



PFOS / PFOA Fact Sheet

Background

Synthetic organic chemicals, known as Per and Polyfluoroalkyl Substances (PFAS), are in many of the products that consumers use every day. They are used in food packaging, nonstick cookware, clothing, and many other products. While these chemicals can make items water-resistant or cooking easier, they also leave behind what is known as “forever chemicals.” Those forever chemicals can become concentrated in the bodies of people, animals, and other living organisms. Scientists call the process bioaccumulation. While there are thousands of these chemicals, the two main ones are perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA).

Scientists, including those at the Division of Public Health (DPH) and Department of Natural Resources and Environmental Control (DNREC), are developing new and more effective methods to better understand the possible health effects these chemicals have on individuals. DPH Office of Drinking Water (ODW) is not recommending an overall alternate source of drinking water currently. Any recommendation to do so would be considered on a case-by-case basis.

Have I been exposed to PFAS?

Almost every person in the U.S. has detectable levels of PFAS in their blood. Finding measurable amounts of PFAS in blood does not imply that the levels of PFAS cause an adverse health effect. PFAS have been manufactured since the 1940s and are found in many consumer products. The nature of PFAS is that they are waterproof, non-stick, and resistant to staining. Because of the number of common products that PFAS are found in, it's not surprising that so many people have been exposed.

How can I get exposed?

People can be exposed to PFAS in a variety of ways including drinking contaminated water (municipal or private), eating fish from contaminated water, breathing and swallowing contaminated dust, eating food that was packaged in material that contains PFAS, contact with stain-resistant carpeting and water repellant clothing.

What consumer products may contain PFAS?

Some products that may contain PFAS include:

- Grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes, and candy wrappers
- Nonstick cookware
- Stain-resistant coatings used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Cleaning products
- Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
- Paints, varnishes, and sealants



What are potential health effects of PFAS exposure?

Many studies indicate that exposure to PFOA and PFOS over a certain level may result in adverse health effects, including low birth weight, accelerated puberty, skeletal variations and other developmental effects, cancer, liver disease, and effects on the immune system, the thyroid, and cholesterol levels.

How is Delaware addressing PFAS exposure?

Delaware has been investigating releases of PFAS to environment and addressing these through DNREC action along with mitigating exposure through consumption at public water systems regulated by DPH using the USEPA Health Advisory Limit for PFOA and PFOS of 70 parts per trillion (PPT). The Governor of Delaware signed a bill, H.B. 8, *An Act To Amend Title 29 Of The Delaware Code Relating To Drinking Water*, in October 2021. The bill directs the DPH and DNREC to establish a state-level maximum contaminant level (MCL) for PFOA and PFOS in drinking water.

The PFOA and PFOS MCL implementation plan is currently available linked below. The first public hearing is mandated to occur within 9 months of the effective date of H.B. 8 (October 20, 2021) which places the deadline on or before mid-July 2022. DPH intends to have a proposed rule ready for public notice sooner than that deadline. The levels proposed through the implementation plan are PFOS – 14 parts per trillion, PFOA – 21 parts per trillion, and combined PFOS and PFOA – 17 parts per trillion.

<https://www.dhss.delaware.gov/dhss/dph/hsp/files/MCLImplementationPlanPFAS.pdf>

Team Approach to Solutions

DNREC is conducting an extensive sample survey working with DPH, which will use the survey information to help develop a representative MCL for Delaware. DNREC has been visiting water system sites as well as other locations and acquiring representative water samples for testing. As sample test results become available water systems are notified of the results. If it is discovered that a water system has elevated PFAS DNREC and DPH as well as other organizations such as the Delaware Rural Water Association (DRWA) assist the water system to include guidance, potential funding sources, and technological recommendations for remediation.

Additional information and contacts.

Additional information can be found at [Per- and Polyfluoroalkyl Substances \(PFAS\) | US EPA](#).

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