

PFAS National Primary Drinking Water Regulation

Introduction

Safe drinking water is fundamental to healthy people and thriving communities. EPA believes that all people in the United States should have access to clean, safe drinking water and has been delivering on the promise to protect communities from the harmful effects of toxic substances, including carcinogens. PFAS are a series of man-made chemical compounds that persist in the environment for long periods of time. They are often called “forever chemicals.” For decades PFAS chemicals have been used in industry and consumer products such as nonstick cookware, waterproof clothing, and stain resistant furniture. These chemicals have been important for certain industries and uses. And the latest science shows that these chemicals are harmful to our health.

PFAS exposure over a long period of time can cause cancer and other serious illnesses that decrease quality of life or result in death. PFAS exposure during critical life stages such as pregnancy or early childhood can also result in adverse health impacts. EPA’s responsibility through the Safe Drinking Water Act is to protect people’s drinking water, and the agency is taking action to protect public health by establishing nationwide, legally enforceable drinking water limits for several well-researched PFAS chemicals and reduce PFAS exposure for approximately 100 million Americans served by public drinking water systems.

The Rule

As the lead federal agency responsible for protecting America’s drinking water, EPA is using the best available science on PFAS to set national standards. PFAS can often be found together in water and in varying combinations as mixtures. Decades of research shows mixtures of different chemicals can have additive health effects, even if the individual chemicals are each present at lower levels.

In this final rule, EPA is setting limits for five individual PFAS: PFOA, PFOS, PFNA, PFHxS, and HFPO-DA (known as GenX Chemicals). And EPA is also setting a hazard index level for two or more of four PFAS as a mixture: PFNA, PFHxS, HFPO-DA, and PFBS:

Chemical	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)
PFOA	0	4.0 ppt
PFOS	0	4.0 ppt
PFNA	10 ppt	10 ppt
PFHxS	10 ppt	10 ppt
HFPO-DA (GenX chemicals)	10 ppt	10 ppt
Mixture of two or more: PFNA, PFHxS, HFPO-DA, and PFBS	Hazard Index of 1	Hazard Index of 1

Maximum Contaminant Level Goal (MCLG): 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 and are non-enforceable public health goals.

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

ppt: parts per trillion

Hazard Index (HI): The Hazard Index is a long-established approach that EPA regularly uses to understand health risk from a chemical mixture (i.e., exposure to multiple chemicals). The HI is made up of a sum of fractions. Each fraction compares the level of each PFAS measured in the water to the health-based water concentration.

This new rule will significantly reduce the level of PFAS in drinking water across the United States. Many states have worked to monitor for and reduce PFAS exposure in drinking water through state-specific regulations. This rule builds on these efforts by incorporating the latest science and establishing a nationwide, long-term health-protective level for these specific PFAS in drinking water. Communities and states will need to determine whether PFAS is in their drinking water and take actions such as notifying consumers and reducing the levels of PFAS, as needed.

Water systems must take action to reduce the levels of these PFAS in drinking water if the level of PFAS in their drinking water exceeds regulatory standards. Regulated public water systems have three years to complete their initial monitoring for these chemicals. Systems must include their results in their Annual Water Quality reports to customers. Systems that detect PFAS above the new standards will have five years to implement solutions that reduce PFAS in their drinking water. Water systems must also notify the public if levels of regulated PFAS exceed these new standards.

Impacts and Costs of the Rule

People will live longer, healthier lives because of this action, and the benefits justify the costs. Once implemented, these limits will reduce tens of thousands of PFAS-attributable illnesses or deaths. EPA estimates that once implemented, this regulation will reduce PFAS exposure for approximately 100 million Americans served by public drinking water systems. EPA considered all available information and analyses for costs and benefits, quantifiable and non-quantifiable, of this rule and determined that the benefits justify the costs.

