Submission to the Productivity Commission National Water Reform 2026

Response to the Interim Update

"Every Australian deserves access to safe drinking water—not because of where they live, but because it is fundamental to public health."

Submitted by

Dr Annette Davison and Mr Darryl Day - the views expressed are our own.

About the Authors

Darryl Day

Darryl is the Director of Wongulla Waters, with more than forty years working across urban, regional and remote water sectors in Australia, and globally. Darryl was the Australian Water Association's Water Professional of the Year Award in 2019 and was recognised as Distinguished Fellow in 2018 and Honorary Member in 2024 of the International Water Association, and Honorary Fellow of Engineers Australia in 2025.

Darryl's career has included executive leadership in water services, water policy, drinking water and environmental health research, water resource management, environmental management, infrastructure planning, emergency and counter disaster management and regulation.

Darryl has contributed to national and international water policy with the Power and Water Corporation, as the Rural and Regional Water Program Leader with the Water Cooperative Research Centre for Water Quality and Treatment, Chief Executive Officer with the Peter Cullen Water and Environment Trust, Managing Director of WaterEd Australia (trading as ICE WaRM and the Australian Water School) and numerous water association boards and government advisory committees.

Dr Annette Davison

With over 35 years' experience, Annette is a certified lead auditor Water Quality Management Systems and award-winning risk manager in the water, environment, policy and mining fields. Annette has been recognised multiple times over by the industry and her peers. She was the recipient of the Nancy Millis Award in 2005, the Australian Water Association's Water Professional of the Year Award in 2021, and recognised by the international organisation, Exemplar Global, as an Honoree in the Community-Endorsed Consultant category in 2024.

Globally, Annette has guided many organisations in their development and implementation of water safety and risk management plans and was the lead author of the WHO's very first Water Safety Plan (WSP) guidance manual in 2005. In May 2024, Annette was invited to talk on her work at an International Water Association global webinar on Water Safety Plans. She has a multitude of journal papers, book chapters, books, technical papers, reports and other publications in several fields including bioremediation, biodiversity, microbial ecology, water utility due diligence, auditing and risk management.

Annette is the founder of water risk management company Risk Edge Pty Ltd, co-founder of the water knowledge and learning risk management platform, LIKWD, and co-founder of the water educational company, Water's Most Unwanted.

Executive Summary

Australia's next phase of water reform should recognise that water supply security, access to drinking water quality that underpins public health, good environmental health practices and effective and accountable governance are inseparable and must be addressed through a systems-thinking approach.

Together, they provide a practical pathway to improve public health outcomes, reduce inequities experienced by regional, rural and remote communities, strengthen resilience to climate and emerging water quality risks, and ensure every Australian—regardless of where they live—has access to safe drinking water and sanitation.

These reforms will support healthier communities, stronger regional economies and more resilient water services for communities today, and importantly future generations.

Australia's 2004 National Water Initiative introduced a consistent national approach to water management. It recognised that some small regional and rural water services may never be financially viable but should still be maintained to support public health and community wellbeing.

Twenty years later, Australia's water challenges have fundamentally changed (population growth, climate change, emerging contaminants in source waters and increased non-domestic water demands), however, access to safe drinking water and sanitation in regional and rural Australia remains elusive, health risks are under-reported, and accountability for safe drinking water under-recognised.

The proposed National Water Agreement strengthens recognition of safe drinking water, sanitation and public health, but lacks clear accountability, transparency and ambition for regional and rural communities.

The proposed Agreement should be strengthened by adding a commitment that all Australians, including those in regional, remote, homeland and self-supplied communities, have access to safe drinking water and sanitation services that meet a nationally agreed minimum level of service.

This inquiry by the Productivity Commission should highlight that water security, public health, environmental health, economic prosperity and effective governance are inseparable and must be addressed as an integrated whole, through systems-thinking.

Governance arrangements should support clear accountability, coordinated decision-making, transparent risk management, and long-term stewardship across the water system.

