

# PFAS National Environmental Management Plan: Consultation Summary Report

There has been extensive consultation during development of the PFAS National Environmental Management Plan.

Drafting of the plan began at the Environmental Regulators PFAS summit in Melbourne on 4–5 April 2017, hosted by EPA Victoria, on behalf of Heads of EPAs Australia and New Zealand and the Australian Government Department of the Environment and Energy. The summit, which attracted more than 100 participants, involved regulators from all Australian jurisdictions and national and international experts on the environmental regulation of PFAS. The keynote speeches were webcast live and are available via [goo.gl/MPECZC](http://goo.gl/MPECZC)

On 8 August 2017, HEPA, through jurisdiction websites published a consultation draft of plan on their web site together with a one-page guide. The web site included a call for written submissions, with an optional response template. There were over 180 responses, including more than 80 submissions.

During August and September 2017, EPA Victoria, under the direction of HEPA, organised and ran consultation sessions in Melbourne, Hobart, Canberra, Sydney, Brisbane, Darwin (including a live videostream to Katherine, NT), Perth and Adelaide.

## Significant points and comments made in written submissions

- PFAS contamination covered by the PFAS NEMP should include contemporary as well as legacy issues. The plan should include all sources and uses of PFAS, not just firefighting foams, as many are disposed of through landfill, waste water treatment plants, their effluent and resulting sewage sludge or biosolids.
- A centralised database of publicly available information on the occurrence of PFAS-contaminated sites would be particularly helpful, especially when investigations are being undertaken in a region that is known to be, or is likely to be, significantly impacted by multiple sources.
- We need a better understanding of the impact of PFAS compounds on human health and the environment, and of what level of PFAS contamination might require treatment and/or remediation and the viability of treatment technologies to achieve this.
- The development of a PFAS contaminated site risk assessment template is needed to help ensure the risk assessment can be applied consistently. Recommendations for modelling and assessment tools for PFAS and advice/learnings on weaknesses or failures of tools commonly used for other pollutants would be helpful.
- Screening criteria for precursor assays should be developed as a priority to account for transformation processes in long term impact assessment. Information is needed on analysis of PFAS precursors and formation of perfluorinated PFAS contaminants of concern from precursor transformation.
- Total Oxidisable Precursor (TOP) assay requires further refinement before it can be offered as a robust, reproducible analytical tool.
- When presenting 'criteria', it will be important to distinguish between 'investigation levels' or 'screening levels', as used in the ASC NEPM, and 'action levels' – i.e. concentrations that trigger the need for remediation.



- Priority should be placed on defining a range of environmental health levels for freshwater and marine water sediment. The draft ANZECC criterion for 99% protection of species in fresh water (0.00023 µg/L) is difficult to attain and may be lower than environmental or laboratory backgrounds.
  - The effect of bioaccumulation and biomagnification in the environment should be considered when setting ecological criteria for water.
  - Guidance regarding sampling techniques for biota would be useful, as well as criteria for marine and freshwater ecosystems.
  - Landfill guidelines may need to be revised to include PFAS in the analytical suite for leachate and groundwater sample analysis.
  - Indefinite storage is a high-risk strategy as safe long-term storage is difficult to ensure and storage vessels become part of the waste and ultimately contribute to the stockpile volume. More information needs to be provided, including on bunding, protection from weather and prevention of water movement through stored wastes and soils.
  - The adoption of a national waste code for the transport, storage and disposal of any PFAS containing wastes would greatly assist regulatory tracking and accounting of the materials. Any such code must also recognise that wastes may be contaminated with other substances.
  - Treatment criteria and remediation objectives should be considered under a waste hierarchy framework and where possible the avoidance mechanism invoked to minimise cost to community. Treatment criteria could be developed for off-site waste disposal (e.g. waste levels / fill classification) providing guidance to landfills and thermal (or other) treatment facilities. Treatment should be based upon known contaminant type and concentration.
  - A targeted consultation campaign needs to be conducted to ensure people understand the potential contaminants, the process that has been agreed upon and what is being done to fix the problem. Open and honest engagement with the community has proved to be effective in minimising angst and alarm.
- Summary of comments and questions from national consultation sessions**
- Open communication and transparency are vital, including presentation of the evidence that forms the basis of criteria levels. There is a need for communication expertise and well-founded community education programs. Information sharing would be valuable, including on PFAS baseline concentrations and measurements from various sites and stockpiles
  - Guidance is needed for undertaking site assessments. Case studies would be helpful. Explicit consideration is needed for soils, sediments and possibly wastes. Trade waste acceptance standards are necessary.
  - Regulator advice is needed on measurement and sampling techniques, including advice on TOPA and TOF and their application. There is a widely expressed concern about laboratories using different methods and different reporting standards, and questions about the reliability of analyses.
  - Advice is sought on leachability and on biota sampling methods and preparation and on the principles for testing receptors. What marine water and landfill criteria should be adopted nationally?
  - There are concerns about the sustainability of transporting the wastes, with clear national guidance sought on offsite disposal.
  - The plan should include high level recommendations on remediation and treatment, as techniques change rapidly. We need clarity on waste disposal criteria and need to consider what happens to storage sites after closure. A database of waste treatment facilities is needed, together with licencing requirements for them that include obligations to collect and publish relevant data.
  - International experience is relevant, especially in countries that are ahead of Australia in managing PFAS. Provision of case studies will help. More information is needed on PFAS transformations within the environment. It would be helpful to regularly distil and publicise the latest relevant national and international research into PFAS.