

# PFAS Rule



STATE OF IDAHO  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

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# Agenda

- Health Effects & Background
- Monitoring
- MCL and HI
- PN
- Treatment overview
- Summary of deadlines
- EPA resources

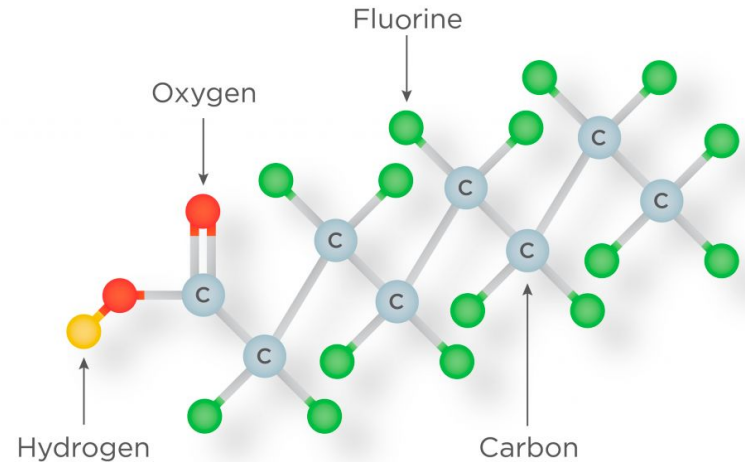


# Acronym Soup

- PFAS – per- and polyfluoroalkyl substances
- MCL – maximum contaminant level
- HI – Hazard Index
- PN – public notice or notification
- UCMR – Unregulated Contaminant Monitoring Rule
- EPTDS – Entry Point to Distribution System
- FTM – Failure to Monitor
- PFOA, PFOS, GenX (HFPO-DA), PFBS, PFHxS, PNFA – regulated PFAS contaminants
- RAA – Running Annual Average
- R&C – Reliably and Consistently

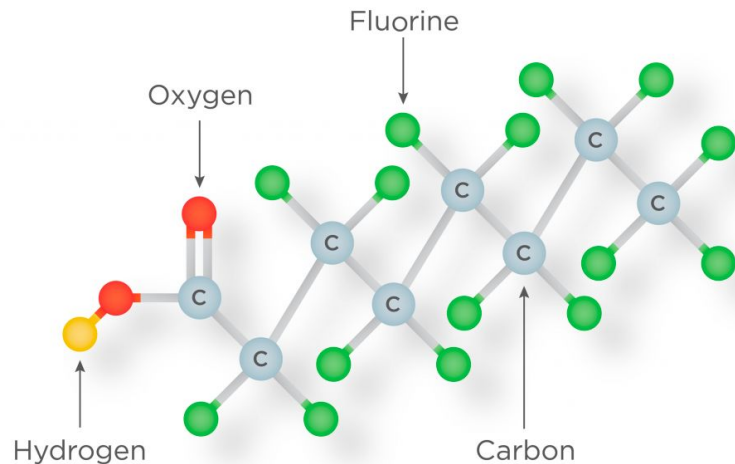
# PFAS

- Health Effects
  - Reproductive harm
  - Developmental delays in children
  - Immune system
  - Hormone interference
  - Some cancers



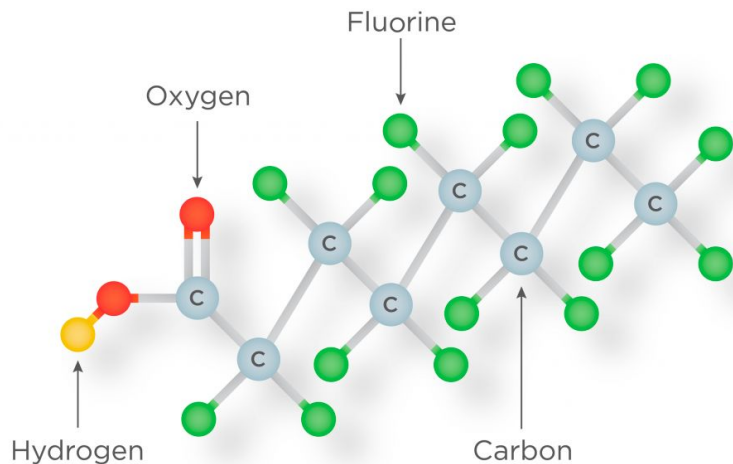
# PFAS

- Background
  - UCMR3 - 2013-2015
  - PFOA and PFOS interim Health Advisories – 2022
  - GenX and PFBS final health advisories - 2022
  - UCMR5 - 2023-2025
  - DEQ 2021-2025 voluntary sampling project
  - PFAS final rule for Drinking Water – effective June 25, 2024



