



Factsheets for Estimates 2019/2020

PFAS (per and polyfluoroalkyl substances)

This is part of a series of fact sheets prepared for the Environment Committee's 2019/20 Estimates examination of Vote Environment.

Work to investigate and manage PFAS contamination

Since late 2017, the Ministry for the Environment has been leading an all-of-Government programme to help councils and landowners to investigate the extent of PFAS contamination in New Zealand, and to guide them on managing this emerging contaminant.

Crown sites, such as New Zealand Defence Force (NZDF) bases that have historically used fluorinated firefighting foams, have been leading investigations.

Regional councils around the country are undertaking their own investigations into PFAS to understand the sites that may pose a risk to their communities, alongside other contaminated land issues.

All-of-Government programme

The all-of-Government programme involves representatives from:

- the Ministry for the Environment
- Ministry for Primary Industries
- Ministry of Health
- Environmental Protection Authority (EPA)
- NZ Defence Force
- Crown Law
- Fire & Emergency New Zealand
- Local Government New Zealand
- local authority representation where necessary.

As well as leading investigations into Crown sites, the programme has produced guidance and advice for councils and landowners. It has linked together joint Australia/New Zealand health and environmental limits with research to identify what and where PFAS has been used in New Zealand, and the New Zealand specific effects on health and the environment.

What have investigations found?

- Residual contamination has been found in groundwater and surface water downstream of Ohakea, Woodbourne, and Whenuapai bases, where firefighting foams containing PFAS

were historically used. Some recommended restrictions remain in place for consumption of certain foods and groundwater, and alternative water supplies have been provided where needed.

- At Devonport, PFAS compounds have been found in harbour sediment adjacent to the base; however they have also been found at control sites in distant areas of the harbour.
- Some regional councils and private landowners around New Zealand have conducted their own investigations and found PFAS contamination downstream of wastewater treatment plants, landfills, airports, and oil and gas installations.
- While of concern, the concentrations and extent of PFAS found in the environment have been low compared to similar sites in Australia and the USA.
- The EPA conducted an investigation into the use of firefighting foams containing PFOS, and found that many airports, ports and other industries continued to have stores of the PFOS foams after they were banned. These sites have switched to alternatives and are working with the EPA to safely dispose of the old foams.
- Fire and Emergency New Zealand (FENZ) has undertaken a contaminated land prioritisation of their approximately 650 sites around the country, and found no sites of high risk. Preliminary site investigations are starting at the top eight sites with moderate/low risk of PFAS contamination. Note that 95 per cent of firefighting foams used by FENZ are of the 'Class A' type and do not contain PFAS.

Background information about PFAS

What is PFAS?

PFAS is an acronym for per- and poly-fluoroalkyl substances, a large group of manufactured compounds that have industrial and consumer applications, being resistant to heat, water, and oil. There are more than 4,000 such substances, grouped in various subclasses.

PFAS has been used in a range of industrial and consumer applications, often as surfactants, coatings and treatments to repel oil, grease and water.

Why is PFAS a concern?

Some PFAS, such as PFOS, PFOA and PFHxS, are persistent in the environment and in the human body, and so are of concern nationally and internationally. They are resistant to environmental degradation. They also bioaccumulate in the tissues of living organisms for long periods of time.

Based on current information, at the concentrations people are normally exposed to, there is no acute health risk. There is limited understanding of the long term health effects of exposure to these compounds, and so conservative limits have been proposed to reduce exposure.

Where does PFAS come from?

A notable source of PFAS in the environment is from the historic use of fluorinated firefighting foams for flammable liquid fires. Independent preliminary investigations are underway at sites that may have used such foams, including airports, fire training sites, and oil and gas facilities.

PFAS are also very common additives to industrial processes and consumer goods such as waterproof clothing, cookware, cosmetics, paint, polish, textile, and electroplating industries. As products are used and disposed of, PFAS is discharged into the environment from wastewater treatment plants and landfills.

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