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NSW Water Strategy
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WSAA SUBMISSION TO DRAFT NSW WATER STRATEGY

The Water Services Association of Australia (WSAA) is pleased to provide input to the Draft NSW Water Strategy. The Draft Strategy comes at a critical time for the State as the challenges of climate change and associated extreme events become more apparent, including last week's floods across NSW. We commend DPIE for supporting an 'all options on the table' approach to ensuring all communities in NSW, can achieve a reliable, resilient water supply in the best value manner possible.

WSAA is the peak industry body representing the urban water industry in Australia and New Zealand. Our members include the water utilities supplying water and wastewater services to over 24 million customers.

Please see below more detailed comments on specific priorities in the Draft Strategy.

Priorities 1, 4, 6

WSAA has long advocated that water security comes through diversity. In other words, having all options on the table for consideration, including purified recycled water alongside desalination, water efficiency, dams, water sharing through pipelines, and recycling for non-drinking purposes. Water efficiency, or using the water we have wisely, is always the first step; nonetheless with the challenges of growth, climate change and drought, augmentation at some stage usually needs to be planned.

WSAA is pleased that the Draft NSW Water Strategy includes the exploration and use of diverse water sources for greater water security including purified recycled water for drinking, managed aquifer recharge and other options. It is a positive step forward that the Strategy explicitly mentions these options, to put them on the industry and community's radar as options that are becoming increasingly common around the world.

We are particularly pleased that the Strategy indicates that the Government will look to initiate public engagement for consideration of purified recycled water for drinking, through the Greater Sydney Water Strategy when released. WSAA has researched this extensively in recent years. In Australia, the water industry anecdotally indicates that purified recycled water for drinking could often be a cost-effective option of meeting a town's water needs, yet it has sometimes been 'taken off the table' out of concern that the community may not support it. This may be a lost opportunity, over 35 cities around the world have adopted it as part of their drinking water supply (see attachment 1), including Perth in Western Australia.

International experience shows that it is quite possible to take the community on a journey to understand and accept this water supply option as a safe, proven, cost-effective and sustainable way to meet their water needs into the future. For example, the City of San Diego publicly rejected this option in the late 1990s; but was able to turn around that initial rejection. Community support was as low as 26% in 2004; by 2012, after a demonstration project had

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been conducted, this had increased to 73% and was measured at 79% in 2019. San Diego is now building a scheme that will supply at least a third of its water needs by 2035.

The key to creating understanding of any water supply option is providing information so that the community can learn and be satisfied that it is safe, environmentally sustainable and how it will impact their water bill. The Draft Strategy's **Priority 1: Build community confidence and capacity through engagement, transparency and accountability**, is a good platform for education initiatives. Our report 'Lessons from the Journeys of Others', is a guidebook on how to approach the conversation with the community about this subject.

In the Draft Strategy and recent webinar, DPIE has mentioned that there are some matters that need to be worked through to enable this. Our research over recent years indicates that 'barriers' to this option are more perceived than actual. For example, NSW Health has publicly stated that they are willing to work with the industry on making use of different sources including purified recycled water (from wastewater or stormwater) to provide drinking water. There are no 'policy bans' as the NSW Minister for Water, Property and Housing has expressed support for an 'all options on the table' approach to ensure communities can achieve resilient water supplies at good value. Perceptions of barriers, can sometimes lead to inaction. WSAA would support future iterations of this strategy, and the NSW metropolitan strategies (Sydney, Hunter), outlining in more detail what the issues are, and we would be very happy to work with all parties in a collaborative way to resolve them, so that communities are able to benefit from this option if it suits their circumstances.

To do so would also capitalise on the increasing interest in circular economy approaches, that help the water industry evolve from 'make, take, use, dispose' models of resource utilisation. We agree with **Priority 6.10 Foster the circular economy in our cities and towns** and WSAA recently released a paper: Transitioning the water industry with the circular economy. The paper is a guide for water utilities to unlock the circular economy to better manage resources, make and use products and to regenerate natural systems. We are also progressing a Draft Action Plan linked to the paper that includes four strategic directions and actions:

- Building circular economy knowledge
- Establishing new business models
- Measurement of the circular economy
- Institutional transitioning.

We note that the NSW Productivity Commission recommended exploring a demonstration plant for Sydney (Draft Recommendation 5.5 in their report), and purified recycled water is a long-term supply option short-listed for consideration in the Lower Hunter Water Security Plan.

