

13 September 2013

**The Office of Living Victoria
PO Box 500
East Melbourne VIC 3002**

Melbourne's Water Future

The Water Services Association of Australia (WSAA) welcomes the opportunity to provide comment on the above paper. We are the National peak industry body that brings together and supports the Australian urban water industry. We do not have state-based branches like the Australian Water Association. We have 31 members, including the largest water utilities in Australia, which provide urban water services to around 17 million Australians. Our Association facilitates collaboration, knowledge sharing, networking and cooperation within the urban water industry. We also provide a forum for debate on issues important to the industry and a voice for communicating the members' views.

2030 Vision for the Australian urban water industry

WSAA members' vision for the sector is '**Customer driven, enriching life.**' The vision and four outcomes highlights the industry's commitment to anchor our services to customers' values, and to enrich communities where water services have broad economic, environmental and social values (see brochure insert).

- Outcome 1:** The most efficient trusted and valued service providers in Australia
- Outcome 2:** A compelling voice in national policy making
- Outcome 3:** A valued partner in urban and land use planning to enrich communities
- Outcome 4:** Stewardship of the urban water cycle

The Victorian Government's proposed strategy for Melbourne's Water Future assists in progressing the outcomes listed. In this context, WSAA provides this submission from a National perspective because we realise that sometimes state-based policy decisions flow through to other states.

In summary WSAA believes the three critical issues for this strategy cover stormwater, transparency in decision making and making good use of existing infrastructure.

Stormwater

A diverse range of sources operating at various scales, in different places and at different times (depending on the supply-demand balance and climate variability) but all connected to a grid, is likely to become more commonplace. The only way to manage this is to legitimately recognise alternative water sources in regulatory systems alongside drinking water and wastewater services. This particularly goes for stormwater. Defining ownership, trading rights, entitlements and management responsibilities for this source is critical if it is to be a part of the urban water cycle. Also efficient decision-making is unlikely to occur with fragmented institutional responsibilities across the urban water cycle. Hence, there is a role for a steward of the urban water cycle.

Transparency in decision-making

Greater transparency in decision-making processes, legitimately accounting for the full range of costs and benefits (i.e. beyond financial) of schemes and independent oversight of planning processes undertaken within the context of broader strategies is likely to improve trust and faith in the system from all stakeholders including the community. It will be particularly important for a system that transcends the boundaries between public and private, and which operates at different scales.

Making use of the existing system

Whole of water cycle planning does need to consider the significant investment made in the existing system, and leverage off this system and prior investment to deliver the most efficient and effective outcome. This requires consideration of the potential multiple uses of an asset, the potential for technology and 'intelligent networks' to enhance the efficiencies in this system, and the possible disruption in existing areas if this entire system were to be replaced with smaller decentralised schemes.

Attached are further detailed comments from WSAA.

WSAA is happy to elaborate on any of the above.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Adam Lovell', written in a cursive style.

Adam Lovell
Executive Director

Melbourne's Water Future

OLV Outcome 3.1 A community engaged in whole of water cycle planning (WSAA Outcome 3)

Meaningful and earlier involvement of communities in land use and urban water planning leads to significantly better community outcomes. For urban water services this will greatly assist in: better defining the problem; understanding the needs and wants of a community (ie the levels of service) and more targeted investigation and assessment of a range of water servicing options.

Fundamentally, better relationships are the key to delivering whole of water cycle planning and the focus on this within the plan is consistent with relatively recent efforts by public water utilities.

OLV Outcome 3.2 Suburbs – old and new- designed with water in mind (WSAA Outcome 3)

Land use and urban water planning

Greater integration of urban water planning with land use planning is the key to achieving liveable communities. We see this as essential to deliver services that meet multiple objectives including improving liveability and urban design. A strategic approach to planning keeps open the maximum number of options for servicing a community to achieve the best scale, delivery model and development timeframes.

Whole of water cycle planning

WSAA recognises that investment in new sources; from large seawater desalination plants down to local third pipe recycling schemes have changed the urban water cycle. While it will continue to evolve, whole of water cycle planning does need to consider the significant investment in the existing system and leverage off this system and prior investment to deliver the most efficient and effective outcome. This could involve adding highly treated wastewater indirectly to the drinking water supply system as is being planned for the city of Perth.

