



WATER SERVICES
ASSOCIATION OF AUSTRALIA



WSAA RESPONSE TO DRAFT PFAS NEMP 3.0

A summary report to present a national perspective on the implications and recommendations for the finalisation of the PFAS NEMP 3.0



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About WSAA

The Water Services Association of Australia (WSAA) is the peak industry body representing the urban water industry. Our members provide water and sewerage services to over 24 million customers in Australia and New Zealand and many of Australia's largest industrial and commercial enterprises.

WSAA facilitates collaboration, knowledge sharing, networking, and cooperation within the urban water industry. The outcome of the approach with our members has led to industry-wide advances to national water issues. *Reference to water utilities includes those members who are local councils responsible for the provision of water supply, treatment, and sewage management.*

Acknowledgement of country

The Water Services Association of Australia acknowledges and pays respect to the past, present and future Traditional Custodians and Elders of this nation. We recognise their continuing connection to land and waters and thank them for protecting our waterways and environment since time immemorial.

Disclaimer

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1.1 Member Engagement

WSAA is aware of individual members that will make their own submissions in responses to the review of the PFAS NEMP 3.0 (herein after referred to as the "draft NEMP"), either as individual entities, or as part of other group submissions. However, a collective industry effort has been undertaken to collate data, review and consolidate feedback which is presented through this submission. This includes work undertaken through Water Research Australia and the publication of the *Final Scientific Review of Draft NEMP3 (February 2023)*.

The recommendations provided, while focussed on the management of PFAS types - PFOA, PFOS, PFHxS - also relate more generally to the approach in managing against other PFAS compounds that may be of concern in the future.

WSAA applauds the extensive consultation process initiated by the PFAS NEMP coordination team under the HEPA NCWG. Consequently, WSAA would welcome the opportunity for ongoing consultation and engagement following the consultation period. Further consultation on the data available and insight gained may prove useful to refine criteria and details that are required prior to finalisation and publication of the PFAS NEMP 3.0.

Key recommendations and proposals for the draft NEMP have been made in bold for ease of reference.

1.2 General comments on the development of the plan

Our review recognises that the proposed guidelines meet international standards and best practices principles for data requirements, methodology, model fitting, and regulatory toxicology, including sampling, analysis, and statistical evaluation strategies. It is understood that the development of the criteria was based on limited data and information available at the time to the HEPA NCWG coordinating team responsible for drafting the PFAS NEMP 3.0. However, as an industry we would like to see the draft NEMP expand on more diverse aspects of management actions, beyond just regulatory guidance, to curtail PFAS contamination across the supply chain.

It is noted that the proposed draft NEMP and the approach for managing PFAS in the water industry and natural waters appear to be advancing ahead of the rest of the world. However, Australian practice with respect to adopting national guidance is variable, and it is not clear whether and over what time all Australian jurisdictions will enact legislation to effectively bind the proposed measures to current jurisdictional legislation. This variation in requirements for each State and Territory may inhibit the response of water authorities. Therefore, **the need is for clear communication and a communication strategy to accompany and be included within the NEMP respectively**, clarifying the expectation it sets for ongoing management and developing a response to the risks and impacts from PFAS.

Potential areas have been identified for further consideration and work to assist understanding and implications of the proposed guidance within the draft NEMP and the translation across to State and Territory jurisdictions. These are provided for below.

1.2.1 Key Recommendations for Review

Overall, key recommendations have been made to note for review in the following areas:

- a. Principally, the NEMP should provide guidelines and clear actions to be developed for respective industries that outlines practical steps to address data gaps, manage implementation and provide for an ongoing review and update to the PFAS NEMP.
- b. There is difficulty in the expectation that the margin of safety can be universally applied to the diverse range of conditions and context settings involved in the application of biosolids. Rather the focus should be on achieving consistency in the approach to managing risk. This requires a collaborative effort between the State/Territory environmental regulatory agencies, water utilities, and agriculture departments, with the goal of ensuring regional relevancy. Providing guidance on the assessment approach can better aid in determining and managing risk, instead of relying on a one-size-fits-all approach.
- c. Furthermore, with respect to the selected margin of safety, in assessing the prevalence of precursors, it would be more appropriate to assess potential precursor contribution on a case-by-case basis rather than adopting a broad margin of safety. Therefore, as per the previous point, a consistent approach towards a case-by-case basis needs to be the focus rather than the alternative, to applying a broad margin of safety.
- d. Provide recognition and further clarity for alternatives to the agricultural use scenario, which has a significant influence on the criteria. An example would be, where agricultural environments in a state or region do not support the type of dairy farming settings included in the draft NEMP, the provision of an alternative receptor and scenario may be more appropriate for biosolids management in that state or region.
- e. There is an increasing body of evidence to support an understanding of PFAS behaviour in beef cattle, but data and information to validate the dairy cattle scenario is lacking. This should be noted within the draft NEMP.
- f. An agreed upon and consistent statistical method for data analysis to support decision-making should be utilized in the management of biosolids application to agricultural soils with respect to PFAS contaminants of concern.
- g. The remit of the NEMP should be expanded to provided guidance for management actions on how to respond if PFAS is detected in WWTP effluent and/or biosolids. The process should consider the ubiquitous nature of PFAS and the feasibility of reducing it across WWTP discharge pathways. The response should not be burdensome unless necessary.

