



**WATER SERVICES
ASSOCIATION OF AUSTRALIA**



**WSAA SUBMISSION TO
PRODUCTIVITY
COMMISSION'S INTERIM
REPORT NATIONAL
WATER REFORM 2024**



WSAA submission to Productivity Commission's Interim Report National Water Reform 2024

The Water Services Association of Australia (WSAA) thanks the Productivity Commission for its work in preparing the Interim Triennial Assessment of progress towards the 2004 National Water Initiative (NWI). We welcome the report and provide some comments in response to its Recommendations and key Information Requests.

WSAA is the peak industry body representing the urban water industry in Australia. Our members are water utilities and councils who provide water and sewerage services to over 24 million customers in Australia and New Zealand.

We note the Department of Climate Change, Energy, the Environment and Water (DCCEEW) has also released a Discussion Paper from with proposed Objectives and Outcomes for a new National Water Agreement (NWA Discussion Paper), and the elements from the 2004 National Water Initiative (NWI) to be retained.

As both reviews aim to identify the best form and content for the future NWA, many of our comments on the Commission's Interim Report include commentary on the proposed Objectives and Outcomes. Our comments are mirrored in our submission to each.

Overall feedback

We strongly support the Interim Report Key Points and Recommendations. It shows an in-depth understanding of the issues facing the Australian water industry, and the Recommendations offer a sensible and forward-looking view of the Objectives and Outcomes needed in the future NWA.

Indeed, we would like to see more of the detail in the Commission's Recommendations be incorporated into the proposed Objectives and Outcomes in the NWA Discussion Paper. The proposed Objectives and Outcomes are a solid starting point, picking up many key priority areas for the urban water industry, and we support their overall intent. However, several additional Outcomes, and greater emphasis in some target areas, would make them stronger and help the industry face the challenges of the future. The Commission's recommendations point to these improvements.

We also support the Commission's Recommendations on governance arrangements for the NWA.

We have focused our comments on five key areas:

1. We support the Commission's recommendations on First Nations values and involvement in water management. We support the elevation of these issues in the proposed Objectives and Outcomes in the NWA Discussion Paper.
2. We support the Commission's Recommendations on climate change challenges; we would like to see more urgency on this in the proposed NWA Objective and Outcomes, particularly on the adaptation front. We agree with the Commission's focus on other extreme climate events that will impact our industry in future such as heatwaves, flood and sea level rise. We support the Commission's view that better water security planning, with all options on the table, is an essential part of climate change mitigation.

3. We strongly support the Commission's findings on water security and the increasing importance of rainfall-independent supply options like desalination, purified recycled water and recycled water. We recommend the NWA contain clearer support for water security measures and most importantly, for all options to be on the table, including dams, desalination, groundwater, purified recycled water, recycled water, stormwater, water sharing and trading along with water efficiency and pricing. Information on all options should be transparently shared with communities, and the NWA should drive community education and engagement, especially on purified recycled water and desalination which are newer.
4. We support the Commission's Recommendation for 'effective, efficient and equitable provision of water services that meets the needs of customers and communities in a changing climate' (p24,25, retained from the Commission's 2021 Report). We support the Principles for best-practice independent economic regulation (NWI Renewal advice 11.2, p41).

The proposed NWA Objectives include one on efficient water use (Objective 7), however, we would like to see a clear and separate Objective of efficient water services, providing broader health and environmental outcomes.

5. We believe the NWA needs to drive progress on workforce and skills and training. We support the Commission's mention of Knowledge, Capacity and capability building (NWI Renewal advice 3.5(10), and agree with NWI Renewal advice 16.1, that 'Water utility staff have the capacity and capability to discharge their functions'. We would like to see the NWA adopt an Outcome that reflects the essential nature of this, such as: 'Water service providers have the appropriate skills and capabilities to ensure safe and reliable water, sewerage and stormwater services for Australian communities'.

