

PROMOTING THE PUBLIC'S RIGHT TO KNOW ABOUT PFAS CONTAMINATION IN DRINKING WATER

A Guide for Water Utilities & Public Officials



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Wisconsinites have a right to know about chemicals to which they might be exposed in their daily lives and about the health risks associated with toxic exposure. Water utilities and local officials are uniquely positioned to foster public awareness about PFAS contamination in drinking water.

What are PFAS?

Per- and polyfluoroalkyl substances, or PFAS (pronounced “PEA-FASS”), are a group of synthetic chemicals used for decades in a wide variety of consumer products, including firefighting foam, nonstick cookware, water-repellant clothing, stain resistant carpets, cleaning products, cosmetics and more. These toxic chemicals have been found in drinking water across Wisconsin.

Are PFAS a threat to human health?

Yes. Even at extremely low levels, exposure to PFAS has been linked to an increased risk of kidney and testicular cancer, reproductive and developmental disorders, thyroid hormone disruption, high cholesterol, ulcerative colitis, immune system dysfunction, and more.

How do PFAS end up in drinking water?

Drinking water is the main pathway of exposure. PFAS contamination comes from several sources, including discharges from manufacturing facilities and industrial sites that use PFAS, firefighting foam used at military bases and commercial airports, and run-off or leaching from wastewater treatment plants.

What level of PFAS is considered unsafe?

The table and the hazard index found at the end of this guide provide concrete guidelines to help municipal officials assess the safety of their drinking water.

Local officials have an important role to play in protecting public health by preventing exposure to toxic PFAS chemicals.

3 REASONS TO TEST FOR PFAS NOW



PROMOTE TRANSPARENCY & MAINTAIN PUBLIC TRUST

Members of your community deserve to know the risks of drinking water from your water system, and they will appreciate full transparency regarding PFAS test results. As more PFAS data is made available in the coming months and years, public trust will be critical to effectively dealing with any issues that might arise.



PROTECT PUBLIC HEALTH

Avoiding contaminated water can go a long way toward reducing the risks of PFAS exposure. That's why it's so important to know if your community's water contains unsafe levels of PFAS.

Options for lowering unsafe PFAS concentrations include treating source water with activated carbon or high-pressure membrane systems. If those options are not available, supplying bottled water could help mitigate the health risks while utilities work on long-term solutions.



MINIMIZE THE COST OF TESTING AND REMEDIATION

In early 2022, Governor Evers announced the availability of \$600,000 in EPA funding to help municipalities test their drinking water. If a community finds their drinking water supply is impacted by PFAS, the Department of Natural Resources and the Department of Health Services will help community leaders access available resources to address the contamination.

Under the Bipartisan Infrastructure Law, federal funds will soon be available to help Wisconsin communities with the cost of PFAS remediation. Wisconsin is set to receive a minimum of \$95 million in funding through state revolving fund loan programs over the next five years. Over the coming months, DNR will determine priorities and develop ranking criteria for providing grants and below-market-rate loans to communities undertaking municipal water infrastructure improvements.

Communities whose updated test results show unsafe levels of PFAS will be better positioned to receive priority for these funds, while those that wait to test could lose out on the opportunity to take advantage of significant federal resources

Learn about DNR's voluntary PFAS sampling program [here](#).

INFORMING THE PUBLIC

Members of your community deserve full transparency about what's in their drinking water. If test results show individual or combined PFAS levels greater than the Department of Health Services' recommendations and/or federal or state standards, take immediate steps to inform the public:

- ✓ issue a **drinking water advisory** as soon as practicable, but no later than 30 days after the system learns of the exceedance, and make it available for as long as the exceedance persists
- ✓ provide **public notice** in a form and manner that is reasonably calculated to reach all people served by the water utility. For people receiving a bill, mail the drinking water advisory. Take the following steps to reach people who do not pay water bills, including renters, apartment dwellers, university students, and nursing home patients:
 - publish the advisory in a local newspaper
 - post in public places served by the water system and on the internet
 - provide copies for distribution by customers that provide drinking water to others
 - provide copies to engaged community organizations
- ✓ work with city officials to take **short-term responsive steps**, such as providing bottled water and in-home filter devices, to mitigate the health risks of the exceedance
- ✓ work with city officials to take **long-term responsive steps**, such as installing treatment devices at the water system, to reduce or remove PFAS
- ✓ work with city officials to give the public ample **opportunity to provide feedback** about the public notice and about steps taken by the water utility and local government officials

What type of information should be included in a drinking water advisory?

