

TDEC Source Water PFAS Sampling Strategy

Frequently Asked Questions (FAQs)

Overview

What is the TDEC strategy for PFAS monitoring and sampling?

The Tennessee Department of Environment and Conservation (TDEC) is working alongside local, state, and federal partners to monitor the presence of per- and polyfluoroalkyl substances (PFAS). As of August 2023, TDEC has implemented a [statewide sampling strategy](#) to monitor PFAS in source (raw/unfinished) water for all public drinking water systems statewide. As part of this effort, TDEC has contracted with an EPA-certified laboratory to test source water for 29 PFAS compounds, mirroring the PFAS that are being tested by certain water systems under the US Environmental Protection Agency's (EPA) required [Fifth Unregulated Contaminant Monitoring Rule \(UCMR 5\)](#) effort.

Both TDEC's sampling effort and UCMR 5 testing include monitoring the six PFAS included in the EPA's proposed [rulemaking](#) for national drinking water standards. Over the next two years, TDEC will test approximately 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 (PWS) serving approximately 88% of Tennesseans. TDEC anticipates completing and sharing the results of this massive sampling effort by summer 2025. To view TDEC PFAS sampling results, please visit our [interactive dashboard](#).

When will systems be tested?

TDEC is currently conducting testing across the state of Tennessee with each TDEC [Environmental Field Office](#) respective jurisdictions. While a complete schedule is yet to be set, TDEC aims to test all systems within the next two years.

Is TDEC sampling private wells?

No, TDEC is only sampling Public Water Systems (PWS) through this current sampling effort.

How are TDEC's PFAS sampling efforts and the EPA's UCMR 5 sampling efforts different?

There are two concurrent PFAS sampling efforts happening in the State of Tennessee:

1. TDEC PFAS Statewide Sampling Effort
2. EPA's UCMR 5 (Fifth Unregulated Contaminant Monitoring Rule)

While both efforts are testing for PFAS, it is critical to understand the following key differences:

1. TDEC is conducting its statewide sampling efforts separately from the EPA's UCMR 5.
2. TDEC is testing raw (source/untreated) water. EPA is testing finished (treated) drinking water.

See below for additional information about these two distinct efforts.

PFAS Sampling	TDEC Statewide Sampling	EPA UCMR 5
Lead Agency	TDEC	EPA
Sample Source	Raw (Source; Untreated) Water	Finished Drinking Water
PFAS Sampled	29 PFAS	29 PFAS and Lithium
Analytical Methods	EPA Methods 533 and 537.1	EPA Methods 533 and 537.1
Systems Included	All Public Drinking Water Systems	Public Drinking Water Systems... <ul style="list-style-type: none"> • Serving 10,001 or More Customers • Serving 3,301 to 10,000 Customers if Confirmed by EPA • A Nationally Representative Sample Serving Fewer than 3,000 Customers
How to Access the Data	Interactive Dashboard for TDEC's PFAS Sampling Effort	EPA's Occurrence Data from the Unregulated Contaminant Monitoring Rule
Additional Resources	<ul style="list-style-type: none"> • TDEC's PFAS Brief • TDEC's PFAS Statewide Sampling Strategy 	<ul style="list-style-type: none"> • EPA's Fifth Unregulated Contaminant Monitoring Rule • UCMR 5 Program Overview Fact Sheet • UCMR 5 Questions and Answers
For More Information	Contact TDEC	Contact EPA

Strategy Rationale

Why is TDEC sampling water (source/untreated) water through this effort?

TDEC is undertaking this statewide initiative to sample source (raw) water at public water systems to determine whether PFAS are present in Tennessee waters. While PFAS are not currently regulated by the EPA or TDEC, the EPA has proposed rules to regulate certain PFAS, including in finished drinking water, to protect public health. TDEC's sampling effort will help TDEC better understand the presence of 29 PFAS analytes in Tennessee. The goal of this sampling event is to examine PFAS levels across the state of Tennessee and to understand how state waters may be impacted by these compounds.

Will my system be testing its finished (treated) water?

