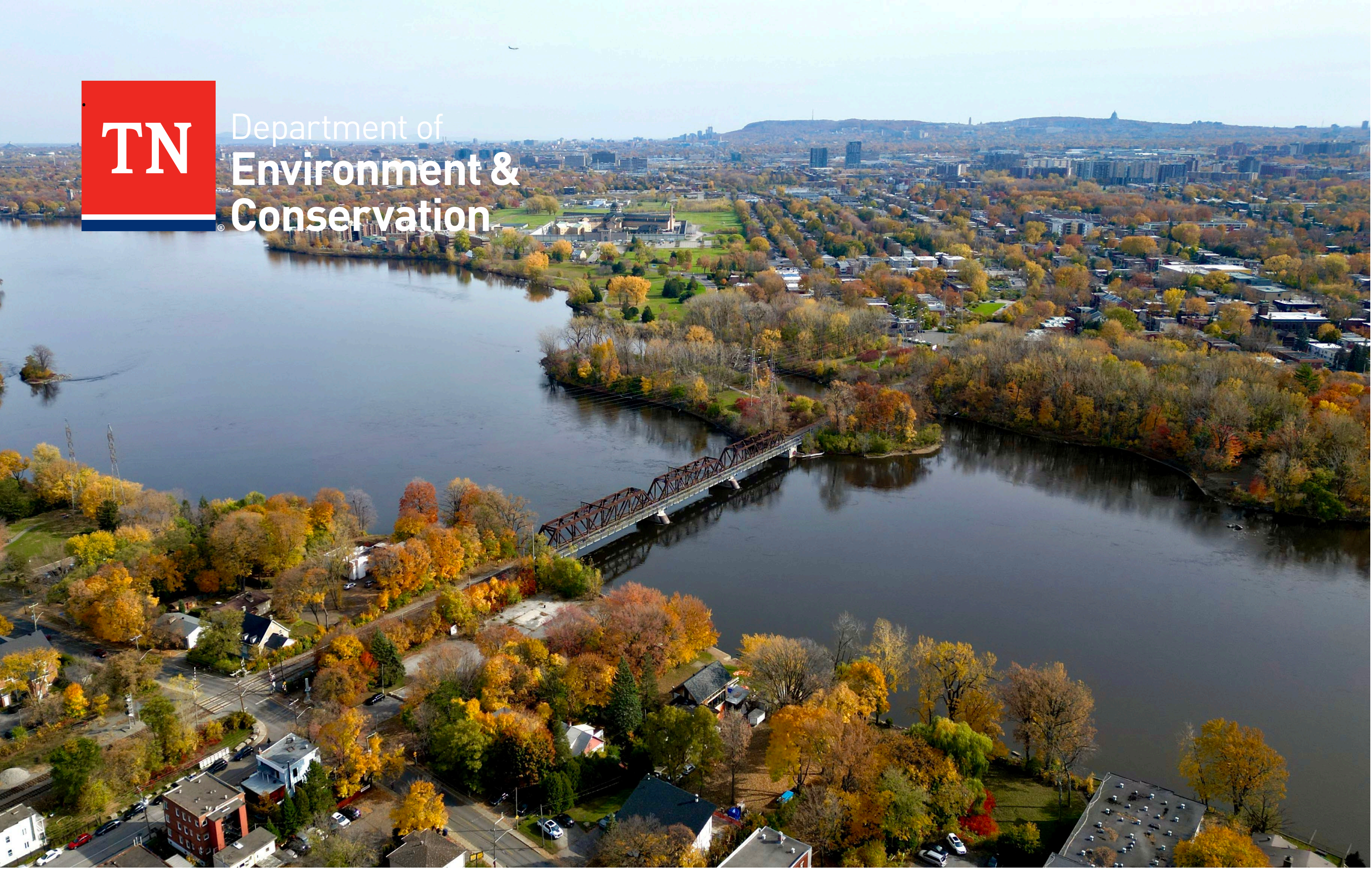



# Addressing Per-and Polyfluoroalkyl Substances (PFAS) “Forever Chemicals” in Tennessee

## PFAS Sampling Results: Tennessee Source Water

Tennessee Department of Environment & Conservation| Report| January 2026

# Executive Summary

Per- and polyfluoroalkyl substances (PFAS) are a diverse family of thousands of man-made chemicals that have been manufactured for a variety of consumer and industrial uses in the United States since the 1940s. PFAS are widely 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. While PFAS do not occur naturally, PFAS are found throughout the environment due to their long history of use. Due to their chemical structure, PFAS break down very slowly over time which is why PFAS are often referred to as "Forever Chemicals." According to the Environmental Protection Agency (EPA) and the Centers for Disease Control and Prevention's (CDC) Agency for Toxic Substances and Disease Registry (ATSDR), prolonged exposure to certain PFASs are associated with pregnancy complications, liver damage, high cholesterol, cancer, immune system effects, and thyroid hormone disruption. Thus, PFAS pose a serious risk to human health and the environment. PFAS have previously been detected across the state in groundwater, surface water, finished public drinking water, private wells, and fish tissue samples. The Tennessee Department of Environment and Conservation (TDEC) is working to understand and reduce potential PFAS exposure for Tennesseans.

The first step in reducing risks to human health and the environment from PFAS is understanding their location and concentration in the environment and potential pathways for human exposure. Drinking water is one potential pathway for human exposure to PFAS. In January 2023, EPA began its fifth cycle of nationwide contaminant sampling under the Unregulated Contaminants Monitoring Rule (UCMR 5) to test for 29 PFAS chemicals in finished drinking water. EPA's UCMR 5 testing of Public Water Systems (PWSs) is ongoing through Summer 2026. However, as not all PWSs in Tennessee will be tested under EPA's UCMR 5, TDEC developed a source water sampling strategy to understand the breadth and severity of PFAS contamination of Tennessee's public drinking water supplies. The following report examines TDEC's results to date, analyzes the implications of the findings, and evaluates anticipated future needs and resources to address PFAS contamination in Tennessee. Finally, this report details ways in which the public can reduce PFAS exposure in individual household water.

## Background

**Purpose:** The following report details TDEC's PFAS Sampling Strategy which aims to create a comprehensive picture of what PFAS contamination looks like across Tennessee source water supplies used for drinking water, identify areas where public water supplies may be contaminated with PFAS, and study how effectively PWSs are filtering out PFAS in finished drinking water.

**Implications:** TDEC aims to better understand the movement of PFAS through water and the environment, to identify water sources with PFAS contamination in need of remediation, and to direct resources to communities most impacted by PFAS in public water supplies.

**Implementation:** From August 2023 through October 2025, TDEC implemented its PFAS Sampling Strategy to sample all Tennessee public source water supplies for 29 PFAS chemicals. TDEC has collected over 1,400 individual samples across the state of Tennessee. For future sampling, TDEC anticipates resampling in East Tennessee communities impacted by Hurricane Helene as severe flooding and damage may have spread PFAS contamination.

