



Australian Government  
Department of Health

# *Final health based guidance values for PFAS site investigations in Australia*

Australian Government Department of Health

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## What are PFAS?

- Per- and poly-fluorinated alkyl substances (PFAS) are a group of man-made chemicals.
- They have been widely used since the 1950s in household and industrial products that resist heat, oil, stains, grease and water.
- Include PFOS (perfluorooctane sulfonate), PFHxS (perfluorohexane sulfonate) and PFOA (perfluorooctanoic acid).





## What are PFAS?

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- PFAS contamination is an emerging global issue.
- Can travel long distances through soil and water and does not break down in the environment
- Can accumulate in animals, including humans.
- There is no consistent evidence of adverse health effects in humans from exposure to PFAS.
- Most people are likely to have background levels of PFOS, PFOA and PFHxS in their blood.



## What are Health Based Guidance Values?

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- Health based guidance values indicate the amount of a chemical in food or drinking water that a person can ingest on regular basis over a lifetime without any appreciable risk to health.
- The health based guidance values for PFAS are a precautionary measure to assist people, investigating agencies and affected communities in minimising their exposure to PFAS.
- Health based guidance values for PFAS are based on laboratory animal studies, due to the lack of available evidence of health effects in humans.



## Interim guidelines for PFOS and PFOA



Environmental Health Standing Committee of the  
Australian Health Protection Principal Committee

- Before June 2016 there were no Australian human health guidelines for PFOS and PFOA.
- In June 2016, enHealth made recommendations on interim guidelines that could guide the Human Health Risk Assessments at contaminated sites.
- Guidelines were needed so that authorities could provide advice to communities while FSANZ developed its advice on health based guidance values for PFAS.



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FOOD STANDARDS  
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Te Mana Kounga Kai - Ahitereiria me Aotearoa

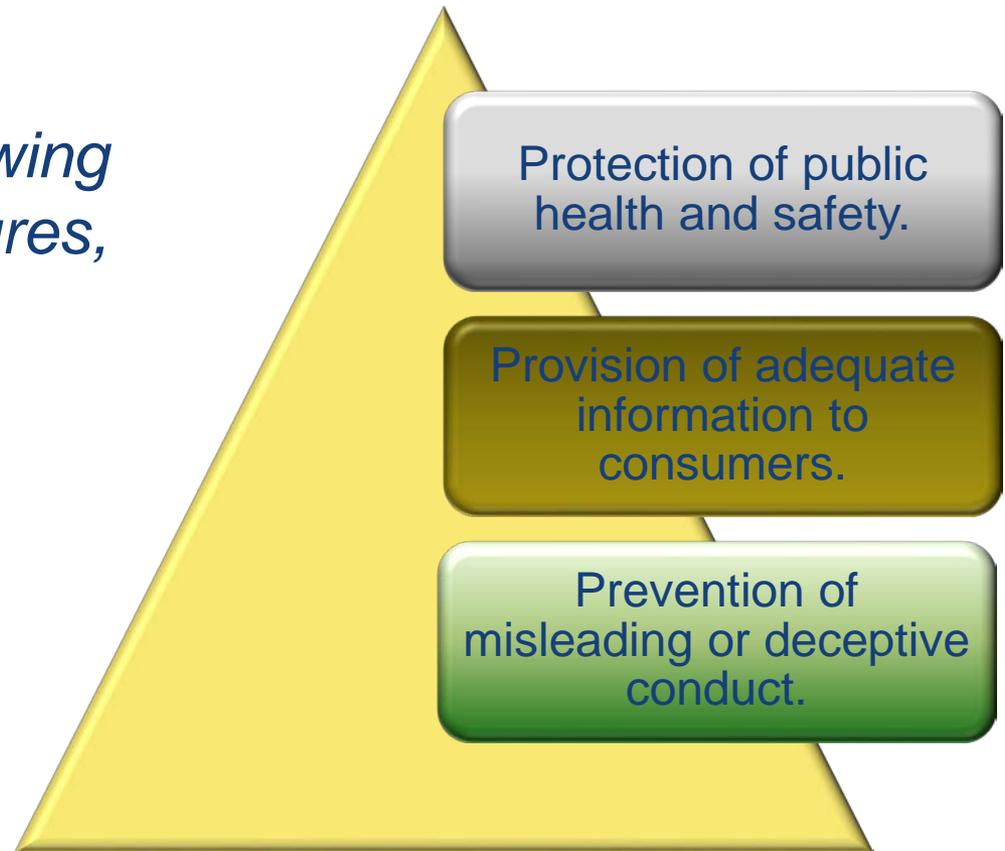
***Partnership between Australian and New Zealand Governments and Australian States and Territories.***



# Main objectives for FSANZ

*In developing or reviewing food regulatory measures, FSANZ focuses on...*

*Food Standards Australia New Zealand Act 1991*





## What did FSANZ find?

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- FSANZ recommended health based guidance values in the form of a tolerable daily intake (TDI).
- There was not enough data or evidence from studies on human health to calculate TDIs.
- The TDIs are based on the findings of toxicological studies in laboratory animals.
- There is a lack of epidemiological evidence with regards to human health and exposure to PFAS.



