



FACT SHEET: PER- AND POLY-FLUOROALKYL SUBSTANCES (PFAS)

PFAS and the water industry

- PFAS or Per- and Poly-FluoroAlkyl Substances are a group of manufactured chemicals that have been used widely since the 1950s in household and industrial products that resist heat, oil, stains, grease and water. Common uses include non-stick cookware, stain and water-resistant treatment on fabrics, food packaging, in cleaning and beauty products and firefighting foam.
- The application of PFAS means they are water soluble and do not easily break down. As a result, they are commonly found and are persistent in the environment giving them the label of forever chemicals.
- The urban water industry is often tasked with the responsibility to monitor and treat for PFAS that enters the sewerage system because of its widespread application in industry and commercial products.
- Research shows that removal of PFAS by water treatment processes is challenging because of the chemical structure of these compounds. Consequently, the treatment and destruction of these chemicals can be quite costly and energy intensive.

What is PFAS?

PFAS refers to Per- and polyfluoroalkyl substances that represent a large range of chemicals applied as non-stick coatings for textiles and paper products, as well as in firefighting foams often associated with air force bases. The nature of the chemical structure and bonds within these compounds means they are highly resistant to biological, thermal and chemical degradation, allowing them to persist in the environment. Their ability to persist in the environment means PFAS are also highly resistant to most standard water and wastewater treatment processes.

How do we control PFAS in the wastewater system?

The use of PFAS in everyday household items from cosmetics to detergents and sunscreen, is a challenge for wastewater systems as they are washed down the drain and into the wastewater system.



To reduce PFAS in the system requires effective source control (manufacturing, application and use of PFAS) to form part of updated regulations and management plans. To prevent PFAS from entering the wastewater system, the urban water industry strongly recommends stricter regulation of importation and manufacturing of products containing PFAS. This will help limit and overtime significantly reduce the presence and exposure to PFAS entering the wastewater system.

How is the urban water industry in Australia responding?

The industry has proactively recognised the evidence-based risk associated with PFAS and has engaged in the development of the current and previous versions of the PFAS National Environmental Management Plan (NEMP). This plan provides national guidance on actions and limits to better manage exposure and spread of PFAS, with further development towards more effective source control.

The industry also invests in research projects and initiatives which provide evidence to inform monitoring, treatment, and policy decisions. Through the investment in this type of research, outputs include more effective and cost-efficient processes and technologies to treat and destroy PFAS, while trying to better understand the specific risks associated with PFAS. Research organisations such as Water Research Australia play an important role in coordinating and getting industry stakeholders to collaborate on researching the impact from PFAS.

One impact of this, is the further presence of PFAS in biosolids, the dried by-product of sewage sludge from wastewater treatment. In this regard, effective collaboration with organisations such as the Australian New Zealand Biosolids Partnership help to understand risks and impacts. As an industry we committed to ensure compliance with regulations and maintain the use of biosolids in the best and safest application. This ensures the valuable nutrient resources contained in biosolids are not lost.

Are there regulations for wastewater treatment plants to test for PFAS in Australia?

The management of biosolids is governed by individual states, their respective regulators and associated legislation and guidelines for PFAS in both wastewater and biosolids. However, additional national guidance is provided for by the PFAS NEMP. The plan provides specific guidance for testing and limits of PFAS in recycled water and biosolids through the development of Version 3 of the NEMP, by the National Chemicals Working Group of the Heads of EPA.



WATER SERVICES
ASSOCIATION OF AUSTRALIA

More information on PFAS is available here:

<https://www.dcceew.gov.au/environment/protection/publications/pfas-nemp>

[Water Research Australia Factsheet 1 - PFAS in the environment](#)

[Water Research Australia Factsheet 2 - PFAS in drinking water](#)

[Water Research Australia Factsheet 3 - PFAS in recycled water](#)

[Australian Drinking Water Quality Guidelines \(ADWG\)](#)

Media inquiries:

Sandi Kolbe, Communications Manager

Water Services Association of Australia

P: 0427 224 694

E: sandi.kolbe@wsaa.asn.au