- all testing results to date and related hazard index calculations
- information on the health risks of PFAS exposure, including risks to children and developing fetuses
- information about how individuals can reduce their exposure
- information about steps the water utility and the municipality are taking to mitigate the health risks of the exceedance
- information about what the water utility and the municipality are doing to correct the problem in the short-term and the long-term

DRINKING WATER HEALTH GUIDELINES

1 ppt = 1 nanogram/liter (ng/l)
1 ppb = 1 microgram/liter (µg/l)

Contaminant	EPA Health Advisory	Department of Health Services Safety Standard	
		individual	combined
Perfluorooctane sulfonate (PFOS)	70 ppt* 0.07 ppb	20 ppt** 0.02 ppb	20 ppt 0.02 ppb
Perfluorooctanoic acid (PFOA)	70 ppt* 0.07 ppb	20 ppt** 0.02 ppb	
Perfluorooctane sulfonamide (FOSA)	not yet established	20 ppt 0.02 ppb	
N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE)	not yet established	20 ppt 0.02 ppb	
N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	not yet established	20 ppt 0.02 ppb	
N-Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	not yet established	20 ppt 0.02 ppb	
Perfluorobutanoic acid (PFBA)	not yet established	10,000 ppt 10 ppb	
Perfluorotetradecanoic acid (PFTeA)	not yet established	10,000 ppt 10 ppb	
Perfluorohexanoic acid (PFHxA)	not yet established	150,000 ppt 150 ppb	
Perfluorononanoic acid (PFNA)	not yet established	30 ppt 0.03 ppb	
Perfluorodecanoic acid (PFDA)	not yet established	300 ppt 0.3 ppb	
Perfluoroundecanoic acid (PFUnA)	not yet established	3,000 ppt 3 ppb	
Perfluorobutanesulfonic acid (PFBS)	not yet established	450,000 ppt 450 ppb	
Perfluorohexanesulfonic acid (PFHxS)	not yet established	40 ppt 0.04 ppb	
Perfluorododecanoic acid (PFDoA)	not yet established	500 ppt 0.5 ppb	
Perfluorooctadecanoic acid (PFODA)	not yet established	400,000 ppt 400 ppb	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	not yet established	3,000 ppt 3 ppb	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	not yet established	300 ppt 0.3 ppb	

*In 2021, EPA acknowledged that the health advisory does not consider studies published after 2013. The agency has initiated a systematic review of peer-reviewed scientific literature for PFOA and PFOS published since 2013, with the goal of updating the human health assessment. Learn more [here](#).

**DHS conducted a systematic review of peer-reviewed scientific literature for PFOA and PFOS published before and after 2013 to establish the safety standard.

THE HAZARD INDEX

The hazard index is a tool designed to evaluate the health risk from exposure to multiple chemicals of concern that have similar adverse health effects.

The hazard index approach is used or recommended across the country by expert agencies and organizations, including the Agency for Toxic Substances and Disease Registry and the U.S. Environmental Protection Agency.

The Wisconsin Department of Health Services recommends using this approach to evaluate health risks from PFAS. The hazard index is particularly important when test results show levels of concentration for multiple PFAS that are below the individual or combined safety guidelines.

The hazard index is calculated by comparing the levels of each PFAS compound in drinking water to an available health guideline. For example:

$$\begin{array}{l} \text{actual PFAS level} \rightarrow \\ \text{safety level} \rightarrow \end{array} \frac{18.6 \text{ ppt (PFOA + PFOS)}}{20 \text{ ppt}} + \frac{4.5 \text{ ppt (PFNA)}}{30 \text{ ppt}} = 1.08$$

If the Hazard Index is 1 or greater, TAKE ACTION.

Note that both the combined PFOA and PFOS level of 18.6 ppt and the individual PFNA level of 4.5 ppt are below DHS Safety Levels. When considering both values using the hazard index approach, however, it is clear that the health risk of exposure warrants action to protect public health.