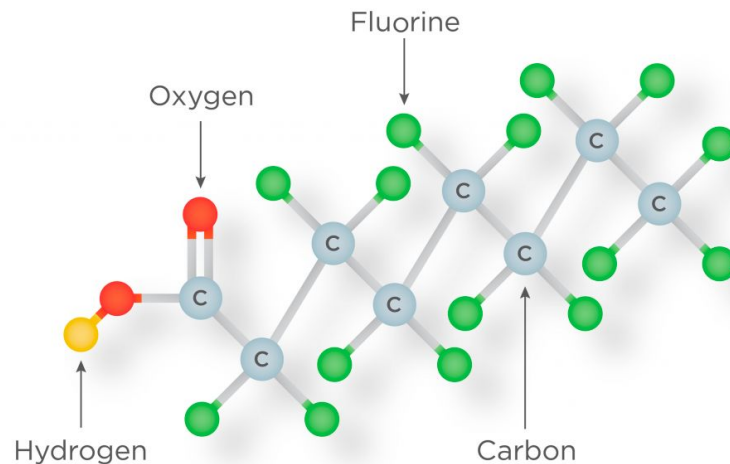
# PFAS Rule

- Idaho Primacy
  - Legislative session Spring 2025 – pending governor signature
  - State applies to EPA Mid-year 2025
  - EPA reviews and formally grants primacy



# PFAS Rule: Monitoring

- Certified Labs only
  - Methods
    - 533
- OR
- 537.1 (v1 or v2)



- <https://www.epa.gov/pfas/epa-pfas-drinking-water-laboratory-methods>

# PFAS Rule Initial monitoring

SW/GWUDI Systems	GW Systems >10,000	GW Systems ≤10,000
Quarterly w/in 12 months	Quarterly w/in 12 months	Twice w/in 12 months
Samples 2-4 months apart	Samples 2-4 months apart	Samples 5-7 months apart

- Completed by 4/26/2027
- Every entry point to distribution
- Can leverage UCMR5 data
- Must have data for all required timeframes

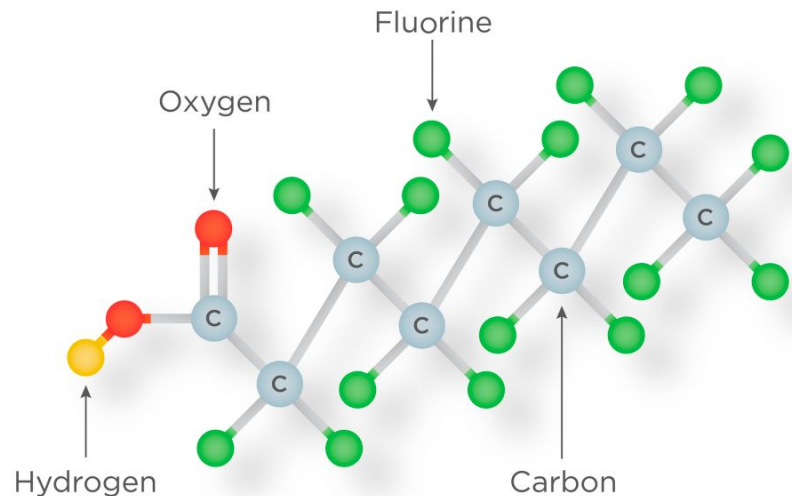


# PFAS Rule Routine/Reduced monitoring

- Based on initial monitoring
  - All results below trigger levels = triennial monitoring
  - Any single result above trigger level = quarterly
- After 1-year consecutive quarterly monitoring
  - Compliance staff evaluate for R&C
  - If so = annual monitoring
  - After 3 yrs annual evaluate for triennial

# UCMR5 – existing data

- 61 systems sampled in Idaho
  - VSWS – 3
  - Small – 5
  - Medium – 30
  - Large – 23
- 31 systems w/ detections



