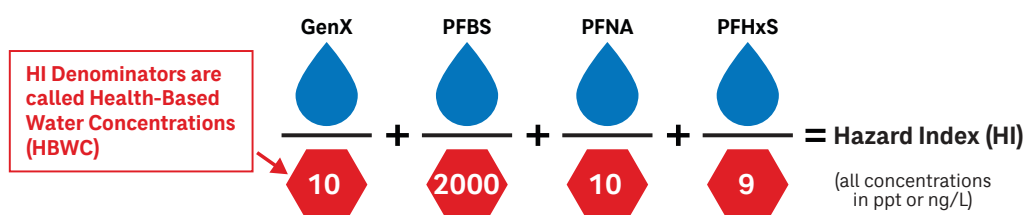


EPA's Draft PFAS Regs. What Do You Need To Know?

On March 14th, 2023, EPA proposed National Drinking Water Standards for six PFAS (PFOS, PFOA, PFNA, PFBS, PFHxS, and GenX). The draft rule proposes a combination of traditional Maximum Contaminant Levels (MCLs) and a novel Hazard Index (HI) concept.

Numerical levels for compliance

- 4.0 ng/L or ppt MCL PFOA
- 4.0 ng/L or ppt MCL PFOS
- 1.0 (unitless, NOT 1 ppt) Hazard Index (HI) for a mixture of PFNA, PFHxS, PFBS, and GenX



"Under the HI approach, additional PFAS can be added over time once more information on health effects, analytics, exposure and/or treatment becomes available, and merits additional regulation as determined by EPA."

- See next page for HI examples

Why did EPA draft these regulations?

- PFOA & PFOS: kidney and liver cancer risks - (MCL Goal = 0 ng/L)
 - 4 ng/L is the practical quantitation level (PQL) or minimum quantitation level where the lowest PFOA/PFOS can be reliably measured
- PFNA (developmental effects), PFHxS (thyroid effects), PFBS (thyroid effects) & GenX (liver effects) - (MCLG = 1, unitless)
 - Impacts of "dose additivity" = "low levels of multiple PFAS that individually would not likely result in adverse health impacts, when combined in a mixture are expected to result in adverse health effects"
 - While PFOA, PFOS & PFNA have been phased out, other PFAS concentrations in source water may increase

Treatment

- Best Available Technology (BAT):
 - Granular activated carbon (GAC)
 - Anion exchange (AIX)
 - High pressure membranes - nanofiltration (NF) and reverse osmosis (RO)
- Small systems serving <3,300 people
 - Point-of-use (POU) RO and NF filters are allowed (NSF/ANSI certified for the required PFAS treatment)

System Size (Population Served)	GAC	IX	RO/NF	Point of Use (POU) RO/NF ¹
25-500	Yes	Yes	No	Yes
501-3,300	Yes	Yes	No	Yes
3,301-10,000	Yes	Yes	Yes	applicable ²

Monitoring

Initial Monitoring:

- Large groundwater systems serving >10,000 people & surface water systems to complete quarterly monitoring over 12-months
- Small groundwater systems serving <10,000 people to complete monitoring twice over 12-months (90 days apart).
- Must be completed within 3 years of the final rule
- Previous monitoring results may be used
 - UCMR 5 or other data collected using EPA Methods 533 or 537.1 after 1/1/2023
 - Data collected between 1/1/2019-12/31/2022 can be used if they are below the proposed rule trigger level

Compliance Monitoring:

- Quarterly monitoring, unless approved for reduced monitoring
- Initially required to monitor quarterly
- Compliance based on a **running annual average**.
 - Example: Q1 = 5 ppt & Q2, Q3 & Q4 = 2 ppt
 - Running annual average = NOT in violation
- Results <PQL will be summed as zero
 - Example: PFOA results of 2.0, 1.5, 5.0 & 1.5 ppt (results below PQL)
 - Running annual average = (0.0 + 0.0 + 5.0 + 0.0) / 4 = 1.3 ppt
- If more than one sample taken per quarter, all samples are used in the running annual average calculation.

Contaminant	PQL (ppt)
PFOA	4.0
PFOS	4.0
HFPO_DA	5.0
PFHxS	3.0
PFNA	4.0
PFBS	3.0

Reduced Monitoring:

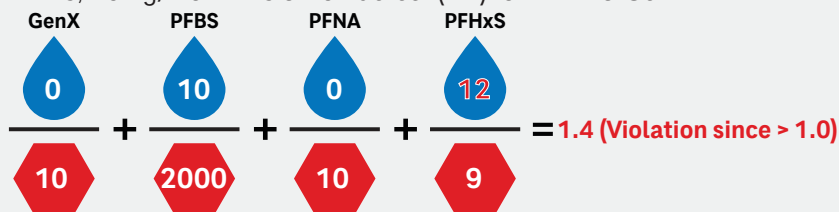
- Eligible for reduced monitoring if levels are less than 1/3rd of the MCLs (called "Trigger Levels" = 1.3 ppt for PFOA/PFOS & 0.33 HI)
- ≤3,300 people: 1 sample per 3-year compliance period
- >3,300 people: 2 samples 90 days apart in one calendar year per 3-year compliance period

Next Steps

- 60-day public comment period
- Final Rule anticipated by early 2024
- Proposed rule requires compliance 3 years after promulgation

HI Calculation Examples

- Water A: 12 ng/L of PFHxS, 10 ng/L of PFBS & non detect (ND) for PFNA & GenX



- Water B: 6 ng/L of PFHxS, 8 ng/L of PFBS & 5 ng/L for PFNA & ND for GenX