Six high level recommendations are submitted for consideration by the Productivity Commission:

Recommendation	Substance
Recommendation 1. Strengthen national leadership for water quality and public health	Reinvest in national leadership, science, guidelines and capability for drinking water, recycling and public health protection.
Recommendation 2. Provide national consistency across State/Territory health agencies	Implement the ADWG and AGWR consistently across all jurisdictions through a common national framework.
Recommendation 3. Address gaps in governance and accountability	Make drinking water decision-makers accountable for public health outcomes, supported by fit-and-proper person requirements.
Recommendation 4. Establish nationally consistent minimum levels of water service, and integrated planning	Establish nationally consistent minimum standards for safe, reliable and resilient water and sanitation services.
Recommendation 5. Financial sustainability and affordability for rural water supplies	Ensure regional and rural water services are financially sustainable and affordable, with transparent government support where needed.
Recommendation 6. Establish a national and international water knowledge exchange	Support nationally coordinated and internationally aligned water sector capability development, knowledge sharing and continuous learning to strengthen workforce resilience, improve mobility of skilled personnel and build long-term sector capability.

Discussion

The six recommendations provide a practical and achievable pathway to strengthen public health protection and ensure all Australians have access to safe, secure, resilient and sustainable water services, regardless of where they live.

Recommendation 1. Strengthen national leadership for water quality and public health

The National Health and Medical research Council (NHMRC) is Australia's lead scientific authority for drinking water quality, responsible not only for maintaining contemporary national guidelines but also for coordinating the research, evidence synthesis, guidance and capability needed for consistent implementation across jurisdictions

However, the investment in the underpinning science and adoption of Australian Drinking Water Guidelines (ADWG) has waned over the past 20 years. This includes investment in research funding for evidence-based decisions, capacity and capability for engagement with national (Coalition of Peaks) and international (World Health Organisation) stakeholders and investment in the use of best practice resources such as the Community Water Planner (which was developed by the NHMRC but access on-line has discontinued).

In addition, the role of the NHMRC in supporting the Australian Guidelines for Water Recycling (AGWR) must be strengthened, and the ADWG updated to include purified, or manufactured, water

from all available sources – essential to providing secure, resilient, and, to the extent achievable, sustainable water services.

The National Health and Medical Research Strategy (National Strategy), covering the 10-year period 2026-2036 published in May 2026 does not explicitly focus on (or reference) water-related health impacts, however it provides a high-level systemic framework for Australian health research.

Specific water-related health policy and research are managed under separate NHMRC guidelines, including the ADWG, the Australian Guidelines for Water Recycling (AGWR) – issued in 2006 and updated in 2008 - and guidelines for managing risks in recreational water.

However, in contrast to a single universally applicable risk management framework, we have seen the separation of these frameworks drinking water and water recycling resulting in unclear accountabilities, fragmented decision-making, and increased burdens (especially on smaller, council-run utilities), creating implementation inconsistencies that may increase risks to public health.

The ADWG Work Plan 2026-2028 developed by the NHMRC Water Quality Advisory Committee provides expert advice on drinking water quality and public health and has included a specific focus on improving accessibility and useability of the ADWG for end users and consumers, including:

- Clarifying priority requirements for managing safe drinking water supplies, including in remote and regional areas; and
- Developing consumer information about water quality and public health

The focus is welcomed, but a more ambitious program, with appropriate funding for research, engagement and development of resources for good practice, is needed to take a systems' approach to all available water sources and provide resources for application of the guidelines to remote and regional areas.[1]

Recommendation 2. Provide national consistency across State/Territory health agencies

Adopt nationally consistent implementation of the ADWG and the AGWR. While these guidelines are recognised as Australia's authoritative, risk-based frameworks for protecting public and environmental health, their regulatory adoption, implementation and enforcement currently vary across states and territories (and across regulators), resulting in inconsistent expectations for water suppliers, regulators and communities.