We support the NSW Productivity Commission recommendation of a demonstration plant, as it has proved a key step in the journey for many cities around the world considering purified recycled water for drinking as an option. Our research shows that nearly all cities contemplating this option that have created a demonstration plant, incorporating some sort of visitor experience, have been able to help their communities understand the water cycle, and that recycling simply speeds up what happens in nature; and they have gone on to adopt purified recycled water. An exception is Denver, Colorado, which has been able to reduce its water usage sufficiently that they have not needed to augment their water supply at all yet. The demonstration plants are at different budgets; some are quite modest and yet have still played a key role in helping that community understand the option.

At a Federal level, the Productivity Commission recently supported the 'all options on the table for water security' policy position in its Draft Report on National Water Reform (February 2021), echoing the sentiments of Infrastructure Australia in its Australian Infrastructure Audit 2019. The Commission has recommended that the federal government re-establish a new National Water Initiative to help spear-head consideration of all options.

We have published two reports in relation to purified recycled water for drinking that would be of interest in this review:

- All Options on the Table: Lessons from the Journeys of Others, a guidebook for the Australian water industry on how to approach the conversation with the community about purified recycled water for drinking
- All Options on the Table: Urban Water Supply Options, which provides levelised cost and other information about all water supply options.

We have a range of other free resources available such as infographics, animations, maps and fact sheets. The Australian community have already come on many journeys with the water industry as it crosses new frontiers. With continued long-term climate change affecting water supply, and less reliable rainfall, it is appropriate to consider purified recycled water among other drinking water supply options as part of a robust planning process.

We support **Priority 6.8: Promote and improve Integrated Water Cycle Management**, as there are many benefits to this type of management approach that brings together brings together all stakeholders involved in the planning and management of all water across the entire water cycle, to ensure that the liveability, resilience and sustainability outcomes that the community is seeking are maximised across our cities and regions. Last year WSAA released a paper: Integrated water management: Principles and best practice for water utilities. The paper provides a framework with a set of principles and agreed best practice outcomes supported by case studies, that allow water utilities to step through the IWM planning process in a way that suits their own particular circumstances. Integrating stormwater into the urban water cycle is fundamental to good outcomes, yet success on this front is characterised by ad hoc collaboration rather than a systematic approach. All utilities, including smaller regional utilities could use the principles and best practice document as a guide to progress integrated water management through better planning and collaboration.

We note the focus on livable and vibrant towns and cities embedded throughout the Draft Strategy and specifically in **Priority 6: Support resilient, prosperous and liveable cities and towns**. We know that investing in water-enabled green and blue infrastructure can deliver benefits to physical and mental health by making our communities cooler, healthier and more attractive places to live, work and play. Our report Blue + green = liveability seeks to increase understanding and explain how the urban water industry enables broader liveability outcomes. Health benefits can be up to $94/person/day in a greenfield development built with an integrated water management approach. Health benefits include improved physical and mental health, air quality and urban cooling. This is in addition to the provision of safe, secure and affordable drinking water and wastewater services. However, while planning for green and blue infrastructure can start to unlock improved liveability outcomes there are often no clear pathways to deliver and fund these initiatives. In Blue + green = liveability we outline specific recommendations for governments (all levels), the urban water industry and collaboration partners to enable green and blue infrastructure to deliver liveability outcomes for cities and regions, consistent with Priority 6 in the Draft Strategy.

Priority 2

WSAA welcomes the focus in the Draft Strategy's **Priority 2: Recognise Aboriginal rights and values and increase access to and ownership of water for cultural and economic purposes**.

Through our information sharing and advocacy platforms, we can clearly see that this is an area the water industry is united in wanting to better understand and grow, but could benefit from more knowledge. We are working to improve our awareness and increase Indigenous involvement in the industry and representation of Aboriginal rights to water, and to share learnings across the industry.

We support any efforts to improve the water service outcomes for Indigenous communities. Recent work commissioned by WSAA identified five principles of effective development practice for working with Indigenous communities provide guidance for conceptualising any support initiatives from the water sector:

- any initiative must be based on trust, integrity, collaboration and partnership with relevant Indigenous communities.
- a long-term perspective must be taken.
- remote Indigenous communities must be recognised and respected as key client-partners with agency
- any initiative must leave a legacy in the community of strengthened capacity to achieve good water service outcomes.
- utilities must approach initiatives with an orientation for mutual learning.

