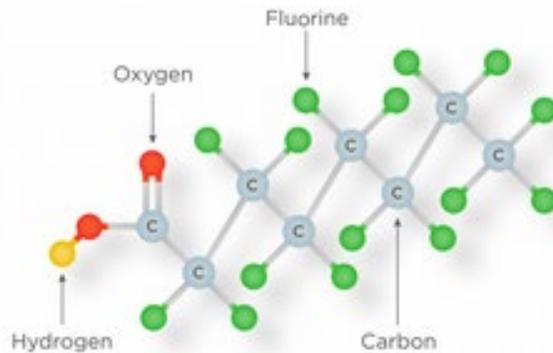


What You Need to Know About PFAS

What are PFAS and PFOS/PFOA?



PFAS, or per- and polyfluoroalkyl substances, are a group of about 15,000 man-made, persistent synthetic compounds used in a variety of industrial and consumer products. They have been used in industry to make everyday products that resist heat, oil, stains, grease, and water since the 1940's. They are extremely stable and do not breakdown in the environment.

Where are PFAS compounds commonly found?

PFAS are found in water, air, and soil around the world. Because of their unique property to resist heat, oils, stains, grease, and water, you can find these chemicals in:

- Non-stick cookware
- Shampoos, sunscreens, cosmetics, and personal care products
- Coatings on food packaging such as fast-food wrappers
- Firefighting foam
- Waterproof/water resistant clothing
- Pesticides and herbicides
- Paints, stains, varnishes, inks, and dyes

How does PFAS get into source water?

PFAS can get into our water sources in a wide variety of ways. They would include from manufacturing facilities and storm water runoff. PFAS can get into the water when products containing them are used or spilled onto the ground or into rivers, streams and any body of water.

How does PFAS affect our health?

According to the Environmental Protection Agency, scientific studies have shown that exposure to PFAS in the environment may be linked to harmful effects on humans and animals. Research is still ongoing to determine how different levels of exposure to PFAS can lead to different health effects. Current scientific studies have shown the exposure to certain levels of PFAS may lead to increased risk of some cancers, reduced ability of the body's immune system to fight infections, increased cholesterol levels, and higher risk of obesity among other risks. You can read more about this on the EPA website at: [PFAS Explained | US EPA](#)

National Drinking Water Regulations

On April 10, 2024, the EPA announced the final National Primary Drinking Water Regulation for six PFAS compounds – PFOA, PFOS, PFNA, PFHxS, HFPO-DA and mixtures of two or more: PFNA, PFHxS, HFPO-DA, and PFBS. Public water systems have three years to complete initial monitoring (by 2027) for these six PFAS. This will be followed by ongoing compliance monitoring. Public water systems have five years (by 2029) to implement solutions that reduce PFAS if monitoring shows that drinking water exceeds the maximum contaminant levels. Beginning in 2029, public water systems that have PFAS levels that violate the maximum contaminant levels of this regulation must take action to reduce those levels to be within compliance and must notify the public of any violations. Public water systems must also provide the public with ongoing information on the levels of PFAS in their drinking water beginning in 2027.

These are the compliance levels from the new regulation:

Compound	Final MCLG	Final MCL (enforceable levels)
PFOA	Zero	4.0 parts per trillion (ppt) (also expressed as ng/L)
PFOS	Zero	4.0 ppt
PFHxS	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
HFPO-DA (commonly known as GenX Chemicals)	10 ppt	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index

MCLG – Maximum Contaminant Level Goal

MCL – Maximum Contaminant Level

Compliance is determined by running annual averages at the sampling point and sampling is completed quarterly.

To read the entire regulation, you can go to: <https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas#Technical>.

Granular Activated Carbon (GAC) as an Effective Treatment

The Rivanna Water & Sewer Authority has used Granular Activated Carbon (GAC) filters as a part of our water treatment process at our water treatment plants since 2018. GAC filters have been shown to be effective in removing most PFAS from drinking water. It is effective at removing PFAS and other compounds from drinking water because it is highly porous and provides a large surface area which allows these compounds to stick to the GAC. Our GAC vessels are located towards the end of the water treatment process to maximize filtration. For more information about GAC, use this link: <https://www.rivanna.org/granular-activated-carbon/>.



Granular Activated Carbon Vessels at the South Rivanna Water Treatment Plant

What's Next with PFAS?

The Rivanna Water & Sewer Authority has been monitoring PFAs levels for several years and has been a participant in the EPA's Unregulated Contaminant Monitoring Rule program since 2023. With the exception of one instance in May of 2023 at the North Rivanna Water Treatment Plant, all of the samples which have been collected have not shown levels of PFAs exceeding the new compliance regulation.

Protecting and providing safe, reliable drinking water is of the utmost importance to the Rivanna Water & Sewer Authority. By using GAC to treat our water, we have already put into place a means of removing these PFAs contaminants. We will continue to utilize our multi-barrier treatment processes, which include granular activated carbon (GAC) filtering systems, to remove any undesirable substances, including PFAs, from the drinking water that we produce for the customers of Charlottesville Utilities and the Albemarle County Service Authority and to ensure that our drinking water is in compliance with this new regulation.