Update: PFAS in Drinking Water



Whidbey Island Water System Association Sept 15, 2022







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Overview

Implementing PFAS State Action Levels Response to new EPA health guidance Next steps in EPA Regulatory Process New ECY Cleanup Values for PFAS Planning for a PFAS stakeholder forum Q&A



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Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Nonstick, Stain and Water Resistant, Heat Stable







Some PFAS are PBTs

Persistent in the environment

Bioaccumulate in humans

Toxic at relatively low (ppt) levels

Health Concerns

In Laboratory Animals

- Liver toxicity
- Developmental toxicity
- Reproductive toxicity
- Immune toxicity
- Endocrine disruption
- Tumors in liver, pancreas, testes

In Humans

- Increased cholesterol levels
- Altered liver enzyme levels
- Reduced immune response to vaccines
- Lower birth weight
- Blood pressure problems
 during pregnancy
- Increase risk of thyroid disease
- Increased risk of cancer (kidney and testicular)-PFOA

2021 State Action Levels (SALs)

WASHINGTON STATE

Features

- Sets action levels for 5 PFAS.
- Requires PFAS testing by most Group A water systems.
- Requires notification of customers.
- Requires follow-up monitoring
- Effective date: Jan 1, 2022.
- Mitigation of water is not required but systems are encouraged to follow public health advice and funding support is available.

| Drinking water Contaminant | SAL (parts per trillion) | |
|-------------------------------|--------------------------------|--|
| PFOA | 10 | |
| PFOS | 15 | |
| PFNA | 9 | |
| PFHxS | 65 | |
| PFBS | 345 | |



A SAL is a Bridge to an MCL

- SALs **require** testing and public notification and **guide** public health action.
- Testing will help define scope of problem and necessary funding and resources.
- Testing data is needed to develop state cost-benefit analyses for Maximum Contaminant Levels (MCL).

Implementation of the SALs

- Funding for water testing and water treatment
- Voluntary free testing program
- Early water testing results

2022–Voluntary Water Testing Program

- Offered in advance of required testing (2023-2025)
- Summary (as of July 15, 2022)
 - 427 water systems have tested (659 sources tested)
 - 7 systems (9 sources) had a SAL exceedance
 - 131 sources had PFAS detections
 - 80 percent of sources tested were < detection limits (~2 ppt)

PFAS in Drinking Water and Ground Water



Source of data: PFAS Detections reported to Sentry Database—primarily voluntary testing.

PFAS in Drinking Water and Ground Water



Drinking Water source results Groundwater Monitoring well results

Source of data: voluntary testing by military bases and public water systems.

How Water Systems are Responding to Detections

Community Water System responses

- Notifying public of SAL exceedance (required)
- Annual notification for PFAS detections (required)
- Removing sources from service
- Exploring treatment alternatives

DOD response

- Interim action to provide alternate water for drinking and cooking when PFOS +PFOA >70 ppt (No change yet)
- Lower screening values no guide which sources are considered for long-term solutions (based on EPA RSLs)

Implementation Issue—New Health Guidance



PFOS 0.02

EPA warns that even tiny amounts

- of chemicals found in drinking
 - water pose risks

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Evolving Health Guidance Values (ng/L)

Changes over time largely reflect expanding and strengthening scientific understanding of adverse impacts of PFAS.

| | PFAS | EPA HALs 2016 | WA SALs 2021 | EPA HALs 2022 |
|---|-------|------------------|-----------------|------------------|
| | PFOA | 70 | 10 | 0.004 |
| | PFOS | 70 | 15 | 0.020 |
| / | PFHxS | - | 65 | - |
| | PFNA | - | 9 | |
| | PFBS | - | 345 | 2,000 |
| | GenX | _ | - | 10 |

Italics indicate an interim value

SAL - State Action Level; HAL – Health Advisory Level

Implementation Issue—New Health Guidance

Complicates public health message—functionally no "safe" level in drinking water.

Can adjust SALs based on new science. Requires SBOH rulemaking, must be feasible.

EPA is about to propose a national enforceable drinking water standard for PFOA and PFOS.

DOH decision: Wait for final EPA numbers before evaluating state rulemaking.

Impacts to Risk Communication

- New interim PFOA and PFOS HALs
 - Any detections in drinking water are above what EPA recommends for a lifetime of exposure in residential drinking water.
- EPA recommends that people with detectable PFOA and PFOS be informed and told how to reduce their exposure.
- Impacts a narrow range of results (between WA SALs and detection limit of 2 ppt in drinking water).

DOH/SBOH Response

- Update public messaging to relay new EPA advice
- Continue to regulate with SALs for now
 - Prefer WA SAL for PFBS
 - Interim HALs for PFOA, PFOS are still undergoing expert review and may change
- Follow the expert review, evaluate final EPA assessment
- When EPA finalizes PFOA and PFOS numbers and proposes the MCL (in late 2022):
 - Review EPA's analyses of technical feasibility, costs-benefits
 - Consider options for SAL adjustment

HAL vs. SAL vs. MCL



HAL = Health Advisory Level SAL = State Action Level MCLG = Maximum Contaminant Level Goal MCL = Maximum Contaminant Level

State Timeline— PFAS in Drinking Water

| 2022 | 2023 | 2024 | 2025 |
|---------------------------------|------------------------------|---------------------------------------|---------------------------|
| SAL rule effective | Utilities to begin | SBOH begins Rule | Complete initial |
| Identify funding for mitigation | required PFAS sampling | to adopt federal MCLs and add | systems |
| DOH-Voluntary | Rule revision in response to | or update other PFAS in state rule | Adopt federal standard |
| federal funding | new EPA health values? | | |
| Respond to HALs | | 1 | |

EPA developing standard for PFAS in drinking water (DW)

Issued 4 new HALs Propose PFAS Standard for DW by Dec 2022

Adopt Standard for DW by Dec 2023

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State PFAS Stakeholder forum

Topics

• Forum to discuss solutions to PFAS in surface and drinking water

Intended audience

- Drinking water purveyors and private wells owners
- Others who investigate, mitigate, or clean up PFAS
- State and local governments
- Any interested parties (communities)

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