# PFAS Rule: Monitoring

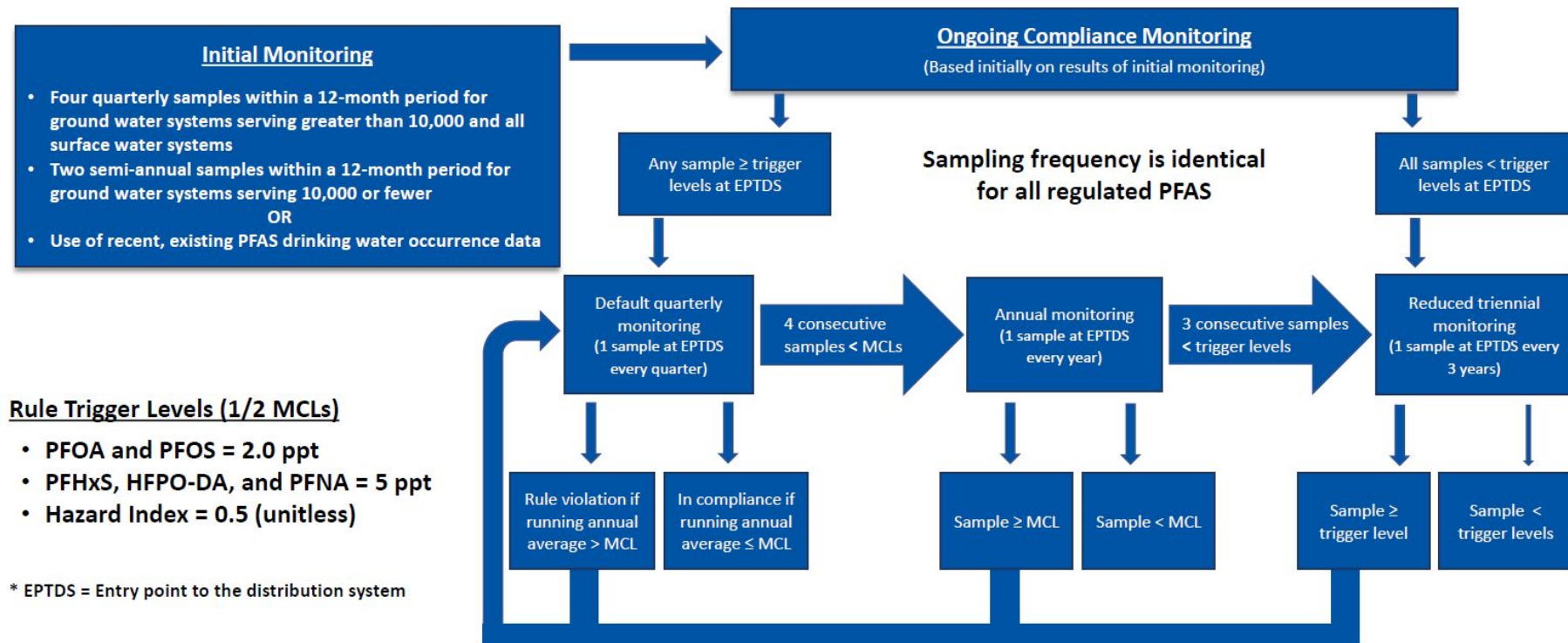
- Staff may request confirmation samples for any results
- No guarantee of reduced monitoring
- Reduced Monitoring schedules are not permanent
- Monitoring schedule changes are not automatic
- NO Monitoring waivers

# PFAS MCLs and Hazard Index

Chemical	MCLG	MCL	Trigger Level	PQL
PFOA	0	4.0 ppt	2.0 ppt	4.0 ppt
PFOS	0	4.0 ppt	2.0 ppt	4.0 ppt
PFHxS	10 ppt	10 ppt	5 ppt	3.0 ppt
HFPO-DA	10 ppt	10 ppt	5 ppt	5.0 ppt
PFNA	10 ppt	10 ppt	5 ppt	4.0 ppt
PFBS	N/A	N/A	N/A	3.0 ppt
Hazard Index*	1	1	0.5 unitless	N/A

$$HI\ MCL = \left( \frac{[HFPO-DA_{water}]}{[10\ ppt]} \right) + \left( \frac{[PFBS_{water}]}{[2000\ ppt]} \right) + \left( \frac{[PFNA_{water}]}{[10\ ppt]} \right) + \left( \frac{[PFHxS_{water}]}{[10\ ppt]} \right) = 1$$

# Implementation: Monitoring Requirements Summary



# PFAS MCL Calculations

- Calculations
  - Quarterly monitoring - calculate RAA
  - < quarterly monitoring - use individual samples
  - Hazard Index: must have at least 2 (PFHxS, HFPO-DA, PFNA, PFBS) to calculate

