August 31, 2026

Administrator Lee Zeldin
U.S. Environmental Protection Agency (EPA)
Docket No. EPA-HQ-OW-2023-0469

RE: Environmental Working Group Comments on Revisions to Establish the Sixth Unregulated Contaminant Monitoring Rule (UCMR 6) for Public Water Systems (Docket No. EPA-HQ-OW-2023-0469)

The Environmental Working Group (EWG) urges the EPA to lower the reporting limits and require full reporting from all lab reporting of test results in the nationwide testing for “forever chemicals” and pesticide byproducts under UCMR 6.

These changes are particularly important for ultra-short-chain PFAS such as trifluoroacetic acid (TFA), which may be present in drinking water at concentrations below the EPA’s proposed reporting limit. TFA and other compounds from PFAS pesticide use have been increasingly detected in environmental and surface water samples across the country. Peer-reviewed studies have also repeatedly linked cumulative PFAS exposure to immune system harm, reproductive risks and developmental issues.

Additionally, EWG urges the EPA to pursue nationwide microplastics testing through the UCMR 6. Exposure to micro- and nanoplastics through drinking water is a growing public health concern. Comprehensive monitoring to quantify and characterize this exposure should be an urgent public health priority.

EWG is a nonprofit public health and environmental research and advocacy organization, headquartered in Washington, D.C., with staff also based in Minneapolis and Sacramento. EWG’s research focuses on understanding health risks from chemical contamination of food, water, consumer products and the environment, and on supporting a healthy indoor and outdoor environment for all communities.

Summary of EWG's comments:

1. No secret test results. The EPA should set reporting levels at the lowest concentration achievable by approved laboratories, and require that every result including those above and below the quantification limit – and specifically any results collected below the minimum reporting level (MRL) – be reported to EPA and released publicly.
2. The proposed MRL for TFA will likely miss a large proportion of contamination. A 200 ng/L MRL sits above the median of nearly every U.S. drinking water measurement in the peer-reviewed literature.
3. Microplastics testing of drinking water is urgently needed.

1. No secret test results

For TFA, as well as other contaminants, the EPA UCMR program should require public disclosure of all results, including results collected below the MRL.

During UCMR 3 testing, multiple laboratories were able to detect and quantify PFOA and PFOS at concentrations significantly below the MRL, suggesting that many samples could have been measured at concentrations below EPA's reporting limit. This PFAS occurrence data below reporting limits were not shared with EPA, the public, or even with the utilities that commissioned the testing in some cases. The private laboratories systematically collected PFAS occurrence data that were generated with public funds but withheld from public disclosure, while using these data in company presentations.

In the following slide, it was reported that EPA detection frequencies for PFAS in UCMR 3 were between 0.1 and 1.0 percent, but if a lower reporting limit of 2.5 ng/L had been used, the detection frequencies would have increased up to 100 fold with PFOA found in 23.5 percent of samples.[1]

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[1] Eaton A. A Further Examination of a Subset of UCMR 3 PFAS Data Demonstrates Wider Occurrence. Presentation, December 8, 2017. Published by PFAS Central, a project of the Green Science Policy Institute.
https://pfascentral.org/science/presentation-a-further-examination-of-a-subset-of-ucmr-3-pfas-data-demonstrates-wider-occurrence

Here's the Bottom Line: If You Look Lower You See a Lot More Detection

Compound	Official NCOD Database samples with detection (UCMR 3 MRLs)	EEA Subset of Samples with detection using UCMR 3 MRLs	EEA Subset of Samples with detection using 5 ng/L MRL	EEA Subset of Samples with detection using 2.5 ng/L MRL
N	~37,000	~10,500	~10,500	~10,500
PFOS	0.8%	1.3%	11.5%	20.5%
PFOA	1.0%	1.8%	12.5%	23.5%
PFNA	0.1%	0.1%	0.6%	1.9%
PFHxS	0.6%	1.0%	6.0%	12.3%
PFHpA	0.6%	1.5%	3.3%	8.8%
PFBS	<0.1%	0.2%	5.3%	11.9%

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This failure to require disclosure of all test results led to additional costs for public utilities who subsequently requested these test data or retested the water. For example, the Massachusetts Department of Environmental Protection wrote a letter to all utilities on June 12, 2019, requesting that they reach out to their UCMR 3 testing lab to request all test results while noting that this would incur additional costs.[2]

Dozens of academic papers analyzing nationwide exposure to PFAS and the health impacts for drinking contaminated water were limited because of this unnecessary censoring of results. A publicly funded government testing program should not generate secret data that result in the loss of scientifically important information as well as additional costs for the public.

