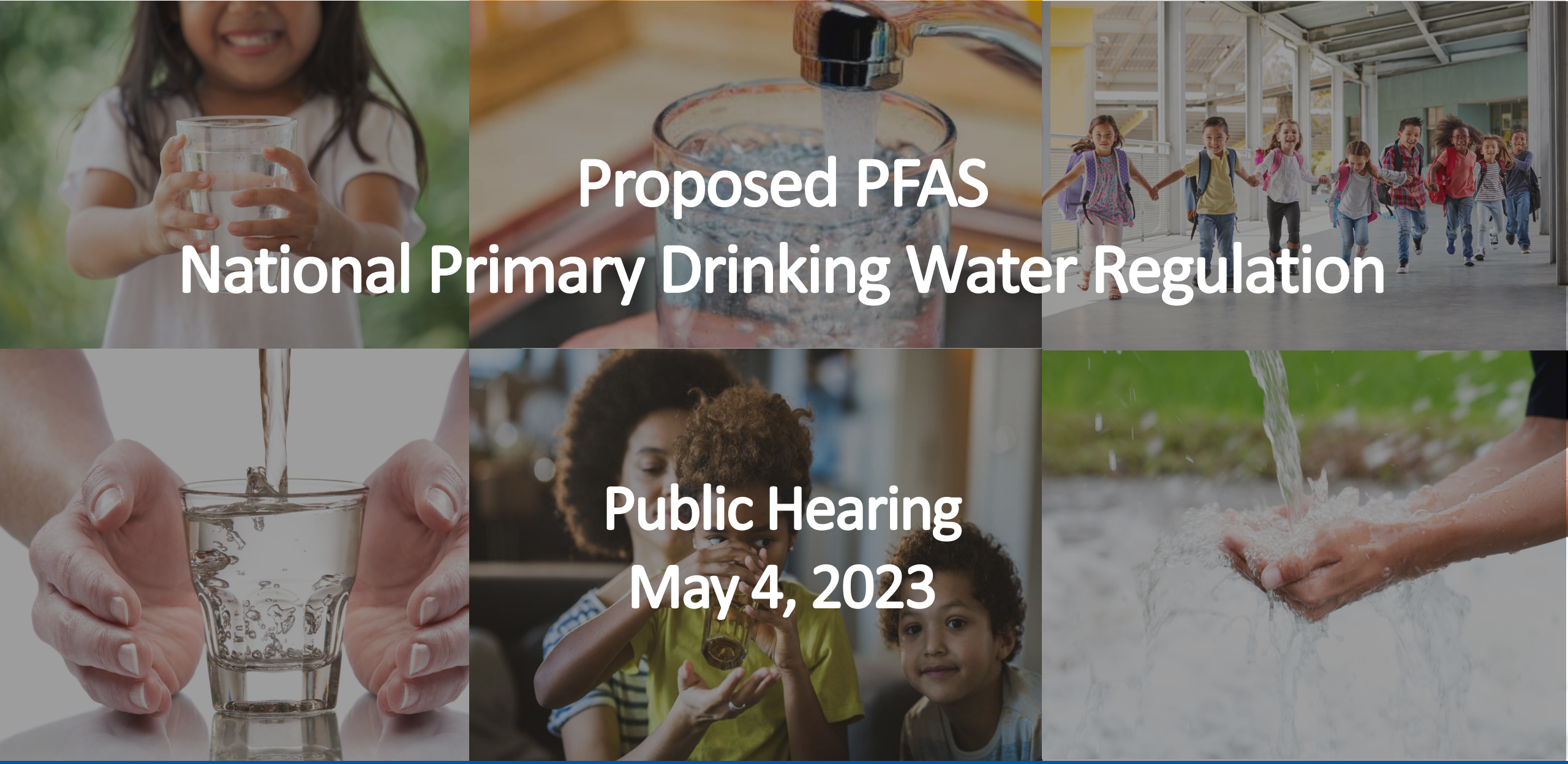


Proposed PFAS National Primary Drinking Water Regulation

Public Hearing
May 4, 2023

EPA United States Environmental Protection Agency

Office of Water

PFAS Background

- PFAS are a category of manufactured chemicals that have been used in industry and consumer products since the 1940s.
- PFAS have characteristics that make them useful in a variety of products, including nonstick cookware, waterproof clothing, and firefighting foam, as well as in certain manufacturing processes.
- PFAS tend to break down extremely slowly in the environment and can build up in people, animals, and the environment over time.
- Even though some specific PFAS have been largely phased out due to health and environmental concerns, they may still be found in the environment and in drinking water.

