

EPA finalizes Drinking Water Regulation for PFAS



On April 10th, 2024, the US Environmental Protection Agency (EPA) announced its final enforceable Maximum Contaminant Levels (MCLs) in drinking water under the Clean Water Act for six (6) per- and polyfluoroalkyl substances (PFAS). The rule requires public water systems to monitor for PFAS and notify the public of any contamination starting in 2027. Municipalities will have 5 years to comply with this new National Primary Drinking Water Regulation (NPDWR) and take action if monitoring shows that drinking water levels exceed these MCLs.

The EPA-finalized MCLs are 4.0 parts per trillion (ppt) for PFOA, 4.0 ppt for PFOS, 10 for PFNA, 10 ppt for PFHxS, and 10 ppt for HFPO-DA (GenX) individually. Also, the NPDWR uses a Hazard Index (HI) MCL to limit any mixture containing two or more of PFNA, PFHxS, PFBS, and HFPO-DA. (see table)

COMPOUND	ENFORCEABLE MCL
PFOA	4.0 ppt
PFOS	4.0 ppt
PFNA	10 ppt
PFHxS	10 ppt
HFPO-DA ("GenX")	10 ppt
PFNA	Hazard Index (HI) = 1* (unitless) <i>*Calculation rounded to one (1) significant figure</i>
PFHxS	
PFBS	
HFPO-DA ("GenX")	

What is a Hazard Index?





This is the first time a Hazard Index approach has been used for drinking water regulation but is a common tool used in other types of EPA regulation like the Superfund program, to understand health risk from chemical mixtures. The Hazard Index considers the different toxicities of PFNA, PFHxS, PFBS, and HFPO-DA. For these PFAS, water systems would use a hazard index calculation to determine if the combined levels of these PFAS in the drinking water at each system pose a potential risk and require action.

The Hazard Index is made up of a sum of fractions. Each fraction compares the level of each individual PFAS measured in the water to the highest level determined not to have risk of health effects. The measured value is divided by health-based values for each PFAS and then the fractions are added together for the 4 compounds:

HAZARD INDEX COMPOUND	HEALTH BASED VALUES
PFNA	10 ppt
PFHxS	10 ppt
PFBS	2000 ppt
HFPO-DA ("GenX")	10 ppt



How do I Calculate It?

				= Hazard Index (HI) <small>(All concentrations in ppt or ng/L)</small>
10	2000	10	10	

HI Denominators are called Health-Based Water Concentration (HBWC)

To determine compliance, sum up all the fractions for each PFAS and if the total is above 1, it is a violation of the new regulation.



Affordable, Effective PFAS Treatment Solutions to Comply with this New Regulatory Landscape

The most common water treatment technologies for removing PFAS from water include granular activated carbon (GAC), ion-exchange resin (IX) and high-pressure membranes (Nanofiltration / Reverse Osmosis). All these solutions merely capture and divert PFAS, creating a concentrated waste stream that will become increasingly more challenging to dispose of, at greater costs. Ovivo's integrated approach combines concentration, destruction, and polishing technologies to ensure a complete, economically viable solution that destroys all types of PFAS to meet compliance. This integrated solution will reduce both operating costs and offsite liabilities around the disposal of adsorption media such as GAC and IX resins. The solution also pairs well with high-pressure membranes.



With over 150 years of experience in water treatment, Ovivo brings a legacy of expertise and reliability to the table. As a trusted partner, committed to innovation, Ovivo is dedicated to reducing the PFAS treatment burden on municipalities and on industry.

pfas@ovivowater.com

pfas.ovivowater.com/epa