The groundwater replenishment trial in Perth (modelled on Orange County's scheme) injects highly treated wastewater into Perth's aquifers where it mixes with groundwater before extraction through existing drinking water bores, treatment at existing water treatment plants and distributed through the existing drinking water supply system. It uses a third of the energy of seawater desalination. The success of this trial very recently led to a WA Government announcement to implement a full scale groundwater replenishment scheme beginning in 2016 and ultimately delivering around 28GL/year by 2022.

WSAA's information packs on dams and seawater desalination provide factual evidence concerning the role of these sources in the urban water cycle <https://www.wsaa.asn.au/WSAAPublications/Pages/Information-Packs.aspx>

The urban water value chain

WSAA is keen to explore with the OLV how their systems analysis approach may link to work WSAA is doing with its members on defining the urban water *value* chain and quantifying benefits and costs associated with environmental, social and cultural issues attributable to urban water services. WSAA also advises that engagement with the Departments of Health, and Sport and Recreation is important when developing the new urban water cycle planning framework.

Stormwater

The urban water sector has called for the inclusion of stormwater into the regulatory and performance arrangements of the water cycle over the last decade. This is a significant omission, that in the past could be accommodated, but as stormwater use becomes an integral part of the urban water cycle is increasingly becoming a significant barrier. While guidelines for stormwater management currently exist for local

government, WSAA's own work in stormwater may result in the further development of stormwater infrastructure design guidelines similar to those currently in place for water supply and sewerage systems.

Linking local water, energy and waste cycles

WSAA acknowledges the importance of reducing energy use in the urban water cycle and refers the OLV to the work it has done with CSIRO on this topic, 'Energy use in the provision and consumption of urban water in Australia: an update' (May 2012) <https://www.wsaa.asn.au/WSAAPublications/Pages/Occasional-Papers.aspx> This report found that for Sydney, Melbourne and Perth the amount of energy used to *treat* water and wastewater is generally higher than that used in *pumping* (Attachment 1).

There has been a lot of research attention on the interdependencies between energy, water and waste in urban areas and less so in commercial/industrial hubs. More recently, this has expanded to managing the water, energy, waste and food nexus, and is particularly relevant in regional Victoria and at the peri-urban interface.

The WSAA and CSIRO report on energy use concluded that

wastewater contains significant amounts of nitrogen and phosphorus, which is mostly contributed from human waste. Urine separation in new urban developments could not only open up possibilities for energy and nutrient recovery, but also greatly reduce the need for tertiary treatment based on nitrogen removal.

Notably, Yarra Valley Water is undertaking a trial at Kinglake to separate urine for use in growing turf.

OLV Outcome 3.3 Sensible use of water in our homes and businesses (WSAA Outcome 1)

WSAA's recently released position paper on 'Using Water Wisely' (March 2013) <https://www.wsaa.asn.au/Policy/Pages/Positions.aspx> provides a very detailed analysis of water efficiency, the key issues, success stories, savings and long term strategy including policy recommendations. In particular it advocates for:

- setting and maintaining a water efficiency benchmark or water use reduction target (whichever suits the organisation)
- states to adopt legislation to improve the water efficiency of rental properties (as is already the case in NSW and Queensland).

Hence, WSAA supports the OLV's plans to address the water efficiency of existing and rental homes as well as setting specific water use benchmarks for households and businesses. However, the latter needs to be distinguished as a long term measure and hence different from the mass marketing Target155 campaign (similar to campaigns like QUIT smoking) run during the severe drought to engage the whole community in an effort to significantly reduce water use. Analysis of Target155 found that across all media channels, the consistent use of a bold and easily identifiable logo and slogan was essential in achieving strategic positioning (Liubinas and Harrison, 2012) This positioned each message, independent of the communication channel or target segment, closely with the campaign, and increased the effectiveness of the communications (Liubinas and Harrison, 2012)¹.

WSAA currently represents its members on the National Water Efficiency Labelling and Standards Scheme Advisory Group. There is merit in proposed changes to this scheme to improve water efficiency, provided they demonstrate significant net social benefits to customers at minimum cost.

1

Audra Liubinas and Paul Harrison (2012) *Saving a Scarce Resource: A Case Study of Behavioural Change*. Deakin University.

