Government of **Western Australia**
Department of **Water**

Submission to issues paper on national water reform

Securing Western Australia's water future

Department of Water

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1 Benefits of water sector reform to date

The National Water Commission completed a thorough evaluation of the benefits of water sector reform in its 2014 triennial assessment of jurisdictional progress against the National Water Initiative (NWI).

The report said, *"solid progress on managing the nation's water resources during the past two decades has delivered tangible benefits to governments, communities and industries. The Millennium Drought tested the reform principles enshrined in the NWI but the principles have proven to be of enduring value, even when confounded by crisis, shorter-term priorities and declining resourcing."*

It is valuable that in its issues paper the Productivity Commission has picked up the National Water Commission's look at benefits realisation. It is helpful for governments to reflect on the economic, social and environmental gains of reform as motivation to press forward.

The water resources reform program in Western Australia has matured with the inception of the NWI. The publication in 2013 of *Securing Western Australia's water future: Position paper - reforming water resource management,* was a further significant step forward for our state, and has continued to drive our policy development in preparation for legislative reform.

Western Australia's current revision of the *Gnangara groundwater areas allocation plan 2009* is analogous to the difficult journey the Murray–Darling Basin states underwent to complete their basin plan.

Where the Murray–Darling Basin states worked for years to configure the NWI principles for practical application in a regulated surface water system (under severe stress from prolonged drought and overuse), Western Australia must now do so for a groundwater system with 2 600 licensees (under stress from a drying climate, reduced recharge and population growth).

Gnangara is by no means the only groundwater system in the country that is not yet managed under an NWI entitlement regime and our progress is potentially of national interest.

As Western Australia deep dives into resolving policy challenges relating to reducing over-allocation and over-use in Gnangara, Commonwealth support and interest could benefit our reform process.

Part of the story of protecting the future of Perth's water supply and the sustainable management of the Gnangara groundwater system is driving forward with the water resources reform process.

In addition to better management of water resources, water reform has also improved the efficiency of water services delivery. The adoption of commercial decision-making principles has strengthened the capacity of the water industry to deliver a high standard of water services at an affordable and transparent cost to customers, helped minimised the need for government subsidies of services and helped allow

infrastructure investment to proceed on a timely and efficient basis. In Western Australia, competition reforms of the 1990s also allowed private sector companies to provide water services to customers. This was further clarified by the establishment of the *Water Services Act 2012*.

Cooperative Research Centre for Water Sensitive Cities

This is also an important opportunity to highlight the work of the Cooperative Research Centre for Water Sensitive Cities (CRC) and its ongoing role in urban water services reform.

The Department of Water joined the CRC in July 2012 as an essential participant (major funding partner) due to strong alignment of the CRC research program to the delivery of the goals in the department's strategic plan.

Our work with the CRC is focussing resources on facilitating the transition to water sensitive cities and towns in Western Australia.

- The Department of Water has adopted an integrating framework Water for Living to focus the use, management and protection of water in the urban landscape. All activities that promote liveable, productive and connected communities and activities in the urban landscape are advanced under this banner.
- In 2016 the Department of Water and the Water Corporation signed a drainage partnering agreement. The agreement will improve water and drainage management in the landscape with the aim of enhancing liveability of our cities and towns.
    - Under the agreement the two agencies will work with local authorities, developers and the community to scope and deliver a series of on-ground projects that demonstrate how drainage infrastructure can contribute to the liveability of our local communities.
    - The Drainage for Liveability guidance note series is in development to guide stakeholders and aid the implementation of the Drainage for Liveability program. It is anticipated that 10 guidance notes will be published in 2017.
- Water for public open space is another important theme. To offset the effects of the drying climate and increasing demand on the traditional use of groundwater, the Department of Water is partnering with local governments, other state government agencies, developers, researchers and enthusiasts to explore contemporary water supply solutions for irrigating public open space.

These initiatives, and leadership from the Cooperative Research Centre for Water Sensitive Cities, have helped to set the direction for the future liveability of our urban areas. Other innovative solutions are emerging across the Perth metropolitan area and regional centres and examples/case studies can be provided to the enquiry.

National Water Reform Committee reform program

It is also important to acknowledge that Western Australia has benefitted from the collaboration with other jurisdictions on the National Water Reform Program.