There are significant pressures on the urban water industry, some of which have been both highlighted and exacerbated by the COVID pandemic including pressure on critical supply chains, housing and infrastructure shortfalls, cost of living pressures at a time when investment in water infrastructure is expected to triple, magnification of extreme events (flooding, fire and droughts) and the role of the industry in helping economy-wide approaches to net zero and the circular economy. The touch points on the broader Australian economy are largely not addressed at a policy level, or if they are, it is fragmented and situation-specific. 'Business as usual' is not what it has been in the past and we contend that stronger ambition and recognition of water's role in the economy needs to be addressed in the NWA.

DETAILED RESPONSES

1. First Nations values and involvement

We support the Commission’s third Key Point and recommendation to elevate and create a dedicated objective on First Nations values and involvement in water management. We support the proposed Objective and Outcomes in the NWA Discussion Paper that reflect this, including the reference to safe water as a human right.

We support the renewal advice elements on First Nations issues (p10-11 of the Interim Report), while noting that water utilities continue to make positive progress in improving their incorporation of First Nations knowledge and science, and engagement processes, and water quality outcomes.

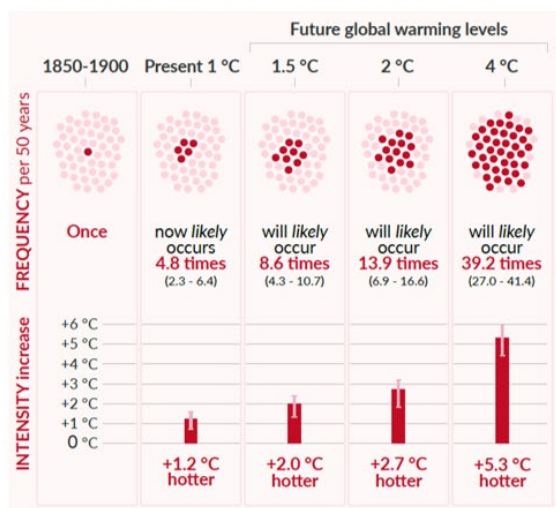
We support the ongoing role of the Committee on Aboriginal and Torres Strait Islander Water Interests, while noting the importance of other First Nations voices as well.

2. Climate change challenges including adaptation

We support the Commission’s Recommendations in this area, such as the 2021 Renewal advice 3.3, (p9 of the Interim Report), to include ‘Processes for water planning, sharing and management that are focused on adaptation in a world characterised by uncertainty, climate change, and increasing physical scarcity of water.’

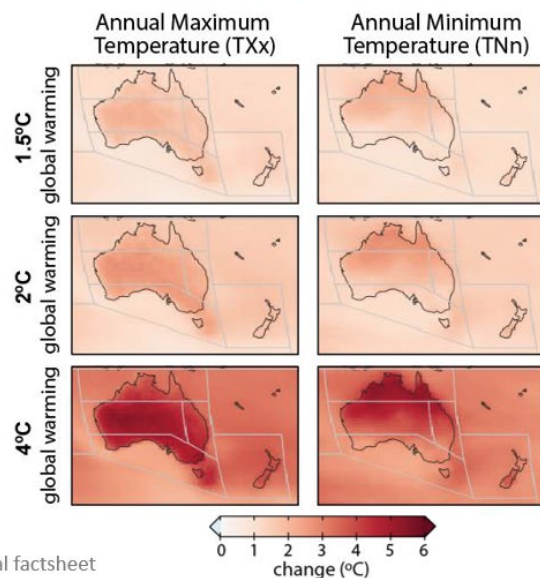
We support Draft Recommendation 3.2 to consider all extreme climate events (drought, floods, bushfire, storms) in water planning. The Commission’s own report presents data on long-term rainfall trends (p5). This is certainly a key indicator, but other forward-looking predictions point to potentially more concerning future impacts, for example those in the IPCC report:

Heat extremes: Global

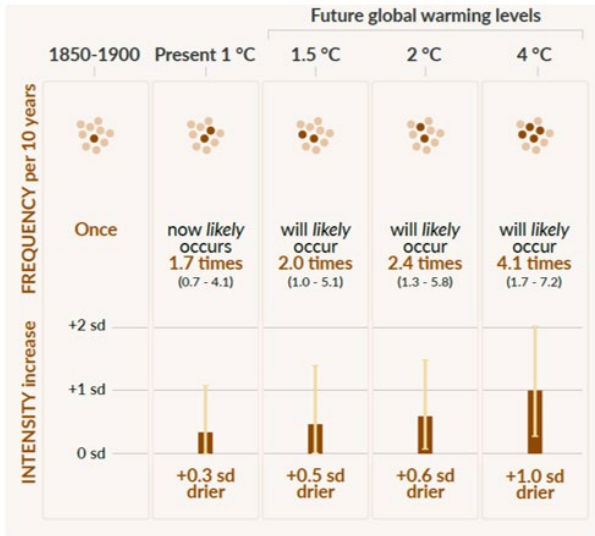


IPCC 2021, AR6 Summary for Policymakers and Australasia regional factsheet

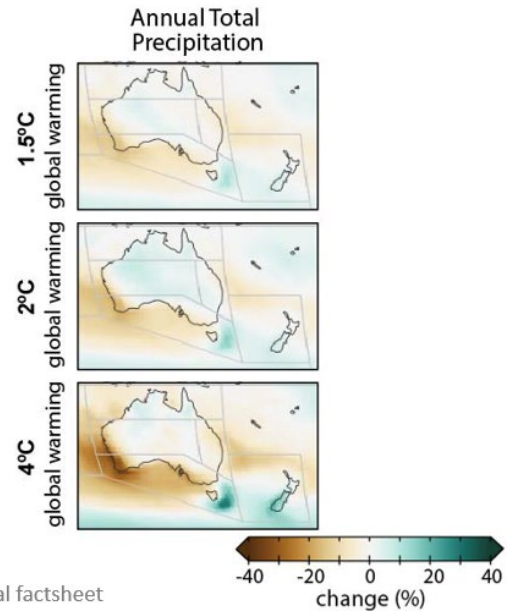
Australia/NZ



Drought: Global

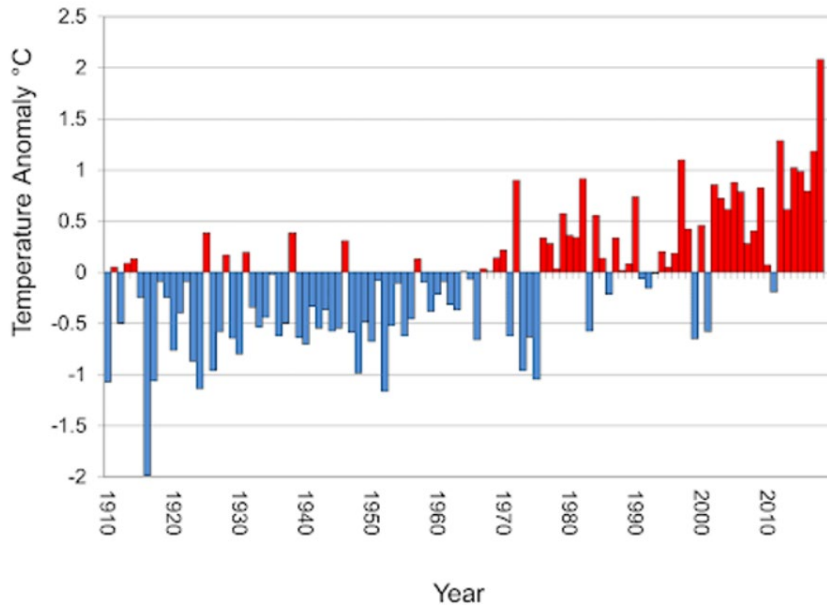


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IPCC 2021, AR6 Summary for Policymakers and Australasia regional factsheet

Australian Summer Mean Temperature



Australian summer mean temperature anomalies against the 1961–1990 average. Bureau of Meteorology

We would like to see more urgency on climate change challenges in the proposed Objectives and Outcomes in the NWA Discussion Paper, particularly on adaptation. Climate change and its impacts are acknowledged in the DCCEEW discussion, however the escalating scale and pace of impacts could be more apparent in the proposed Objectives and Outcomes.

We support Draft Recommendation 3.3 on modelling and planning for Water for Net Zero.

