

NEWEA Position Paper

PFAS: A Class of Contaminants of Emerging Concern



PFAS – Contaminants of Emerging Concern: In March 2019, NEWEA renewed its position statement on the prevention of and research on Contaminants of Emerging Concern (CECs). This document is an addendum to that statement and concerns one particular class of CECs that rose to prominence in the 2010s: PFAS – per- and polyfluoroalkyl substances.

What Are PFAS? PFAS are a group of man-made chemicals that includes over 4,700 chemicals and polymers. PFAS contain many carbon-fluorine bonds, making them very chemically stable and highly persistent. PFAS have been manufactured and used in a variety of products and industries in the United States and around the globe since the 1940s. Epidemiological and laboratory-based studies have found associations between PFAS exposure and testicular and kidney cancers, thyroid disease, immune suppression and other health effects.

How Are Humans Exposed to PFAS? In some communities, high levels of PFAS exposure occur through contamination of drinking water supplies. Sources of water contamination include a class of



Food Packaging



Non-stick Cookware



Child Car Seats



Protective Coatings



Firefighting Foam



Dental Floss

Take Home Messages

- Wastewater treatment processes do not utilize or add PFAS chemicals; they convey the PFAS that initially enter society through commercial products. Additionally, PFAS are highly resistant to treatment and remediation.
- Prevention, product evaluation and control of PFAS-containing products are necessary to address the sources of PFAS.
- Continued funding and facilitation of research and monitoring are necessary to understand the impacts PFAS and other contaminants have on the environment, wastewater and associated media.
- Wastewater treatment utilities are unable to afford the costs to measure, monitor and treat PFAS that arrive at facilities.

firefighting foams, AFFF, used at military bases and airports, as well as industries that manufacture or use PFAS. Exposure also comes from food and consumer products, such as food packaging, dental floss, nonstick cookware, stain resistant textiles and waterproof clothing. As a result, nearly all Americans contain traces of PFAS in their bodies.

PFAS in Wastewater and Associated Residuals:

Wastewater treatment plants do not utilize or add PFAS chemicals, and because of the persistent nature of PFAS, these chemicals are highly resistant to treatment and remediation. Some PFAS are therefore released from wastewater treatment plants into surface water and groundwater, which can be sources of drinking water. Trace amounts are also found in associated media, such as wastewater solids, sludges, biosolids, incinerator ash and air emissions.

Prevention: NEWEA commends the voluntary removal of PFOA and PFOS in products, facilitated by U.S. EPA, and advocates for additional measures aimed at reducing one of the main sources of PFAS contamination in the environment – commercial products. Such source control is the most effective method of addressing PFAS concerns. Proper disposal of existing materials is a necessary additional step for removing these chemicals from the human and natural environment.

Although newer PFAS chemicals are slightly different, for regulatory and policy practicality, consideration should be given to restricting all PFAS-containing products as a class.

Product Evaluation and Control: NEWEA urges the U.S. EPA, the U.S. Food and Drug Administration, other government agencies and U.S. Congress to review and advance regulatory actions aimed at evaluating PFAS replacements and other emerging chemicals prior to their production and use.

Research: NEWEA encourages research organizations, states, and the federal government to coordinate funding and facilitate research on:

- The presence, fate and impacts of PFAS in wastewater and associated media;
- Cost- and energy-efficient methods for minimizing conveyance of PFAS via wastewater and associated media, such as source control and industrial pretreatment; and
- Cost-effective technologies to reduce background PFAS concentrations in wastewater collection systems, wastewater treatment facilities and associated operations.
- Monitoring: NEWEA requests that U.S. EPA increase its resources dedicated to monitoring PFAS through:
- Standardized analytical methods for quantifying PFAS concentrations in non-potable waters (e.g., groundwater, wastewater), solids (e.g., soils, sediments, biosolids), and other media (e.g., incinerator ash, air emissions); and
- Enhanced monitoring of PFAS chemicals to identify pollution sources and characterize environmental fate and transport.

Public Outreach: NEWEA urges U.S. EPA, other federal agencies, state regulatory agencies and its members to advance balanced risk communications related to PFAS contamination in the environment, the implications for public health and the consequences on wastewater treatment and associated operations. The following facts are critical to NEWEA and our members:

- Wastewater treatment processes do not utilize or add PFAS chemicals. Wastewater conveys traces of PFAS that initially enter into Americans' lives by the manufacturing of commercial products.
- In the rare instances where PFAS is present in wastewater at levels higher than trace amounts, the underlying source is often an upstream industrial discharge. Eliminating such discharges with industrial pretreatment will lower the burden on municipal plants and on the environment.
- The largest releases of PFAS to the environment are from firefighting foams and industrial uses; these releases have orders-of-magnitude greater impact than the trace levels found in typical wastewaters. These large releases should continue to be the priority for regulatory policies and actions.
- Wastewater treatment utilities and their ratepayers, septic system owners, and municipalities are unable to afford the costs of measuring, monitoring, researching and treating the trace PFAS that arrive at the facilities.

Conclusions: Water and wastewater infrastructure is under stress and in need of repair and replacement. The added burden of addressing PFAS concerns without extensive federal and state funding and technical support could result in compromises at public utilities and financial burdens on municipal budgets and ratepayers. The most cost-effective way to minimize discharges of these highly persistent and mobile chemicals into the environment is to restrict the class of PFAS at the source. Safe, non-PFAS alternatives should replace PFAS as soon as possible. NEWEA reaffirms its call on Congress to address all CECs, most importantly PFAS, at the same time as Congress advances infrastructure legislation that includes much-needed water and wastewater infrastructure funding.