

Setting our future urban water directions

Feedback Form



Please provide your responses to the questions outlined in the discussion paper below and return to DEWWater@sa.gov.au by 1 October 2021.

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PERMISSION TO PUBLISH YOUR FEEDBACK	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	please indicate if you give your permission for your responses to be made public as part of a consultation report
General comments – please provide any general comments you have in relation to the development of an Urban Water Directions Statement for South Australia			
Water supply for the future – all options on the table			
1. What key factors should we consider in developing a decision-making framework for augmentation that considers all options for providing water security (all options on the table)?			
<p><u>Framework to support new and emerging technologies</u></p> <p>SACOSS is strongly supportive of an approach to future water supply, which considers “all options on the table”. Beyond the water supply augmentation options mentioned in the DEW discussion papers, SACOSS encourages the consideration of new and emerging technologies, including non-network and climate independent options to supplement traditional methods of supply. As noted in Support Paper 1, South Australia currently has two climate independent water sources – desalinated seawater and recycled water – both which will have a role in securing our urban water supply in response to the pressures of climate change. Where these options are not fit-for-purpose, emerging technologies could be considered to help meet future supply demands.</p> <p>For example, solar evaporation techniques present a low-cost, innovative solution, and may be viable in smaller populations where desalination may not be cost-effective. Such technology is currently being developed at UniSA’s Future Industries Institute, drawing on a technique which creates fresh drinking water from seawater, brackish water or contaminated water via solar evaporation.¹ Although promising, such technologies may take time to progress from R&D to commercialisation. Among technology currently on the market, hydropanels uses solar technology to extract drinking water from the ambient air and convert water vapor into drinking water.² While the technology may not be appropriate on a wider scale, there may be fit-for-purpose applications, such as augmenting water supply in drought affected areas, and emergency water supply during extreme events. A robust framework is needed to independently evaluate the merits of such technology against existing options, including initial capital and operational costs, and broader environmental impacts (noting imperatives for the water sector to decarbonise).</p> <p><u>Funding arrangements</u></p> <p>Given SA Water is the major water retailer in South Australia, many of the funding and decision-making frameworks will necessarily occur via SA Water’s regulatory determination process. SACOSS has previously raised queries in relation to the regulation of ‘stand-alone’ water supply options – and whether there is a disincentive for SA Water to propose decentralised options as opposed to a network option, even where the stand-alone option might be more efficient and cost-effective. We question whether ‘stand-alone’ water supply options fall within the definition of ‘retail services’ under the Water Industry Act, and therefore, whether it falls under WI Act regulations. SACOSS believes there are implications for SA Water properly costing and proposing ‘place-based’ solutions for regional locations where it has an obligation to supply (as it would potentially not be permitted to recover the costs of stand-alone systems through its allowed revenue).</p> <p>Beyond water supply under SA Water’s responsibility, SACOSS sees a role for targeted government funded programs to pilot emerging technologies which also support social equity outcomes (similar to the State Government’s Virtual Power Plant (VPP) trial to reduce energy costs and supporting Housing SA tenants on low incomes).³ We note that there may be a need to explore alternate financing models to meet community expectations and needs into the future.⁴</p>			
2. Do you have ideas around criteria that could be used to weigh all relative costs and benefits of potential water supply options (all options on the table), including those that can be delivered from an integrated urban water management approach?			

¹ <https://www.unisa.edu.au/Media-Centre/Releases/2021/sunlight-to-solve-the-worlds-clean-water-crisis/>

² https://www.pc.gov.au/data/assets/pdf_file/0005/255263/sub006-water-reform-2020.pdf

³ <https://www.energymining.sa.gov.au/growth-and-low-carbon/virtual-power-plant>

⁴ Allens Linklaters (2017) [Alternative models for funding water infrastructure](#), Australian Water Association

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Decisions around managing water supplies will require transparent decision making and appropriate information around social, economic, cultural and environmental benefits and impacts. Such trade-offs need to be guided by community needs, aspirations, and expectations around quality (taste and safety), reliability, health, liveability, costs (both capital and recurrent costs), and affordability.

SACOSS views the State Government's proposed **basic level of service** as a mechanism which could assist in decision making for integrated urban water system planning across the state. Currently, the State Government has committed to developing a **standard for a basic level of safe and reliable drinking water** for self-supplied remote communities by 2022, as part of the state's Implementation Plan for the National Agreement on Closing the Gap.⁵ The development of a **basic level of service** would enable conversations between communities, government and service providers about how basic water needs can be met under all circumstances (drought and 'normal' times). Noting that the expectations and preferences of some communities may naturally exceed the minimum standards for safety and reliability, an **agreed level of service** could be co-developed with community reflecting communities' aspirations, willingness to pay and tolerance for risk.⁶ For example, an agreed level of service for a particular community may include a desire for green spaces or recreational values.

