

On a Mission to Assess and Address Per- and Polyfluoroalkyl Substances at NASA Sites

What Are Per- and Polyfluoroalkyl Substances?

Per- and polyfluoroalkyl substances (PFAS) is an umbrella term for thousands of synthetic fluorinated chemicals that have been widely used for their chemical stability and because they repel water, stains, and oil. Products such as non-stick cookware, outdoor clothing, fabrics, carpets, and paper packaging for food may contain PFAS. Firefighters and the military use aqueous film-forming foams (AFFF) that contain PFAS to put out fires that occur at airfields and on naval vessels.

The characteristics that make PFAS effective for so many uses also prevent them from breaking down in the environment. As a result, the substances may remain in air, soil, surface water, and groundwater.



Investigators collect and evaluate data on the presence of per- and polyfluoroalkyl substances at Kennedy Space Center.

What is NASA Doing About PFAS at its Facilities?

Knowledge about the health effects of PFAS exposure is evolving but scientific studies have shown that exposure to some PFAS may be linked to harmful health effects in humans and animals. NASA is committed to understanding and addressing PFAS at its centers and facilities and to protecting human health and the environment in all its activities.

In 2018, NASA began preliminary assessments for PFAS at all its centers, component facilities, and work areas. These assessments identify areas of potential concern where PFAS releases may have occurred. Potential PFAS sources investigated by NASA included AFFF release areas, electroplating facilities, wastewater treatment plants, biosolids disposal areas, landfills, and areas where PFAS containing products were utilized or stored.

NASA began site inspections in 2019 and has completed them at all centers, component facilities, and work areas. These inspections confirmed whether PFAS were released into the environment, whether specific PFAS are present, and their concentrations.

The results of the site inspections determined whether remedial investigations or immediate response action was needed to protect human health and the environment. For example, drinking water wells for the Town of Chincoteague, located on the Goddard Space Flight Center's Wallops Flight Facility, were impacted with PFAS. Following this discovery, a PFAS treatment system was constructed and has been operating since 2021.

Remedial investigations have been initiated at Kennedy Space Center and Wallops Flight Facility, and others are planned for 2024. These investigations fully delineate PFAS impacts to soil, groundwater, surface water, and sediment. They also determine ecological and human health risks, what areas need to be remediated, and how areas will be cleaned up.



The Latest on Federal Regulation of PFAS

To date, there are no federal or state drinking water, groundwater or surface water regulatory standards for PFAS. The U.S. Environmental Protection Agency announced its PFAS Strategic Roadmap in 2021 and proposed in 2023 to establish drinking water standards for PFAS and other substances. Since 2018, NASA has taken steps to proactively assess and address the presence of PFAS across its sites.

Contact

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