Published: January 13, 2026

# Introduction to PFAS

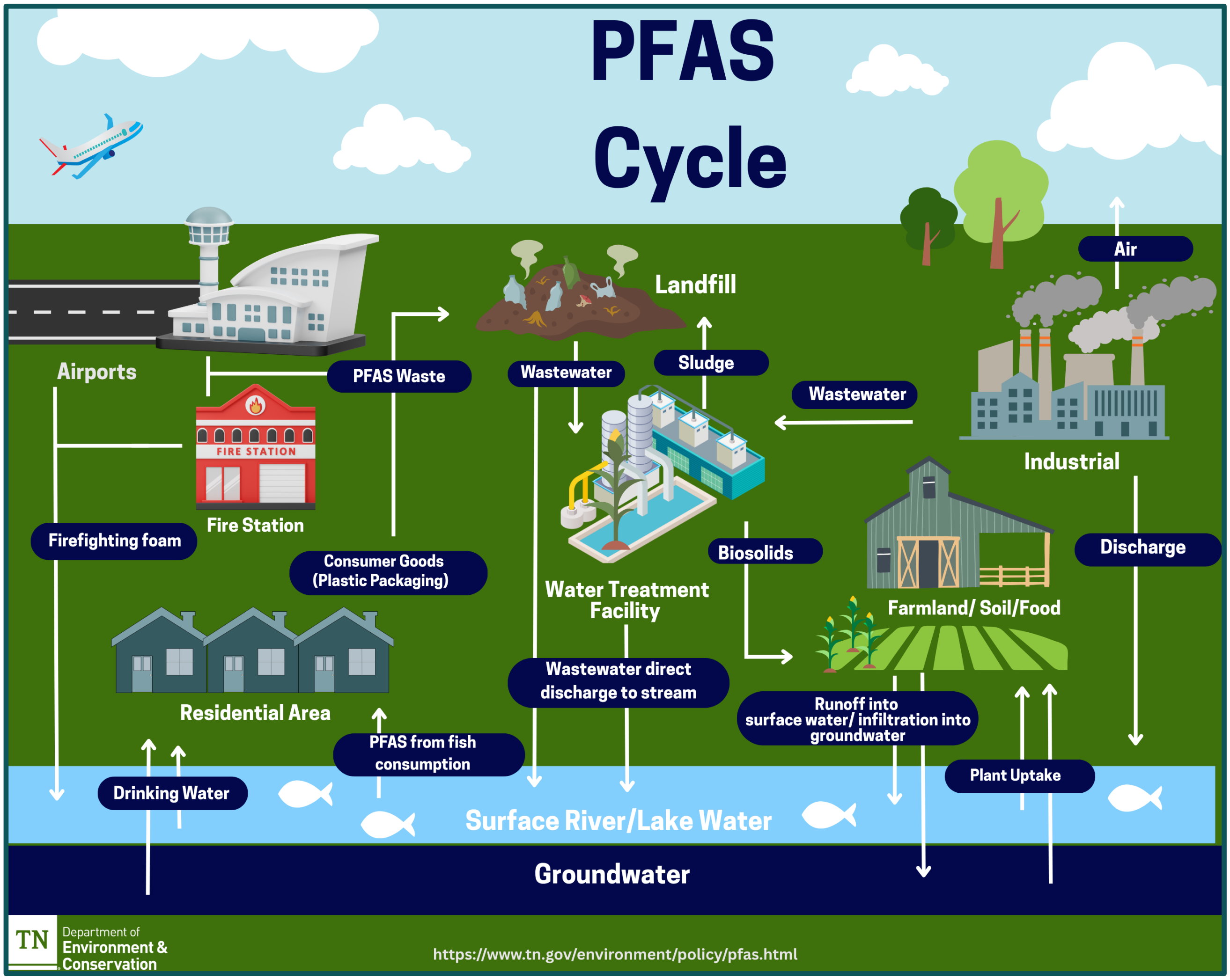
## What are PFAS?

A 2023 study published by the Public Library of Science, 45.1% of respondents had never heard of PFAS, 31.6% had heard of PFAS but were unaware of what PFAS are, and 97.4% did not believe that PFAS was in their drinking water (Berthold, A. et al. (2023)). PFAS are a group of thousands of man-made chemicals that have been manufactured for a variety of consumer and industrial uses in the United States since the 1940s. PFAS provide grease- and water-resistance properties to carpets, cookware, clothing, food packaging, cosmetics, and other common consumer products. PFAS are also used in certain types of firefighting foams such as Aqueous Film-Forming Foam (AFFF).


***Graphic 1. PFAS are found in a variety of common items and consumer goods used every day.***

## How do PFAS Enter the Environment?

The widespread use of PFAS in commercial and industrial goods creates multiple pathways for environmental contamination and, consequently, human exposure to these persistent "forever chemicals." They can be found in the air, soil, and water, often near chemical manufacturing sites or military bases where firefighting training occurs. Inadequate waste handling at these locations has contributed to the spread of PFAS in groundwater and surface water. Landfills and wastewater treatment facilities receive PFAS-containing waste from residential, commercial, and industrial sources and can introduce PFAS to surface water through wastewater discharges. Once released into the environment, PFAS remain persistent due to strong chemical bonds that breakdown very slowly over time. Although the U.S. has phased out the production of some PFAS chemicals, such as perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), products made with other PFAS chemicals are still manufactured in U.S. and products manufactured with or containing PFAS can still imported from other countries. Prolonged exposure has been linked to a range of serious health concerns, including reproductive, developmental, and immune system issues in both humans and animals, posing a significant threat to public and environmental health.




***Graphic 2. The PFAS Cycle: Due to strong chemical bonds and the prevalence of use in consumer goods, PFAS are prolific and persistent in the environment through a multitude of sources.***

## *What are the Health Risks Associated with PFAS?*

According to the Center for Disease Control (CDC), "epidemiological evidence suggests associations between increases in exposure to (specific) PFAS and certain health effects, such as: Increases in cholesterol levels (PFOA, PFOS, perfluorononanoic acid (PFNA), perfluorodecanoic acid (PFDA)), lower antibody response to some vaccines (PFOA, PFOS, perfluorohexane sulfonic acid (PFHxS), PFDA), changes in liver enzymes (PFOA, PFOS, PFHxS), pregnancy-induced hypertension and preeclampsia (PFOA, PFOS), small decreases in birth weight (PFOA, PFOS), kidney and testicular cancer (PFOA)". Additional research (Wang, W. et al, (2023) and Cohen, N J. et al. (2023)) shows correlations between PFAS exposure (PFOA, PFOS) and decreased fertility in women.