3. Water security and all options on the table

Shared understanding of water security

We support Draft Recommendation 3.1, that jurisdictions should agree a shared understanding or common definition of water security, that sets out water achieving water security in Australia looks like. This needs to go beyond broad goals and incorporate metrics.

Remote and regional access to safe drinking water

We strongly support Draft Findings 9.1 and 9.2, that some remote and regional areas still do not have access to safe drinking water supply, and that reporting on drinking water quality data can be centralised and improved. We welcome the requirement for providers with under 10,000 customers to report on water quality risk management from July 2024.

We support NWI renewal advice 12.4 to require jurisdictions to define and adhere to a basic level of water services for all Australians (p44).

There is both need and opportunity to approach the infrastructure investment for remote and First Nations communities with a focus on the health outcomes of clean and aesthetically sound drinking water. It is of course obvious that capital and operating costs for water and sanitation services will be significantly higher for these communities and an 'as usual' cost benefit analysis (CBA) approach is usually not favourable.

We draw your attention to the [report](#) that IPART commissioned through Sapere Consulting in 2018 and previous work by Sapere assessing the approach to CBA work in New Zealand in 2010. Whilst this work was primarily focused on Sydney and benefits of consumers receiving water meeting the Australian Drinking Water Guidelines, we would suggest the outcomes are conservative when considering the health burdens in First Nations communities with high calcium and sodium being both unpalatable and causing blocking issues in pipes. Dr Nina Hall and Dr Cara Beal have published work in this particular area as well.

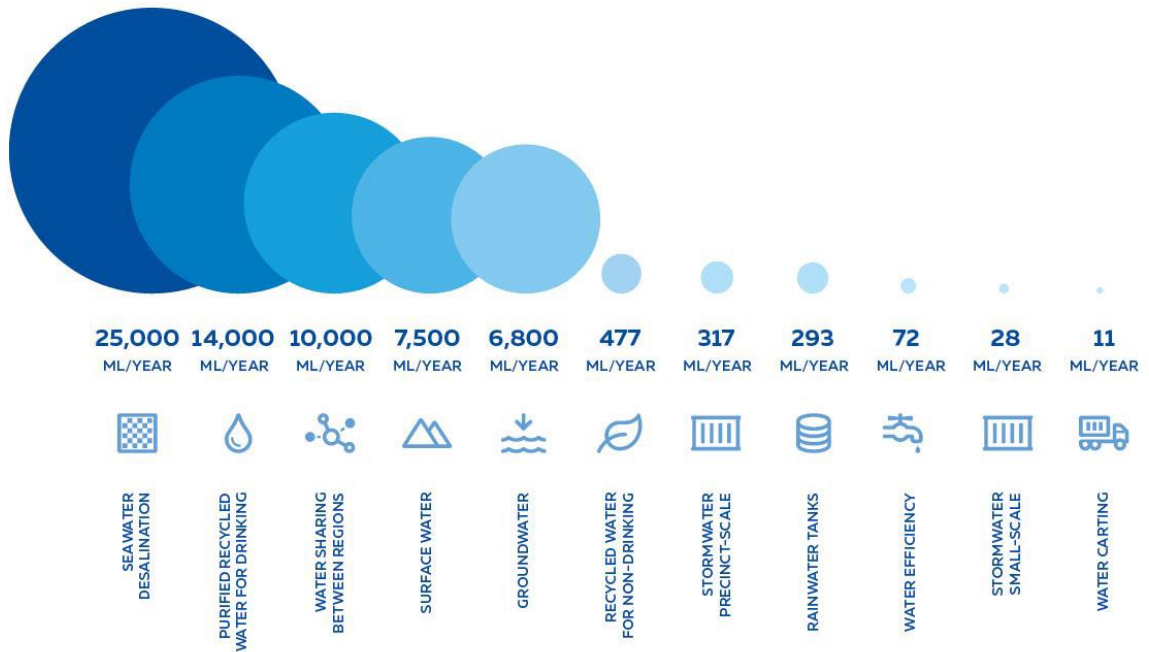
We recommend that Commonwealth Government departments give strong consideration to the CBA approach as presented by Sapere for IPART in future investments for remote and First Nations communities.

