

PFAS investigation in North Esk River

In June 2019, Airservices Australia released the results of its Preliminary Site Investigation (PSI) for PFAS contamination at the Launceston Airport.

Based on the findings, the Department of Health (DoH) undertook limited off-site sampling downstream of the Airport to assess water and fish quality.

The investigation was not designed to be an exhaustive assessment of PFAS in the North Esk River environment. Rather it was a timely initial investigation of a potential environmental health risk, and may be part of a staged investigation.

PFAS in the environment

PFAS (per- and poly-fluoroalkyl substances) are a class of manufactured chemicals which include perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), and perfluorohexane sulphonate (PFHxS). PFAS have been widely used globally to make household and industrial products that resist heat, stains, grease and water, and in firefighting foams. They do not break down in the environment and can accumulate in animals and humans.

The use of PFAS has now been minimised in Australia.

PFAS are found in higher concentrations in environments around sites where PFAS-containing products have been used. These include certain defence sites, airports, firefighting training grounds and some heavy industrial sites.

Food Standards Australia New Zealand (FSANZ) has developed 'trigger points' for individual foods and food groups. These values help state and territory food authorities determine whether further investigation is needed if PFAS is detected in food.

The Commonwealth Government has published guidance values for PFAS in drinking water and recreational water to use in site investigations.

North Esk River sampling

The North Esk River is commonly accessed for recreational purposes, particularly swimming and fishing.

This investigation focused on the river water and fish found within the river. People may have contact with the water through swimming, including accidental ingestion; and people may consume fish caught from the river.

Three fish species from four locations along the North Esk River were sampled. Recreational water samples were collected from one location on the river – a recognised recreational area.

Results

The lowest level of each of the chemicals (PFOS, PFHxS, PFOA) the laboratory test can detect in foods is 0.5 µg/kg, and in water is 0.01 µg/L. These are called the 'limit of reporting'.

At Corra Linn Picnic Ground, the North Esk River water was sampled four times. PFHxS was detected in two of the water samples. The concentration detected (0.01 µg/L) was far below the recreational water guideline value for PFOS + PFHxS combined of 2 µg/L.

All of the other PFAS chemicals tested for and the other two water samples were below the laboratory's limit of reporting.

This low level detection of PFHxS does not pose a risk to people exposed to the North Esk River water at the Corra Linn Picnic Ground, through recreational activities in and on the water.

Fish were caught from four locations along the North Esk River – the St Leonards Picnic Ground in Launceston, the Corra Linn Picnic Ground just outside of Launceston and two locations upstream of Corra Linn Gorge, towards Blessington.

Near to Blessington, three trout were caught at each of two locations easily accessible from Blessington Rd. These locations were either side of Ballroom Hill, namely Lower Ballroom and Upper Ballroom. All trout samples were below the laboratory's limit of reporting for PFOS, PFHxS and PFOA.

At the Corra Linn Picnic Ground one trout was caught. PFOS was detected in this one trout sample at a concentration of 7.7 µg/kg. The results for PFHxS and PFOA were below the laboratory's limit of reporting. The PFOS result of 7.7 µg/kg was above the FSANZ 'trigger point' for PFOS + PFHxS combined of 5.2 µg/kg.

At the St Leonards Picnic Ground, two eels, two sandies, and two Brown trout were caught. In the eels, PFOS was detected at a concentration of 27 µg/kg and PFHxS was detected at a concentration of 1.2 µg/kg. The result for PFOA was below the limit of reporting.

In the sandies, PFOS was detected at a concentration of 23 µg/kg and the results for PFOA and PFHxS were below the limit of reporting. In the trout, PFOS was detected at a concentration of 18 µg/kg and the results for PFOA and PFHxS were below the limit of reporting.

The combined results for PFOS + PFHxS for all three species (eels, sandy, and trout) caught at the St Leonards Picnic Ground were above the FSANZ 'trigger point' of 5.2 µg/kg.

This means further investigation of fish that may be caught for human consumption is needed.

Advice

All fish, including eels, caught downstream of the Corra Linn Gorge exceeded the FSANZ 'trigger point' for PFOS + PFHxS combined. This means further investigation of fish that may be caught for human consumption is needed.

While this investigation is ongoing, the Department of Health issued precautionary advice in June 2019 for people not to eat any fish, including eels, caught in the North Esk River from the Corra Linn Gorge/Bridge to the Tamar River, until further notice.

Fish from the upper North Esk River may be eaten.

Although PFAS has not been proven to cause any specific human illness, the DoH took a precautionary approach by issuing the warning to not eat fish, in line with the Australian Government's recommendation that human exposure to PFAS chemicals be minimised.

DoH is working with other Tasmanian authorities to minimise the risks of human exposure to elevated PFAS levels in food, soil and water.

Should I be concerned?

It is safe to eat fish caught from the upper North Esk River and information on other locations to fish can be found from the Inland Fisheries Service:

www.ifs.tas.gov.au/fishing-near-me

Food Standards Australia New Zealand (FSANZ) provides advice on general fish and seafood consumption

www.foodstandards.gov.au/consumer/chemicals/mercury/Pages/default.aspx.