In Australia, environmental guidance documents generally include criteria that aim to safeguard human health, amenity, and ecological systems. However, it is crucial that screening criteria are not overly cautious and rely on reasonable assumptions that align with the principles of environmental legislation. These principles prioritize achieving sustainable, practical, and proportionate outcomes while considering shared costs. **The NEMP should**

include a section similar to Schedule B1, Section 2.1.2 of the ASC NEPM 2013, which highlights that screening criteria are not clean-up or response levels:

“Investigation and screening levels are not clean-up or response levels nor are they desirable soil quality criteria. Investigation and screening levels are intended for assessing existing contamination and to trigger consideration of an appropriate site-specific risk-based approach or appropriate risk management options when they are exceeded. The use of these levels in regulating emissions and application of wastes to soil is inappropriate.”

1.3 Source Control Factors

The industry firmly agrees with the guiding principle within the NEMP of “the polluter pays”. However, the “polluter pays” principle cannot be solely attributed to water authorities and their management of waste discharged from treatment plants. **It is crucial to acknowledge that both the public and industry contribute to pollution and holding only water authorities responsible for compliance goes against this principle.**

The framework outlined in the draft NEMP is missing some detail on the core elements that support guiding principles included in environmental legislation such as ‘polluter pays’, the ‘general environmental duty’ and ‘shared responsibility’. Additionally, the draft NEMP currently focuses on the PFAS that is received by WWTPs and the resulting effluent and biosolids and implies that much of the responsibility for understanding and controlling PFAS discharges lies with the water authorities. However, the draft NEMP does not identify and quantify the contribution of specific PFAS-containing products to the PFAS load entering WWTPs, and how these may be best controlled.

The NEMP should provide a reference and an explanation as to the link and/or synergy that is being created as part of the guidance provided by the NEMP and the process of the Industrial Chemicals Environmental Management Standard (IChEMS) for PFAS.

Our understanding from our members is that the split in PFAS load entering wastewater treatment plants (WWTPs) resulting from domestic and trade waste, and non-point sources in the sewerage catchment, can be significant. However, **there is currently no standard approach for how and when PFAS is measured in wastewater influent, which makes drawing conclusions about management responses for recycled water and biosolids difficult. This should be a key area that NEMP should address in providing national consistency to improve an understanding of the extent and nature of the impact of end of source streams of PFAS.**

1.4 Interventions required in response to guidance

The draft NEMP would require considerable effort and investment over many years to effectively meet the guiding values and likely interpretation of them at a state and territory level. Our review has identified several key points that need to be addressed for effective interventions. Firstly, it is recognised that no single technology is available that can treat large volumes of recycled water, effluent, and biosolids produced by major wastewater treatment plants (WWTPs) at the scale, cost, and time required by the proposed draft NEMP.

Furthermore, there is a lack of proven technologies at scale for selective removal of PFAS from biosolids to allow for biosolids reuse.

To ensure compliance, based on current criteria would involve likely unnecessary risks associated with high capital, operation, and maintenance costs. This is in the absence of sufficient data and context defining the risk to justify the level of investment that is needed.

As such **we recommend that a Regulatory Impact Statement¹ would be a valuable tool in helping to assess the potential impact of this regulation.** It would provide an objective analysis of the costs and benefits of the proposed guidance update and would help to identify any unintended consequences that may arise. This information would be invaluable in informing the decision-making process and ensuring that any new regulations that are enacted because of the proposed draft NEMP are effective and beneficial for all stakeholders.

We recognize that preparing a Regulatory Impact Statement requires significant time and resources, but we believe that it is a necessary step in ensuring that the regulation is in the best interests of all stakeholders. WSAA and our members are willing to assist in any way we can in the preparation of this statement.

1.5 Suggested mechanisms to achieve NEMP objectives

The following recommendations for inclusion as part of a review of the draft NEMP, provide the means to achieve objectives through a balanced understanding of practical implications against possible risks:

The current version of draft NEMP only includes criteria for the most rigorous receptor and pathway, without detailing the derivation of other exposure routes. This approach may not align with established practices and land use scenarios for managing contaminated land. However, the information provided by the industry suggests that there are less stringent criteria for other uses of biosolids that should be considered. Therefore, comprehending the criteria applicable to these alternative scenarios, as well as the underlying assumptions (like incorporation depth, bulk density, and land use setting), could aid industry and regulators in tailoring their response and avoiding overly cautious options.

