



PFAS contamination

Last edited: 24 February 2022

Per- and poly-fluoroalkyl substances (PFAS) are a group of nearly 5,000 man-made chemicals that have been used widely since the 1950s. Known for their water- and heat-resistant properties, they are used in products including furniture and fabric protectants, manufacture of electrical equipment, and as an ingredient in firefighting foam.

Health and the environment

PFAS chemicals are resistant to degradation, so can build up in the environment, particularly where PFAS-containing firefighting foams have been used (e.g. airports, firefighting training sites, military bases).

As well as persisting in the environment, PFAS can accumulate in living organisms including humans. Studies suggest that PFAS exposure [may be associated with adverse health effects](#),¹ but everyday exposure levels in Aotearoa New Zealand are generally very low and so the Ministry of Health advises that PFAS do not pose a significant public health risk.

A [2018 report prepared for the Ministry for the Environment](#)² found that the impacts of PFAS on ecosystems in Aotearoa New Zealand was understudied, including aquatic and land-based animals and plants.

One member of the PFAS family, perfluorooctane sulfonate (PFOS), has been effectively [banned in Aotearoa New Zealand since 2011](#)³ (and banned for use in firefighting foams since 2006), and use of perfluorooctanoic acid (PFOA) is restricted. Both PFOS and PFOA are regulated at the international level under the [Stockholm Convention](#),⁴ a global treaty to protect people and the environment from chemical contaminants.

Contamination investigation

Since 2018, the government has been investigating potential PFAS contamination sites and examining the health and environmental impacts of any detected environmental contamination. Contamination has been confirmed at multiple sites where PFAS-containing firefighting foams were historically used, as well as in landfill leachates and in discharges from wastewater treatment plants. However, the Ministry of Health continues to advise that there is no significant public health risk. Findings from investigations conducted at Crown-owned sites are available on the [Ministry for the Environment](#) website.⁵

Read more

- Key messages from a 2019 [workshop on PFAS](#)⁶ involving academics and government officials from Australia and New Zealand, held at the University of Auckland

Endnotes

- ¹ Food Standards Australia New Zealand Hazard Assessment Report - Perfluorooctane Sulfonate (PFOS), Perfluorooctanoic Acid (PFOA), Perfluorohexane Sulfonate (PFHxS) (2018), accessed on 24 February 2022
[https://www1.health.gov.au/internet/main/publishing.nsf/Content/2200FE086D480353CA2580C900817CDC/\\$File/6.sd1-Hazard-assessment-report.pdf](https://www1.health.gov.au/internet/main/publishing.nsf/Content/2200FE086D480353CA2580C900817CDC/$File/6.sd1-Hazard-assessment-report.pdf)
- ² Report prepared for the Ministry for the Environment – Impact of Per and Poly Fluoroalkyl Substances on Ecosystems (2018), accessed on 24 February 2022
https://environment.govt.nz/assets/final-impact-of-pfas-on-ecosystems_0.pdf
- ³ Ministry for the Environment webpage – Frequently Asked Questions on PFAS, accessed on 24 February 2022 <https://environment.govt.nz/what-government-is-doing/areas-of-work/land/per-and-poly-fluoroalkyl-substances-pfas/information/>
- ⁴ United Nations Industrial Development Organisation webpage – Stockholm Convention, accessed on 24 February 2022 <https://www.unido.org/our-focus/safeguarding-environment-implementation-multilateral-environmental-agreements/stockholm-convention>
- ⁵ Ministry for the Environment webpage – PFAS investigations, accessed on 24 February 2022 <https://environment.govt.nz/what-government-is-doing/areas-of-work/land/per-and-poly-fluoroalkyl-substances-pfas/pfas-investigations/>
- ⁶ University of Auckland workshop key messages – PFAS in New Zealand: current knowledge and the steps forwards (2019), accessed on 24 February 2022 <https://cpb-ap-se2.wpmucdn.com/blogs.auckland.ac.nz/dist/f/688/files/2020/02/PFAS-workshop-brief-2019.pdf>