



2022 EPA Health Advisory Levels for Four PFAS

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What did EPA announce?

On June 15, 2022, the U.S. Environmental Protection Agency (EPA) released lifetime Health Advisory Levels (HALs) for four per- and polyfluoroalkyl substances (PFAS) in drinking water. These included interim health advisories for PFOA and PFOS and final health advisories for PFBS and GenX chemicals.

**Health Advisories for PFAS in Drinking Water Over Time
in ng/L or parts per trillion (ppt)**

Individual PFAS	EPA Health Advisory Levels (2016)	WA State Action Levels (2021)	New EPA Health Advisory Levels (2022)
PFOA (perfluorooctanoic acid)	70	10	0.004 *
PFOS (perfluorooctane sulfonic acid)	70	15	0.02 *
PFNA (perfluorononanoic acid)		9	-
PFHxS (perfluorohexanesulfonic acid)		65	-
PFBS (perfluorobutane sulfonic acid)		345	2,000
GenX (hexafluoropropylene oxide dimer acid and its ammonium salt)		-	10

**These are interim values; scientific review at EPA is not finished.*

What is an EPA Lifetime Health Advisory Level (HAL)?

EPA health advisory levels measure the amount of a contaminant in drinking water. They establish a level that is almost certain not to cause harmful human health effects if consumed over a lifetime. EPA’s PFOS and PFOA health advisories also apply to shorter periods of exposure (months) in sensitive groups (pregnant and lactating persons, children aged birth to five years old).

Health advisories are set well below the level at which scientists expect to see negative health impacts. Health advisories are not regulations and are not enforceable.

What should you know about the new EPA assessments?

EPA now advises that any detectable levels of PFOS and PFOA in drinking water is a potential health concern when consumed over years. Although this advice is still undergoing scientific review, people may wish to take action if any PFOS and PFOA are detected.

EPA is only part way through a multi-year process of setting an enforceable safety standard for PFAS in drinking water. In the next step of EPA’s effort, the agency will finalize its protective health goals for PFOS and PFOA. These goals are likely to be similar to the new health advisory levels. EPA will then propose a standard that is as close to the goals as possible while taking feasibility, costs, and benefits into consideration. EPA expects to propose a drinking water standard by the end of 2022 and adopt an enforceable standard by the end of 2023.

Will Washington change its State Action Level (SAL) values based on the new EPA health advisories?

EPA’s new interim HAs for PFOA and PFOS are still undergoing expert review and may change. After EPA finalizes their values and proposes an enforceable safety standard for PFOA and PFOA, Washington will consider whether to recommend adjustment of SAL values.

Any SAL changes require rule-making by the State Board of Health.

How do EPA HALs differ from Washington SALs?

EPA's HALs are based on health science alone and do not consider if that level can be achieved. EPA's interim HALs for PFOA and PFOS are below what we can accurately measure with approved laboratory methods and below what current PFAS treatment technology is certified or demonstrated to achieve. In contrast, a SAL can't be set below what we can measure in drinking water (~2 ppt). SALs also must consider whether available treatment can reach those levels.

What's behind the different EPA HA and SAL values?

- ◆ Both HAs and SALs are set to protect human health, based on the available science.
- ◆ **PFOA and PFOS.** EPA developed interim HALs from a human study of immune effects in children, specifically a reduced immune response to childhood vaccines. Washington based SALs on developmental and immune effects observed in controlled rodent studies.
- ◆ **PFBS.** EPA and Washington used different drinking water intake rates in their calculations. EPA used intake associated with women of reproductive age. WA selected a higher rate of drinking water intake associated with infant consumption. While EPA's HALs provide adequate protection for adults and fetuses, Washington's SAL better protects infants, which are a potentially sensitive life stage for PFBS exposure.

New public health goals set by EPA for PFOS and PFOA require a broader approach

We can't reach EPA's new HALs for PFOA and PFOS in drinking water anytime soon. This is because we can't measure that low in water and aren't sure that PFAS removal technology can treat to those levels. We'll need broad, long-term efforts to lower exposure from all sources to reach EPA's recommended exposure limits for PFOA and PFOS (2021 Reference Doses). Efforts will need to reduce PFAS in foods and consumer products, and prevent environmental releases from users of PFAS, waste streams, and disposal sites.

Washington is a leader in this broader approach. In 2018, we were one of the first states to restrict major sources of PFAS in our food and water (firefighting foam and food packaging). In 2019, our state legislature authorized the Washington State Department of Ecology to further regulate PFAS in consumer products through the [Safer Products for WA Program](#). Ecology is currently considering restrictions on PFAS in carpets, leather and textile furnishings, and aftermarket stain and waterproofing sprays. Ecology is also investigating occurrence and sources of PFAS in surface water, fish, and key waste streams. DOH developed state action levels for PFAS in drinking water, is administering funding to address PFAS in public water systems, and is developing recommendations for PFAS in recreational freshwater fish. In 2021, Washington departments of Ecology and Health issued a to guide state work. [Chemical Action Plan for PFAS](#). EPA is also [taking action](#) at the federal level.



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