Priority 3, 4, 5, 7

WSAA has long promoted the valuation of blue and green infrastructure, as outlined above and the contribution they make to liveability. We also are promoting innovative work happening across various parts of Australia, and many developments internationally, in harnessing the benefits from circular economy approaches. NSW would be well placed to make significant sustainability gains through adopting integrated water management and circular economy approaches in future.

The Draft NSW Strategy could play a role by recognising the value these approaches create (financial and broader economic) to liveability and resource recovery. There can be cumulative benefits of green spaces including biodiversity, waterway management and carbon sequestration. It also needs to be implementable – regional water utilities often find the integrated water management planning requirements excessive and fragmented. We expect that any submission by the NSW Water Directorate will detail the issues small water utilities face in implementing integrated approaches. We would be happy to support any initiatives that help overcome these hurdles.

Specifically, we support proactive action to implement green infrastructure like tree canopy and grass cover, which can help reduce urban heat island. Sydney Water released an 'Urban Typologies and Stormwater Management' report with approaches that can meet urban water needs while also addressing urban heat island impacts, to achieve 'win win' outcomes.

We also support efforts to improve waterway health, however we note that this tends to focus heavily on the discharges of water utilities, which are already highly regulated and held to strict standards. The great area of opportunity is to address diffuse runoff, from agriculture, industry, and stormwater.

For river health, we would also like to see a greater acknowledgement of the prevalence, and beneficial role, of highly treated replacement flows and 'return' wastewater flows in maintaining healthy river systems, especially during low flow seasons or drought.

In relation to **Priority 4: Increase resilience to changes in water availability (variability and climate change)** we would also welcome adoption of zero emissions targets as government policy. Regulation and government policy are critical drivers as they create a mandate to invest in projects that will enhance resilience. This month WSAA released the urban water industry climate change position which outlines the contributions of the urban water industry to meeting the challenges of climate change. Key to the position is that the urban water industry will achieve net zero greenhouse gas emissions by 2050, and sooner where it aligns with customer expectations. The water industry is uniquely positioned to mitigate its impact on climate, respond and adapt to the impacts of a changing climate on the delivery of services, and improve the resilience of communities and the environment in adapting to a changing climate. The industry will continue to work together and collaborate with stakeholders to meet the challenges of a changing climate.

We also note the often-stated hurdle for regional water utilities, that roles and responsibilities for regulating agencies and operators can be unclear, overlapping or sometimes even contradictory. We believe there would be great benefit in creating better mechanisms for collaboration between State Owned Corporations and smaller utilities, to share knowledge, training, frameworks and mentoring. The regulatory frameworks for large utilities often seek to avoid expenditure that is not closely linked to the utility's own corporate objectives, which can make it challenging to mount a case for investment to share knowledge with smaller water utilities. However, the service levels in small regional areas are often recognised as warranting improvement. It is hard for the utilities to come together to identify and bring about these opportunities, but the NSW Water Strategy could be the over-arching umbrella that helps to create ways for the whole state to benefit from the maturity, size and experience of large, metropolitan utilities.

An example of this might be investment in a demonstration plant for purified recycled water for drinking. As discussed above the NSW Productivity Commission has recommended exploring a demonstration plant for Sydney and also identifies a need to 'Improve the performance of local water utilities in the regions'. Purified recycled water for drinking could have significant benefits for small utilities, particularly inland ones, for whom desalination is not a feasible option. An over-arching instrument like the NSW Water Strategy could help achieve both these objectives by recommending a cost-effective demonstration plant to explore technologies that could be used by different towns in NSW. With dozens of towns counting towards Day Zero in the drought during 2019-20, it is clear that whole-of-state approaches that can prove technologies and models quickly and identify pathways that would be of great value to all of NSW.

Another example could be within the climate change and circular economy work. Umbrella government targets, policies and frameworks would make it easier for small utilities to tap into these approaches and opportunities that might otherwise be appealing, but hard to initiate.

We would be happy to discuss these matters further and I can be contacted on 0417 211 319 or adam.lovell@wsaa.asn.au.

Kind regards

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ATTACHMENT 1

Over 35 cities globally have now adopted purified recycled water as part of their drinking water supply, with many more seriously exploring it.