TDEC is only testing raw (source/untreated) water for PFAS. Separately, water systems are testing for PFAS in finished (treated) water through EPA's UCMR 5 requirements. Individuals interested in the results of the UCMR 5 testing effort should contact their drinking water provider. TDEC is carefully monitoring the results of both separate sampling efforts and will continue to communicate with and to provide guidance for public water systems as EPA's rules and regulations on PFAS evolve.

Why is TDEC sampling raw water instead of finished water?

TDEC is undertaking this sampling effort to determine the presence and concentration of PFAS compounds in raw public drinking water sources throughout the State. The results of this study may also be used to identify watersheds or aquifers that have PFAS contamination and to characterize groundwater conditions across state and provides the state with an idea of areas that may require additional concentration efforts and/or treatment. Having the raw water will also allow TDEC to compare how well a given treatment plant is operating.

Testing Procedures

What experience does the sampler have in pulling these types of samples?

Qualified and trained staff from TDEC's Division of Water Resources are conducting the sampling efforts.

What laboratory will be conducting TDEC's PFAS testing, and is the laboratory certified?

TDEC contracted with [PACE Analytical](#) to conduct PFAS testing. PACE Analytical has EPA certification to test for PFAS utilizing EPA methods [533](#) and [537.1](#). Sampling is conducted in accordance with the required protocols and procedures of these testing methods to ensure the quality and accuracy of sampling results. For additional information regarding sampling methodology, please refer to the [EPA's website](#).

Sample Results

Can I view TDEC's PFAS monitoring results now?

Yes, results are provided on a rolling basis and are currently available on our [interactive dashboard](#). TDEC staff will update the dashboard as additional data are analyzed and received and will indicate on the website when the most recent updates have been completed. Due to the high volume of water intake sampling, the results of the TDEC PFAS sampling effort for all water intakes will likely not be available until summer 2025. TDEC's statewide testing strategy aims to maintain the highest level of accuracy in procedural compliance for the sampling and lab testing processes prior to public release of the lab results.

How often will TDEC's dashboard be updated with new data?

TDEC will release updated data on sampling results to the public approximately every 2-4 weeks, depending on sampling schedules and laboratory processing times. TDEC's dashboard will indicate the day when sampling results were last updated. Tested water systems will also be notified of test results via email from TDEC.

What actions will be taken if a sampling result comes back at or above the detection or reporting levels?

There is no regulatory limit on raw water so there is no action that the state would take on the water system. However, TDEC will be available to help the system navigate the [State Revolving Fund Program \(SRF\)](#) and/or grants pathways to find funding if the system wishes to explore possible alterations to its treatment plan to address PFAS or [Emerging Contaminants of Concern \(ECCs\)](#).

How do TDEC's sampling results apply to any future drinking water regulations?

As TDEC is testing raw (source/untreated) water, these sampling results would not be directly tied to future drinking water regulations. Individuals/systems should refer to the results from the UCMR 5 effort for that purpose.

What are the detection and reporting levels for the 29 PFAS?

The minimum detection level (MDL) is the minimum concentration of a PFAS analyte that can be measured and reported with statistical confidence that the PFAS analyte is greater than zero. The minimum reporting level (MRL) is the lowest concentration at which a PFAS analyte can be reliably quantified under method conditions. MRLs are set higher than MDLs. If a PFAS analyte was detected above the MDL but below the MRL, that result indicates that the analyte was detected with statistical confidence but its detection level is an estimate.

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The MRLs for PFOA, PFOS, PFHxS, HFPO-DA, GenX, and PFNA are below EPA's proposed regulatory limits. If a PFAS analyte is detected above the MRL, then it can be determined that the analyte was not only detected, but that it was detected at the level reported with statistical confidence.