## Final Health Based Guidance Values for Site Investigations in Australia

Toxicity reference value	PFOS/PFHxS		PFOA	
	ng	µg	ng	µg
Tolerable daily intake (ng or µg /kg bw/day)	20	0.02	160	0.16
Drinking water quality value (ng or µg /L)	70	0.07	560	0.56
Recreational water quality value (ng or µg /L)	700	0.7	5,600	5.6

Note: bw = body weight, ng = nanograms, µg = micrograms (1 µg = 1,000 ng)



## Final Health Based Guidance Values for Site Investigations in Australia

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- The final values do not change the current health advice:
  - There is currently **no consistent evidence** that exposure to PFOS and PFOA causes adverse human health effects. Because these chemicals persist in humans and the environment, it is recommended that human exposure to these chemicals is minimised as a precaution.
- Allow for a large margin of safety and are protective of public health.
- Will be used by agencies and organisations in current and future site investigations and human health risk assessments in Australia.



## Final Health Based Guidance Values vs. Interim Guidance

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- The final health based guidance values are lower than the interim values that were adopted by enHealth.
- This does not mean that the enHealth values were wrong or not protective of public health.
- Both sets of values factor in large safety margins.
- The independent review conducted in September 2016 confirmed that the enHealth values were protective of public health.



## Australia's Values vs. Other International Values

Country	PFOS		PFOA	
	ng	µg	ng	µg
EFSA Tolerable Daily Intake	150	0.15	1500	1.5
FSANZ Tolerable Daily Intake	20	0.02	160	0.16
US EPA Reference Dose	20	0.02	20	0.02



## Managing PFAS in the general food supply

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- Dietary exposure to PFOS, PFOA and PFHxS from the general food supply is likely to be low.
- There is not enough information on PFAS levels in the general food supply to set maximum limits in the *Australia New Zealand Food Standards Code*.
- No other country has set regulatory limits for PFAS in food.
- FSANZ has developed a tool, referred to as ‘trigger points’ for state and territory food regulators to use in site investigations.



## Managing PFAS in food from or near Contaminated Sites

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- Based on data provided on levels of PFAS in food at contaminated sites and the average Australian diet, FSANZ has calculated the amount of some foods that can be eaten daily without exceeding the TDIs.
- These guidelines only apply to food sourced from within the contaminated areas.
- This does not include food from the general food supply (e.g. food purchased from the supermarket).



## Managing PFAS in Food from or near Contaminated Sites

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- People consuming certain foods sourced from within the contaminated sites may reach the TDI for PFOS and PFOS/PFHxS combined.
- These include, game meat, some animal products and freshwater fish.
- For PFOA, the amount of food that can be consumed before exceeding the TDI is much higher than the amount people normally eat.
- Occasional exceedances of the TDI from consumption of a specific food are not of public health concern.



## What Happens Next?

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- The Department of Defence will use the final health based guidance values when conducting site investigations.
- If required, the NT government will issue any food advisories for the area.
- Follow any advice issued in food advisories or as part of the site investigations to minimise your exposure.



## Key Messages

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- FSANZ has recommended health based guidance values which are now the final health based guidance values for Australia.
- The final health based guidance values have replaced the interim health values that were adopted by enHealth.
- The final values are a precautionary measure to assist in minimising people's exposure to PFAS.



## Key Messages

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- FSANZ did not recommend that PFAS be regulated through the *Food Standards Code* or maximum limits in food.
- The Dietary Exposure Assessment provides advice for investigating agencies and relevant authorities conducting risk assessments in contaminated areas.
- Follow any advice issued by the Department of Defence or NT government.



## Further Information

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Further information is available from the Department of Health at:

Phone: 1800 941 180

Email: [health.pfas@health.gov.au](mailto:health.pfas@health.gov.au)

Website: [www.health.gov.au/pfas](http://www.health.gov.au/pfas)