



## Drinking Water Contamination from Per- and Polyfluoroalkyl Substances (PFAS)

*Under the Statewide PFAS Action Plan, all community and non-transient non-community public water systems in Ohio will be sampled for PFAS. Although transient public water systems will not be sampled, some may be located near areas with PFAS contamination. This document provides guidance for transient public water systems located in areas with known PFAS contamination.*

### Information about PFAS and the State Action Plan

#### What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals applied to many consumer goods to make them waterproof, stain resistant, or nonstick. PFAS are also used in products like cosmetics, fast food packaging, and a type of firefighting foam called aqueous film forming foam (AFFF) which are used mainly on large spills of flammable liquids, such as jet fuel.

Because PFAS are very long-lasting and are not easily broken down by sunlight or other natural processes, they may remain in the environment for many years. PFAS are classified as contaminants of emerging concern, meaning that research into the harm they may cause to human health is still ongoing. The most commonly studied PFAS are perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorohexane sulfonic acid (PFHxS), and perfluorononanoic acid (PFNA).

#### How Does PFAS get into Drinking Water?

PFAS can enter drinking water at sites where they are made, used, disposed of, or spilled. PFAS can be found in the air near manufacturing facilities and can enter rainwater. PFAS are very mobile and can be transported through rainwater run-off and enter surface water (lakes, ponds, etc.) or seep through the soil and migrate into ground water (underground sources of drinking water).

#### What is Ohio Doing About PFAS?

The State of Ohio has released the statewide action plan to address PFAS. The plan calls for Ohio EPA to gather data from public water systems statewide to determine if PFAS are present in drinking water. Under this plan approximately 1,500 community and non-transient non-community public water systems will be sampled for PFAS.

Ohio EPA and ODH have established PFAS Action Levels for each of the six PFAS compounds.

Statewide Action Levels for PFAS						
PFAS Compounds	PFOA	PFOS	GenX	PFBS	PFHxS	PFNA
Statewide Action Level (ppt)	>70 single or combined with PFOS	>70 single or combined with PFOA	> 700	>140,000	>140	>21

## Health Effects and PFAS Exposure

There are many chemicals in the PFAS family that may cause different health effects if you are exposed to them. The health effects of PFOS, PFOA, PFHxS, and PFNA have been more widely studied than other chemicals in the PFAS family. Scientists are still learning about the health effects of exposures to mixtures of PFAS.

### What are the Health Effects of PFAS?

Some, but not all, studies in humans with PFAS exposure have shown that certain PFAS may:

- Affect growth, learning, and behavior of infants and children;
- Lower a woman's chance of getting pregnant;
- Interfere with the body's natural hormones;
- Increase cholesterol levels;
- Affect the immune system; or
- Increase the risk of certain cancers.

Sensitive populations such as infants and children, pregnant and nursing women, and those who are immune compromised may be at higher risk of health effects from exposure to PFAS. More information on health effects can be found at [www.pfas.ohio.gov](http://www.pfas.ohio.gov).

#### If I am exposed to PFAS will I get sick?

**Being exposed to PFAS does not mean you will necessarily have health effects.** Whether you get sick from exposure to any chemical depends on how much you were exposed to (dose), how long you were exposed for (duration), and how often you were exposed (frequency). Personal factors like age, lifestyle, and other illnesses may also determine whether or not a person gets sick from exposure to PFAS.

## Sampling for PFAS

The only way to know for certain how much, if any, PFAS is in your well water is to have a water sample analyzed at a certified laboratory. Collecting a water sample for PFAS testing is a complicated procedure. Because PFAS is present in many consumer products, collecting a sample is best performed by a trained professional. A list of companies that collect water samples for PFAS and have them analyzed at a certified lab can be found at: <https://epa.ohio.gov/Portals/28/documents/pfas/PFASsampleCollectionServices.pdf>

## Treatment Options for Transient Public Water Systems

Public Water Systems with contaminated source waters should evaluate all possible solutions to PFAS contamination. Information about plan approval and treatment technologies for reducing PFAS in drinking water can be found at [www.pfas.ohio.gov](http://www.pfas.ohio.gov).

### Alternative Water Source

Finding an alternative source may be a practical solution to PFAS contamination for some public water systems. Alternative water sources can include:

- Bottled Water
- Hauled Water
- Connection to another public water system

If your water system intends to connect to another PWS or install a hauled water system, detail plans must be submitted and approved prior to connection.

### Smaller Scale Point-of-Use and Point-of-Entry PFAS Treatment Devices

Point-of-use (POU) and point-of-entry (POE) devices may be used as a solution to certain types of PFAS contamination. Devices certified by NSF P473 have been independently certified to remove PFOS and PFOA.

Noncommunity water systems are eligible to utilize POU or POE devices as a long-term treatment option. If your water system intends to install a POU or POE treatment device(s) for PFAS, notify your Ohio EPA District Office to ensure your water system is eligible. If eligible, detail plans including a demonstration study must be submitted and approved for long-term use.