PFAS Background

- We now know that over a long time PFAS may:
  - Lead to negative health effects on pregnant people and in developing babies
  - Weaken a body's ability to fight disease
  - An increased risk for some cancers, liver damage
  - Elevated cholesterol levels (which can increase the risk for heart attack or stroke)
- Drinking water is one of several ways people may be exposed to PFAS.
- Different PFAS are often found together and in combinations (or mixtures) in drinking water and the environment.
- EPA is acting to protect people's drinking water and reducing our exposure to PFAS, can lower our risk for these health effects.

EPA's Proposed Action for the PFAS NPDWR

- EPA is proposing a National Primary Drinking Water Regulation (NPDWR) to establish legally enforceable levels, called Maximum Contaminant Levels (MCLs), for six PFAS in drinking water.
  - PFOA and PFOS as individual contaminants, and
  - PFHxS, PFNA, PFBS, and HFPO-DA (commonly referred to as GenX Chemicals) as a PFAS mixture
- EPA is also proposing health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these six PFAS.
  - MCLGs are the maximum level of a contaminant in drinking water where there are no known or anticipated negative health effects allowing for a margin of safety.

EPA's Proposed Action for the PFAS NPDWR

Compound	Proposed MCLG	Proposed MCL (enforceable levels)
PFOA	zero	4.0 ppt*
PFOS	zero	4.0 ppt*
PFNA	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index
PFHxS		
PFBS		
HFPO-DA (commonly referred to as GenX Chemicals)		

The Hazard Index is a tool used to evaluate potential health risks from exposure to chemical mixtures.

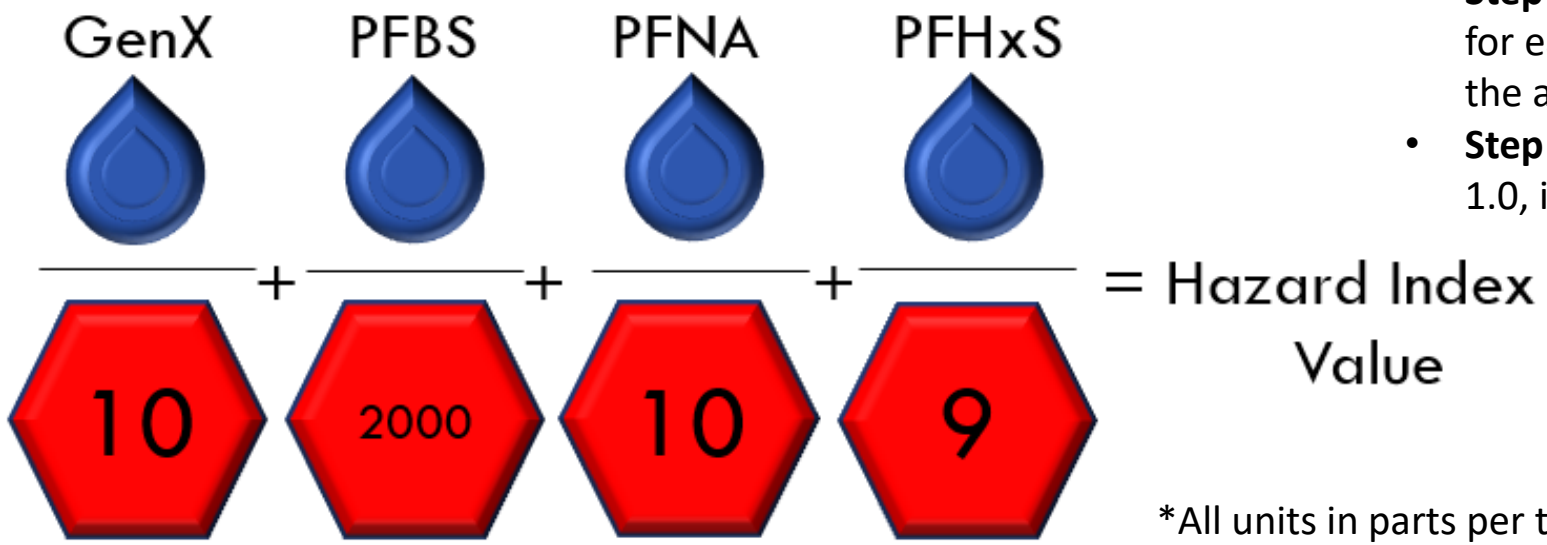
*ppt = parts per trillion (also expressed as ng/L)

How do I calculate the Hazard Index?