2. **The proposed reporting limit for TFA will likely miss a large proportion of contamination**

TFA is now the most widely detected "forever chemical" in water systems worldwide and can arise from multiple independent industrial pathways: breakdown of PFAS pesticides, degradation of fluorinated refrigerants (including newer "climate-friendly" refrigerants), and residues from certain pharmaceuticals.

Peer-reviewed research has linked cumulative PFAS exposure to immune, reproductive, and developmental harm, underscoring the need for accurate national occurrence data, both to assess public health risk and to identify which upstream sources are driving contamination in a given region. A reporting threshold set above the concentrations typically found in the field works against both goals: It undercounts real-world exposure and effectively privatizes a large

[2] Massachusetts Department of Environmental Protection, Drinking Water Program. "UCMR3 Sampling Data for Per- and Polyfluoroalkyl Substances (PFAS) with Lower Reporting Levels." Letter to public water suppliers, June 12, 2019. Signed A.M. Yvette DePeiza, Director.

proportion of the data that regulators and researchers need to trace contamination back to its source, including agricultural PFAS pesticide use and emerging sources like data center cooling systems (e.g. f-gases). As the results of our literature review show, most recent peer-reviewed studies of TFA in U.S. drinking water report concentrations that fall largely below the proposed 200 ng/L MRL, meaning a substantial share of actual contamination would go entirely unreported under the rule, as currently written.

Results of EWG's literature review of TFA quantification in drinking water

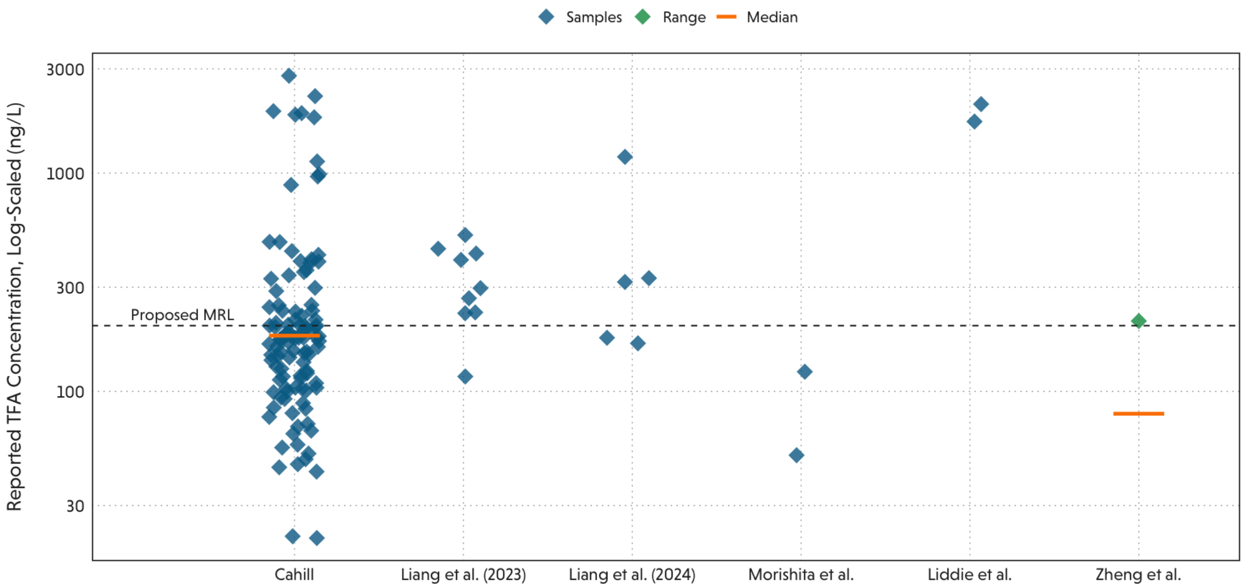
From peer-reviewed studies that have reported TFA concentrations in water, the range of TFA has been quantified at 51-2,069 ng/L, with varying reporting limits (see Table 1 below).

