

Per- and Polyfluoroalkyl Substances (PFAS)

On March 14, 2023, the U.S. Environmental Protection Agency (EPA) announced new *draft* drinking water standards for a subset of compounds referred to as PFAS. Until now, there have been no drinking water standards for PFAS. EPA is proposing to regulate six specific chemicals as shown below.

The proposed Maximum Contaminant Level (MCLs) for PFOA and PFOS in drinking water:

4 parts per trillion for PFOA

4 parts per trillion for PFOS

The new *draft* drinking water standard also includes:

Hazard Index for a combination of PFHxS, GenX, PFNA, and PFBS compounds not to exceed 1
A Hazard Index is a tool used to evaluate combined risk from exposure to a mixture of contaminants. It is determined by calculating the ratio of the contaminant level in the water to the health-based water concentration (HBWC) and summing this ratio for these four PFAS: PFHxS, GenX Chemical (also known as HFPO-DA), PFNA, and PFBS.

For reference, one ppt is the approximate equivalent of one grain of sugar dissolved in an Olympic-sized swimming pool. The fact that a substance is detectable doesn't always mean it is harmful. The health significance of these trace contaminants is often under review and the subject of further study and research.

As these are *proposed* drinking water standards, they are not enforceable standards at this time. The EPA will follow the regulatory development process before the proposed MCLs become the final standards water utilities must meet. Upon completion of this process, the EPA's final drinking water standards may differ from the proposed drinking water standards.

Background

The EPA currently has drinking water regulations for more than 90 contaminants which the City of Graham consistently meets. Providing a clean and safe drinking water supply, and the regulations that protect it, is based on centuries of scientific research. As our collective understanding of safe drinking water evolves, so do our work and the regulations affecting it.

PFAS stands for perfluoroalkyl and poly-fluoroalkyl substances a group of thousands of man-made chemical compounds in use since the 1940s to make products resistant to high temperatures, water, and stains.

The compounds are believed to have adverse health effects at very low concentrations over a lifetime of exposure. Because of these properties, PFOA and PFOS were phased out of production by U.S. manufacturers in the mid-2000s. However, PFOA and PFOS can still be imported into the U.S. through consumer goods. They also remain in the environment due to decades of industrial pollution and consumer product use.

According to EPA's analysis, only 20% of an individual's exposure to these compounds comes from drinking water. The remaining 80% of a person's exposure to PFAS comes from a variety of consumer goods some of which are listed below:



You can limit your exposure to PFAS compounds (and reduce their prevalence in the environment) by assessing and reducing your exposure in other aspects of your life. (<https://cleanwater.org/10-things-you-can-do-about-toxic-pfas-chemicals>)

Graham-Mebane Water Treatment Plant Test Results:

The Graham-Mebane Water Treatment Plant participated in the NC Public Water Supply Section's voluntary per- and poly-fluoroalkyl substances (PFAS) and 1,4-dioxane sampling efforts in September, October, and November of 2022.

Our PFOA and PFOS results were as follows:

Sample Date	PFOA (ppt)		PFOS (ppt)	
	Source Water	Drinking Water	Source Water	Drinking Water
9/18/2022	5.25	5.40	7.46	6.77
9/21/2022	5.13	4.94	7.81	7.07
10/12/2022	6.12	6.4	8.59	7.46
11/9/2022	6.45	5.66	9.97	6.52

We have not detected GenX in our source or drinking water during these sampling events. We also have not detected 1,4-Dioxane in our drinking water during these sampling events.

Graham-Mebane Water Treatment Plant was also below the proposed Hazard Index for the combined compounds of PFHxS, GenX, PFNA, and PFBS.

The full list of sampling results for our facility may be viewed here:


 Graham_NC0201015
 _PFAS GenX 14Diox.:

In the coming months, the Graham-Mebane Treatment Plant Staff will be diligently engaged in the finalization of PFAS drinking water regulation and determining the best course of action for our community, including assessment of potential sources, as well as options for mitigation and treatment. **The City of Graham currently meets all state and federal requirements.**

EPA anticipates finalizing the rule by the end of 2023. The effective date for the final PFOA and PFOS standards is expected between 2026-2028.

It is important to repeat that the proposed PFAS MCLs are not enforceable drinking water standards at this time. If and when the lower limits are finalized, it will require time to determine and fund efforts to meet the revised limits. During this time, residents with high levels of vulnerability may want to assess strategies to reduce their exposure to PFAS compounds. (https://epi.dph.ncdhhs.gov/oe/pfas/PFAS_TestingFiltration.pdf)

The Graham-Mebane Water Treatment Plant will continue to monitor and participate in PFAS testing and regulation and will keep the public apprised of this issue.

If you have any questions or concerns, please contact us at 336-578-3264.