The Hazard Index (HI) is used to understand health risks. For the PFAS NPDWR Proposal, the HI considers the combined toxicity of PFNA, GenX Chemicals, PFHxS, and PFBS in drinking water.

What is a Hazard Index?

The Hazard Index is made up of a sum of fractions. Each fraction compares the level of each PFAS measured in the water to the level determined not to cause health effects.



Steps:

- **Step 1:** Divide the measured concentration of **GenX** by the health-based value of **10 ppt***
- **Step 2:** Divide the measured concentration of **PFBS** by the health-based value of **2000 ppt**
- **Step 3:** Divide the measured concentration of **PFNA** by the health-based value of **10 ppt**
- **Step 4:** Divide the measured concentration of **PFHxS** by the health-based value of **9.0 ppt**
- **Step 5:** Add the ratios from steps 1, 2, 3, and 4 together
- **Step 6:** To determine HI compliance, repeat steps 1-5 for each sample collected in the past year and calculate the average HI for all the samples taken in the past year
- **Step 7:** If the running annual average HI greater than 1.0, it is a violation of the proposed HI MCL

*All units in parts per trillion (ppt)

EPA's Proposed Action for the PFAS NPDWR

- The proposed rule would require public water systems to:
  - Monitor for these PFAS;
  - Notify the public of the levels of these PFAS; and
  - Reduce the levels of these PFAS in drinking water if they exceed the proposed standards.
- EPA is requesting comment on the proposed rule.
- EPA is also requesting comment on its preliminary determinations to regulate PFHxS, PFNA, PFBS, GenX Chemicals, as well as mixtures of these four PFAS.
- This action is not final and does not require any actions until after EPA considers public input and finalizes the regulation.
- EPA anticipates that if fully implemented the rule will prevent tens of thousands of serious PFAS-attributable illnesses or deaths.

National Benefits Summary

- EPA has quantified some of the reduced adverse health effects expected from the proposed rule including kidney cancers, heart attacks, strokes, and developmental (birth weight) effects.
- EPA anticipates significant additional benefits beyond those that EPA has quantified associated with the following adverse health effects:
  - Immune
  - Developmental
  - Cardiovascular
  - Hepatic
  - Carcinogenic
  - Endocrine
  - Metabolic
  - Reproductive
  - Musculoskeletal

Annualized Quantified Rule Benefits (i.e., per year)	3% Discount Rate	7% Discount Rate
	$1.23 billion	**$908 million**

National Costs Summary

- EPA expects roughly 66,000 water systems to be subject to the rule, with approximately 3,400-6,300 systems anticipated to exceed one or more MCL.
- EPA has estimated the costs of the proposed rule to public water systems associated with administration, monitoring, and treatment and costs to primacy agencies associated with rule implementation and administration.
- Public water system treatment cost estimates include capital, and yearly operation and maintenance costs over the period of analysis.

Annualized Quantified Rule Costs (i.e., per year)	3% Discount Rate	7% Discount Rate
	$772 million	**$1.20 billion**

- EPA also prepared a supplemental cost analysis that estimates the annual costs would increase by $30-$61 million per year if water systems are required to dispose of PFAS treatment as hazardous waste.

EPA has determined that the proposed NPDWR benefits justify the costs.

Bipartisan Infrastructure Law Funding for PFAS

- The Bipartisan Infrastructure Law provides $9 billion to invest in drinking water systems specifically impacted by PFAS and other emerging contaminants.
  - $4 billion through the Drinking Water State Revolving Fund (DWSRF)
  - $5 billion through EPA's Emerging Contaminants in Small or Disadvantaged Communities Grant Program
- States and communities can also leverage an additional nearly $12 billion in BIL DWSRF funds dedicated to making drinking water safer.

Public Comment Period and Docket

- The public is invited to review the proposal and supporting information and provide their written input to EPA through the public docket.
- The public docket can be accessed at: www.regulations.gov under Docket ID: EPA-HQ-OW-2022-0114.
- Written comments must be submitted to the public docket by May 30, 2023.
- EPA will consider both written and oral public comments equally in the development of the final NPDWR.
- For more information on submitting information to EPA dockets: https://www.epa.gov/dockets/commenting-epa-dockets

EPA's PFAS NPDWR website:

https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas

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