



What Is The Big Deal About PFAS?

By Daniel Overmoe,
Wastewater Technical Advisor - East

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that include PFOA, PFOS, GenX and many other chemicals. PFAS have been manufactured and used in a variety of industries since the 1940s. Both PFOA and PFOS have been extensively produced and studied and are very persistent in the environment and in the human body. These chemicals do not break down and they can accumulate over time. There is evidence that exposure to PFAS can lead to adverse human health effects.

Where can PFAS be found?

Drinking water	Nonstick cookware
Food	Food packaging materials
Indoor dust	Water resistant clothing
Some consumer products	Cleaning products
Cosmetics	Firefighting foam
Paints, varnishes and sealants	Adhesives

Adverse health effects to PFAS

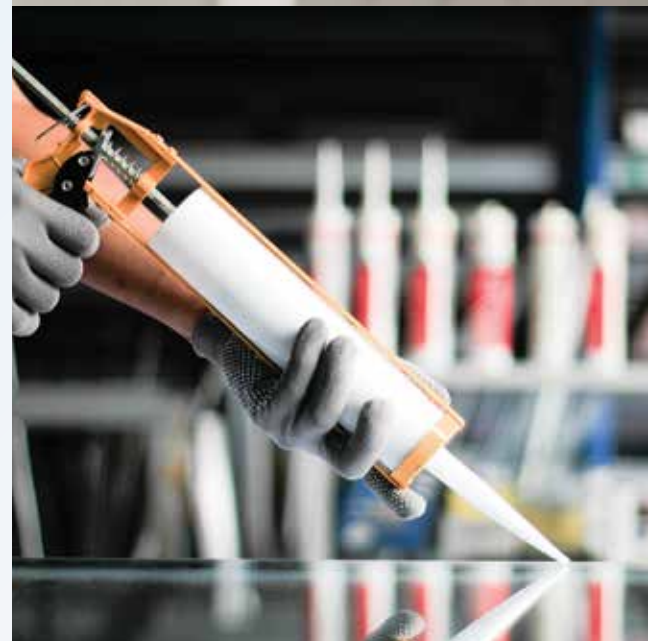
Even though PFAS are used daily in many areas of our lives, and we benefit from them, there are also human health effects.

Studies of the best-known PFAS, show links to kidney cancer and testicular cancer, as well as endocrine disruption in humans. Scientists also have discovered unusual clusters of serious medical effects in communities with heavily PFAS-contaminated water, many of which are near military bases.

How can I reduce my exposure to PFAS?

PFAS are present at low levels in some food products and in the environment (air, water, soil etc.), and in many household products as listed above, so you probably cannot prevent PFAS exposure altogether. However, if you live near known sources of PFAS contamination, it is advised to take steps to reduce your risk of exposure.

For more information on PFAS, go to the North Dakota Department of Environmental Quality website at <https://deq.nd.gov/MF/PFAS/>.





Wastewater Lift Stations

By Keith Hegney, Wastewater Technical Advisor - West

A wastewater lift station is a critical piece of infrastructure included as part of your sanitary collection system. While most wastewater generated by households and businesses are collected and moved through a gravity sanitary pipe, lift stations collect the wastewater at a low point in the collection system and pumps to the next gravity line or to a treatment facility. In most cases, a wastewater lift station includes a wet well to temporarily store wastewater, two or more pumps, float controls, piping, a valve vault, a control panel, radio communication devices, and a backup generator. The lift station pumps the wastewater through a pressurized pipe, known as a forcemain, that transfers the wastewater to an ultimate discharge point or a higher elevation.

REGULAR MAINTENANCE

Most municipalities have a sewer department that is responsible for regular maintenance of the wastewater collection system. Lift stations require regular attention by your municipality's maintenance department to ensure that all components are in proper order. These can include:

- Daily or weekly checks for obstructions or build-up of material that may clog the pumps
- Regular wet well cleaning to reduce grease buildup
- Exercising of valves (gate valves and check valves)
- Annual flushing or jetting
- Jetting lines for cleaning and televising all collection system pipes on a 3–5 year cycle

In the event of a lift station failure, by either a forcemain break, power outage, or pump failure, wastewater will collect in the lift station wet well and back up into the collection system. This could result in sewer backups into homes or cause wastewater to overflow from the lift station to the surrounding environment. Wastewater lift stations are also susceptible to clogs from fats, oils and grease (FOG) generated by restaurants and businesses, as well as “flushable” rags from households and multi-unit residential buildings. Wastewater lift stations can be a source of bad odors that become a nuisance to neighboring properties. The smelly hydrogen sulfide (H₂S) gas from the collected sewage is also highly corrosive and can damage the wet well structure, the piping and pumps over time. H₂S gases can also be reduced by vent filters.

LIFT STATION REPAIR COSTS

Depending on the size, condition, and maintenance history of your wastewater collection system, the rehabilitation of an existing lift station can range from \$75,000 to over \$250,000.

NORTH DAKOTA SYSTEMS ASSOCIATION NDRSA

Our Wastewater technical advisors can help your municipality assess the condition of your wastewater collection system and point out deficiencies that should be addressed in your municipality's Capital Improvements Plan allowing your city to budget for upcoming maintenance.