

NSW Government Response to the inquiry into the augmentation of water supply for rural and regional New South Wales

Foreword

Water is one of our most valuable natural assets. The NSW Government is responsible to the people of NSW for ensuring water is managed effectively now and for future generations.

Current NSW Government reforms that are relevant to this inquiry

The NSW Government is implementing a wide range of reforms to improve the management of water in NSW as well as to ensure water security and quality.

Regional Water Strategies and infrastructure options studies are identifying opportunities for longterm regional water security

The NSW Government is developing regional water strategies to identify opportunities to improve medium and long term regional water security in the context of the future challenges of climate variability and population change. WaterNSW has also recently developed a 20-year infrastructure options study for the state's major rural river valleys to address future challenges in operating regulated river systems, with potential to enhance service levels and guide future investment.

The NSW Government is committed to exploring long-term water security solutions for communities, irrigators, farmers and the environment.

The \$4.2 billion Snowy Hydro legacy fund is powering regional NSW

The NSW Government has also committed the entire \$4.2 billion of the proceeds under the Snowy Hydro Legacy Fund to be spent in regional NSW, backing transformational projects to build on the rapid growth and opportunities in the regions. The Legacy Fund will include a funding stream dedicated to the *Water Security in priority catchments*. This will provide funding for water infrastructure at the regional and catchment level to increase community and industry resilience to drought.

On 8 October 2018, the NSW Government announced \$1.2 million of funding for a business case for a new regulator to allow better management of water on the Macquarie River and help secure the water supply for the residents and businesses that depend on it.



On 23 October 2018, the NSW Government committed \$850,000 to exploring infrastructure options for a pipeline between Carcoar Dam and Lake Rowlands. This pipeline will achieve an improvement in water security for industry in the Central West and Belubula Regulated River Valley, while also delivering benefits in urban water security.

The Safe and Secure Water Program is funding water projects that deliver social and economic benefits to NSW

On 15 June 2017, the NSW Government announced \$1 billion to fund water infrastructure through the Safe and Secure Water Program. The Safe and Secure Water Program was established to fund eligible water and sewerage projects that will deliver public health, environmental and/or social benefits to regional communities which in turn support economic growth and productivity in the State. This program includes the existing NSW commitment for the Broken Hill Water Supply project which will provide long-term water security for the Broken Hill community. The remaining funding is available for water and wastewater projects in regional NSW.

The Government has recently announced that the program criteria have been reconfigured to fast track funding for critical water infrastructure projects. The revised program will target the highest priority issues, regardless of the size of the community that's impacted.

The NSW Government is delivering water management reforms under its commitment to the Water Reform Action Plan to ensure best practice water management in NSW

A number of investigations in late 2017 found that water compliance and enforcement in NSW needed significant improvement. The NSW Government acted quickly to make significant changes to water management following the Matthews Review and the Murray-Darling Basin Water Compliance Review.

The NSW Government has committed to addressing the recommendations of the Matthews report into water management and compliance through the Water Reform Action Plan, and the agreed actions in the Murray-Darling Basin Compliance Compact. The Government has committed funding over two years to deliver comprehensive water management reforms and ensure best practice water management in NSW and the NSW Government has been delivering on its commitments.

The Government has also announced a new draft metering policy, acting on the recommendations of Ken Matthews for a robust metering framework with "no meter, no pump" objectives, while managing impacts on smaller, low-risk users.

An inter-agency working group was established in February 2018 to identify interim and enduring solutions to better manage environmental water. The working group's interim solutions package was published in June 2018. New legislation was also passed in June this year which sets us up for a stronger, clearer and more effective water management and compliance regime.



The Natural Resources Access Regulator is getting on with the job as the new independent water compliance and enforcement body in NSW

In November 2017, legislation was passed by Parliament to establish the independent Natural Resources Access Regulator (NRAR) to oversee water compliance and enforcement across NSW. NRAR commenced operations on 30 April 2018. In its first 100 days of operation, it has taken over 100 actions against land owners. Of these actions, four have progressed to prosecution under the *Water Management Act 2000*.

Technology Programs are allowing NSW Government to leverage innovative technologies to improve water management and compliance

The NSW Government is investing in technologies to improve water management and water compliance efforts. The NSW Government will invest \$4.5 million over the next three years on procuring, developing and implementing remote sensing technologies. Access to the information provided by these technologies will enable NSW Government, including the Natural Resources Access Regulator, to deliver a robust, proactive and evidence-based water regulation, compliance and enforcement framework. This is in addition to the Water Technology Pilot Program, announced in March 2018 as part of delivering the Water Reform Action Plan, which is funding four pilot projects to develop innovative technologies for water compliance and monitoring.

The NSW Government has also been involved with the development of a range of demand-side projects. This includes the Sustaining the Basin Irrigated Farm Modernisation program, which has invested around \$79 million in Commonwealth funding to deliver 112 infrastructure modernisation projects (with 89 complete) which have realised 34.2GL of water savings by targeting inefficiencies within on-farm irrigation systems.