All options on the table

We strongly support Key Point 2(c), that 'all options need to be on the table and transparently assessed, to ensure water security is achieved at least cost to the Australian community and to sustain the underlying health of water systems' and the discussion of this in p13 of the Interim Report. Investigating does not assume any conclusions – but it allows the industry, and community members, to understand the pros and cons of different approaches.

We recommend the proposed NWA Objectives and Outcomes contain clearer support for water security measures and most importantly, for all options to be on the table. In particular, options perceived as 'newer' such as desalination and purified recycled water need to be specified. Complementing traditional sources with rainfall-independent water supply options is underway, and will be more and more critical in future; but we need to accelerate this with a clear authorising environment, led by strong policy guidance from the Commonwealth government.

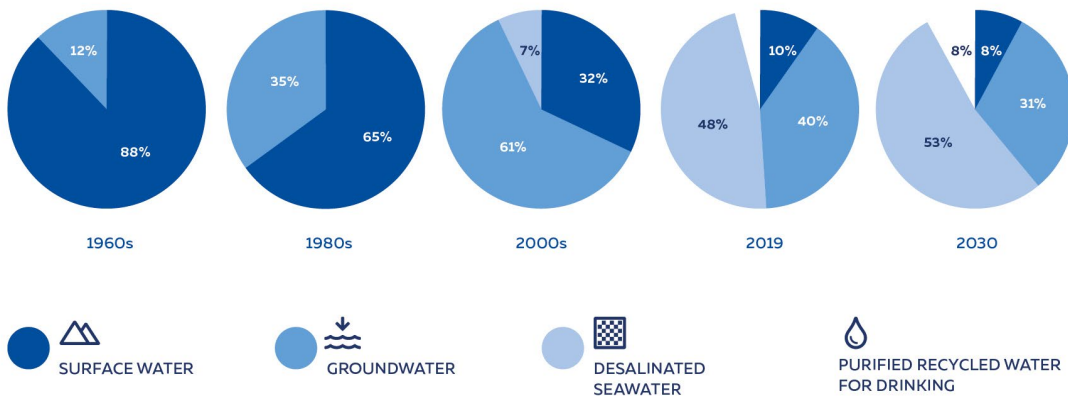
Desalination and purified recycled water are typically the two options that have sufficient yield to meet the large supply gaps many capital cities now face: (WSAA, [All options on the table: Urban water supply options](#), 2019):



As an example, Perth has embraced a truly ‘All options on the table’ approach with diversified sources of supply, as the reality is that surface water is expected to provide less than 10% of their water supply within a few years:



Water supply sources in Perth 1960s – 2030s WATER CORPORATION, 2020B



Embed the Urban Water Planning Principles

NWI Renewal advice 12.1 makes sound recommendations that should be incorporated more clearly into DCCEEW **Objectives 1, 3 and 5**: to embed updated Urban Water Planning Principles into the NWI; integrate urban water planning with land use planning; transparently consider all options; incorporate stormwater into pricing frameworks; and recommit to cost-reflective developer charges.

Water literacy and better community/stakeholder engagement

We support NWI Renewal advice 3.4(6), that ‘Communities are provided with sufficient information to enable effective management’ (p26) and NWI renewal advice 15.1 on Community Engagement Framework and committing to best practice cost-effective engagement that enhances water literacy.

For **Objective 6** on trust in water providers, water literacy is also a key outcome as communities need to understand the drivers, risks and trade-offs involved in water planning. Better understanding of the water cycle is a foundation for options like desalination and purified recycled water – where technology simply speeds up what happens in nature.

- Proposed new Outcome: **All Australians increase their understanding of the natural and urban water cycle; water scarcity; and recognise that water from all sources can contribute to safe and reliable drinking water supplies.** This is supported by the Productivity Commission (NWI renewal advice 15.1).