| *Health Outcomes* | *Associated PFAS* | *Summary of Findings* | *Study Summaries* |
|---|---|---|---|
| **Increases in cholesterol levels** | PFOA, PFOS, PFNA, PFDA | Elevated cholesterol levels were among the most consistently observed outcomes across multiple studies. | 1. Andersen, M.E. et al. (2021) Link between PFOA/PFOS exposure and higher cholesterol levels.<br>2. Liu, B et al. (2023) PFOA and PFOS is significantly associated with higher total and LDL cholesterol levels in adults.<br>3. Kang, H et al. (2023) PFAS concentrations were associated with long-term increases in total and LDL cholesterol levels. |
| **Lower antibody response to vaccines** | PFOA, PFOS, PFHxS, PFDA | Studies show a reduced immune response to routine vaccinations in people exposed to PFAS. | 4. Crawford, L et al.  (2023)  PFOA and PFOS are associated with reduced antibody responses to vaccines.<br>5. Bline, A.P. et al.  (2024) Evidence on PFAS-induced immunotoxicity. |
| **Changes in liver enzymes** | PFOA, PFOS, PFHxS | Studies have shown PFAS exposure has been consistently associated with altered liver enzyme levels, suggesting potential liver stress or injury. | 6. Costello, E et al.  (2022) PFAS exposure is associated with liver injury.<br>7. Zhang, X et al. (2023) PFAS levels were linked to increased risk of fatty liver disease and poorer liver function, especially among individuals with obesity, high-fat diets, or heavy alcohol use.<br>8. Vujic, E et al. (2024) How PFAS interact with human liver transporters, potentially disrupting liver function. |
| **Pregnancy-induced hypertension and preeclampsia** | PFOA, PFOS | Increased rates of pregnancy complications in populations exposed to PFAS. | 9. Erinc, A et al. (2021) PFAS exposure may increase the risk of hypertensive disorders of pregnancy.<br>10. Wang, Y et al. (2025) PFAS exposure was associated with increased blood pressure during late pregnancy.<br>11. Bommarito, P.A. et al. (2021) PFAS was associated with increased odds of late-onset preeclampsia. |
| **Small decreases in birth weight** | PFOA, PFOS | Modest but statistically significant reductions in birth weight observed in multiple epidemiological studies. | 12.  Zheng, T et al. (2024) PFAS during pregnancy was significantly associated with lower birth weight and reduced ponderal index in infants.<br>13. Wright, J.M. (2023) PFNA exposure consistently linked to reduced birth weight. |

| *Health Outcomes* | *Associated PFAS* | *Summary of Findings* | *Study Summaries* |
|---|---|---|---|
| **Kidney and testicular cancer** | PFOA | Growing evidence linking PFAS exposure to kidney and testicular cancers in highly exposed populations. | 14. Seyyedsalehi, M.S. et al. (2023) PFAS exposure increases kidney and testicular cancer.<br>15. Rhee, J et al. (2023) PFAS exposure is associated with increased renal cell carcinoma risk. |
| **Decreased fertility in women** | PFOA, PFOS | PFAS exposure has been linked to reduced fertility in women, including longer time to conception and potential hormonal disruptions. | 16. Wang, W et al. (2023) PFAS exposure is associated with reduced female fertility and higher infertility risk.<br>17. Cohen, N.J. et al (2023) PFAS levels are linked to reduced female fertility and lower chances of pregnancy and live birth. |

***Table 1. Research findings correlate increased health risks with exposure to certain PFAS chemicals.***

The science surrounding PFAS exposure and its effects on human health is constantly evolving. While research has established clear links between PFAS exposure and several health conditions, there are still gaps in our understanding of these relationships. Questions remain about the long-term effects of low-level exposure and how different PFAS compounds may affect the body in distinct ways. Ongoing research is essential to fully understand these risks and inform future regulations and public health efforts.

## Compounding Risk Factors

According to the CDC, while exposure to PFAS can pose a significant threat to human health, the risk of health effects associated with PFAS depends on three key factors:

- Exposure Factors (e.g., dose, frequency, route, and duration),
- Individual Factors (e.g., sensitivity and disease burden), and
- Other Determinants of Health (e.g., access to safe water and quality healthcare)

The Compounding Risk Factors illustrated below highlight how PFAS exposure can be more hazardous when combined with factors beyond the level of exposure, including individual vulnerabilities and social determinants of health. In areas where risk factors overlap, the chances of serious health outcomes increase significantly.

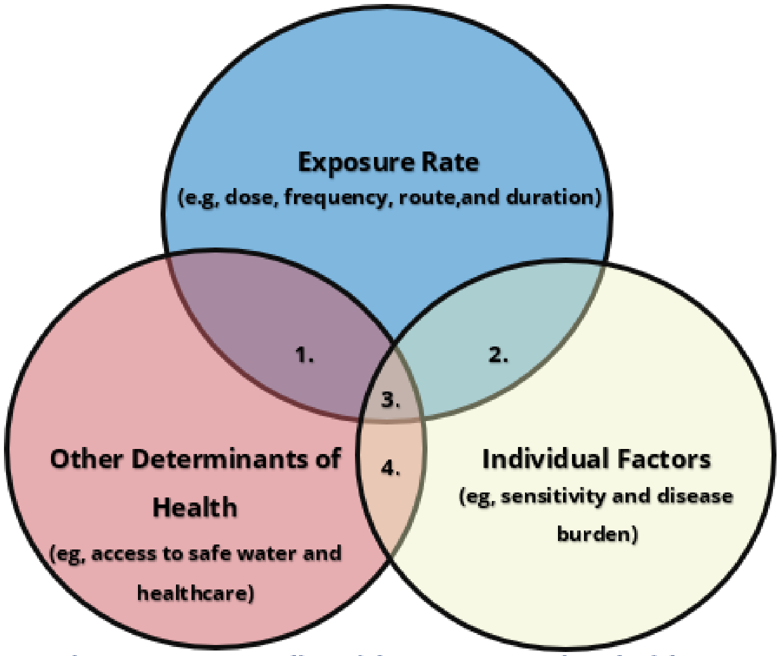



***Figure 1. Compounding Risk Factors Associated with PFAS***

1. Frequent or high-dose exposure plus poor access to clean water or healthcare can worsen outcomes from PFAS contamination.
2. High or long-term exposure combined with personal sensitivity or pre-existing diseases can increase PFAS-related health risks such as cancer or immune system problems.
3. When high PFAS exposure meets individual vulnerabilities and poor social determinants, the risk of serious health issues (e.g., pregnancy complications, cancer) is greatest.
4. Limited healthcare and existing health conditions make it harder to recover or manage PFAS-related health effects.

For additional information on health risks associated with PFAS exposure, please visit the resources available at Tennessee Department of Health (TDH) and the CDC's Agency for Toxic Substances and Disease Registry (ATSDR).

## *How are PFAS Regulated?*

On April 10, 2024, EPA finalized the first PFAS National Primary Drinking Water Regulations establishing legally enforceable Maximum Contaminant Levels (MCLs) for six PFAS chemicals in finished drinking water. EPA established MCLs for six PFAS in drinking water: PFOA, PFOS, PFHxS, PFNA, and hexafluoropropylene oxide dimer acid (HFPO-DA, also known as Gen X) as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and perfluorobutane sulfonic acid (PFBS) using a Hazard Index MCL to account for the combined and co-occurring levels of these PFAS in drinking water. EPA also finalized health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these PFAS.

On May 14, 2025, EPA announced it would retain the MCLs of 4.0 parts per trillion (ppt) for PFOA and PFOS established under the original final rule while simultaneously announcing the intention to rescind and reconsider MCLs for PFHxS, PFNA, HFPO-DA, and the Hazard Index calculation that takes into account the forementioned PFAS chemicals as well as PFBS. Additionally, EPA plans to extend the deadlines for PWSs to meet the compliance standards in finished drinking water for PFOA and PFOS MCLs from 2029 to 2031. To ensure compliance, PWSs must conduct initial and compliance monitoring for PFAS; initial monitoring for PWSs is ongoing and compliance monitoring will be required beginning in 2027. For more information, please visit EPA's PFAS webpage.