A nationally agreed implementation framework (modelling on best-practice approaches such as adopted by Victoria and South Australia with drinking water specific legislation and regulations) should establish consistent minimum regulatory requirements for drinking water quality management, recycled water schemes, public health oversight, auditing, incident reporting, benchmarking, workforce capability and continuous improvement, while preserving the flexibility for jurisdictions to address local environmental and operational circumstances.

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[1] **Sources:** https://www.health.gov.au/resources/publications/national-health-and-medical-research-strategy-2026-2036-0?language=en

https://www.nhmrc.gov.au/health-advice/water-quality-and-health/water-quality-advisory-committee-wqac

This would strengthen public health protection, improve regulatory certainty, support innovation and knowledge sharing, reduce duplication, and ensure that all Australians—regardless of where they live—benefit from an equivalent standard of safe drinking water and fit-for-purpose recycled water services. Australia was once regarded as a global leader in water risk management; however, there is a growing risk that the country is falling behind international best practice. The AGWR which remain a cornerstone of the national framework, are now approximately 20 years old. Since their release, fit-for-purpose water management has evolved substantially, driven by advances in risk assessment methodologies, pathogen science, monitoring technologies, and operational controls.

Many international jurisdictions have subsequently adopted more stringent pathogen log reduction targets and modernised risk-based regulatory frameworks. While the AGWR have provided a strong foundation, the lack of a comprehensive review raises concerns that elements of the Australian approach may no longer reflect contemporary scientific understanding or leading practice, potentially diminishing Australia's position as a leader in water risk management.

Recommendation 3. Address gaps in governance and accountability

Australia requires a clear national expectation that individuals and organisations with responsibility for the provision of drinking water are accountable for protecting public health and maintaining public confidence. This includes boards and directors of public and private water utilities, elected members and chief executive officers of local governments, governing bodies of First Nations community-controlled organisations, and the owners and operators of other drinking water service providers.

These leaders should have an explicit obligation to ensure that effective drinking water quality management systems are implemented and maintained in accordance with the ADWG, supported by appropriate governance, risk management, investment, workforce capability, monitoring, incident reporting and continual improvement.

Regulatory frameworks in each jurisdiction should reinforce these responsibilities through transparent oversight, independent auditing where appropriate, and proportionate enforcement mechanisms, ensuring that those entrusted with supplying drinking water remain accountable for delivering safe, reliable and resilient services to the communities they serve.

Further, individuals responsible for drinking water decisions should be subject to a fit and proper person test to ensure they possess the integrity, competence[2], experience and financial probity necessary to protect public health. England and Wales have adopted this approach, with Ofwat requiring board directors of water and sewerage undertakers to meet defined standards of honesty, integrity, knowledge, experience and financial soundness under *The Water (Special Measures) Act 2025*.

[2] Until recently, our observations indicated a notable lack of interest among the water utilities canvassed in pursuing specialised training for directors in water portfolio risk management, despite the importance of informed governance and oversight in this area. Platforms such as app.likwd.com (developed by one of the authors) help to fill the training gap and are facilitating access to trusted knowledge and learning for water professionals, including for managers and decision-makers. Furthermore, a paper currently being finalised by one of the authors examines board health in the context of water portfolio decision-making and has identified a significant number of gaps that may affect effective governance and decision quality.

Recommendation 4. Establish nationally consistent minimum levels of water service, and integrated planning

Establish a Regional and Rural Water Security Framework that defines nationally consistent minimum service levels for drinking water, wastewater and sanitation, regardless of jurisdiction, governance model or service provider.