Where there is a mismatch between community perspectives and the asset owner/service provider's perspective, the basic level of service and agreed level of service provides a benchmark to guide decisions around acceptable outcomes for the system overall, long-term interests of consumers and broader environmental impacts. Such tensions are currently playing out in SA Water's planned desalination plant on Billy Lights Point in the Eyre Peninsula, with the local aquaculture industry's concerns around potential environmental impacts on local eco-systems and industry.⁷ SACOSS understands that consultation is ongoing with community and that further investigations will be conducted as part of the approval process.⁸ Noting that some information may be commercial in confidence, it is imperative that as much information as possible (including detailed terrestrial, marine, environmental and heritage assessments) are made available to the general public to guide informed decision making.

Any approach attempting to weigh the relative costs and benefits of potential water supply options would necessarily require high levels of community engagement. The approach proposed by Aither⁹ is outlined in Figure 1 and includes the following steps:

- An understanding of the current and future available water sources and needs (with consideration of climate change impacts)
- Developing a water security vision and objectives for the community
- Developing agreed levels of service and identifying and articulating the gap between the basic level of service and the agreed level of service (if there is one)
- Identifying possible servicing options, including sources, infrastructure needs, delivery arrangements and costs to meet a basic and/or agreed level of service
- Short term contingency planning to maintain water supply and quality during extreme events (integrated with water security plans at the local and catchment scale)
- developing an appropriate service delivery model and arrangements, including options for long- term funding. This funding may include a combination of external funding, user charges and the application of CSO (if appropriate)

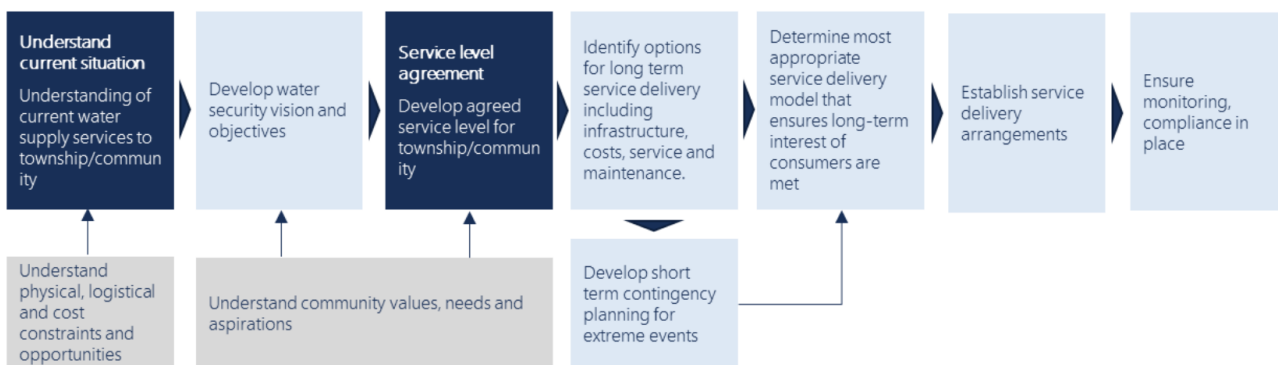


Figure 1. Approach to water security planning and assessing water supply options

⁵ Government of South Australia (2021) [South Australia's Implementation Plan for the National Agreement on Closing the Gap](#), p. 71

⁶ Aither (2021) [Falling through the gaps: A practical approach to improving drinking water services for regional and remote communities in South Australia](#)

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3. What community education and capacity building might be required to create a water literate and water wise community that will support investment in all potential water supply augmentation options, demand management strategies and integrated urban water management projects and initiatives?

There are likely different levels of engagement required, noting the technical nature of some decisions around water supply augmentation and planning. At a broad community level, SA Water, the State Government and Councils all have a role in improving water literacy and water wise behaviours via public facing campaigns. For processes requiring more in-depth, technical knowledge (such as the process described above in Figure 1), capacity building to engage with service providers and government processes are crucial. Meaningful engagement to support investment will take time and require sufficient funding to ensure a robust and thorough process. SA Water and its regulator, the Essential Services Commission of South Australia (ESCOSA) have been progressively moving towards earlier and transparent stakeholder and consumer engagement as part of its regulatory processes.¹⁰ To reach higher levels of the International Association for Public Participation (IAP2) Framework¹¹, significant capacity building is required to enable community engagement in integrated urban water management projects and initiatives which are more technical in nature. In such cases, efforts could be made to upskill members of existing consumer groups such as SA Water's Customer Advisory Groups and ESCOSA's Customer Advisory Committee to deal with broader urban water planning matters. Additionally, the Consumer Advocacy and Research Fund could also be utilised to build further capacity outside these groups.