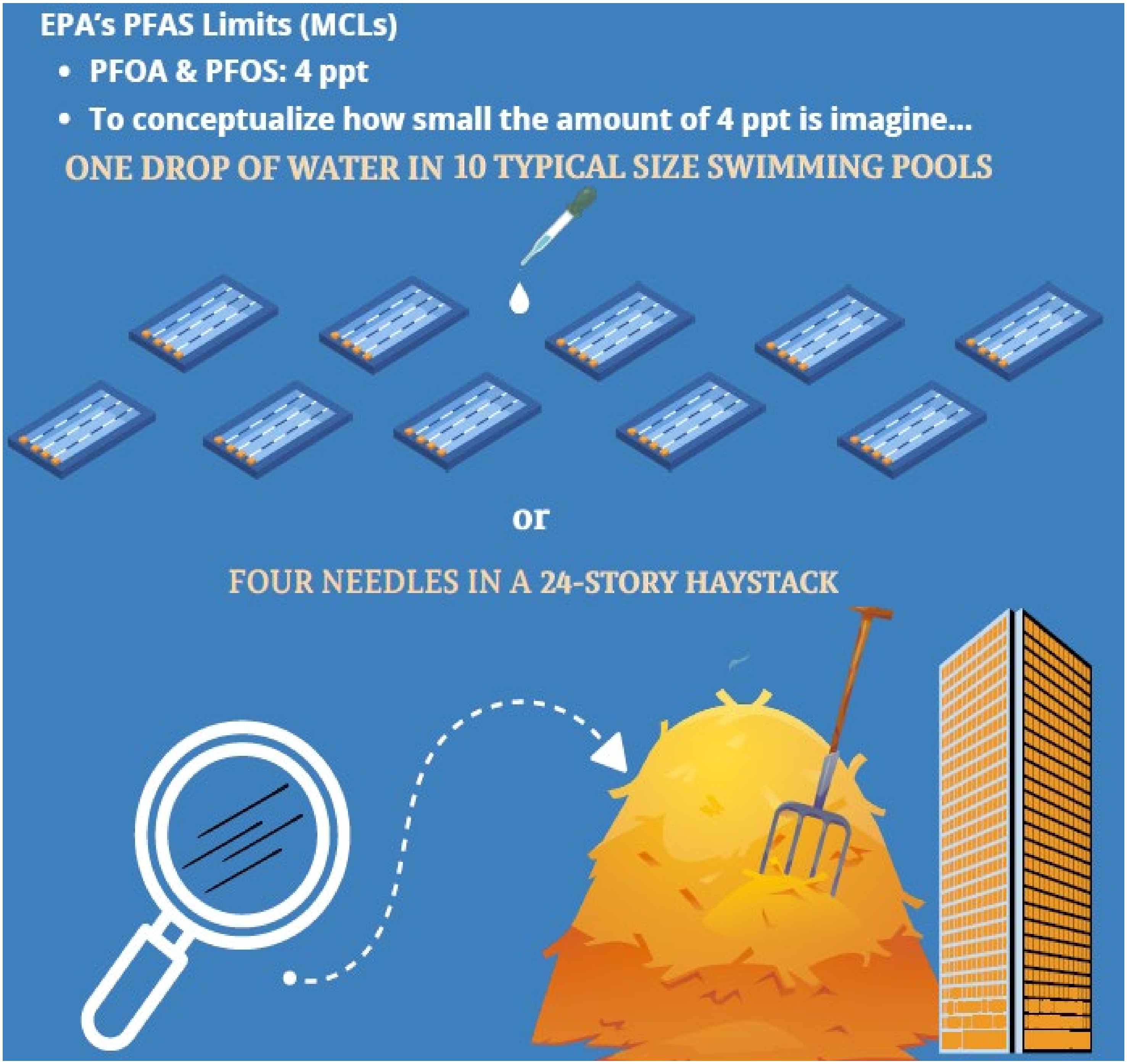
***Table 2. EPA's Final PFAS National Primary Drinking Water Regulation[1]***

| 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)<br><br>Hazard Index | 1 (unitless)<br><br>Hazard Index |

* Compliance with MCLs is determined by running annual averages at the sampling point.

[1] EPA's 2024 final rule establishing drinking water standards for six PFAS chemicals. EPA has indicated that the standards established for PFOA and PFOS will remain in place while the standards for the other PFAS chemicals will be rescinded and reconsidered. Accessed on December 15, 2025, from: https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas.

## *What does a Measurement in Parts per Trillion (ppt) look like?*




***Graphic 3. Visualization of the "smallness" of the unit measurement for ppt.***

# PFAS Contamination in Tennessee Source Water

## *Testing Methodology and Rationale*

TDEC's Strategy to Assess the Impact of Per- and Polyfluoroalkyl Compounds on Public Drinking Water Sources in Tennessee was published in August 2023. The strategy outlined TDEC's plan and rationale to survey all source water supplies utilized for public drinking water with the aim of understanding the breadth of PFAS contamination in raw source water approximately 90% of Tennessee's 7,640,000 residents rely upon[2]. The sampled source water supplies include groundwater, surface water, and consecutive system intakes. If a PWS extracts water from multiple locations, TDEC sampled all locations used by the PWS as source water entry points. All source water samples were collected, processed, and analyzed in accordance with EPA's recommended testing methods (EPA Method 533 and EPA Method 537.1) for finished drinking water. TDEC's PFAS source water sampling effort analyzed samples for the same 29 PFAS chemical compounds as EPA's UCMR 5 sampling in finished drinking water[3]. For sample analysis, TDEC contracted with a private laboratory partner certified to perform the respective analytical methods. TDEC staff reviewed all sample results in this report for quality assurance. All PWSs received notification of source sample results for their respective water source supplies prior to the publication of this report. Sampling data is publicly available on the Interactive Dashboard for TDEC's PFAS Sampling Effort.

## *TDEC's PFAS Sampling Results*

### Overview

TDEC has sampled all active source water supplies for 607 PWSs in Tennessee; inactive wells were not sampled. Additional duplicate samples were taken for quality assurance purposes. TDEC's sample results indicate that 199 PWSs had no detectable indications of PFAS in their source water supplies. 407 PWSs (67.1%) have some detectable levels of PFAS in source water supplies.  243 unique PWSs had detections of PFAS in source water supplies below the Minimum Reporting Level (MRL)[4]. 165 unique PWSs indicated detectable levels of PFAS above the MRL in source water supplies.

[2] 2023 Annual Compliance Report, TDEC Division of Water Resources.

[3] See Appendix 1 for a complete list of the 29 PFAS analytes and for more information on the testing methods utilized.

[4] Minimum Reporting Level (MRL): the smallest concentration of a substance that can be reliably measured using a given analytical method for an individual PFAS analyte (a specific PFAS chemical). The MRL is not a uniform number but rather is analyte dependent.

