

# PFAS

## What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are man-made chemicals that repel both water and oil. They have been produced since the 1950's and used for a variety of manufacturing purposes, including firefighting foam.

These chemicals do not change or break down easily, and, as a result, they are very widespread in the environment from decades of manufacture and use.

## PFAS Exposure

Exposure to PFAS could occur through:

- Drinking water, soil, and outdoor air near industrial areas with frequent PFAS manufacture, disposal, or use
- Indoor air or dust in spaces that contain carpets, textiles, and other consumer products treated with PFAS to resist stains
- Surface water (lakes, ponds, etc.) or groundwater receiving run-off or seepage from areas where firefighting foam was often used (like military or civilian airfields)
- Fish from contaminated bodies of water
- Grease resistant food packaging and paper products



## Potential Health Risks

[Human health implications](#) depend on the level of exposure, the duration of exposure, and how often someone is exposed.

PFAS compounds stay in the human body a long time and can accumulate. The longer a person has experience exposure to higher concentrations, the higher their health risk.

The most consistent findings from studies show that exposure can result in increased cholesterol levels.

More limited findings show a potential association with:

- Liver damage
- Thyroid hormone disruption
- Decreased antibody response to vaccines
- Pregnancy-induced hypertension
- Lower infant birth weights

# PFAS in Madison

## PFAS in Madison Drinking Water

City of Madison Water Utility tested all municipal wells in 2015 for the presence of six PFAS compounds, including PFOA and PFOS. Results showed that no wells tested in Madison had detectable PFAS contamination. In 2017, five wells located near the airport or old landfills were retested with a more sensitive method. None of these wells reported results above the US EPA Health Advisory Level but two wells had trace amounts of PFAS contamination:

- Well 15, located near Truax Field and Dane County Regional Airport had five different PFAS compounds, including PFOA and PFOS, detected well below the current US EPA Health Advisory Level of 0.07 ppb (parts per billion)
- Well 16, located near Memorial High School had trace amounts of the PFAS compound PFHxS

Currently, the low levels detected in these two wells is not considered a potential threat to human health. Additional information is available from the [City of Madison Water Utility](#).

The US EPA does not currently regulate PFAS in drinking water, but has established a lifetime health advisory level of 0.070 ppb for combined PFOA and PFOS levels.

## PFAS in Fish

Previous research conducted by the [Wisconsin Department of Natural Resources \(WI DNR\)](#) which evaluated contamination at seven sites within the Great Lakes and selected river systems in Wisconsin found:

- PFAS was reported at nearly every site
- Three sites were found to have PFAS concentrations to warrant health advisories about consumption of fish
- All three of these sites were located downstream from a major manufacturer of PFAS compounds

The surface waters and fish near the airport would be expected to have detectable levels of PFAS due to the long-term use of PFAS containing firefighting foams at the site and nearby military facility.

Although detectable levels of contamination is likely, based upon the research conducted by the DNR, the surface waters and fish at sites near the airport are not expected to have levels of PFAS contamination that increase the potential risk to health from exposure.

An investigation to evaluate PFAS levels in resident fish at this site will occur in the Spring of 2019 to determine the scale of the contamination and if changes to fish advisories at specific sites is needed. Meanwhile, people are advised to follow [current fish consumption advisories](#).