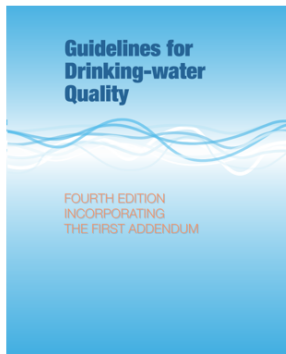
Information Request 3.1: What nationally agreed priority outcomes of water security should form part of a renewed NWI? How should these outcomes be treated when considering trade-offs between competing priorities and the management of risk when addressing water security concerns?

WSAA set out industry views on the elements needed in our [May 2023 submission](#). The current Discussion Paper proposes a Specific Objective and Outcomes. These Outcomes are a good starting point, however, the Outcomes for **Objective 1** relating to water security, should include a requirement to consider rainfall-independent sources of supply. The current water security outcomes are not keeping pace with the changing nature of water supply portfolios, and this makes the job of utilities harder. Leadership from the Commonwealth government is needed, to drive progress across the board. In particular, desalination and purified recycled water need to be stated in the NWA as these are the options likely to provide rainfall-independence to urban communities.

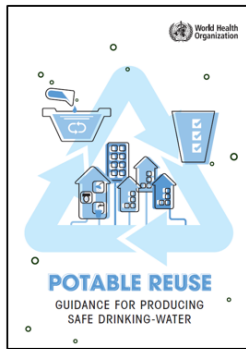
- Proposed new Outcome: **That all options for secure water supplies are investigated including rainfall independent sources. Dams, desalination, water efficiency, groundwater, purified recycled water for drinking, recycled water, rivers, rural-urban trade, scarcity pricing and stormwater should all be investigated, and the results shared transparently with communities.**

This is also supported by local and global practice. There are now six municipal scale desalination plants in Australia, two purified recycled water scheme (1 operating). Across 15 countries, over 35 cities have now adopted purified recycled water as part of drinking water supplies, with another 50 either exploring it or with schemes planned or in construction.

It is recognised as an important water source by the World Health Organization and EPA:



WHO 2017 Drinking Water guidelines acknowledge desalination and recycled water as drinking water sources

