

What are per- and polyfluoroalkyl substances (PFAS)?

PFAS (per- and polyfluoroalkyl substances) are a group of human-made chemicals that have been widely used in industrial and consumer products since the mid-1900s.

Due to the unique physical and chemical properties of PFAS to resist heat, stains, grease and water, they have been used in items including firefighting foams, textiles and leather products, food packaging, non-stick cookware, cosmetics, sunscreens, denture cleaner and medical devices.

Because PFAS break down slowly, they are sometimes referred to as “forever chemicals.”

Is my water safe to drink?

Providing clean, safe drinking water is Seqwater’s number one priority and our water continues to meet the standards set by the *Australian Drinking Water Guidelines* (ADWG).

Who decides the amount of PFAS allowed in my drinking water?

The *Australian Drinking Water Guidelines* (ADWG) are determined by the National Health and Medical Research Council (NHMRC).

Are PFAS chemicals added to my drinking water?

No. Unlike other chemicals such as chlorine and fluoride which are added to drinking water as part of our multi-step approach to water treatment, Seqwater does not add PFAS to the region’s drinking water supplies.

However, PFAS can be present in our water due to external sources. The NHMRC note that exposure to PFAS can occur through many pathways including consumer products, food packaging, air and dust, and drinking water. Exposure to PFOS and PFOA from drinking water has been previously estimated to be approximately 2-3% of total PFAS exposure¹ in areas with low levels of contamination.

The Australian Government has banned the manufacture and importation of some PFAS substances by July 2025, including everyday products that contain PFAS.

¹ Thompson J, Eaglesham G, Mueller J (2011). Concentrations of PFOS, PFOA and other perfluorinated alkyl acids in Australian drinking water. *Chemosphere* 83; 1320-1325.

How regularly does Seqwater test for PFAS?

In accordance with the Australian Drinking Water Guidelines (ADWG), Seqwater tests for a wide range of contaminants in our raw and treated drinking water, plus off-grid supplies.

Seqwater routinely monitors for PFAS in the region’s drinking water supplies, including:

- Twice-yearly region-wide raw water monitoring mostly via highly sensitive passive sampling technology. Testing is conducted in January and February (summer) and July and August (winter). We aim to publish results on our website within three months after testing is complete. This is determined by the collection and validation of independent laboratories.

- Monthly raw and treated drinking water monitoring via grab sampling at the Mount Crosby, Capalaba and Lowood Water Treatment Plants.

Additional testing may also occur to support further catchment analysis and risk assessments, in addition to investigations conducted by the Queensland Government and other agencies.

The number of high-risk facilities such as fire-fighting training grounds, large airfields and heavy industrial facilities (particularly those with oil and chemical management and processing facilities) in Seqwater's catchments are very low or not present. This is based on catchment understanding including Sanitary Surveys (which include both microbial and chemical risk identification elements).

Based on the catchment risk assessment, and that results for PFAS monitoring across raw, treated and off-grid water supplies in 2018 and in additional testing over subsequent years were below the ADWG, Seqwater had previously adopted an intermittent approach to testing for PFAS.

We understand the public health interest in PFAS and out of an abundance of caution, we've enhanced the frequency of our monitoring for PFAS and are regularly making results available on our website so that the community can feel informed about what's in their water.

How does Seqwater test for PFAS?

Seqwater employs multiple techniques to test for micropollutants such as PFAS, including the use of sensitive passive sampling technology which is mostly used as part of our twice-yearly region-wide raw water monitoring campaigns.

The University of Queensland supplies Seqwater with passive samplers to test for PFAS and other micropollutants across South East Queensland's raw water supplies.

Developed by the Queensland Alliance for Environmental Health Services, the Microporous Polyethylene Tube (MPT) is deployed at each water treatment plant (WTP) offtake for approximately one month and is designed to soak up any PFAS detections in the raw water.

Passive sampling technology is beneficial as it is highly sensitive to micropollutants like PFAS and it provides readings over a period of time, supporting a better understanding of the presence of PFAS.

Seqwater also adopts grab sampling as part of its monthly testing for PFAS in the raw and treated drinking water at the Mount Crosby, Capalaba and Lowood Water Treatment Plants. Grab sampling is also used when deploying passive samplers is not feasible (i.e., due to location restraints).

More information:

Passive sampling technology is beneficial as it is highly sensitive to micropollutants such as PFAS and it provides readings over a period time, supporting a better understanding of the presence of PFAS.