For recency, specificity, and reproducibility, we only considered peer-reviewed studies that reported TFA concentrations in drinking water samples in the United States between 2021 and 2026 (see Figure 1 below). Several papers were excluded for looking at other aquatic matrices (e.g. lakes or rivers) or for not measuring TFA (e.g. Total PFAS only).

Only six studies met our inclusion criteria: Cahill, Liang et al. (2023), Liang et al. (2024)., Liddie et al., Morishita et al., and Zheng et al., all of whom reported either medians, ranges, or individual data points of TFA concentrations in drinking water.

Median concentrations reported in Cahill (180 ng/L) and Zheng et al. (79 ng/L) were 1.1 to 2.5 times below the proposed MRL. Morishita et al. collected two finished drinking water samples from Cincinnati, Ohio. They reported concentrations of 123 ng/L and 51 ng/L: levels 1.6 to 3.9 times below the proposed MRL. In 2023, Liang et al. collected ten samples of tap water from Bellefonte, Pennsylvania, with varying degrees of filtration. TFA was detected in nine of the ten samples, with a reported concentration range of 117-520 ng/L. TFA was not detected in the only tap water sample treated at-source with reverse osmosis. The following year, Liang et al. collected five follow-up samples of tap water treated with reverse osmosis from the same location in Pennsylvania. This time, they reported a concentration range of 166-1,186 ng/L, with two of the five samples falling below the proposed MRL. Conversely, Liddie et al. reported TFA concentrations in Eastern Massachusetts far exceeding the proposed MRL, with concentrations of 1,721 and 2,069 ng/L for two samples treated with different technologies.

Figure 1. TFA concentrations in U.S. drinking water reported in peer-reviewed literature between 2021 and 2026. Non-detects not visualized. Log-scaled y-axis.



Note: Due to diversity in methodological design and journal styles, some studies reported sample-level data while others only reported summary statistics (range, minimum, and/or maximum). Types of data visualized for each study are indicated in the legend and details are available in Table 1.

Table 1. Literature review of peer-reviewed studies (2021-2026) quantifying TFA in drinking water

Study Name	Study Title	TFA Quantification	Region	Water Matrix	Num. Samples	Detection Frequency	Study Authors	Journal	DOI
Cahill 2022	Increases in Trifluoroacetate Concentrations in Surface Waters over Two Decades	Median: 180 ng/L Range: 21.3-2,790 ng/L	Northern California	Surface Water Rivers and streams supplying drinking water to Sacramento/San Joaquin water systems	45	Not Reported	Thomas M. Cahill	Environmental Science & Technology, 56(13), 9428–9434	10.1021/acs.est.2c01826
Zheng et al. 2023	Elevated Levels of Ultrashort- and Short-Chain Perfluoroalkyl Acids in US Homes and People	Median: 79 ng/L Range: ND-210 ng/L	Indiana	Household Drinking Water 90% tap/municipal 10% private wells	81	95%	Guomao Zheng; Stephanie M. Eick; Amina Salamova	Environmental Science & Technology, 57(42), 15782–15793	10.1021/acs.est.2c06715
Liang et al. 2023	Analysis of ultrashort-chain and short-chain (C1 to C4) per- and polyfluorinated substances in potable and non-potable waters	Range: 117–520 ng/L	Bellefonte, PA	Tap Water 8/10 samples: raw tap water 1/10 sample: filtrated well water 1/10 sample: RO-filtrated tap water	10	90% ND was RO-treated	Shun-Hsin Liang; Justin A. Steimling; Mike Chang	Journal of Chromatography Open, 4, 100098	10.1016/j.jcoa.2023.100098