***Figure 1. Distribution of PFAS Detections by County in Tennessee Source Water Supplies[5]***
***Sampling from August 2023-December 2025*** *(Dataset Last Updated: January 12, 2026)*

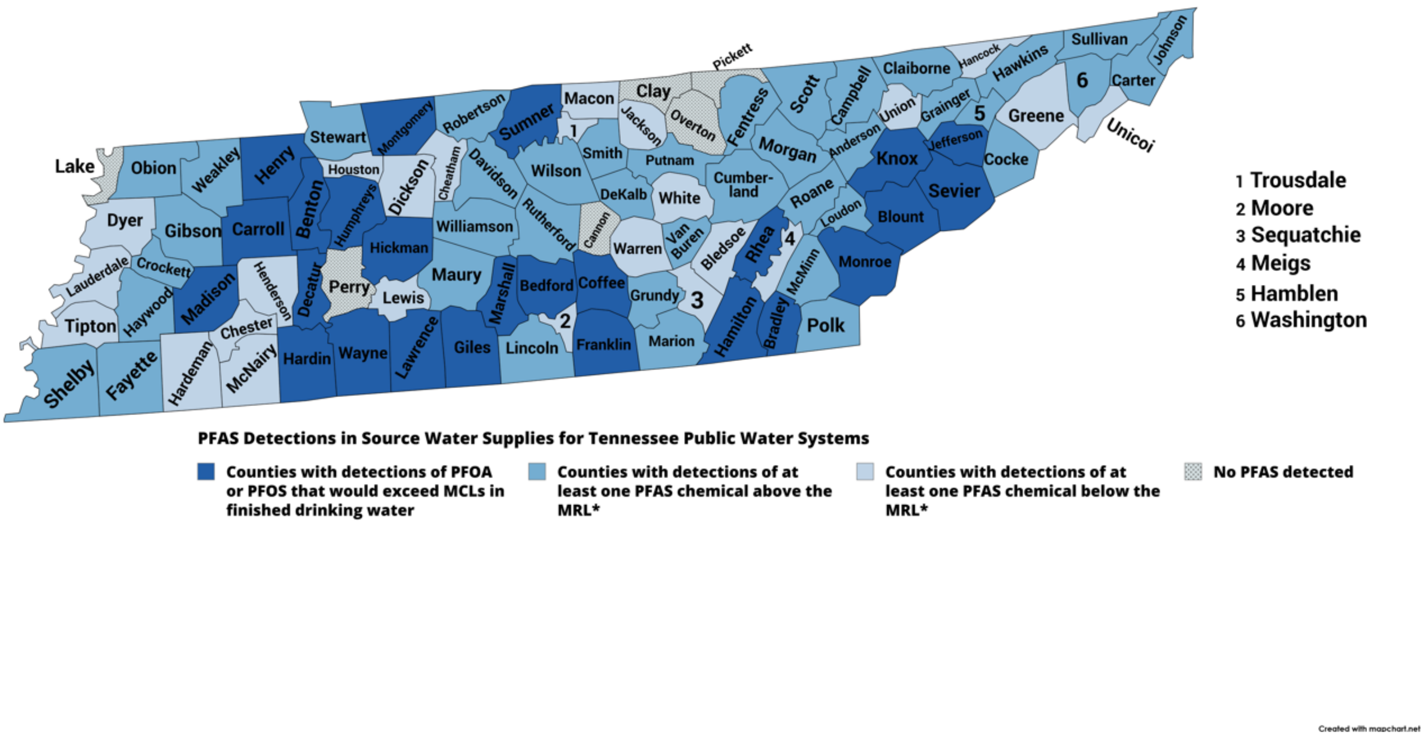



***Figure 1.***
***** *Indicates detection of at least one of twenty-nine PFAS chemicals tested under TDEC's PFAS Source Water Sampling Effort.*

## PFOA and PFOS

Considering that EPA announced intentions to retain the MCLs for PFOA and PFOS of 4.0 ppt for finished drinking water, TDEC examined the frequency of PFOA and PFOS detections in TN source water supplies as PWSs will be required to comply with these MCLs by 2031. Sampling indicates detections of PFOA below the MRL in source water supplies for 66 unique PWSs, detections of PFOA at or above the MRL but less than 4.0 ppt for 37 unique PWSs, and detections of PFOA for 23 unique PWSs that would exceed the MCL of 4.0 ppt for PFOA if the samples were from finished drinking water. Sampling also indicates detections of PFOS detected below the MRL for 64 unique PWSs, detections of PFOS at or above the MRL but less than 4.0 ppt for 44 unique PWSs, and detections of PFOS for 35 unique PWSs would exceed the MCL of 4.0 ppt for PFOS if the samples were from finished drinking water.

[5] Figure generated on January 12, 2026, using Mapchart.net.