Drainage and flood management – managing rain for the next century

4. What do you consider to be the primary challenges in managing urban watercourses in South Australia so that they can provide effective drainage of stormwater flows and flood protection? Do you have ideas to address those challenges?

SACOSS considers that there should be a social responsibility to safeguard members of the community most at risk to the impact of flooding. This recognises that while everyone may be exposed to risks of floods and extreme weather events, some people may face higher levels of risk due to poverty, poor health and mobility, disability, social isolation, communication barriers and locality. Research has highlighted the disproportionate impacts of flooding for socio-economically marginalised groups following the 2017 Northern NSW flood, including subsequent financial hardship and psychological distress.¹² Suggestions to address the challenges are outlined in section 6.

5. What policy and funding approaches could be considered to support multi-objective stormwater management outcomes being delivered at private, local or regional scales?

SACOSS considers that the flood management and warning systems outlined by DEW should as much as practically possible, be embedded in a broader collaborative approach between governments, businesses, emergency management agencies, not-for-profits and communities. DEW's role as South Australia's Hazard Leader for Flood, places it in an opportune position to help build capacity and knowledge around preparedness. Building this level of individual and community resilience would help guard against both the economic and social costs of natural disaster events.¹³

6. How can we ensure that we have the best possible approach to managing flood risk, including sharing and disseminating available flood mapping data, management of the state's flood warning infrastructure and raising the level of people's awareness and understanding of their flood risk?

⁷ <https://www.change.org/p/members-of-the-house-of-assembly-south-australia-reconsider-billy-light-s-point-port-lincoln-as-preferred-site-for-a-desalination-plant>

⁸ <https://watertalks.sawater.com.au/Desalination-Eyre-Peninsula>

⁹ Aither (2021) [Falling through the gaps: A practical approach to improving drinking water services for regional and remote communities in South Australia](#)

¹⁰ Essential Services Commission of South Australia (2021) [SA Water Regulatory Determination 2024: Final Framework and Approach](#)

¹¹ https://iap2.org.au/wp-content/uploads/2019/07/IAP2_Quality_Assurance_Standard_2015.pdf

¹² Matthews, V et al. (2020) [Belonging and Inclusivity Make a Resilient Future for All: A Cross-Sectional Analysis of Post-Flood Social Capital in a Diverse Australian Rural Community](#), International Journal of Environmental Research and Public Health

¹³ Deloitte Access Economics (2016) [The Economic Cost of the Social Impact of Natural Disasters](#), report for the Australian Business Roundtable for Disaster Resilience and Safer Communities

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Flood mapping information

SACOSS notes the insurance risks and liabilities to Local Government in sharing flood-related information with the wider community, as discussed on page 8 of Support Paper 2. We note legislation in other jurisdictions offering safeguards to councils in making flood risk information publicly available (e.g. accuracy of information to reflect new data, or approaches to data).

However, SACOSS is concerned about those in our community who do not have their house and/or contents insured against floods and storm damage. In Australia, approximately 96% of homeowners have building insurance, with approximately 90% holding home and contents insurance.¹⁴ While there is no definitive data, some studies¹⁵ suggest that segments of the population have **much lower rates of insurance** and that rates of holding insurance **decline with income and with household financial stress**, including:

- Only 1 in 5 public housing tenants have contents insurance;
- Approximately a third of renters have contents insurance;
- Retirees with mortgages, single parents, younger people, and people from culturally and linguistically diverse backgrounds are less likely to hold insurance.

SACOSS believes that the individual responsibility for risk mitigation (e.g. by purchasing home and contents insurance) and barriers to access for those on low incomes needs to be considered when balancing roles and responsibility of government, local government and corporations, particularly as they may be better equipped to manage the risk. This may involve insurers, government and councils taking a more proactive approach to identifying and supporting people who face disproportionate risk in flood prone areas, obligations around disclosure of flood information and risk to help facilitate mitigation strategies.