In the draft PFAS NEMP 3.0, the water criteria for evaluating ecological risks in surface waters are outlined, and these can also be applied to assess the release of effluent from wastewater treatment plants. The 99% protection level for PFOS, set at 0.00023 µg/L, is extremely low and applicable in a wide range of situations. However, most laboratories are not capable of accurately testing for PFOS at this level. As a result, any detection is typically considered to exceed the screening level. Consequently, more detailed guidance is needed

¹ Office of Impact Analysis - A RIS is also mandatory for any non-Cabinet decision¹ made by any Australian Government entity if that decision is likely to have a more than minor impact on businesses, community organisations, individuals, or any combination of them (<https://oia.pmc.gov.au/sites/default/files/2023-02/oia-impact-analysis-guide-nov-22.pdf>). ¹ Such as decisions arising through correspondence with the Prime Minister, decisions made by departmental heads, and those made by statutory agencies and boards.

on what to do in a situation where a detection of PFAS in effluent is found and the screening level is exceeded.

The following recommendations are provided across key areas of most relevance to the urban water industry:

1.5.1 Biosolids:

- a. The national set of biosolids concentration criteria should cover a range of land uses beyond the most conservative ones. These criteria should be accompanied by clear explanations of the underlying assumptions and can be applied to evaluate site-specific application rates. It is advisable to explore safer land application options, such as forestry.
- b. Given the level of active governance by the water and agricultural industry on biosolid land application, the NEMP could rather provide guidance on scenarios for maximum allowable soil contaminant concentrations, with clear restrictions linked to concentrations and activities within set scenarios.
- c. A soil sampling programme is recommended at all biosolids application sites due to the potential presence of PFAS in fertilizers, composts, and pesticides. This should be undertaken by respective state and territory EPA agencies be noted that the agricultural industry will incur significant costs to implement this measure

1.5.2 Recycled water:

- a. To broaden the applications of recycled water, it is recommended to expand the range of criteria beyond current standards. This would involve assessing the feasibility of using recycled water for other purposes, such as stock, irrigation, and aquaculture
- b. In accordance with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, guidelines on developing site-specific values should be provided to assist in meeting the standards.
- c. A high priority should be placed on the development of a more up-to-date and reliable set of Default Guideline Values (DGV) for assessing the potential risks of PFAS to the environment. This would help the industry better understand the hazards posed by PFAS.

1.6 Additional Implications

The NEMP is a crucial instrument to deliver on national consensus for a critical issue such as PFAS. However, the scope of the NEMP should provide for addressing uncertainty and

ensuring a good foundation of evidence is developed to continue to inform an effective management response and minimise risk.

An area of significant value would be in conducting comprehensive studies to increase knowledge of PFAS sources and products that give rise to the greatest contribution to PFAS load in different catchment types, and the significance of ill-defined diffuse sources of PFAS.

The availability of information on PFAS discharges to the sewerage system is limited by legislation and regulations in many jurisdictions. For instance, trade waste agreements may not mandate trade waste customers to test for PFAS, while strict limits on information sharing among water authorities across jurisdictional boundaries hamper collaboration and the expansion of knowledge. It is recommended that NEMP provide for jurisdictions to review their legislation and regulations to ensure that water authorities and regulators have sufficient access to information on PFAS discharges to the sewerage system. This may involve revising trade waste agreements to require PFAS testing for trade waste customers, as well as allowing greater collaboration and data sharing between water authorities across jurisdictional boundaries. This will enable more effective identification of entities subject to trade waste agreements, better requirements for those agreements, and improved implementation of the principle of polluter pays.

Additionally, given the potential for PFAS to become an international trade issue, there is a need for assessments of PFAS concentrations in existing biosolids application sites and the formulation of management practices to reduce contamination in produce and address any future risks. This work should be prioritised for implementation across relevant federal, state and territory departments. As such, **a recommendation is made for engaging with a broader range of stakeholders, particularly those with an interest in domestic and international food regulation and the export market.**

While some water authorities may have the capacity to undertake PFAS reduction efforts on their own, it is important to recognize the complexity and scope of the issue. PFAS contamination is not limited to one jurisdiction, and the sources of contamination are varied and widespread. **A collective approach involving a taskforce comprising the major water authorities and regulatory agencies could facilitate greater collaboration and information-sharing, which is crucial in addressing such a widespread problem.** This taskforce could work towards identifying the major sources of PFAS contamination and implementing source control measures to prevent further contamination, linking the objectives of both the NEMP and IChEMs process. Moreover, by expanding considerations beyond "end of pipe" control, the taskforce could explore more comprehensive and long-term solutions. It is imperative that all stakeholders work together towards a common goal of reducing PFAS contamination and protecting public health and the environment.

1.7 Contact details

If there are any details you wish to follow up on, please contact:

Jason Mingo, Manager Liveable Communities

E: jason.mingo@wsaa.asn.au | P: (03) 8605 7600