

# 1 PFAS ('forever chemicals')

## Per- and poly fluoroalkyl substances, their uses and how they are monitored



**PFAS compounds (per-and poly fluoroalkyl substances) are from a chemical family consisting of at least 5,000 individual substances. They are sometimes referred to as 'forever chemicals' because of their persistence in the environment.**

### Where does PFAS come from?

During the manufacture of products, PFAS compounds are favoured for their durability and useful properties, such as non-stick, water repellence and anti-grease. PFAS compounds are used in the manufacture of many domestic products, including:

- skin creams and cosmetics
- car and floor polish
- rinse aid for dishwashers
- textile and fabric treatments
- food packaging and microwave popcorn bags
- baking equipment
- frying pans
- outdoor clothing and shoes

PFAS compounds also have many widespread uses in industry, including historic use in firefighting foam.

### Are PFAS still being used?

There are some PFAS compounds that have had their use restricted. For example, perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) have been restricted in England and Wales through UK REACH, the regulatory framework for the Registration, Evaluation, Authorisation and Restriction of Chemicals.

Work is being carried out by the European Chemicals Agency (ECHA) to restrict the production and import of all PFAS.

However, there are still PFAS compounds currently being used within a range of industries.

### Are PFAS harmful?

In studies, at sufficient levels of exposure, some PFAS compounds, such as PFOA and PFOS, have been associated with adverse health effects. This has led to the restricted use of some of these substances.

For many PFAS compounds there is still a lack of toxicological data. Further international research is ongoing to better understand the health effects associated with low levels of exposure over long periods of time.

### The regulatory position

There are currently no regulatory limits for PFAS compounds within the Water Supply (Water Quality) Regulations (as amended). However, whilst standards are not specified for all chemical compounds, the Regulations do require that, in order to be regarded as "wholesome", drinking water must not contain any substance at a level which would constitute a potential danger to human health. The industry regulator, the Drinking Water Inspectorate (DWI) has issued guidance (which is available on their website) requiring water companies to take action to risk assess, monitor and if necessary, reduce the concentration of the levels of PFAS in drinking water.

Recognising the potential for longer term accumulation in the human body the DWI, has set guidance levels for PFAS in drinking water that provide a precautionary margin of safety.

The DWI has provided information on their website: <https://www.dwi.gov.uk/pfas-and-forever-chemicals/>.

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#### PFAS is not just a drinking water issue

Drinking water is only one possible route of exposure to PFAS, accounting for a small proportion of the possible overall exposure alongside the use of various chemical products, food and even household dust.

#### Is my drinking water safe to drink?

Risk assessment and monitoring of PFAS has confirmed that all drinking water supplied by SES Water sites conforms with the regulations. Drinking water in the SES Water supply area is wholesome and consistently of a high quality.

The DWI state that the low levels of PFAS in water abstracted for public drinking water supplies have no acute or immediate impact on human health.

SES Water is a water supplier regulated by the DWI and is required to meet the Water Supply (Water Quality) Regulations 2016 (as amended). Water supplies provided for human consumption (which includes cooking, drinking, food preparation and washing), must meet the wholesomeness requirements of these Regulations.

#### Do we monitor for PFAS?

Yes. In recent water quality sampling, carried out across our area, the levels of PFAS compounds measured in the water were significantly below the DWI trigger level for action of 0.1 µg/l.

We also assess the risk of chemical contaminants, such as PFAS, within our Drinking Water Safety Plans.

We treat the water in accordance with these risks and the incoming raw water challenge to our treatment works. We have appropriate treatment in place at all our treatment works, including filtration and disinfection.

We carry out monitoring and sampling from our treatment works, and from across our supply area, for a wide variety of water quality parameters to ensure that we provide water to our customers of the highest quality, is constantly wholesome and conforms to the Water Supply (Water Quality) Regulations 2016 (as amended).

We will continue to monitor our sites on a risk-based approach along with continually reviewing our risk assessments as more data becomes available and as we identify potential sources of PFAS within our catchments.

#### Other Water Quality information available

A water quality summary report for your area is available on our website.

These reports along with factsheets, including Water Hardness, Discoloured Water, Lead in drinking water, Taste & Odour, Particles and an industry guide "Looking after water in your home", are available on our website at <http://www.seswater.co.uk/wq>.