

Per- and polyfluoroalkyl substances (PFAS) in Drinking Water

FREQUENTLY ASKED QUESTIONS ABOUT PFAS

Minnesota Department of Health (MDH) has tested for per- and polyfluoroalkyl substances (PFAS) in community water systems across the state. A goal of this initiative was to evaluate whether Minnesotans are exposed to PFAS at levels above health-based guidance values in drinking water.

MDH developed an [Interactive Dashboard for PFAS Testing in Drinking Water](#) that shows the status and results of PFAS testing for community water systems in Minnesota. In the dashboard maps, users can see which community water systems have been tested and see each system's PFAS testing results. MDH is evaluating how to incorporate the updated PFOS and PFOA guidance values into our risk assessment for PFAS in drinking water. We will update the dashboard as needed after this evaluation is complete.

Information in this document is for community water systems and other partners to use for the following purposes:

- Their own understanding
- When answering questions (e.g. from customers, residents, private well users, etc.)
- For developing materials for distribution.

You can use these messages and frequently asked questions (FAQs) for developing resources and answering questions from the public. *This document is not a factsheet – please do not share this document as-is.* PFAS factsheets from MDH are available at [Per- and Polyfluoroalkyl Substances \(PFAS\)](#), including:

- [Per- and polyfluoroalkyl substances \(PFAS\) and Health \(PDF\)](#)
- [Per- and polyfluoroalkyl substances \(PFAS\) Summary \(PDF\)](#)

Translated factsheets in Spanish, Somali, and Hmong are also available at [PFAS Testing in Public Water Systems](#).

For more information about the project, please contact health.drinkingwater@state.mn.us. For more information about PFAS and health, contact health.risk@state.mn.us.

Communicating about PFAS testing results

Tools to help with risk communication

- [MDH Drinking Water Risk Communication Toolkit](#)
- [Interstate Technology Regulatory Council PFAS Risk Communication](#)

What is MDH's guidance for contaminants in drinking water?

Minnesota Department of Health (MDH) uses and develops different types of guidance for different purposes to protect people's health from contaminants in drinking water.

A health-based value is the level of a contaminant that can be present in water and pose little or no health risk to a person drinking that water, including sensitive populations and those who are highly exposed. The health-based values are designed to protect all Minnesotans.

MDH has developed health-based guidance values to represent levels for several PFAS in drinking water. The guidance values are levels that MDH considers safe for all people to consume, including sensitive populations. The guidance values apply to short time periods as well as a lifetime of exposure.

Learn about the different standards and guidance for drinking water at [Guidance Values and Standards for Contaminants in Drinking Water](#).

What is the Health Risk Index?

In some cases, water may contain multiple contaminants. Exposure to multiple contaminants may cause health effects that would not be predicted based on separate exposures to the individual concentrations of each contaminant present. When more than one PFAS is present in drinking water, MDH evaluates the "additive" risk that is created by the presence of multiple contaminants.

A Health Risk Index (HRI) calculation is used to evaluate the combined risk from chemicals that have similar health effects. For each chemical a ratio is calculated by comparing the concentration of the chemical to the exposure duration-specific health-based guidance for that chemical. Chemicals are grouped by health effect and a ratio is calculated for each chemical. These ratios are added together to determine the HRI. If the HRI calculation results in a value greater than 1, that exceeds the allowable risk level and preventative action is recommended.

- Cancer risks for each chemical in a mixture are added together for a cancer HRI
- Non-cancer risks for each chemical are grouped by health effect (liver, kidney, nervous system, etc.) and added together

See [Evaluating Concurrent Exposures to Multiple Chemicals](#) for more information.

What do the PFAS HRI results mean?

Where PFAS sampling results equal half of the HRI or above, MDH recommends follow-up sampling to community water systems. MDH recommends four quarterly samples to get a more accurate understanding of the PFAS levels in drinking water. A person drinking water at or below an HRI of 1 would have little or no risk for health effects.

PFAS sampling results that are greater than an HRI value of 1 indicate a health concern for the combined PFAS exposure. When results exceed the PFAS HRI of 1, MDH works with community water systems to conduct follow-up sampling for three quarters to verify if PFAS levels are

consistently above or below an HRI of 1. There is little or no health risk for drinking water with an HRI near or under 1. As the HRI increases, the risk of health effects also increases.

Community water systems with elevated PFAS can take actions to provide drinking water with PFAS levels that are as low as possible. These actions include shutting off the most highly contaminated wells, using wells that are clean or have lower levels of PFAS, treating water to remove PFAS, or blending water from their wells to minimize PFAS levels in drinking water. MDH continues to monitor water quality at all the affected communities to ensure that the finished drinking water does not exceed the guidance values.

If a community water system has results over health-based guidance, MDH shares the results with the Minnesota Pollution Control Agency (MPCA). This starts a process of investigation at MPCA to determine the source of the contamination. The environmental investigation process can take time to implement.

How can people reduce their exposure to PFAS?

People can learn more about actions they can take to reduce their exposure to PFAS at [Reducing Exposures: Per- and Polyfluoroalkyl substances \(PFAS\)](#).