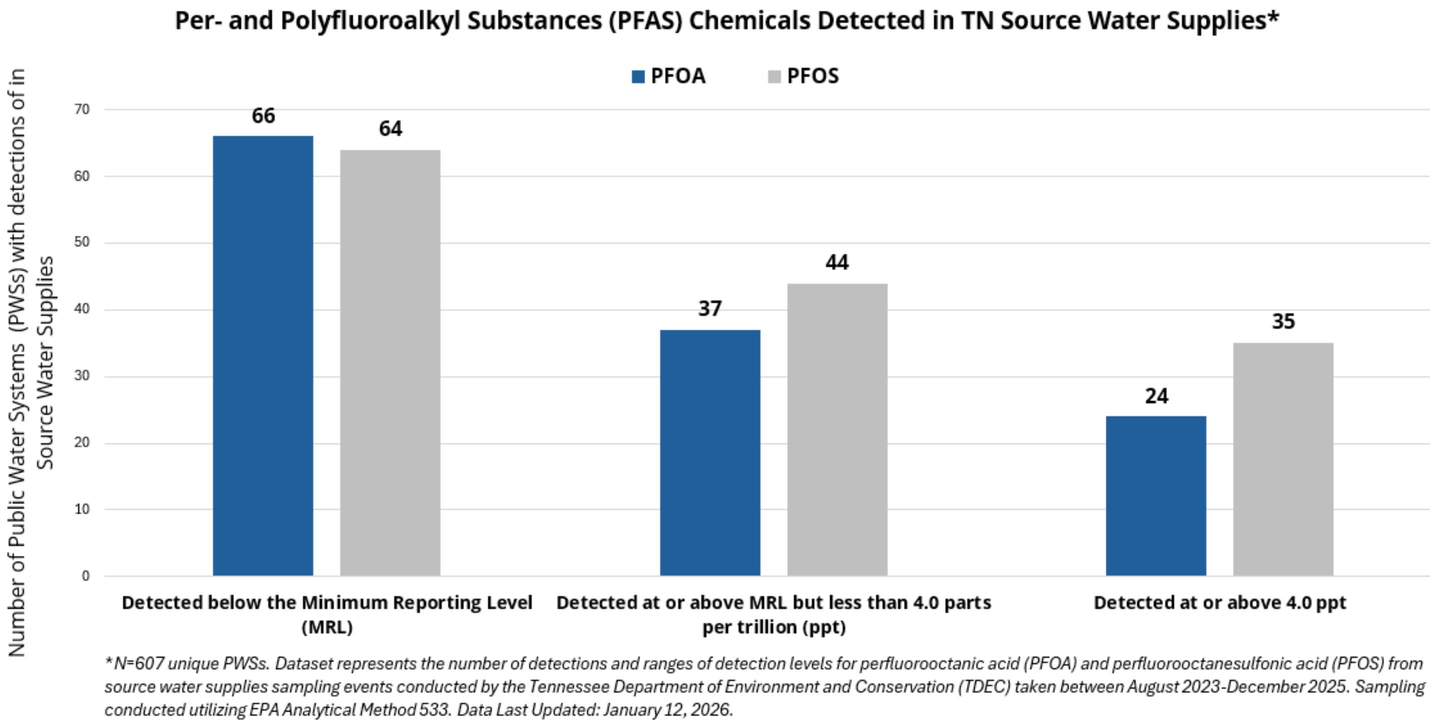



***Chart 1. PFOA and PFOS in Tennessee source water supplies***

## *Comparing Source Water to Finished Drinking Water (EPA's UCMR 5)*

### Overview

EPA's UCMR 5 finished drinking water sampling for PFAS is ongoing and does not account for all PWSs that EPA intends to test in Tennessee. As additional federal sampling results become available, TDEC will examine relationships between PFAS levels measured in source and finished drinking water. Future analysis may include assessing the potential effectiveness of PWSs in removing various PFAS analytes from impacted source waters or identifying locations where sampling data indicates the PWS rather than the source water is the source of PFAS that EPA measured in finished drinking water. Of the systems tested thus far under UCMR 5, PWSs with higher concentrations of PFAS or with detections of multiple PFAS analytes have undergone resampling on separate dates for quality assurance. For additional information on EPA's methodology for UCMR 5 implementation, please visit EPA's UCMR 5 webpage.

The following section analyzes results to date from EPA's UCMR 5 sampling.[6] Of the 95 counties in Tennessee, UCMR 5 samples drawn between the timeframe of March 2023[7] and August 2025 indicate 514 detections at or above the MRL of specific PFAS analytes in the finished drinking water from 76 unique PWSs across 44 counties in the state.