The Framework should ensure every Australian has access to water services that are:

- Safe, through implementation of the Australian Drinking Water Guidelines (ADWG) risk-based management framework, including its six guiding principles and 12 elements for managing drinking water quality;
- Supported by appropriate sanitation and wastewater services that protect public health and the environment;
- Reliable and resilient, maintaining essential services during emergencies and recovering rapidly from disruption;
- Affordable and accessible, supporting equitable health and social outcomes;
- Fit for purpose, including implementation of the AGWR where recycled water is supplied; and
- Transparent and accountable, through nationally consistent reporting of service, public health and resilience outcomes.[3]

Performance reporting should move beyond compliance-based reporting to a risk-informed framework based on the three Ps—Past, Present and Predictive. Reporting should not simply record whether guideline values have been met but also provide leading indicators that demonstrate how close a system is to failure (e.g. how often a critical control point is operating in the "orange" zone), identify emerging risks and support timely and targeted intervention.

This approach would strengthen planning, prioritise investment and workforce capability, improve resource allocation, and enable regulators, governments and utilities to take preventative action before public health or service outcomes are compromised.

The Framework should recognise that service delivery models vary across urban, regional, rural and remote Australia. Jurisdictions should retain flexibility in how services are delivered while remaining accountable for achieving nationally agreed minimum service outcomes.

Nationally consistent minimum service levels, supported by predictive performance reporting and nationally comparable benchmarking, would provide a common basis for planning, regulation, investment and public accountability, ensuring all Australians have access to safe, secure, resilient and financially sustainable water services, irrespective of where they live.

[3] See Core Principles underpinning a fit-for-purpose drinking water quality legal and institutional framework in Dyson, M. and Davison, A. (2020) Risk-based, Best Practice Principles for Drinking Water Quality Regulation. The Risk Edge Group Blog Article: 10 August 2020. https://riskedge.com.au/risk-based-best-practice-principles-for-drinking-water-quality-regulation/.

Recommendation 5. Financial sustainability and affordability for rural water supplies

Establish nationally consistent guidance for the financial sustainability, affordability and resilience of regional, rural and remote water services, supported by a national benchmarking framework covering drinking water, sewerage and recycled water services.

The guidance should enable transparent assessment of service performance, public health risk, environmental compliance, asset condition, resilience and financial sustainability across all providers, allowing governments, regulators and utilities to prioritise investment, regulatory effort and support where risks are greatest.

The guidance should recognise that many smaller utilities cannot sustainably deliver safe, secure and compliant services through customer revenues alone due to limited customer bases, ageing infrastructure, climate risks, workforce constraints and the higher costs associated with remoteness.

Where affordability constraints prevent full cost recovery, the funding gap should be met transparently through government support mechanisms rather than deferred investment or under-pricing, ensuring all communities have access to safe, resilient and sustainable water services while minimising long-term public health, environmental and service reliability risks.

Financial sustainability should therefore be recognised as an essential enabler of public health outcomes rather than solely an economic objective.

Recommendation 6. Establish a national and international water knowledge exchange

Technical capability should not be viewed solely as a workforce qualification issue. Australia should support the development of a nationally coordinated water capability and knowledge-sharing framework, underpinned by digital platforms that enable continuous professional development, workforce capability uplift and the sharing of lessons from operational incidents, emerging risks, innovation and best practice.

Aligning capability development with international good practice would improve workforce mobility, reduce barriers to attracting skilled personnel, strengthen regional and remote capability, and promote the transfer of knowledge between Australia and other countries facing similar water challenges. Such an approach would help build a more resilient, adaptable and future-ready water workforce.

Summary

Australia already possesses the science, technical expertise and practical experience needed to deliver safe drinking water and sanitation for every community.

The challenge is no longer one of capability, but of leadership.

The next phase of national water reform should place greater emphasis on governance, capability and public health outcomes alongside water security. The six recommendations presented in this submission provide practical actions that will strengthen Australia's capacity to deliver safe, reliable and resilient water services, improve public health outcomes, and reduce the inequities experienced by regional, rural and remote communities. In doing so, they would help ensure every Australian—regardless of where they live—has access to safe drinking water and sanitation.

Dr Annette Davison and Mr Darryl Day