For more information about PFAS

MDH has extensive information about PFAS at [Per- and polyfluoroalkyl substances \(PFAS\)](#). It includes information about:

- PFAS testing activities in Minnesota;
- PFAS and health;
- PFAS and home treatment of water;
- PFAS and fish; and
- Other resources.

People who have concerns about their health

People who have specific concerns about their health should consult with their health care provider and keep up to date with all recommended health screenings. MDH is not able to answer questions about any individual's health status or specific health problems.

The [Regional Pediatric Environmental Health Specialty Unit \(PEHSU\)](#) have staff who can talk with parents about concerns about children's environmental health.

What is the risk from PFAS without health-based guidance values?

Some PFAS do not currently have health-based guidance values for drinking water. This is an area of active research, and scientists at MDH and EPA have not yet determined whether these

contaminants in drinking water pose a health concern at the levels detected. As we learn more about these contaminants over time, we will let you know.

For information about specific PFAS for which MDH health-based guidance exist, see [Per- and polyfluoroalkyl substances \(PFAS\)](#).

Are there other contaminants in my drinking water?

Minnesota's community water systems are tested on a regular basis for bacteria, nitrate and other inorganic chemicals, radiological elements, and up to 118 different industrial chemicals and pesticides. The exact list of contaminants—and the testing schedule—vary from one system to another. For more information, see [Basics of Water Monitoring and Testing of Drinking Water in Minnesota](#).

Why are there contaminants in drinking water?

No water supply is ever completely free of contaminants. Drinking water standards protect Minnesotans from substances that may be harmful to their health. Some contaminants occur naturally in our environment, like arsenic. Other contaminants enter our water supplies as a result of our own behaviors. Fertilizer and pesticides in run off from lawns and farm fields, cleaners and personal care products that go down household drains, and industrial leaks or improper waste disposal can all lead to water contamination.

It is normal for people to want their drinking water to be completely free of all contaminants. However, preventing or removing all contamination is not economically or technologically feasible, or necessary to protect our health. US EPA and MDH are responsible for determining the levels of contaminants that can remain in water supplies without threatening human health.

Who keeps track of drinking water quality in Minnesota?

Monitoring the quality of drinking water in community water systems is a joint responsibility of the Minnesota Department of Health (MDH) and community water systems. Local community water systems are responsible for taking some of the required water samples, according to a schedule established by MDH. MDH staff collect the remainder of the required samples. Certified laboratories test the water samples for a broad variety of possible contaminants.

When it comes to complying with the testing requirements of the federal Safe Drinking Water Act (SDWA), Minnesota has one of the best records in the nation.

Contaminants that do not have drinking water standards are unregulated contaminants. There are no enforceable standards for unregulated contaminants under the SDWA. Many of these unregulated contaminants have not been evaluated for the risks they pose to human health or the environment.

MDH has special projects to understand what unregulated contaminants are present in Minnesota drinking water resources and to protect the health of Minnesotans. MDH will use

the results of these projects to set priorities for risk assessment, risk management, and development of health-based guidance values.

For more information on special projects and testing, see:

- [Strategic Initiatives](#)
- [Basics of Monitoring and Testing of Drinking Water in Minnesota](#)

Monitoring results from special projects may be included in a community's Consumer Confidence Report. For more information and to view a copy of your community's annual report, see:

- [Consumer Confidence Report](#)
- [Search for your Consumer Confidence Report \(CCR\)](#).

How do MDH and community water systems protect Minnesota's drinking water?

MDH is responsible for ensuring safe drinking water for all Minnesotans. One way that MDH does this is through regular testing of community water systems for contaminants. In addition, MDH develops health-based guidance for drinking water contaminants. The guidance can be in the form of Health-Based Values (HBVs) or Health Risk Limits (HRLs).

Minnesota's community water systems can use MDH health-based guidance as goals, benchmarks, or indicators of potential concern. Some community water systems may choose to strive to meet health-based guidance for contaminants for which it is possible and cost effective.

MDH works closely with impacted water system operators to help them understand options available and what resources are needed to implement a response to PFAS in drinking water.

Information for private well users

At this time, Minnesota Department of Health (MDH) does not recommend that every private well is tested for PFAS. If you use a private well for drinking water that is included in an existing environmental investigation near a known source of contamination, the Minnesota Pollution Control Agency (MPCA) will notify you if your well might be affected.

If you want to test your private well for PFAS and are not a part of an MPCA environmental investigation, see [Per- and Polyfluoroalkyl Substances and Private Wells](#).

If you have concerns about your health, you can take steps to reduce your potential exposure to PFAS. Filters containing activated carbon or reverse osmosis membranes have been shown to be effective at removing PFAS from water supplies. All water treatment units require regular maintenance to work properly. Water treatment units that are not properly maintained will lose their effectiveness over time. Learn more at [PFAS and Home Treatment of Water](#).

MPCA private well sampling in the East Metro Twin Cities Area

If you are a private well user in the East Metro Twin Cities Area, visit the MPCA webpage [Well Sampling in the East Metro Area](#) for more information. This page has links to an interactive map to see if you are in the private well sampling area as well as a request form for well sampling by the state's contractors.

If you have any questions, please contact MPCA by phone or email at East Metro PFAS Private Well Sampling Inquiries@state.mn.us or 651-757-2903 .

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To obtain this information in a different format, call 651-201-4700.