OLV Outcome 3.4 Resilient water systems (WSAA Outcomes 3 and 4)

WSAA draws the OLV's attention to its key responses under Outcomes 3 and 4 (see brochure insert) and offers the following specific comments.

Decentralised schemes, costs and postage stamp pricing

WSAA supports establishing high level, long term pricing principles that allow for greater pricing flexibility and encourage innovation and productivity. However, in the long-term there is a need to tease out the tension between decentralised schemes and postage stamp pricing as costs can vary significantly across schemes. This is terrain which needs to be negotiated carefully. For example we note the recent media around a NSW IPART decision to impose a specific stormwater drainage charge on new customers in a particular area (known as Rouse Hill) to recover 70% of Sydney Water's capital expenditure on stormwater drainage infrastructure in the Rouse Hill area. The amounts were \$877/yr for five years. Residents have complained and MPs are now drafting legislation to reduce the charges by 70%. This outcome identifies how important extensive, as well as targeted, engagement is to ensure differential pricing is acceptable to customers.

Competition and transparency

The strategy identifies the OLV's desire to work closely with the water authorities to facilitate improved disclosure of the actual costs of water cycle services. Yet it also states that

developing expertise on water cycle planning and a greater degree of competition among water providers for the provision of water cycle projects and services in new suburbs will help to keep costs in check.

New players are emerging in a number of jurisdictions, particularly in NSW under the auspices of the water industry competition act. Greater private sector involvement can promote innovation, productivity and more service choices. However, the lesson from the UK is that a step by step approach to introducing competition — where each step is carefully designed — is necessary to ensure that consumers reap the benefits of competition.

Statewide approach to valuing non-financial benefits

WSAA's members are keen to see strong collaboration between the OLV and the ESC in the development of a statewide approach to valuing non-financial benefits. WSAA also draws the OLV's attention to the following:

- roll-out of the WA Water Corporation's Social-Environment Tool to WSAA's membership
- the imminent release by the Centre of Excellence for Water Recycling of a total economic assessment framework to assess the viability of water recycling schemes

Possible failure of decentralised systems

The possible systemic failure of decentralised systems from a water servicing (quantity and quality) perspective must be mitigated through appropriate legislation allocating clear roles and responsibilities for ongoing management. Supporting this is work WSAA has planned on identifying new business models (supported by regulators and customers), to ensure this element of the urban water cycle is managed and supported, and does not systemically fail.

For example, anecdotal evidence suggests that with the lifting of water restrictions removing the imperative to use tank water outside the home, if a tank fails or poses some other problem to the householder, the solution is to revert all outdoor watering back to the mains. Unfortunately there is little research post-drought to verify the impact of this and hence to fully understand the volume of demand fulfilled by rainwater tanks. However, the Melbourne retailers (partnering with CSIRO) through the SmartWater Fund are embarking on such a project.

OLV Outcome 3.5 Improved natural waterways (WSAA Outcomes 3 and 4)

Stormwater management

As stated earlier WSAA's Vision recognises the need to 'resolve responsibility for (as well as waterway management issues relating to) stormwater.' As stormwater becomes an integral part of the urban water cycle then measuring, monitoring and publishing the level and composition of stormwater runoff needs to be complemented by also reporting the overall performance of the stormwater system.

Recycling of treated wastewater

The urban water utilities are long time proponents of the increased use of highly treated wastewater, particularly including the productive use of water, energy, nutrients and biosolids and any efforts to promote this further are welcomed. WSAA is currently preparing an information paper on water recycling in the Australian urban water industry which reflects the current status across Australia, outlines the key issues and provides a picture of the likely future of water recycling. This will be publically available in late 2013.

OLV Outcome 3.6 - Reduced inefficiency and waste (WSAA Outcome 1)

Regulations and guidelines

WSAA also acknowledges unnecessarily burdensome regulations and scope to enhance the sharing of knowledge and innovation. We believe the regulatory system should support innovation, efficiency and greater private involvement. The Victorian economic regulatory regime is certainly one of the more advanced in Australia in embodying these characteristics and hence, any changes should be considered in this context and seek to enhance not radically change the existing arrangements.

As noted in the plan, a necessary pre-condition for effective innovation is a supportive regulatory environment that contains necessary checks and balances for long term customer and community interests without stifling innovation. WSAA continues to progress this through direct engagement with regulators across the country, such as through the National Validation Guidelines for water recycling.