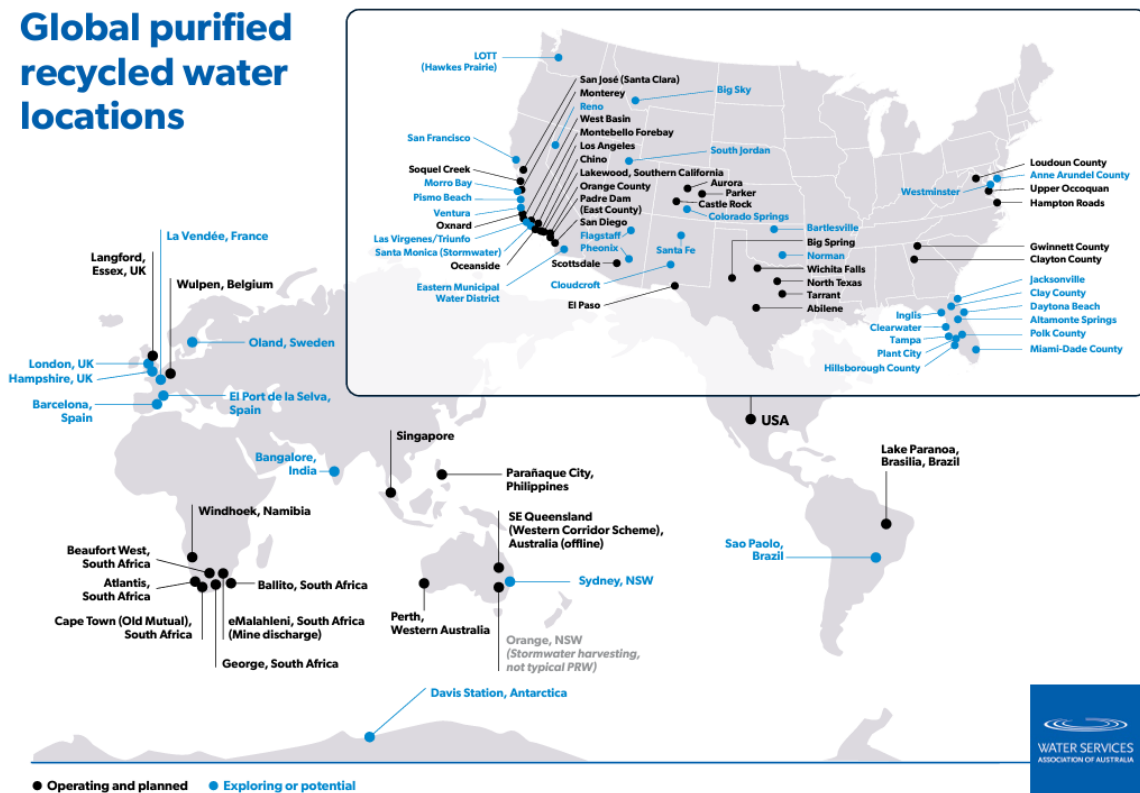


WHO 2017
Key Message (first line): Potable reuse represents a realistic, practical and relatively climate independent source of drinking-water



EPA 2017: Appropriate and necessary treatment and reuse of wastewater to augment existing water resources is a rapidly expanding approach for both non-potable and potable applications...potable reuse of water can play a critical role in helping states, tribes, and communities meet their future drinking water needs with a diversified portfolio of water sources. Beginning [in] 1962,... the practice has gained substantial momentum because of drought and the need to assure groundwater resource sustainability and a secure water supply.

Global purified recycled water locations



Over 35 cities have now adopted purified recycled water as part of their drinking water supply. In the US, several states have already forged beyond indirect potable reuse and are also adopting direct potable reuse projects. For example:

- California has around 30 purified recycled water schemes either in operation or at earlier stages such as education, planning or construction¹. At the same time, there are only 3 large scale municipal desalination plants – there has been substantial

¹ Source: WSAA research to be released in 2024

stakeholder resistance to desalination. Purified recycled water is such an important option that the state passed legislation enabling direct potable reuse in late 2023.

- Colorado has had a direct potable reuse framework since 2022. Three cities in Colorado use purified recycled water as part of their drinking water supply.
- Texas saw direct potable reuse adopted in Big Spring since the 2013 drought, and also in use in Wichita Falls during 2014-2015

Purified recycled water is also in use in southern Africa, with Namibia practicing direct potable reuse for over 50 years, and several places in South Africa also adopting indirect and direct potable reuse.

4. Efficient water services

We note Draft Finding 6.2 that some government decision-making for major water infrastructure is not fully compliant with the NWI. It would be of great benefit to the Australian people to ensure that the new NWA requires rigorous assessment, consideration of all options, and independent, transparent assessment.

We would like to see the NWA include a clear and separate Objective of efficient water services, providing broader health and environmental outcomes.

This should build on the Commission's Draft Finding 7.1, that environmental and other public benefit outcomes are currently inconsistently specified, and could be better defined and recognised.

Whilst core service delivery of water and sanitation services requires a 24/7 focus, the urban water industry is often viewed as a distinctly separate part of the economy divorced from energy, waste, transport, and telecommunications.

The water industry is transitioning from a linear dam-to-outfall approach to a far more circular approach, from both a core water perspective and a waste perspective. Inherent benefits of nutrients, waste and heat recycling are now becoming core business for water utilities, however the impacts of PFAS and other contaminants will require adaptive resource recovery and reuse. See examples including [Yarra Valley Water food waste to energy](#) initiative and [Barwon Water's Regional Renewable Organics Network](#) as examples.

We recommend that the final report reflects the growth and innovation within the industry to ensure economy-wide benefits of resource recovery. In other words, 'business as usual' for water utilities in the future can move beyond core water and sanitation to now becoming fully integrated into the circular economy to realise better health, environment and financial outcomes.

We also recommend that the proposed NWA **Objective 5**, on transparent water investment, build in the Productivity Commission's Renewal Advice 12.4 to provide transparent community service obligation subsidies where appropriate, eg regional and remote locations. Also refer to Section 3 above, ensuring approaches to CBA for infrastructure investments adequately reflects the health benefits of drinking water meeting the Australian Drinking Water Guidelines.