Analyte	Abbreviation	CASRN	Minimum Detection Limit (MDL) (parts per trillion) ¹	Minimum Reporting Level (MRL) (parts per trillion) ²
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	763051-92-9	0.2	1.8
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	756426-58-1	0.1	1.8
4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4	0.2	1.8
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6	0.4	1.8
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6	0.3	1.8
Perfluorobutanoic acid	PFBA	375-22-4	0.6	1.8
Perfluorobutanesulfonic acid	PFBS	375-73-5	0.2	1.8
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	8:2FTS	39108-34-4	0.5	1.8
Perfluorodecanoic acid	PFDA	335-76-2	0.2	1.8
Perfluorododecanoic acid	PFDoA	307-55-1	0.2	1.8
Perfluoro(2-ethoxyethane) sulfonic acid	PFEESA	113507-82-7	.08	1.8
Perfluoroheptanesulfonic acid	PFHpS	375-92-8	0.4	1.8
Perfluoroheptanoic acid	PFHpA	375-85-9	0.2	1.8
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	4:2FTS	757124-72-4	0.4	1.8
Perfluorohexanesulfonic acid	PFHxS	355-46-4	0.3	1.8
Perfluorohexanoic acid	PFHxA	307-24-4	0.2	1.8
Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1	0.3	1.8
Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5	0.2	1.8

¹ MDLs are from actual sample events conducted as a part TDEC's PFAS sampling effort. The MDLs are approximate and will vary slightly from sample event to sample event due to factors such as, but not limited to, 1) sample volume, 2) instrument calibration, 3) measurement scale, 4) lab used, and 5) lab analyst.

² MRLs are from actual sample events conducted as a part TDEC's PFAS sampling effort. The MRLs are approximate and will vary slightly from sample event to sample event due to factors such as, but not limited to, 1) sample volume, 2) instrument calibration, 3) measurement scale, 4) lab used, and 5) lab analyst. All MRLs are at or below the EPA's UCMR 5 MRLs.

Last Updated: January 4, 2024

Perfluorononanoic acid	PFNA	375-95-1	0.2	1.8
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	6:2FTS	27619-97-2	0.6	1.8
Perfluorooctanesulfonic acid	PFOS	1763-23-1	0.3	1.8
Perfluorooctanoic acid	PFOA	335-67-1	0.2	1.8
Perfluoropentanoic acid	PFPeA	2706-90-3	1.0	1.8
Perfluoropentanesulfonic	PFPeS	2706-91-4	0.3	1.8
*Perfluoroundecanoic acid	PFUnA	2058-94-8	0.1	1.8
*N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	2991-50-6	0.7	2.0
*N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	2355-31-9	0.6	2.0
* Perfluorotetradecanoic acid	PFTeDA	376-06-7	0.5	2.0
*Perfluorotridecanoic acid	PFTrDA	72629-94-8	0.5	2.0
Total		29		

Additional Information and Resources

How do I find out where my source water comes from?

Most of the drinking water in the United States, including in Tennessee, is supplied via Public Water Systems (PWS). Examples of PWS-supplied properties can include but are not limited to residential buildings, community facilities (such as schools, libraries, health clinics, parks, etc.), and some commercial buildings (office buildings, shops, restaurants, private retail, etc.). TDEC does not track or maintain locational data specific to the service area of each PWS. For PWS location and service information, please contact your water provider or see your water provider billing information. To learn more, you can utilize the [Safe Drinking Water Information System \(SDWIS\)](#) which tracks PWS water contamination levels per monitoring and reporting requirements of the 1974 Safe Drinking Water Act to ensure water safety.

How do I learn more about TDEC’s sampling effort?

For additional information on TDEC’s PFAS sampling effort, please visit our website. For questions related to the TDEC’s sampling efforts please contact our team at TDEC.PFAS@tn.gov. This email inbox is regularly monitored by TDEC staff.

How do I learn more about EPA’s UCMR 5?

To learn more about the EPA’s UCMR 5 testing, please visit the EPA’s UCMR 5 [webpage](#) or [contact the EPA](#).



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For additional information please see the following resources:

[Environmental Protection Agency \(EPA\)](#)

[Food and Drug Administration \(FDA\)](#)

[Department of Health and Human Services /Centers for Disease Control \(CDC\)](#)

[Department of Defense \(DOD\)](#)

[Department of Energy \(DOE\)](#)

[Tennessee's Department of Health](#)