- We have benefitted from the work to date on the development of a national aquatic ecosystems tool kit.
- Our participation on the National Groundwater Sub-Committee and the development of the *National groundwater strategic framework 2016–2026*, has been an opportunity to improve the general understanding of groundwater both in our state and in other jurisdictions. The successful implementation of the framework can enhance groundwater management in Australia for our economic, environmental and social wellbeing.
- Under the National Framework for Compliance and Enforcement Systems for Water Resource Management, the Department of Water in Western Australia has developed effective, contemporary and nationally consistent compliance and enforcement strategies, systems and processes. Collaboration on the national framework assisted in the state's completion of a new compliance and enforcement policy, consistent with the key objective of the framework. The Department of Water is implementing a compliance monitoring plan for 2016–2019, which maintains the risk-based approach to monitoring established under the National Framework.
- The NWI contains clear guidance on what a water allocation plan should contain and address. Australia has benefited from this guidance, which enabled the work on establishing the *NWI policy guidelines for water planning and management 2010* and the execution of national reviews of planning. These in turn have contributed significantly to both policy changes and Western Australia's improvements in process and practice and specifically assisted in the review of our planning processes. This means that Western Australia:
    - has implemented a water planning process that is consistent with Schedule E of the NWI as far as possible within existing legislation
    - uses a risk-based approach to develop its water allocation plans
    - generally develops allocation plans for resources where 30 per cent or more of the allocation limit is already committed. Western Australia identified 24 areas for management under water allocation plans. A number of these systems included some management units identified as over-allocated. As of March 2017, 25 allocation plans had been completed
    - undertakes annual evaluations of its allocation plans and publishes evaluation statements every three years unless there is significant change in water availability or management arrangements.

Some significant recent achievements

- Western Australian recognises that additional licensing tools are needed to effectively manage over-allocation. Metering is proposed to expand significantly throughout the state under the new *Measuring the taking of water policy (2016)*. Under the policy, all licensed water use over 10 mega litres per annum will be subject to metering or alternative measurement by 2020, except where there is minimal benefit to water resource management from doing so. The implementation of the policy will be staged over the next few years.
- The Department of Water has modelled future demands for water in urban settings out to 2050 and mapped challenges and opportunities, in the *Water for Growth: Urban report*.
- Western Australia is considering a water recycling framework to support recycling where it is an efficient and effective way to meet water demands, provide water resources or environmental benefits/other benefits.
- Significant investment of $64 million has been made since 2011/2012 to 2016 to accelerate water resource investigations throughout Western Australia and improve knowledge with an aim to increase irrigated agriculture and industry. Several thousands of kilometres of aerial electromagnetic surveys have been flown to focus further drilling investigations. Water information obtained is and will be used to update and develop water allocation plans for sustainable use.
- A comprehensive pump test of the Wallal aquifer was completed as part of a $12.5 million Pilbara groundwater investigation of the West Canning Basin, revealing that the aquifer can release large volumes of water quickly, over an extended period, for sustainable use.
- Completed the fourth year of the $7 million Perth Region Confined Aquifer Capacity project to better understand the Gnangara groundwater system under Perth and worked with the Water Corporation to advise on the locations for the most sustainable pumping across the system, as well as possible areas for groundwater recharge.

2 The Commission's approach

2.1 Areas where NWI reforms are stalled or delayed and subsequent consequences

As stated in the Chapter on Western Australian in the 2014 triennial assessment (see Appendix 1), the department published in 2013 *Securing Western Australia's water future – Position paper - reforming water resource management,* which provided the policy intent for water reform.

The government subsequently progressed the drafting of a Water Resources Management Bill.

The intent of the Bill is to modernise legislation, reduce red tape, eliminate duplication and inconsistency by incorporating six Acts into one. The new legislation will help maximise the benefit gained from water resources, including by service providers and their customers and through alternative water use approaches such as non-potable use. It will also create the powers recommended under the National Water Initiative.

The Department of Water has worked with the Water Resources Reform Reference Group – an external stakeholders' working group established by the then Minister for Water – on all aspects of the proposed Bill and the future policy framework.

In March 2017 Western Australia saw a new government elected, which will need to consider the drafting of a Bill for consideration by Parliament.

2.2 Feedback on key contemporary and future drivers of water reform

In September 2016 and April 2017 the Western Australian Water Resources Reform Reference Group identified and refined a list of key water reform issues for the state. Further scoping of the agreed ideas is now underway.

Captured here is a summation of some of those issues raised, combined with additional ideas from the Department of Water and other agencies. Western Australia may progress some of these ideas in more detail through the National Water Reform Committee.

- Provide improved governance and legislative arrangements for the management and use of alternative water sources such as drainage, wastewater and storm water, including the reduction of red tape and use of incentives.
- Provide a clear government position, and better governance and management arrangements for waterways and foreshores to inform and guide potential land development investments.