Roles and responsibilities

Community service organisations are a key stakeholder currently missing from the roles and responsibilities in flood warning networks (Table 1 of Support Paper 2). As identified in SACOSS' Disaster Resilience Project¹⁶, the health and community services sector play an important role in building the resilience of the people and communities they work with to minimise the impacts of emergencies, disasters or extreme weather events. As well having an information dissemination role in increasing the public's awareness and understanding of flood risk, the community services sector also has a role to play during and after floods and extreme weather events.

This includes:

- Developing consumer resources and communication strategies for different population groups (including people living with disability, and CALD groups).
- Collating a list of resources for community members that service providers can refer clients to before, during or after an emergency, disaster or extreme weather event.

Consideration could also be given to how flood alerts are accessible for people with disabilities, drawing on research around effective messaging and modes for those with sensory disabilities (deaf / hard of hearing, blind, visually impaired, or deaf-blind).¹⁷ This could build on SA Water's program of work as part of its Wider World initiative.¹⁸

Water for life – Water to support healthy and enjoyable living

7. How should we meet increased water demands for urban greening and cooling?

8. How should we promote and communicate the complex messages around maintaining water wise behaviours while also increasing water use to support greening and cooling?

¹⁴ Tooth, R (2015) [Analysis of Demand for Home and Contents Insurance](#). Insurance Council of Australia.

¹⁵ Tooth, R (2015) [Analysis of Demand for Home and Contents Insurance](#). Insurance Council of Australia; SACOSS (2020) [Cost of living update No. 41: December quarter, 2019](#); Robinson, T (2017) Uninsured Australia: The case for not-for-profit insurance.

¹⁶ SACOSS (2020) [Disaster Resilience Project Report: Exploring and supporting the roles and responsibilities of community organisations providing services to people at risk before, during and after an emergency or disaster](#)

¹⁷ McRae, L, Locke, K, Ellis, K, Kent, M & Peaty (2020) [Disability Royal Commission Emergency Planning and Response](#), Curtin University

¹⁸ <https://www.sawater.com.au/news/sa-water-shapes-industry-leading-support-for-customers-living-with-disability>

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9. How should water supply for urban greening, water features and water based heat mitigation be funded noting the significant benefits to health, wellbeing and lifestyle in our urban centres?

SACOSS strongly supports policies seeking to address the health and well-being impacts of climate change, and recognise the importance of water for greening and urban heat mitigation. We encourage any policies or initiatives in this space to explicitly incorporate health equity objects, acknowledging the links between climate change and the social determinants of health.¹⁹ This is critical given that vulnerability to extreme heat and climate change experienced by those on lower incomes. Often, this vulnerability is exacerbated by the state of housing, with the National Social Housing Survey (2018)^{20, 21} suggesting that 4 in 10 social housing tenants (incorporating public, Aboriginal and community housing) reporting that their homes do not meet their needs for thermal comfort. For public housing tenants in SA, when asked if their prioritized amenities were met, only 55 percent stated that their need for thermal comfort was met.²² This was the lowest score across Australia for thermal comfort, indicating that public housing tenants in particular, are living in sub-standard housing that affects the health and comfort of residents. There is therefore a compelling case for water sensitive design to be incorporated into Housing SA properties.

There is emerging evidence in Australia that while there are significant health and well-being benefits to urban greening, there may be demographic and geographic disparities in access to urban greening, particularly for low-income communities.²³ While funding is available to councils via the Greener Neighbourhoods Grants program, and there are a range of initiatives under Green Adelaide and local council level, an impact evaluation of these programs and initiatives from a health equity perspective²⁴ could be undertaken to ensure funding is appropriately targeted.

¹⁹ Delany-Crowe, T, Marinova, D, Fisher, M, McGreevy, M & Baum, F (2019) [Australian policies on water management and climate change: Are they supporting the sustainable development goals and improved health and well-being?](#)

²⁰ Australian Institute of Health and Welfare (2018) National Social Housing Survey. <https://www.aihw.gov.au/reports/housing-assistance/national-social-housing-survey-2018-key-results/contents/table-of-contents>

²¹ Productivity Commission (2021) Report on Government Services 2021 – 18 Housing. <https://www.pc.gov.au/research/ongoing/report-on-government-services/2021/housing-and-homelessness/housing>

²² Ibid, p.33

²³ Kelly, D, Davern, M, Farahani, Higgs, C, and Maller, C (2021) [Urban greening for health and wellbeing in low-income communities: A baseline study in Melbourne, Australia](#)

²⁴ For example - https://www.vichealth.vic.gov.au/-/media/ResourceCentre/PublicationsandResources/Health-Inequalities/Fair-Foundations/Summary/Health-Equity_Summary-Report_Settings.pdf?la=en&hash=B2A5E839976105CC913F69857DB532203613C37E