5. Workforce, skills and training

We believe the NWA needs to drive progress on workforce and skills and training. The industry is currently experiencing staffing shortages, particularly in regional areas, and the thin training market creates challenges. Without a suitably skilled workforce to provide safe and reliable water services, public health risks arise, and none of the other Objectives in the NWA can be achieved.

For example, Water and Wastewater Operator shortages appear across all jurisdictions, but appear to be more pronounced in NSW and QLD, particularly in regional locations. The Queensland Water Directorate (qldwater) have recently published their 2022 Industry Workforce Snapshot which highlighted that Water Plant Operator Shortages were the highest vacancy rate across respondents at 15% ([Workforce Composition Snapshot Reports \(qldwater.com.au\)](#)). The NSW Water Directorate have also identified that skill shortages are one of regional NSW's most significant strategic challenges.

These critical shortages are not necessarily reflected in the National Skills Priority List and also in the the Australian and New Zealand Standard Classification of Occupations (ANZSCO) codes as the water industry is significantly undercounted in Census data due to the lack of water-specific occupational codes recognised by the ABS. There is an opportunity for Build Skills Australia to help improve overall reporting and workforce planning.

The shortage of formally trained water operators increase the risk of water safety incidents that could compromise public and environmental health. The causes include ([NSW Government, 2022](#)):

- The lack of any mandatory requirement for water operators to complete accredited training or hold qualifications.
- Low uptake of available national accredited water operations training.
- Difficulty attracting new operators to water utilities, and retaining existing skilled operators, particular in regional and remote Australian communities.
- Few registered training organisations offering water operations training.
- Shortage of accredited trainers, and lack of pathways for existing trainers to maintain training and technical skills.

Water and Wastewater Operators are not the only critical roles within our sector with Engineers, Project Managers, Procurement Specialists, Information Technology, Water Planning/ Modelling, Finance and Energy roles also identified as essential to the ongoing provision of safe, reliable water and sewerage services (WSAA Critical Skills Survey 2023). In a recent survey of WSAA member organisations, just over half had relatively low confidence levels in 6-10 years to deliver business objectives with current skills and capabilities. An ageing workforce is also problematic, with approximately 20% of urban water utilities' staff aged 55 or over.

PC Renewal Advice 3.3 Modernised Objectives: (p25) 'effective, equitable and efficient provision of water services that 5 (b) incentivise water service providers to be efficient and innovative, and to deliver services in ways that are cost-effective and in the interests of their customers'

The NWA Objectives and Outcomes should address these urgent skills and training challenges. Proposed outcome for Objective 6: **Water service providers have the appropriate skills and capabilities to ensure safe and reliable water and sewerage services for Australian communities.** (The NSW Government proposed this in a submission to DCCEE in 2021/22.)

The NWA Discussion Paper has a disappointing lack of focus on water utilities as the providers of water services, recognising their role as the service provider to over 20 million customers. The PC's report notes on p7 that 'The current NWI objective are focused largely on water resource management. While this remains important, water service provision is largely overlooked and needs to be prioritised.' We would like to see the renewed NWI implement this recommendation.

GENERAL

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Water efficiency

We would like to see water efficiency for households and businesses in urban areas receive more attention in both the Interim Report and the NWA Discussion Paper. Ironically, it is one of the few areas that was specified in the 2004 NWI under Urban Water.

The NWA Discussion Paper proposes a dedicated objective on efficient use of water however, it appears focused on large-scale water rights and trading. It needs to be remembered that the urban water industry is around 30 times larger in value than rural water; and that initiatives such as Water Efficiency Labelling Scheme and Smart Approved Water Mark have driven substantial ongoing water savings.

The current Outcomes for Objective 7 are a missed opportunity to prioritise continued focus on water efficiency. We reiterate our recommendation that the new NWA should have an additional Outcome: To expand the Smart Approved Water Mark certification and related initiatives to enhance the co-benefits with WELS and to further boost efficient outdoor water use providing more savings of water and money for families and businesses.

Contact

WSAA welcomes the opportunity to discuss this submission further.

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