Liang et al. 2024	Incorporating ultrashort-chain compounds into the comprehensive analysis of per- and polyfluorinated substances in potable and non-potable waters by LC-MS/MS	Range: 166-1,186 ng/L	Bellefonte, PA	Tap Water	5	100%	Shun-Hsin Liang; Moubani Chakraborty; Justin A. Steimling	Journal of Chromatography Open, 6, 100188	10.1016/j.jcoa.2024.100188
Morishita et al. 2025	Occurrence of ultrashort-chain per- and polyfluoroalkyl substances in water samples from Ohio, Indiana, and Illinois	Range: 51-123 ng/L	Ohio	Finished drinking water (different treatments by site)	2	100%	Karen Noda Morishita; Alexander Pimenidis; Leif Abrell; Jon Chorover; Xi-Zhi Niu	Journal of Hazardous Materials: Organics, 1(1), 100006	10.1016/j.hazmo.2025.100006
Liddie et al. 2026	Trifluoroacetic Acid (TFA) Exceeds All Other Extractable Organofluorine in Drinking Water from Eastern Massachusetts, United States	Range: 1,721-2,069 ng/L	Eastern Massachusetts	Finished drinking water from 19 CWS (GAC and/or IX) Each sample is an average across triplicates	2	Not Reported	Jahred M. Liddie; Euna Kim; Faiz Haque; Anton Roche; Ethan J. Sontarp; Elsie M. Sunderland	Environmental Science & Technology Letters, 13(8), 1157–1163	10.1021/acs.estlett.6c00404

Altogether, this literature review indicates that the proposed MRL likely will not capture the true extent of TFA contamination, since concentrations in many locations and across samples are frequently below 200 ng/L. As proposed, the EPA reporting of detections based on the MRL runs the risk of underestimating the extent of TFA contamination in regions not known to be PFAS hotspots or proximate to known PFAS dischargers. The 200 ng/L limit will only yield public reports of very high concentrations, missing low-to-moderate contamination – a substantial share of the distribution in several studies – entirely.

Notably, this is not an analytical limitation: California's own certified method for TFA (CAC-TFA-1.1) achieves a reporting level of 85 ng/L, less than half of EPA's proposal, and commercial and research labs report reliably at 20 ng/L and below.

Therefore, the rule should include a lower MRL and must be adapted to mandate reporting of *all* detects of TFA in drinking water, not just the few that exceed the proposed MRL of 200 ng/L.

3. **Microplastics testing is urgently needed.**

Current analytical tools have documented the presence of microplastics in diverse matrices, from human tissues to drinking water. Research shows that every day, people unknowingly swallow, inhale and are dermally exposed to large quantities of plastic particles in the nano- and micro-size range and these particles accumulate in our bodies.

While more research is urgently needed on the health impacts of exposure, existing data support a conclusion that exposure to plastic polymer particles can threaten human health. Studies link exposure to plastic particles with a greater risk of stroke or heart attack, and a variety of additives are associated with plastics and plastic fragments.[3,4]

There is an urgent need for nationwide sampling for microplastics that quantifies the total mass, plastic type, and morphology of micro- and nanoplastics in public drinking water systems.

Sincerely,

Varun Subramaniam, M.S.	Tasha Stoiber, Ph.D.	David Andrews, Ph.D.
Science Analyst	Senior Scientist	Chief Science Officer

[3] Marfella R, Prattichizzo F, Sardu C, et al. Microplastics and Nanoplastics in Atheromas and Cardiovascular Events. N Engl J Med. 2024;390(10):900-910. doi:10.1056/NEJMoa2309822
[4] Zhang X, Yu C, Wang P, Yang C. Microplastics and human health: unraveling the toxicological pathways and implications for public health. Front Public Health. 2025;13:1567200. Published 2025 Jun 18. doi:10.3389/fpubh.2025.1567200