- Provide better coordination amongst government agencies on environmental policies and requirements, reducing any inconsistencies between existing regulatory or administrative requirements.
- Provide increased management to address the cumulative impacts of industry on water resources including creating rules for managing the impacts on water.
- Manage the demand for water for public open space to meet the liveability expectations of communities through:
    - increasing collaboration between government and industry
    - reducing inconsistencies in government requirements from developers and local authorities
    - improving collaboration between land developers and local authorities
    - reviewing regulatory and government requirements for public open space.
- Government to work with industry on water efficiency and innovation including developing guidelines for water efficiency.
- Develop policy and guidelines to help encourage managed aquifer recharge and encourage and use education to overcome resistance to the development of new water sources such as desalination and managed aquifer recharge.
- The Australian Government's response to the Harper Competition Review highlighted a lack of progress in water industry reform across Australia. Reform should ensure and show that the regulatory framework has removed any incentives to make decisions at the expense of other people and companies or the broader community and to provide a clear story of how it provides value to the public.
- Future reform trends may benefit from customer-driven regulatory approaches that are currently emerging, to ensure the industry explicitly identifies and adapts to the needs of customers.
- The Department of Water has made significant in-roads into data sharing and digital business through the development of Water Online. There are opportunities for further enhancements of the agency's program. There is also a broader reform opportunity of alignment with the state government's open data policy, and national and international digital information collection and access.

3 Water resource management

The Government of Western Australia provides in-principle support for the water resource management matters listed in the national water reform issues paper. We consider the following to be important in future planning and management of water resources:

- flexibility in entitlement arrangements (where they apply)
- defining the consumptive pool (where this can apply)
- management of dewater.

These should be pursued without the roll-back of the NWI, and through a set of nationally consistent guidelines that are developed across jurisdictions.

We provide in-principle support for water laws and regulatory processes that provide certainty and clarity in decision-making and also provides for the development of reliable water plans and secure water access entitlements (where they can apply), and reform to address risk management, protection of water quality and improvements in water trading and charges. The Government of Western Australian strongly supports measures that provide investor confidence and secure water access to reliable sources.

These matters remain unresolved and the Government of Western Australian wishes to be engaged in the process of defining nationally consistent guidelines.

3.1 What further steps are required to achieve property rights

The intent under legislative reform is described in *Securing Western Australia's water future: Position paper - reforming water resource management.*

Western Australia is focussing on better security for entitlements under a licensing regime because there will be many circumstances where it may be inefficient or impractical to create NWI property rights. Providing this improved security is a policy challenge we continue to work through with our stakeholders.

3.2 What steps have been taken, or should be taken to:

Unbundle entitlements in unregulated surface water and groundwater systems

Current practice is described in Appendix 1 and the intent under legislative reform is described in *Securing Western Australia's water future: Position paper - reforming water resource management.*

There remains a question nationally of the best way to deliver more secure entitlements where consumptive pools cannot be created, e.g. certain groundwater

systems. Western Australia is making every effort through its legislative reform process to scope a simplified licensing system that extends the period of licences, makes the associated licensed entitlement easier to trade, and provides in high risk areas a greater security of entitlement by introducing statutory allocation planning that will require more defensible allocation limits.

3.3 What new water resources should be brought into the entitlement process and why?

The Department of Water is currently considering the entitlements regime that will be required for managed aquifer recharge (MAR) operations because infiltration or injection water is not considered to be part of the allocation limit. An associated entitlement for recovery of water would also need to be created outside of the allocation limit. Where recharge and recovery in MAR operations are not undertaken in the same groundwater system, consideration of the impacts to the entitlements required will be needed.

Entitlements for MAR must be created for use in either an NWI-type entitlements, or licensing regime. Both regimes are supported in the *Securing Western Australia's water future: Position paper - reforming water resource management.*

3.4 Water planning

Resourcing all areas of water management is an ongoing challenge for all jurisdictions, as is developing and maintaining the necessary policy and science skills that we can draw on. A public sector that is more agile and can more readily respond to machinery of government and political changes, will also serve us well. These are not new challenges.

The development of robust systems and processes are key to resilience when we are faced with drivers for change.

So we see the recent development of the new module on climate change and extreme weather events of the *NWI policy guidelines for water planning and management 2010* as being of benefit to Western Australian planning. Continued national cooperation through the National Water Reform Committee and other collaborative initiatives should be supported where it is sensible to do so.

Sharing of our science and progress is also important. In 2015, the Department of Water published *Selection of future climate projections for Western Australia* (available on the Department of Water's website). It outlines how our water science specialists used the most up- to-date global climate information to select rainfall scenarios for use in our work. It has particular application to water allocation planning as it allows us to look at future rainfall and therefore water availability over different timeframes. Through our planning, we are then able to work with stakeholders to put in place management frameworks that provide certainty and transparency for water users and the environment.

Water quality

There is a positive program of work in water quality policy under the National Water Reform Committee's national water reform program. Support for this program and the generation of future work in this area will assist with the challenges that water quality issues pose to water resources.

