



PFAS 101

May 19, 2021

PFAS belong to a class of man-made chemicals known as perfluorinated compounds. There are thousands of PFAS chemicals in use and in the environment today. These chemicals include perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), perfluorodecanoic acid (PFDA), perfluorononanoic acid (PFNA), perfluorobutanesulfonic acid (PFBS), perfluorohexanoic acid (PFHxA), perfluorohexanesulfonate (PFHxS), and HFPO dimer acid (GenX).

PFAS were originally developed in the 1940s, and put into large-scale manufacture and use by the early 1950s. These compounds have unique physical and chemical properties – including their carbon-fluorine bond – which can impart oil, water, stain, and soil repellency; chemical and temperature resistance; friction reduction; and surfactant properties to a wide range of products. The unique ability of PFAS to repel both oil and water has led to their application in numerous household goods and apparel. Common uses of PFAS include:

- Aqueous film-forming foam (AFFF);
- Cosmetics;
- Food packaging;
- Commercial household products (e.g., stain- and water-repellent fabrics, nonstick products like Teflon, and cleaning products);
- Industrial facilities (e.g., aerospace, chemical, refineries, and electronics)

PFOA and PFOS have been the most extensively produced and studied of these chemicals. They are persistent, bioaccumulative, and linked to various human diseases and cancers. While U.S. manufacturers have phased out their domestic use of PFOA and PFOS and other long-chain PFAS chemicals, they have shifted production to shorter-chain PFAS chemicals mentioned above that may also present health risks.

Because of their unique properties, including waterproof, stain-resistant, and non-stick, PFAS are ubiquitous in industrial and consumer products and, now, in the natural environment, including in waste facilities, drinking water and living organisms.

This webinar will discuss the current and potential federal and state regulatory landscape, including

existing guidelines on PFAS. In addition, we will discuss operational considerations for water and wastewater utilities, including potential short-, medium- and long-term impacts and potential legal implications.