The NSW Modelling and Monitoring hub (<u>www.mamh.nsw.gov.au</u>) opened in September 2018. The knowledge hub operates with agreed processes established to coordinate and aid information sharing across government agencies and state-owned corporations in relation to water modelling and monitoring. It offers strong and cost-effective data to inform policy, planning and decision frameworks.

NSW Drought and Emergency Drought Relief Packages are supporting NSW communities affected by the drought

Drought is an inevitable feature of the NSW landscape. However, the NSW Government is concerned about the impact that drought is having on regional communities and economies. Most of NSW is now suffering from an extended dry period, and it is unlikely that conditions will improve in the short term.

Some of the worst hit areas are the Hunter, Central Tablelands, Central West, North West Northern Tablelands and in the Western Local Land Service regions of the state.

In June 2018 the NSW Government announced a new NSW Drought Package to continue to support NSW farming families and their communities. Key components of the new package include:

another \$250 million for the Farm Innovation Fund for the next 4 years



- new immediate assistance measures by way of new \$50,000 zero interest rate 7 year loans
- \$4 million for mental health support services and
- a streamlined approach to managing kangaroos.

The package also looks to important long term investments in the building of three Doppler radars for western NSW to improve weather forecasting capability. This was followed by a subsequent announcement in July 2018 of a \$500 million Emergency Drought Relief Package as conditions continued to deteriorate, which brought the NSW Government's drought support to over \$1 billion. This package included:

- \$190 million for the introduction of Drought Transportation Subsidies
- \$100 million in cutting farming fees and charges including waiving of Local Land Services rates, waiving fixed water charges, and waiving class one agricultural vehicle registration costs, and
- \$150 million to further bolster the Farm Innovation Fund.

The package also includes funding for:

- counselling and mental health
- critical services in regional communities including transporting water and drought related road upgrades and repairs, and
- animal welfare and stock disposal.

15,000 megalitres of NSW environmental water has also been sold to farmers to assist them during the drought, with all proceeds to be used for drought related projects. An additional 450 megalitres of groundwater was also made available in the Riverina area.

Government agencies responsible for water management in NSW

In NSW, there are several government agencies responsible for the management of water:

NSW Department of Industry - Lands and Water Division

- Responsible for surface and groundwater management including ensuring water security for NSW
- Ensures equitable sharing of surface and groundwater resources and that water entitlements and allocations are secure and tradeable
- Manages NSW's water resources through planning, policy and regulation
- Leads negotiations with the Commonwealth, including the Murray-Darling Basin Authority (MDBA) and other jurisdictions

Natural Resources Access Regulator

 Responsible for compliance and enforcement of NSW water law with powers for investigations and other strategies as part of providing quality regulation



- Determines when to commence prosecutions or uses other enforcement tools in the event of non compliance
- Other functions include:
 - o preparing policies and procedures relating to the enforcement powers under natural resources management legislation
 - o advising and reporting to the Minister on matters relating to administration of natural resources management legislation
 - o publishing details of convictions in prosecutions

Office of Environment and Heritage

- Manages the state's environmental water holdings
- Develops long term environmental watering plans as required under the Murray- Darling Basin Plan

WaterNSW

- The state's bulk water supplier and operational manager of surface water and groundwater resources
- Develops and operates infrastructure solutions for water supply security and reliability
- Conducts customer facing functions such as the delivery of water and billing

Commonwealth agencies

 NSW agencies work with Commonwealth agencies, including the Murray Darling Basin Authority, the Commonwealth Environmental Water Holder and the Department of Agriculture and Water Resources.



NSW Government response to recommendations

Rec #	Recommendation	Government Response	
1	That the NSW Government immediately makes a commitment to not increase the water bills for residents of the Broken Hill area to pay for the construction and ongoing maintenance of the Broken Hill pipeline.	Supported in principle The Wentworth to Broken Hill Pipeline, due to be completed and ready for water by December 2018, will provide long-term water security for the Broken Hill community. The pipeline will supply up to 37.4 megalitres of a peak daily demand of raw water to Essential Water, the local water provider in Broken Hill. The Government has announced that it will provide a subsidy to customers for the next four financial years from 2019-20, meaning that any price increases as a result of the construction, maintenance and operation of the pipeline will not be passed on to customers.	
2	That the Independent Pricing and Regulatory Tribunal take into account its 2017 pricing determination for Peel Valley water users when determining water pricing for residents of the Broken Hill area following the construction of the Broken Hill pipeline.	IPART has commenced reviews of WaterNSW's prices for the Wentworth to Broken Hill pipeline and Essential Energy's prices for its water and sewerage services provided to customers in Broken Hill, for new prices to apply from 1 July 2019. To the extent that IPART's 2017 decision on prices in the Peel valley is relevant to these reviews, IPART would take this into account. When setting prices for Broken Hill, it will apply the same broad framework used for the 2017 Determination of prices for the Peel valley. Information on IPART's review of prices for WaterNSW's Wentworth to Broken Hill Pipeline services from 1 July 2019 is available here . Information on IPART's review of prices for Essential Energy's water and sewerage services in Broken Hill from 1 July 2019 is available here .	



That the NSW Government make a commitment to maintaining and improving the operation of the Menindee Lakes following the construction of the Broken Hill pipeline.