Fewer people will get cancer or liver disease, pregnant women will have reduced risks, and more and children and infants will be stronger and grow healthier. EPA calculated measurable health benefits based on fewer cancers, lower incidents of heart attacks and strokes, and reduced birth complications. These benefits are estimated to be approximately \$1.5 billion per year, and include avoided costs of medical bills, income lost to illness, and death. Additionally, EPA could not quantify all the health benefits, including developmental, cardiovascular, liver, immune, endocrine, metabolic, reproductive, musculoskeletal, and carcinogenic effects, and therefore the benefit estimates are likely greater than \$1.5 billion.

Compliance with this rule is estimated to cost approximately \$1.5 billion annually. The Infrastructure Investment and Jobs Act has dedicated \$9 billion through to help communities impacted by PFAS pollution in drinking water. In addition, another \$12 billion in Infrastructure Investment and Jobs Act funding is available to communities to make general drinking water improvements, including addressing PFAS chemicals. Estimated costs include water system monitoring, communicating with customers, and – if necessary – installing treatment technologies.

Implementation and Funding

The rule is achievable and implementable. Drinking water utilities will be able to implement these new requirements as control technologies exist and are in use today. Water treatment technologies exist to remove PFAS from drinking water including granular activated carbon, reverse osmosis, and ion exchange systems. EPA's final rule does not dictate how water systems remove these contaminants. The rule is flexible, allowing systems to determine the best solutions for their community. Public water systems can choose from multiple proven treatment options. In some cases, systems can close contaminated wells or obtain a new uncontaminated source of drinking water.

There is unprecedented funding for drinking water systems impacted by PFAS and other emerging contaminants to provide safe water to communities. We know that PFAS pollution can have a disproportionate impact on small, disadvantaged, and rural communities, and there is federal funding available specifically for these water systems. With today's announcement of the rule, EPA is also announcing nearly \$1 billion for states and territories, through the [Emerging Contaminants in Small or Disadvantaged Communities Grant Program](#), which can be used for initial testing and treatment at both public water systems and to help owners of private wells address PFAS contamination. The nearly \$1 billion announced today is part of the dedicated \$9 billion of Infrastructure Investment and Jobs Act funding for communities with drinking water impacted by PFAS and other emerging contaminants. An additional \$12 billion in Infrastructure Investment and Jobs Act funding is available to communities to make general drinking water improvements, including addressing PFAS pollution. Another option for PFAS funding is the Water Infrastructure Finance and Innovation Act (WIFIA) program, a federal loan program at EPA that provides low-cost, flexible funding to communities for water infrastructure projects, including projects to address PFAS. WIFIA funding is available year-round, so communities can request financing on their schedule. Visit the WIFIA program's [website](#) to learn more.

EPA's free [Water Technical Assistance program](#) (WaterTA) is ensuring that disadvantaged communities can access federal funding. Too many communities across America face challenges providing safe drinking water services to their residents, and WaterTA supports communities to identify water challenges; develop plans; build technical, managerial, and financial capacity; and develop application materials to access water infrastructure funding. EPA collaborates with state, Tribes, territories, community partners, and other key stakeholders to implement WaterTA efforts and the end result is more communities with applications for federal funding, quality water infrastructure, and reliable water services. [Learn more here.](#)

Additional Resources

Learn more about water infrastructure funding opportunities by visiting EPA's [water infrastructure page](#).

If you are concerned about PFAS in drinking water, there are key actions you can take. People who are concerned about PFAS in their drinking water should first contact their drinking water utility to find out more about their drinking water, including what contaminants may be present, if the utility is monitoring for PFAS, what the levels are, and to see whether any actions are being taken.

If you remain concerned after talking to your utility, then consider using or installing in-home water treatment (e.g., filters) that is certified to lower the levels of PFAS in your water and/or contact your health care provider as well as your state or local health department. You can find more information about water filters that help reduce PFAS [here](#). If you get your water from a home drinking water well, then EPA recommends you conduct regular testing. If PFAS are found, you can take steps to lower the levels of PFAS. For more visit EPA's website [here](#).