

PFAS IN DRINKING WATER

PERFLUOROALKYL SUBSTANCES AND WATER

Perfluoroalkyl substances (PFAS) are a group of man-made chemicals that have been used in industrial and consumer products worldwide since the 1950s. Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) were manufactured for the longest amount of time, and are the most widespread in the environment. They have been used in non-stick cookware, water-repellent clothing, stain-resistant fabrics, some firefighting foams, pesticides, household cleaning products, as well as products that resist grease, water, and oil. This has resulted in PFAS being released into the air, water, and soil. While many PFAS have been phased out of use in the US, they are considered "forever chemicals" because they persist in the environment.

Scientists are studying the impacts of these compounds on the environment and human health. Though typically found in minuscule amounts, PFAS are found nearly everywhere.

PFAS REGULATION/ GUIDANCE

The US Environmental Protection Agency (US EPA) regulates drinking water by setting limits, known as Maximum Contaminant Levels (MCLs). MCLs are numeric standards that have been established for more than 90 chemicals. The US EPA has not set MCLs for any PFAS chemicals.

In 2016, USEPA issued drinking water health advisories for PFOA and PFOS at 70 parts per trillion (ppt). These standards are non-binding, non-regulatory, and meant to provide technical information to state agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination.

In 2021, the Illinois EPA issued statewide health advisories and started an ongoing sampling investigation of PFAS chemicals in community water supplies. As "forever chemicals," trace amounts of PFAS are often detected in drinking water.

Both the US EPA Lifetime Health Advisory Levels and Illinois EPA Health-Based Guidance Levels are measured in parts per trillion (ppt), whereas many drinking water compounds are measured in parts per billion (ppb).

At this time, no enforceable federal or state drinking water standard exists for any of the more than 5,000 known PFAS chemicals. Illinois EPA is in the process of collecting data to develop a state MCL.



PFAS IN WINNETKA- the source of Northfield's water

Winnetka's 2021 Illinois EPA testing results determined that one PFAS chemical was detected in the Village's drinking water just above the Illinois EPA Health-Based Guidance Level.

It should be noted that Winnetka's results are well below the US EPA Lifetime Health Advisory Level of 70 ppt. Communities along the west shore of Lake Michigan are seeing similar results at about 2 ppt on average.

Test Results - Village of Winnetka Drinking Water		
Date	PFOS IEPA Guidance Level 14.0 ppt US EPA Guidance Level 70.0 ppt	PFOA IEPA Guidance Level 2.0 ppt US EPA Guidance Level 70.0 ppt
09/03/2021	2.7	2.2
11/17/2021	2.3	2.2
01/03/22	2.2	< 2.0

Ng/L or ppt = nanograms per liter or parts per trillion.

The lowest concentration the laboratory can reliably detect is 2.0 ppt.

Guidance Level (ng/LJ)	PFAS Organics	Units	Jan. 3, 2022	2nd Quarter 2022
2.0 (IEPA) 70 (USEPA)	Perfluorooctanoic Acid (PFOA)	ng/L	<2.0	
14.0 (IEPA) 70 (USEPA)	Perfluorooctanesulfonic Acid (PFOS)	ng/L	2.2	
2,100	Perfluorobutanesulfonic Acid (PFBS)	ng/L	<2.0	
N/A	Perfluoroheptanoic Acid (PFHpA)	ng/L	<2.0	
140	Perfluorohexanesulfonic Acid (PFHxS)	ng/L	<2.0	
21	Perfluorononanoic Acid (PFNA)	ng/L	<2.0	

The Village of Northfield

NIA	Perfluorodecanoic Acid (PFDA)	ngll	<2.0
560,000	Perfluorohexanoic Acid (PFHxA)	ngll	<2.0
NIA	Perfluorododecanoic Acid (PFDoA)	ngll	<2.0
NIA	Perfluorotridecanoic Acid (PFTrDA)	ngll	<2.0
NIA	Perfluoroundecanoic Acid (PFUnA)	ngll	<2.0
NIA	N-ethyl Perfluorooctanesulfonamidoacetic Acid	ngll	<2.0
NIA	N-methyl Perfluorooctanesulfonamidoacetic Acid	ngll	<2.0
560	HFPO-DA	ngll	<2.0
NIA	ADONA	ngll	<2.0
NIA	PCI-PF30 NS	ngll	<2.0
NIA	11CI-PF30UdS	ngll	<2.0
NIA	Perfluorotetradecanoic Acid (PFTeDA)	ngll	<2.0

Ng/L or ppt = nanograms per liter or parts per trillion.

The lowest concentration the laboratory can reliably detect is 2.0 ppt.

NEXT STEPS

The Village of Northfield is following guidance from the Illinois EPA and closely monitoring the latest health-based guidance. PFAS levels will be monitored quarterly in accordance with Illinois EPA. Once available, the most recent results will be posted on the Village's website.

MORE INFORMATION

If you have questions, please contact Public Works Field Supervisor, Bill Wipperfurth at 847-784-3583 or bwipperfurth@northfieldil.org.



The Village of Northfield

RESOURCES

[IEPA PFAS Info](#)

[DrinkTap.org PFAS Consumer Info](#)

[EPA's PFAs Information](#)

[EPA's PFAS Management Plan Website](#)