For example, in this state, water quality has always been considered as part of the water allocation planning process. Issues such as salt water intrusion and the generation of acidic runoff from exposed sulphide sediments are both strongly influenced by the take of water in a particular area and have affected the setting of allocation limits at a regional scale and local licensing rules. However, water quality issues stemming from point source and diffuse pollution are dealt with through other regulatory, and in some cases non-regulatory, processes.

There is a need for better processes to ensure the water quality outcomes necessary for the sustainability of the resource.

3.5 Water trading

The NWI goal of open water trading markets

Water trading in Western Australia has come from a low base, but there has been a surge in interest with many water management areas reaching full allocation in recent years. There has been a particular increase in the registration of agreements which result in the temporary trading of water rights.

The Department of Water has actively supported local Perth company NGIS in obtaining a grant from the Australian Government's Business Research and Innovation Initiative (BRII) grants scheme to "improve the transparency and reliability of water market information".

We will continue to assist NGIS by providing water markets expertise and water and spatial information in order to conduct a feasibility study, and for the proof-of-concept, if NGIS is selected to prove its solution – into improving water market information in Western Australia.

Potential beneficiaries of the NGIS project include the Department of Water, water utilities, irrigators and cooperatives, water licensees, water users, community groups the banking and finance sector, universities and research organisations and many other stakeholders.

NGIS and the department successfully partnered in the past to create the Department's water information reporting portal which has reduced waiting times for water information from a minimum of 10 business days to the current turnaround time of around a minute.

The portal won an Australian Business Award for Innovation, a Spatial Excellence Award for Innovation and Commercialisation and an Australian Water Award. The portal can be found at http://wir.water.wa.gov.au/ .

With climate change, population and economic growth pressures, water trading is on the increase and has the potential to add tens of millions of dollars to the Western Australian economy every year.

The state's metering/measurement policy being phased in between 2016 and 2020 will also provide the right environment for even further water trading to occur, particularly in the south west of the state.

3.6 Environmental water

What are the guiding principles for best-practice management of environmental water? Are the institutional and governance arrangements for held environmental water working well?

The language of 'held environmental water' above makes it difficult for a response that is relevant to Western Australia and does not assist the debate around environmental water management in groundwater systems anywhere in Australia. In many groundwater systems it will not be feasible to include environmental water as an entitlement within the allocation limit.

The retention of water *in situ* to protect the productive base of the resource and environmental, social and cultural water-dependent values is the main way we meet environmental and other public benefit outcomes. We retain water *in situ* through limits on abstraction set with reference to maintenance of surface or groundwater levels.

It is often the case, and particularly so for groundwater and non-regulated surface water systems, that specific volumes of water for the environment are not able to be identified.

Western Australia will therefore continue to define environmental water as *in situ* water left in the system predominantly, or water that is put back in the system through dam releases or pumping.

This approach is worth analysis for its potential benefits to other jurisdictions.

Principles for best practice management of environmental water

Given the challenges facing the management of water resources due to the changing climate we are currently reviewing our environmental principles to ensure that we continue to provide secure water for use while protecting the environment. Some key principles that are important for environments impacted by the drying climate are:

- assisting water dependent ecosystems to build resilience and adapt to climate change
- identify and protect water dependent ecosystems that provide refuge for species during dry periods and extreme climate events
- protect and maintain ecological connectivity between water dependent environments.

4 Achieving reform

4.1 Should further water reform be pursued through an improved NWI?

Western Australia has stated before that the NWI is enduring and successive governments in Western Australia have committed to delivering on the agreement. The types of issues that are on the horizon for Western Australia over the next few decades do not differ significantly from those that we faced a decade ago, though risks may have escalated since 2004.

Our challenges remain climate change, sustainable growth, supply planning, urban water management, water quality, none of which necessarily require changes to be made to the NWI.

Reform is helped along when all jurisdictions face a common challenge and agree a common solution. The NWI did not fully achieve national progress at a uniform pace. To some degree, this has resulted in Western Australia developing its own solutions at a different speed with less support from national funding pools – the impetus the NWI had for the Murray–Darling Basin did not manifest here.

That said, achieving reform over the next decade is just as much about the 'how'.

Collaboration models of governance to deliver on reform could benefit from discussion. What role does the National Water Reform Committee have? Is the cooperative research centres governance model a better model for delivering reform?

Attracting the appropriate amount of resourcing, funding and skills for national and state programs where water reform is competing against many priority sectors for funding is a further barrier to reform.

It would be helpful to gain an understanding of the constraints that government agencies are working under to deliver on water reforms and the impact of those constraints, not to demonstrate that we should wish them away, but to devise a way forward within those constraints.