***Figure 2. Distribution of PFAS Detections by County - EPA's UCMR 5[8]***

***Sampling dataset from August 2023-August 2025** (Dataset Last Updated: December 5, 2025)*

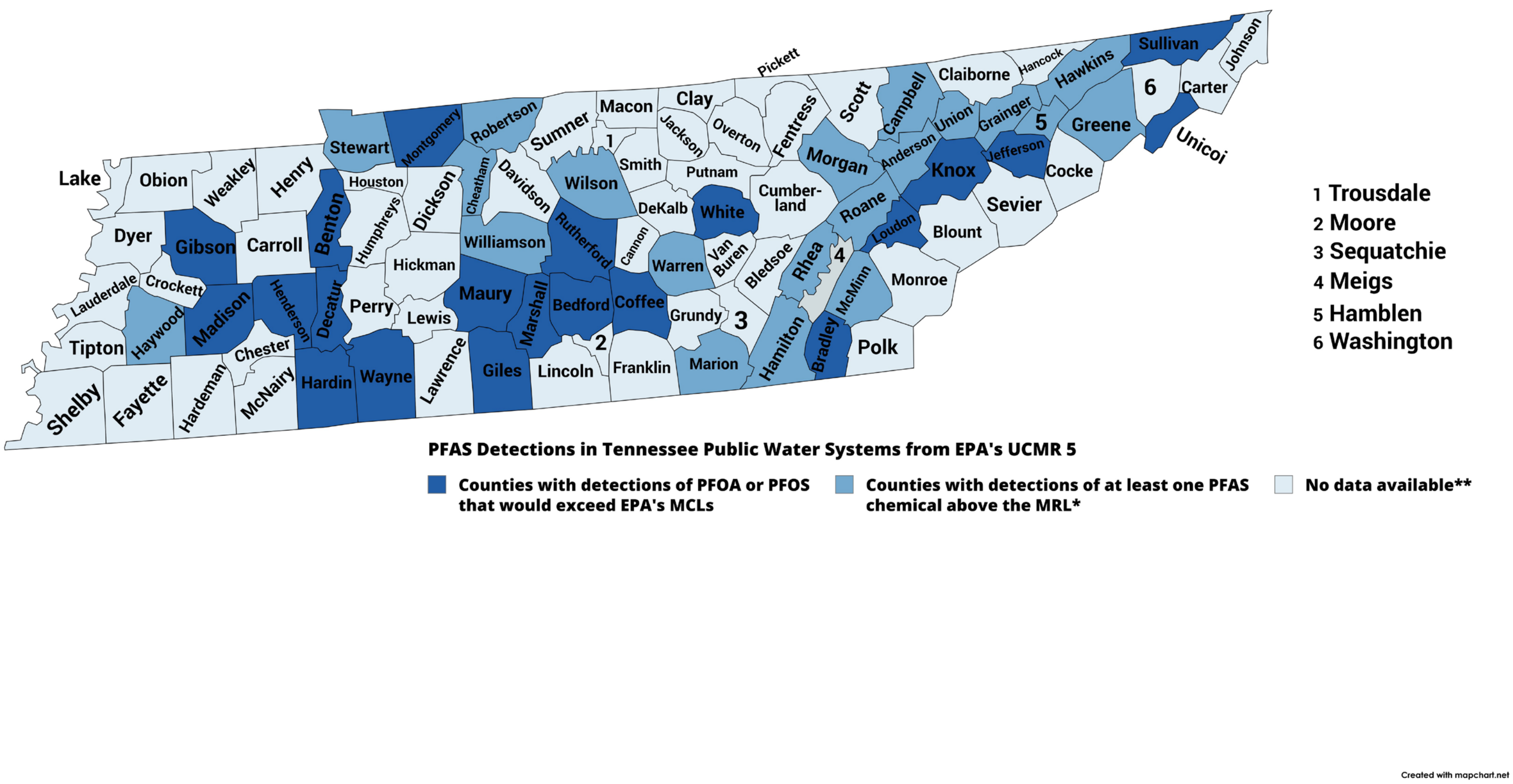



***Figure 2.***

****** *Indicates detection of at least one of twenty-nine PFAS chemicals tested under EPA's UCMR 5.*

******* *Indicates no sampling data available from EPA's UCMR 5 as of December 5, 2025.*

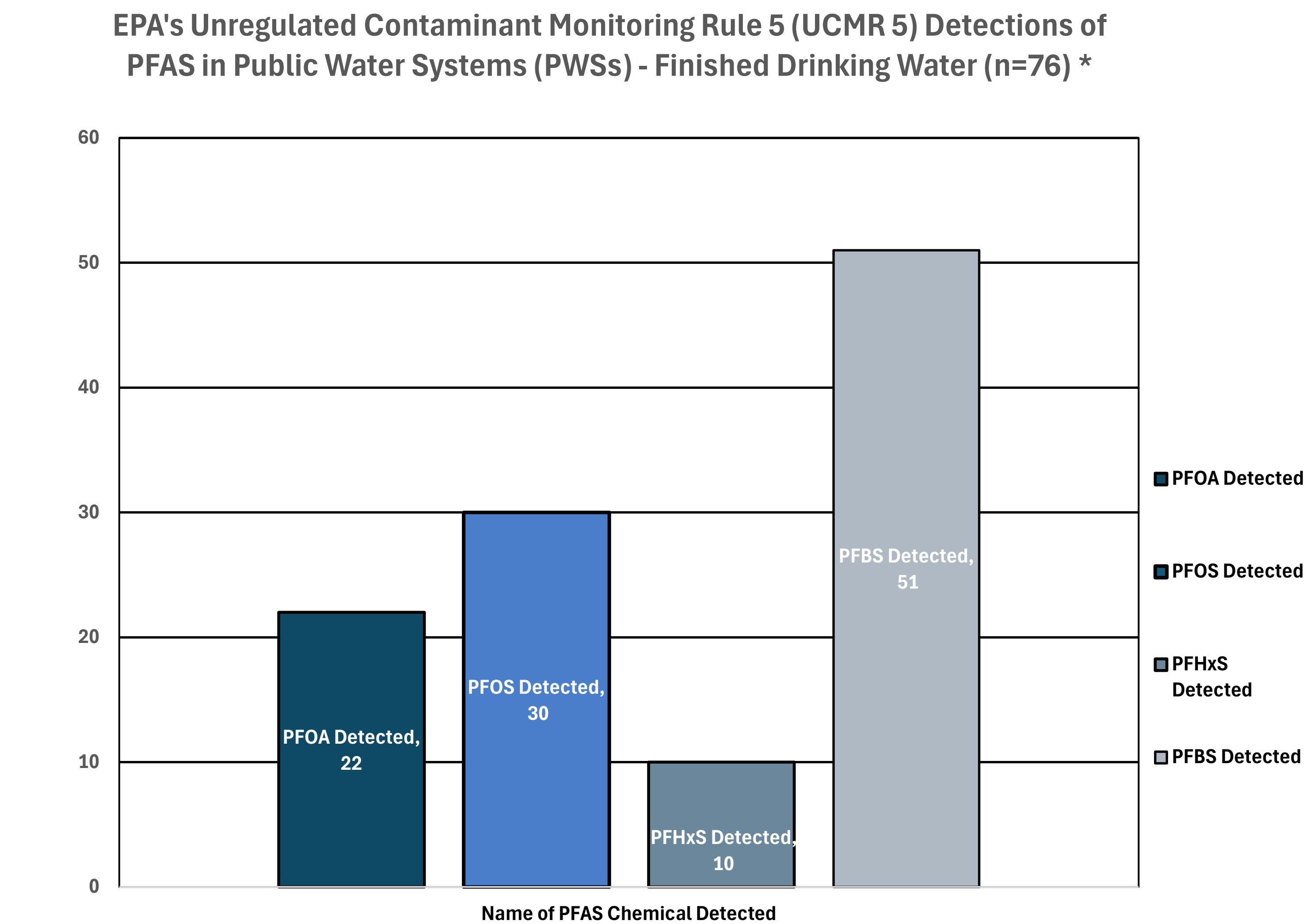
[6] EPA's UCMR 5 is ongoing through summer 2026. The data compared in this report from UCMR 5 sampling is data available as of December 2025. Accessed on December 5, 2025, from UCMR 5 Data Finder; results published to EPA's website after December 5, 2025 are not included in this analysis.

[7] Nationwide sampling under UCMR 5 began in March 2023; UCMR 5 sampling results became available for Tennessee from August 2023.

[8] Figure generated on January 12, 2026, using Mapchart.net.

## PFOA and PFOS

EPA's PFAS National Primary Drinking Water Regulations established MCLs of 4.0 ppt for both PFOA and PFOS in finished drinking water. In total, 34 PWSs had detectable levels of PFOA and PFOS greater than MCLs established under the EPA final rule for those respective PFAS chemicals. Current UCMR 5 sample results indicate that 22 unique PWSs across 13 counties detected levels of PFOA higher than the MCL, and 30 unique PWSs across 21counties detected levels of PFOS higher than the MCL. 18 unique PWSs detected levels of both PFOA and PFOS above the 4.0 ppt MCL.




**N= 76; number of unique Tennessee PWSs with PFAS detections above MRL for 4 PFAS compounds to be regulated under Safe Drinking Water Act per EPA final rule. Dataset accessed on December 5, 2025, from: EPA's UCMR 5 data finder website. Last Updated: December 15, 2025.*

***Chart 2. Detections of PFAS Chemicals in finished drinking water to be regulated under existing MCL final rule***

## PFHxS and PFBS

Ten unique PWSs had detections of PFHxS above the MRL. Two PWSs had detections of PFHxS above the final rule MCL of 10.0 ppt; two additional PWSs detected PFHxS near but below the MCL of 10 ppt. PFBS was detected in 51 unique PWSs. Under EPA's final PFAS rule, PFBS does not have an individual MCL but exposure to PFBS is taken into account through the rule's Hazard Index calculation. EPA plans to rescind and to re-evaluate the MCLs for these PFAS chemicals.

# Next Phases of PFAS Sampling and Resources

## *TDEC's PFAS Response*

To research state PFAS presence, educate the public, and mitigate risk, TDEC is prioritizing the following to address PFAS contamination in Tennessee.

### Research

TDEC will continue to:

- Develop a comprehensive picture of PFAS contamination in the environment.
- Evaluate the complete results of EPA's UCMR 5 upon availability.
- Analyze its source water sampling results alongside EPA's finished drinking water sampling results to identify relevant trends and areas for additional study.
- Gather data on PFAS to make data-driven decisions.
- Work with its federal, state, and local partners to address PFAS.

### Education

TDEC will continue to:

- Raise public knowledge and awareness of what PFAS are, exposure pathways, and potential health risks based on exposure.
- Evaluate and publicize recommended federal guidance and the latest scientific research related to risks associated with PFAS.

### Mitigation

TDEC will continue to:

- Ensure a clean and safe environment for Tennesseans and ensure that Tennessee is an ideal place for people to live, work, and play by making data-driven decisions.
- Develop plans for additional sampling efforts in the state and evaluate needs for future research and remediation efforts per the direction of leadership.

## ***Future Sampling Efforts and Resource Priorities***

### Hurricane Helene

In late September 2024, Hurricane Helene hit the Southeast causing destruction and loss of life across the region, including communities in East Tennessee. Due to heavy rains and historic flooding, impacted areas experienced a high volume of debris and water damage from the storm. Recovery and repair efforts are still ongoing in many remote and rural areas of the state. Most of TDEC's source water samples drawn in East Tennessee were collected in August and early September 2024 prior to Hurricane Helene's landfall. TDEC intends to investigate the extent to which the water sources for communities in East Tennessee may have possible PFAS contamination resulting from storm damage. Plans for resampling of the area are currently under development.

