**Keywords**: protect our drinking water

**Problem**: Research indicates that forever chemicals have been found in drinking water nationwide. The Environmental Protection Agency (EPA) regulates all public water systems and has waved the red flag. It is time for action. The EPA has finalized enforceable drinking water standards to address the mounting problem.

**Solution**: This article highlights the growing problem of drinking water contamination. Legislatures aim to protect our drinking water with new enforceable standards. These regulations are not in full effect, so citizens must know how to protect themselves from water pollution.

# Legislation Aims to Protect Our Drinking Water

PFAS, or forever chemicals, have entered drinking water nationwide. The Environmental Protection Agency (EPA) regulates public water systems and has waved the red flag. It is time for action.

"Drinking water contaminated with PFAS has plagued communities across this country for too long," proclaims the EPA administrator, Michael S. Regan. With financial and legislative support, the EPA can begin addressing this mounting problem.

It will take time to enforce these new standards. Therefore, people must be aware of water contaminants. They need to know which filters are most effective at protecting our drinking water. This article explains the dangers of PFAS and why new testing and treatment standards are essential.

# **Key Takeaways**

- According to the EPA, forever chemicals are polluting drinking water nationwide. New legislation aims to better protect our drinking water.
- Per- and polyfluoroalkyl substances, or PFAS, are man-made chemicals that persist in the environment for thousands of years.
- PFAS ingestion and exposure are linked to serious health concerns.
- The EPA recently approved the first-ever legally enforceable drinking water regulations for PFAS.
- The benefits of these legislative changes will take several years to manifest. Therefore, people should consider purchasing a water filtration system certified to NSF/ANSI 42 and 53 standards.

## What is contaminating the water?

It is the main ingredient in morning coffee, herbal teas and winter soups. Water transports nutrients, regulates body temperature, protects organs, cushions joints and helps excrete waste. What happens when the water we so vitally depend on becomes contaminated? Health declines. Children suffer. Medical expenses increase. Some common contaminants that impact water purity are:

- Microbes
- Lead
- Mercury
- Asbestos
- Pesticides
- Microplastics
- Pharmaceuticals
- PFAS

The EPA ensures that Americans can access safe, pure, life-giving water. So, **when they wave the red flag, everyone should stop and take note.** EPA administrators are concerned about the levels of PFAS in drinking water nationwide. Consequently, new regulations specifically address PFAS pollution. The goal is to protect our drinking water and improve public health.

#### Per- and polyfluoroalkyl substances (PFAS)

PFAS are long-lasting chemicals that persist for thousands of years. Slow decomposition leads to buildup in the environment and bloodstream.

Since 1940, this group of man-made chemicals has been widely used in consumer, commercial and industrial products. All over the world, forever chemicals are found in the bloodstream, water, air and soil. Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are the most commonly used and studied types.

#### Public health concern

PFAS exposure is linked to health concerns. Some typical methods of PFAS exposure include:

- Drinking contaminated water
- Eating fish with high levels of PFAS
- Working in occupations with high levels of PFAS exposure (firefighting, chemical manufacturing or processing)
- Using products with PFAS (nonstick cookware and stain-, grease- or water-resistant coatings)
- Breathing contaminated air

#### Scientific research claims that PFAS ingestion and exposure is a public health concern.

Research is ongoing to determine what types and levels of PFAS cause health problems. Some well-established adverse effects include:

- Infertility
- Pregnancy-induced hypertension (PIH)
- Developmental delays in children
- Elevated cancer risk
- Suppressed immunity
- Hormonal imbalances
- Increased cholesterol
- Obesity

Thousands of PFAS chemicals with varying levels of toxicity persist in the environment. However, current research focuses on PFOA and PFOS.

## Drinking water regulations

Through the Bipartisan Infrastructure Law, the EPA has \$1 billion in available resources. This funding will help with testing and treatment of public water systems. Additionally, it will assist private well owners in reducing contaminants. The funding is the most significant financial investment to help communities purify water. Once in full force, regulations will limit specific chemicals individually and as combinations. The legislation has set limits for five individual PFAS chemicals:

- PFOA
- PFOS
- PFNA
- PFHxS
- HFPO-DA

The combination of different chemicals can also be damaging. Therefore, regulations set limits on two or more of the following PFAS chemicals:

- PFNA
- PFHxS
- HFPO-DA
- PFBS

Public water systems have three years to complete the initial monitoring. Within five years, the EPA will require treatment solutions for water systems whose PFAS levels exceed the standards.

Transparency is also a priority. That is why all public water systems must now make PFAS levels available to the public. The EPA anticipates these changes will prevent many deaths, cancers, immune diseases and developmental conditions.

## Filters to protect our drinking water

Change takes time. These new regulations aim to protect our drinking water, elevate water quality and improve public health. However, what should people know in the meantime?

#### NSF/ANSI 42

Not all filters are created equal. **Most at-home filtration systems improve water taste but do not remove contaminants.** NSF/ANSI 42 filters reduce aesthetic impurities like chlorine and sulfur. These harmless compounds have an odor and taste that make drinking water unpleasant. NSF/ANSI 42 filters remove these compounds, making water taste better. However, they are not certified to reduce health-altering contaminants.

#### NSF/ANSI 53

Look for the NSF/ANSI 53 guarantee when shopping for an at-home filtration system. **Filters that meet NSF 53 standards remove health-altering contaminants.** Standard 53 covers activated carbon filters and reverse osmosis filters. Though carbon filters are affordable, they are less effective at removing specific contaminants. Conversely, reverse osmosis eradicates chemical and bacterial pollutants while removing vital minerals. Either option produces safe and pure drinking water, promoting healthy hydration.

# Informing individuals and improving lives

"The water tastes better, so it must be better, right?" People assume all water filters remove harmful pollutants. However, many contaminants are odorless and tasteless. That is why U.S. legislatures have prioritized water purity. **The EPA finalized the first-ever legally enforceable drinking water standards to address PFAS pollution.** The goal is to improve health nationwide.

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#### Resources

"Our Current Understanding of the Human Health and Environmental Risks of PFAS." EPA: United States Environmental Protection Agency, 2024, Our Current Understanding of the Human Health and Environmental Risks of PFAS | US EPA.

"Biden-Harris Administration Finalizes First-Ever National Drinking Water Standard to Protect 100M People from PFAS Pollution." EPA: United States Environmental Protection Agency, 2024, Biden-Harris Administration Finalizes First-Ever National Drinking Water Standard to Protect 100M People from PFAS Pollution | US EPA.

"NSF Standards for Water Treatment Systems." NSF: National Sanitation Foundation, NSF Standards for Water Treatment Systems | NSF.