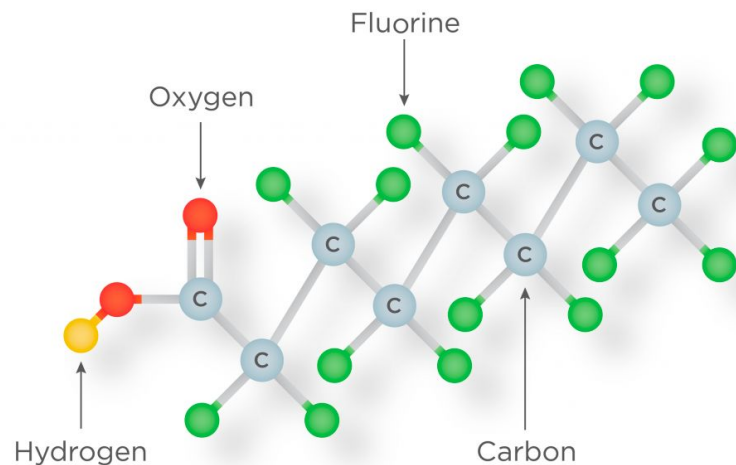
# Hazard Index calculation examples

	HFPO-DA	PFBS	PFNA	PFHxS	Hazard Index	
• <b>Example 1</b>	$\left(\frac{[0 \text{ ppt}]}{[10 \text{ ppt}]}\right)$	$+$ $\left(\frac{[200 \text{ ppt}]}{[2000 \text{ ppt}]}\right)$	$+$ $\left(\frac{[4 \text{ ppt}]}{[10 \text{ ppt}]}\right)$	$+$ $\left(\frac{[4 \text{ ppt}]}{[10 \text{ ppt}]}\right)$	$=$ <b>0.9</b>	No exceedance of final Hazard Index MCL
• <b>Example 2</b>	$\left(\frac{[5 \text{ ppt}]}{[10 \text{ ppt}]}\right)$	$+$ $\left(\frac{[200 \text{ ppt}]}{[2000 \text{ ppt}]}\right)$	$+$ $\left(\frac{[6 \text{ ppt}]}{[10 \text{ ppt}]}\right)$	$+$ $\left(\frac{[15 \text{ ppt}]}{[10 \text{ ppt}]}\right)$	$=$ <b>3</b>	Exceedance of final Hazard Index MCL (and exceedance of PFHxS MCL)
• <b>Example 3</b>	$\left(\frac{[14 \text{ ppt}]}{[10 \text{ ppt}]}\right)$	$+$ $\left(\frac{[0 \text{ ppt}]}{[2000 \text{ ppt}]}\right)$	$+$ $\left(\frac{[0 \text{ ppt}]}{[10 \text{ ppt}]}\right)$	$+$ $\left(\frac{[0 \text{ ppt}]}{[10 \text{ ppt}]}\right)$	$=$ <b>1</b>	No exceedance of final Hazard Index MCL
• <b>Example 4</b>	$\left(\frac{[9 \text{ ppt}]}{[10 \text{ ppt}]}\right)$	$+$ $\left(\frac{[100 \text{ ppt}]}{[2000 \text{ ppt}]}\right)$	$+$ $\left(\frac{[4 \text{ ppt}]}{[10 \text{ ppt}]}\right)$	$+$ $\left(\frac{[3 \text{ ppt}]}{[10 \text{ ppt}]}\right)$	$=$ <b>2</b>	Exceedance of final Hazard Index MCL (no individual MCL exceedances)

\*MCL compliance is determined by running annual averages at the sampling point

# MCL Violations

- Exceedance vs Violation
  - Single sample
  - Multiple samples
  - Can have multiple violations





# PN requirements

- Tier 3 Failure To Monitor
  - Initial and routine
  - W/in 12 months
  - Included in CCR
- Tier 2 PN MCL
  - If system has known MCL exceedances
  - If system experiences MCL exceedance after 4/26/2029

# PFAS Treatment Technologies

- GAC – granular activated carbon
- IX – ion exchange
- RO/NF – reverse osmosis/nanofiltration
- POU RO is not currently approved
- Wastewater stream considerations
- EPA has modeling tools publicly available
  - <https://www.epa.gov/water-research/environmental-technologies-design-option-tool-etdot>
  - [https://github.com/USEPA/Water\\_Treatment\\_Models](https://github.com/USEPA/Water_Treatment_Models)

PFAS BAT



# PFAS Rule: Date Summary

Metric	Due	Notes
Complete initial monitoring	4/26/2027	Population specific
Routine monitoring begins	4/26/2027	Based on initial monitoring
Monitoring and reporting violations attach	4/26/2027	Initial monitoring violations, then ongoing for routine FTM
CCR compliance	2027	
MCL compliance	4/26/2029	Mitigation completed
MCL violations attach	4/26/2029	Mitigation not complete

# EPA

# Resources

# Idaho



- <https://www.epa.gov/sdwa/pfas-communications-toolkit>



- <https://www.deq.idaho.gov/water-quality/drinking-water/pfas-and-idaho-drinking-water/>
- \*\*Pending update\*\*

# Questions?



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