

***What are PFAS?***

Also known as “forever chemicals”, [per- and polyfluoroalkyl chemicals \(PFAS\)](#) are a large, diverse group of over 5,000 manmade chemicals that have been manufactured for a variety of consumer and industrial uses in the United States since the 1940s. PFAS have historically been used in consumer products such as water-resistant clothing, cookware, carpets, and food packaging. PFAS have also been widely used in firefighting foams at military installations and fire training facilities. Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are the most studied PFAS chemicals and have been partially, voluntarily phased out by industry<sup>1</sup>, though PFOA and PFOS are persistent in the environment. While PFAS do not occur naturally, PFAS may be found throughout the environment due to their long history of use. There are many other PFAS, including GenX chemicals and perfluorobutane sulfonate (PFBS), in use throughout the country. PFAS have previously been detected in groundwater, surface water, finished public drinking water, private wells, and in fish tissue samples in Tennessee. The Tennessee Department of Environment and Conservation (TDEC) is working to protect Tennesseans from potential risks posed by PFAS. According to the Environmental Protection Agency (EPA) and Agency for Toxic Substances and Disease Registry (ATSDR), there is some evidence that prolonged exposure to certain PFAS can cause pregnancy complications, liver damage, high cholesterol, cancer (PFOA), immune system effects, and thyroid hormone disruption (PFOS).

***TDEC PFAS Statewide Sampling Effort***

TDEC works alongside local, state, and federal partners to monitor PFAS. As of August 2023, TDEC has implemented a [statewide testing strategy](#) to monitor for PFAS in source (raw/unfinished) water for public drinking water systems<sup>2</sup>. As part of this effort, TDEC has contracted with a private, EPA-certified laboratory (PACE) to test for [29 PFAS compounds](#), including the 6 PFAS with proposed MCLGs and MCLs<sup>3</sup>. TDEC will suggest that water systems investigate PFAS detections in raw water by sampling finished drinking water as necessary. Over the next 2 years, TDEC will test 1,295 water intakes (178 surface water intakes, 66 springs, and 1,051 water wells) which provide the source water for 784 regulated Public Water Systems serving approximately 88% of Tennesseans. TDEC anticipates the results of this massive sampling effort by summer 2025. To view TDEC PFAS sampling results, please visit our [interactive dashboard](#).

***EPA Guidance***

On March 14, 2023, the EPA released a proposed [National Primary Drinking Water Regulation \(NPDWR\)](#) and health-based Maximum Contaminant Level Goals (MCLGs) at the levels below for six PFAS: PFHxS, HFPO-DA, GenX, PFNA, PFOA, and PFOS. EPA anticipates finalizing the rule by early 2024. Tennessee will adopt any final EPA Maximum Contaminant Level (MCLs) for PFAS.

Compound	Proposed MCLG <sup>4</sup>	Proposed MCL (enforceable) <sup>5</sup>
PFOA, PFOS	Zero	4.0 ppt (parts per trillion)
PFNA, PFHxS, PFBS, HFPO-DA (GenX)	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index

<sup>1</sup> In 2002, industry began reducing the production of PFOS. Subsequently, in 2015, industry phased out the production of PFOA. According to the [National Toxicology Program](#), PFOA and PFOS emissions have reduced drastically in the U.S. and Western Europe since phase downs, but less is known about the global emissions impact.

<sup>2</sup> TDEC is not testing private drinking water wells.

<sup>3</sup> Tests will be conducted utilizing [EPA methods 533 and 537.1](#).

<sup>4</sup>EPA defines an MCLG as 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. [Hazard Index Metric](#).

<sup>5</sup> EPA defines an MCL as the highest level of a contaminant that is allowed in drinking water. MCLs are set as close as technologically possible to MCLGs.