



Mullumbimby PFAS Investigations

Fire and Rescue NSW (FRNSW) is investigating the presence of per- and polyfluoroalkyl substances (PFAS) at the Mullumbimby Fire Station arising from historical use of PFAS containing firefighting foams.

Initially this work involved a targeted site investigation at the Fire Station. Based on the results of this preliminary work, the New South Wales Environment Protection Authority (EPA) recommended FRNSW undertake additional investigations.

This additional work involved installing groundwater wells near the fire station to determine groundwater flow direction and to identify if there was any potential offsite PFAS impact.

The EPA has now requested FRNSW to undertake additional sampling and analysis, including a water use survey with surrounding residents and businesses to understand their potential use of groundwater.

FRNSW will work closely with the NSW EPA to determine what further actions may be required after these investigation results are known and will update the local community accordingly.

Investigation background

FRNSW commenced its work in Mullumbimby as part of its ongoing environmental program to manage potential PFAS impacts.

All firefighting foams currently used by FRNSW do not contain PFAS as use of PFAS containing foams by FRNSW ceased from 2007.

FRNSW PFAS environmental program

Fire and Rescue NSW (FRNSW) commenced this environmental program in 2016. It investigates and manages the potential presence and impacts of PFAS on, and in the vicinity of, FRNSW sites.

The program was developed in consultation with the EPA. It includes training sites, current and former fire stations, and offsite locations across NSW where historical firefighting foams containing PFAS were stored and used by FRNSW.

The EPA oversees the progress of FRNSW PFAS investigations.

What are PFAS?

PFAS (per- and poly-fluoroalkyl substances) are a group of manufactured chemicals used since the 1950s to make products that resist heat, stains, grease and water. They include perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA) and perfluorohexane sulfonate (PFHxS).

PFAS are very stable chemicals that do not easily break down and can persist for a long time in humans and in the environment.

PFAS compounds have been used in the manufacture of many common household and industrial goods as shown in Figure 1, as well as historically in certain types of firefighting foams.

These household goods include, but are not limited to, stain resistant applications for furniture and carpets, non-stick cookware, fast food or packaged food containers, make up, personal care products, paints and cleaning products.

Products containing PFAS are currently being phased out around the world wherever possible.

Due to their widespread use and persistence in the environment, most people living in developed nations would have had exposure to PFAS from various sources. According to the Australian Government's Environmental Health Standing Committee (enHealth), this means most people in Australia would have some level of PFAS present in their body.



Figure 1: Common uses of PFAS



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PFAS FACT SHEET

MULLUMBIMBY

May 2024

PFAS and Firefighting Foam

PFAS compounds have been used in aqueous film forming foams (AFFFs) since the 1970s due to their effectiveness in extinguishing liquid fuel fires.

AFFFs were used worldwide as firefighting foams by both civilian and military authorities and historically contained PFOS and PFOA as active ingredients.

The firefighting foam used by FRNSW today does not contain PFAS. FRNSW commenced phasing out use of AFFFs in 2007.

PFAS and Human Health

FRNSW relies on guidance from relevant health authorities and cannot provide PFAS health advice.

More information about PFAS and human health can be found in the February 2024 enHealth PFAS [Guidance Statement](#) and [Fact Sheet](#).

This enHealth advice states that PFAS has been associated with a range of health effects. It also notes that it is important to recognise an association does not constitute causation and to date a causative relationship between health effects and PFAS exposure has not been established.

As science and understanding about PFAS continues to evolve enHealth recommends minimising exposure where possible.

PFAS exposure pathways

According to enHealth, for most people their level of PFAS exposure is likely to be small and PFAS levels in the general Australian food supply are very low.

In locations where there may be higher levels of PFAS in the local environment key exposure pathways may include regular consumption of contaminated groundwater from drinking water bores, certain locally grown foods or seafood sourced from impacted waterways.

The Australian Government's Department of Health has developed [health-based guidance values for PFAS](#) in the form of a tolerable daily intake (TDI). The TDI is an estimate of the amount of a chemical that can be ingested daily over a lifetime without appreciable health risks. This guidance is used in human health risk assessments for PFAS including site investigations.

For more information you can visit the Australian Government's PFAS information portal which includes contact details for information about PFAS in your state or territory: www.pfas.gov.au.

Further PFAS information

Information about the NSW Government PFAS Investigation Program can be found by visiting the NSW EPA website available at:

<https://www.epa.nsw.gov.au/your-environment/contaminated-land/pfas-investigation-program>.

You can read more about the Australian Government's approach to chemicals management, including PFAS, on the Department of Climate Change, Energy, the Environment and Water website available at:

<https://www.dcceew.gov.au/environment/protection/chemicals-management>

Information on PFAS health effects and health-based guidance values can be found on the Australian Government's Department of Health website here:

<https://www.health.gov.au/topics/environmental-health/what-were-doing/environmental-toxins-and-contaminants#pfas>

The most recent enHealth information including the February 2024 PFAS [Guidance Statement](#) and [Fact Sheet](#) can also be found on the Department of Health's website here:

<https://www.health.gov.au/resources/collections/enhealth-guidance>

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