Grab sampling is also beneficial for providing time sensitive results. It is the most effective monitoring technique where results are required quickly to identify potential risks. Passive sampling technology also can't be used at every location due site and physical constraints.

Why do the results for PFAS in our drinking water fluctuate?

Seqwater does not add or remove PFAS from the region's drinking water.

Because PFAS chemicals break down slowly and have been used in a wide variety of applications over time, they are present in many environments. As such, weather events (drought, rain, flood etc) or climatic differences (i.e., the wet season) may impact inflows into the catchment and PFAS levels.

Results for PFAS can also vary due to sampling and analytical differences.

Seqwater adopts both grab and passive sampling techniques to test for PFAS and slight variations can arise due to the differences in sampling.

Sample contamination may also impact result variability. Given PFAS is used across a wide variety of applications, including make-up and sunscreen, sample contamination during testing can occur. Seqwater has recently enhanced its controls to mitigate sample contamination when monitoring for PFAS.

If PFAS were detected at high levels in raw or treated water, what steps would Seqwater take?

Seqwater is committed to delivering clean, safe drinking water.

If PFAS are detected at high levels in raw or treated drinking water, Seqwater would adopt a risk-informed approach to the management of drinking water quality.

Several factors influence this approach and can include, but are not limited to:

- The types of PFAS detected and their measured concentrations
- The location of sampling.

Any actions by Seqwater would be undertaken in consultation with the Queensland Government's Water Supply Regulator and Queensland Health and can include, but are not limited to:

- Follow up testing
- Utilising alternate water supplies if available and optimisation of the SEQ Water Grid where possible
- The provision of information to the general public.

Can Seqwater remove PFAS from water?

PFAS are difficult to remove from water using conventional water treatment methods such as coagulation and filtration. Proven technologies that remove or reduce PFAS levels in water include:

- Activated carbon
- Anion exchange
- Reverse osmosis or nanofiltration.

Some of Seqwater's water treatment plants have activated carbon treatment processes. These assets were not specifically designed to remove PFAS but may assist if elevated levels are present. The Gold Coast Desalination Plant also utilises reverse osmosis which is effective at removing PFAS.

Will Seqwater adopt PFAS removal technologies?

Seqwater's number one priority is to deliver clean, safe and valued drinking water to South East Queenslanders. Seqwater ensures water treatment options are adopted based on risk level so that our drinking water continues to meet the standards set by the Australian Drinking Water Guidelines, while being delivered in a cost-effective way.

Why can't PFAS be removed at traditional water treatment plants?

The properties of PFAS that make them useful for fire retardants or resistant to stains mean they are not amenable to removal through conventional water treatment processes including coagulation, flocculation, settling and filtration or oxidation with chlorine or ozone.

Removing PFAS from water involves separating it through absorption (activated carbon or ion exchange) or by size exclusion through high pressure membranes (reverse osmosis or nanofiltration).

What is Seqwater's position on the draft updated ADWG for PFAS?

The ADWG for PFAS is currently being reviewed by the NHMRC. The draft update includes lower levels for three types of PFAS (PFOS, PFOA and PFHxS) and the introduction of a limit for PFBS.

Seqwater welcomes the release of the updated draft ADWG for PFAS by the NHMRC. We support the rolling review of the ADWG in line with the latest scientific data to maintain clean, safe and sustainable drinking water across South East Queensland for generations to come.

The NHMRC held a public consultation period for the draft updated ADWG for PFAS in late 2024. We expect the changes could come into effect in 2025 and we will ensure more information is provided when the updated ADWG for PFAS is released.

Visit the Water Services Association of Australia PFAS webpage for more <https://wsaa.asn.au/Web/Web/News-and-Resources/Resources/Per-and-Poly-Fluoroalkyl-Substances-PFAS.aspx>

Will filtering my water make it safe from PFAS?

South East Queensland's drinking water is safe to drink and continues to meet the standards set by the ADWG.

Any PFAS queries relating to public health should be direct to Queensland Health on 13HEALTH (13 43 25 84).

Where can I find more information on PFAS?

For public health enquiries, call Queensland Health on 13HEALTH (13 43 25 84). You can also find more information [here](#).

For more information on The Australia Drinking Water Guidelines, visit [The National Health and Medical Research Council](#).

For more information on PFAS, visit the [Water Services Association of Australia](#).