The proposed changes around the bulk water arrangements have the potential to lead the nation in the more dynamic allocation of resources and optimal decision making because bulk water costs are the major component of the end customer's water bills. Therefore, WSAA supports any initiative that might lead to delay large, costly augmentations or drive efficiencies in bulk water management.

Any regulatory reform also needs to recognise that 'peak load levels' and 'peaks or surges' (as referenced in the strategy) are not a major issue in urban water servicing the same way they are in electricity servicing given that water can be stored and also that residential water use is not as 'peaky' as residential electricity use. This is particularly the case in Melbourne unlike other cities (eg Perth and Adelaide) where most water is used outdoors on gardens in summer.

Codes

WSAA has produced national guidelines for the design of infrastructure as these are critical to the effective operation of the water supply and sewerage systems. These codes provide a critical role in establishing efficiency and underpinning enhanced productivity in the design of systems. While they can be, and are, regularly reviewed, any proposed changes naturally reflect practical outcomes driven by utility experts and endorsed by all WSAA member utilities.

Transparency and 'big data'

WSAA supports greater transparency and disclosure of data and information relevant to the performance of urban water systems and draws the OLV's attention to the benchmarking programs it runs for its members (eg Aquamark - asset management) as well as the National Performance

Reporting system. The Melbourne Water Future plan represents a key opportunity for OLV to lead by example, through the complete sharing of all modelling inputs, assumptions and outputs associated with the plan.

WSAA's asset management program and Technology Approval Group² are well established mechanisms for undertaking analysis of existing infrastructure to improve efficiency. Additionally the AdaptWater tool, co funded by the Federal Government, delivers a data-rich, user-friendly software program to quantify the climate change risks to multiple assets, assess adaptation options and provide economic modelling for investment decisions.

Contestability

WSAA recognises that greater private involvement in the water industry can drive innovation and efficiency. Water utilities already outsource to the private sector 99% of capex and 50-60% of opex. This has created a lot of competition in the market and private sector growth. To ensure that competition provides ongoing benefits to customers there needs to be detailed policy development and a strong institutional framework to support new players. Two key issues that need to be addressed are: ensuring that entrants cannot cherry pick low-cost profitable areas leaving existing customers to fund high cost areas; and developing operator of last resort arrangements to protect customers if new entrants fail.

OLV Outcome 3.7 Accelerated innovation and world recognition of expertise (WSAA Outcome 1)

Research and investment

WSAA refers the OLV to its recent submission (25 June 2013) on the OLV Discussion Paper – 'Issues and Questions on Knowledge and Innovation', which demonstrates that the Australian water sector is highly collaborative. In particular, WSAA promotes innovation with the private sector through the TAG program and ensures the Australian water utility sector has access to leading edge global research through collaborative arrangements with bodies such as WERF. There is a real opportunity for Victoria to test-bed the outcomes of recent significant investments in new technologies and innovations around Australia and overseas. OLV could facilitate this through the Living Victoria Fund.

Skills and capability

The urban water sector has a strong focus on industry up-skilling and expanding capabilities to meet new outcomes and challenges, including achieving more liveable cities and communities. The key objective of WSAA's newly created People and Capability Committee (Chaired by Anne Barker, Managing Director City West Water) is to improve workforce productivity. The Committee will facilitate processes to identify and share leading practices and oversee a work program including; initiatives targeting improved workforce planning and the delivery of the federally funded 'Urban Water Industry Workforce Development Project' (which involves establishing a national water industry occupation and competency framework and expanding the NSW Trainer and Assessor Network nationally).

WSAA also notes that the current occupational data for the urban water industry captured by the ABS through the Census does not reflect the true size or importance of the water industry relative to other profiled industries. This is because of significant undercounting of employment in the water industry due to the lack of water specific occupational codes recognised by the ABS. Addressing this will promote professionalism and provide more robust outcomes for public health and the environment. Please also refer to WSAA's 'Proposal for an Australian and New Zealand Water Industry revision of the ANZSCO Codes First Edition, August 2012.'

² TAG+. This project gives Australian SMEs the opportunity to showcase their capabilities, technologies and solutions to large water utilities in order to increase Australian water firms' access to opportunities with domestic customers.