### Further Sampling

TDEC and TDH are collaborating to determine the needs for additional water sampling of finished drinking water for PFAS those PWSs that were not sampled under EPA's UCMR 5. Future sampling efforts of PFAS testing may expand beyond drinking water sources to additional media such as soil, fish tissue, etc. to aid TDEC in better understanding how PFAS accumulates in the environment. TDEC will continue to evaluate the needs for any additional PFAS sampling.

### Building Resources

TDEC recognizes that many communities throughout Tennessee have limited financial and technical resources to test for PFAS. TDEC is actively working to assess community needs to address PFAS and to aid local governments and municipalities. TDEC works to deliver programs across the state that provide communities with the ability to meet compliance requirements, address economic challenges, and better serve the people of Tennessee. Tennessee's State Revolving Fund (SRF) Loan Program within TDEC's Division of Water Resources administers both the Clean Water State Revolving Fund (CWSRF) Loan Program and the Drinking Water State Revolving Fund (DWSRF) Loan Program. These programs provide technical assistance and low-interest loans to cities, counties, utility districts, and water authorities across the state for planning, design, and construction of drinking water and wastewater infrastructure projects. We support TDEC's mission to protect and promote human health & safety, and to protect and improve water quality across the state by helping communities afford safe, sustainable and resilient water systems. For more information, please visit the State Revolving Fund Program.

*Published: January 13, 2026*

# *Reducing Exposure to PFAS in Drinking Water*

Members of the public can explore other resources to reduce risks of PFAS exposures.

## Explore EPA's Information on Public Drinking Water Systems

UCMR 5 tested many community water systems finished drinking water within Tennessee and across the nation. You can use the UCMR 5 Data Finder and PFAS Analytic Tool to see if your community's water system has been tested.

## Contact Your Local Water System

Call the phone number listed on your water bill or search online for your local water system's contact information. Ask if they have tested for PFAS.

## Request Your Water System's Annual Water Quality Report

This report is also known as the Consumer Confidence Report (CCR). It includes testing results and important water quality information. Your water system is required to provide it every year, ask for the latest version. For more information on CCR, please visit EPA's CCR webpage.

## Test Your Private Well

Approximately 10% of Tennesseans rely on private wells for drinking water supplies. TDEC does not test private wells for PFAS. However, well owners can arrange PFAS testing through certified private labs. Owners may conduct regular well testing for information on the overall quality of the water and whether it contains chemical contaminants, such as PFAS.

Funded by EPA through the Rural Community Assistance Partnership, Communities Unlimited offers free well assessments, provides trainings, and technical assistance for private well owners to help improve water quality. For additional information on resources for private wells, please visit TN's Department of Health webpage.

## If Your Water System Has Not Been Tested or You Are Seeking Additional Testing Services

If your area hasn't been tested or to seek additional testing, you may contact your local water provider, if supplied with municipal water. Additionally, private testing options are available. You can arrange independent testing through private labs. For information on EPA certified labs utilized for UCMR 5 testing, please refer to the list of EPA's Certified Labs.

## Drinking Water Filters to Reduce PFAS Exposure in Individual Households

Reducing PFAS levels at the tap is an effective way to lower your exposure. These systems treat water at a single faucet and are a relatively affordable way to reduce PFAS in the home. Filters that are certified by independent accredited bodies such as the National Sanitation Foundation (NSF) and the American National Standards Institute (ANSI) can provide tested and verified PFAS reduction. NSF is an ANSI-accredited third-party certification body that evaluates point-of-use water filters for reductions in harmful contaminants. The EPA has determined that the following point-of-use systems provide effective modes of water filtration for PFAS removal: Granular Activated Carbon (GAC), Ion Exchange (IX), and Reverse Osmosis (RO) systems.

- **NSF/ANSI 53: For filters certified to reduce specific PFAS chemicals**
  Find certified products with PFAS reduction claims here.
- **NSF/ANSI 58: For Reverse Osmosis systems**
  Find certified reverse osmosis systems here.

## When Buying a Filter

**Before you purchase a filter:**

- Look for certification labels (NSF/ANSI 53 or 58) on the product.
- Visit the manufacturer's website or contact them for certification details.
- Use the NSF website to confirm which PFAS chemicals the filter treats.
- Filters are only effective if maintained properly. Follow the manufacturer's instructions for replacing cartridges or membranes.

# Appendix 1 – PFAS Analytes Tested in TDEC's Source Water Sampling Effort

| Analyte | Abbreviation | CASRN |
|---|---|---|
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid | 11Cl-PF3OUdS | 763051-92-9 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid | 9Cl-PF3ONS | 756426-58-1 |
| 4,8-Dioxa-3H-perfluorononanoic acid | ADONA | 919005-14-4 |
| Hexafluoropropylene oxide dimer acid | HFPO-DA | 13252-13-6 |
| Nonafluoro-3,6-dioxaheptanoic acid | NFDHA | 151772-58-6 |
| Perfluorobutanoic acid | PFBA | 375-22-4 |
| Perfluorobutanesulfonic acid | PFBS | 375-73-5 |
| 1H,1H, 2H, 2H-Perfluorodecane sulfonic acid | 8:2FTS | 39108-34-4 |
| Perfluorodecanoic acid | PFDA | 335-76-2 |
| Perfluorododecanoic acid | PFDoA | 307-55-1 |
| Perfluoro(2-ethoxyethane) sulfonic acid | PFEESA | 113507-82-7 |
| Perfluoroheptanesulfonic acid | PPFHpS | 375-92-8 |
| Perfluoroheptanoic acid | PFHpA | 375-85-9 |
| 1H,1H, 2H, 2H-Perfluorohexane sulfonic acid | 4:2FTS | 757124-72-4 |
| Perfluorohexanesulfonic acid | PFHxS | 355-46-4 |
| Perfluorohexanoic acid | PFHxA | 307-24-4 |
| Perfluoro-3-methoxypropanoic acid | PFMPA | 377-73-1 |
| Perfluoro-4-methoxybutanoic acid | PFMBA | 863090-89-5 |
| Perfluorononanoic acid | PFNA | 375-95-1 |
| 1H,1H, 2H, 2H-Perfluorooctane sulfonic acid | 6:2FTS | 27619-97-2 |
| Perfluorooctanesulfonic acid | PFOS | 1763-23-1 |
| Perfluorooctanoic acid | PFOA | 335-67-1 |
| Perfluoropentanoic acid | PFPeA | 2706-90-3 |
| Perfluoropentanesulfonic | PFPeS | 2706-91-4 |
| Perfluoroundecanoic acid | PFUnA | 2058-94-8 |
| *N-ethyl perfluorooctanesulfonamidoacetic acid | NEtFOSAA | 2991-50-6 |
| * N-methyl perfluorooctanesulfonamidoacetic acid | NMeFOSAA | 2355-31-9 |
| * Perfluorotetradecanoic acid | PFTA | 376-06-7 |
| *Perfluorotridecanoic acid | PFTrDA | 72629-94-8 |
| **Total Number of Analytes – 29** | | |

A CASRN, or CAS Registry Number, is a unique numeric identifier that corresponds with one chemical substance and associated information about that substance.

Asterisks (*) indicate analytes were tested under EPA Method 537; all other analytes were tested under EPA Method 533.

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