Supported

The NSW Government has been working over a number of years to identify appropriate solutions for Menindee Lakes that balances local needs while improving the water efficiency and management of the Lakes.

Completion of the Wentworth to Broken Hill Pipeline will deliver a benefit to the operation of the Menindee Lakes in that the Lakes will no longer have to provide water to Broken Hill. This change will enable the NSW Government to consider improved operations of the Lakes with community consultation.

The Menindee Lakes Water Savings project is one of 36 Sustainable Diversion Limit (SDL) adjustment projects which underpin the 605GL reduction in water required to meet Basin Plan extraction limits.

Initial meetings about the project were held with members of the Menindee and Pooncarie communities in mid-September 2017, with staff from both the MDBA and Department of Industry present.

The NSW Government has commenced consulting with landholders, community members, and local councils about the next stages of the project which will involve the development of a detailed business case, environmental impact assessment and engagement with the native title holders for the area.

Stakeholder engagement will continue throughout the design and implementation of the project. We recognise the unique cultural position of the Menindee Lakes to those communities surrounding the lakes and we are committed to their ongoing place in the Darling River system.

The preliminary business case, or concept design, for this project was published on the Department of Industry's website in late June.

This proposal maintains Menindee Lakes as an important part of the water supply system for the Murray River.

That the NSW Government work with regional communities and the federal government to unlock the full agricultural

Supported

The NSW Department of Primary Industries - Agriculture (DPI Ag) leads the NSW Government's work with both the Federal Government and regional communities to unlock full agricultural production



production potential of regional New South Wales.

potential through the delivery of agricultural research and development that

- promotes innovation in primary industries to improve resilience and boost productivity, and
- manages risks for natural resources, farming and food.

DPI Ag is ranked in the top one percent of research organisations in agriculture, plant and animal sciences world-wide.

The NSW Government supports DPI Ag by providing 25 scientific facilities that enable R&D. An additional \$50 million was committed in the 2018/19 budget to boost agricultural productivity and support world class food and fibre production through upgrading the capabilities of DPI Ag research stations across rural and regional NSW.

The DPI Ag R&D program is supported by external funding provided, in the majority, by partnership with the national agricultural Research and Development Corporations (RDCs).

That the NSW Government, as a matter of urgency and in consultation with regional communities, develop a comprehensive water equation for supply and demand in New South Wales by March 2020, for the next 50 years.

Supported in principle

The NSW Government is developing regional water strategies to identify opportunities to improve medium and long-term regional water security.

Strategy development builds on the best available data, including long-term climate information and regional NSW population forecasts.

The NSW Government is focusing on two coastal priority regions including the Far North Coast and South Coast (with the Hunter Strategy having been finalised), and three inland priority regions, the Gwydir, Macquarie and Lachlan. Work on the remaining regions will follow.

WaterNSW also currently models supply and demand to meet long-term sustainable yield and short-term drought reliability and system operation obligations.

WaterNSW recently published a 20-year infrastructure options study (available here) for the state's major rural river valleys to address future challenges in operating regulated river systems, with potential to enhance service levels and guide future investment.



That the NSW Government work with regional communities to fund and conduct long-term strategic planning for the security of water in rural and regional areas.

Supported

The NSW Government is developing regional water strategies to identify opportunities to improve medium and long-term regional water security and is working with local water utilities. The Safe and Secure Water Program opened in August 2017 which is a \$1 billion regional infrastructure co-funding program for eligible water and sewerage projects.

The NSW Government has recently announced that the program criteria for the program have been reconfigured to ensure the highest priority issues are funded and that all communities have equitable opportunity for funding. The Government will work on end-to-end projects with local councils and communities to solve critical water safety and security issues.

The NSW Government has also implemented a regulatory framework to ensure that the water and wastewater services provided by regional NSW's local water utilities are safe, secure and sustainable.

The 30 year Integrated Water Cycle Management (IWCM) Strategy is a key part of the regulatory framework and addresses the complex linkages between elements of the urban water cycle and community expectations.

The NSW Government is committed to exploring long-term water security solutions for communities, irrigators, farmers and the environment. On 8 October 2018, the NSW Government announced \$1.2 million funding for a business case on a regulating structure to better manage water on the Macquarie River to help secure the water supply for the residents and businesses that depend on it.

On 23 October 2018, the NSW Government committed \$850,000 to exploring infrastructure options for a pipeline between Carcoar Dam and Lake Rowlands. This pipeline could achieve an improvement in water security for agriculture/industry in the Central West and Belubula Regulated River Valley, whilst also obtaining benefits in urban water security.

The NSW Government has announced that water security in priority catchments is one of the five priorities NSW Government will fund out of the \$4.2 billion of the proceeds under the Snowy Hydro Legacy Fund to be spent in regional NSW. Drought conditions across NSW highlight the importance of



investing in water infrastructure at a regional and catchment level to increase community and industry resilience. The Snowy Hydro Legacy Fund will back transformational projects to build on the rapid growth and opportunities in the regions.

15,000 megalitres of NSW environmental water has also been sold to farmers to assist them during the drought, with all proceeds to be used for drought related projects. An additional 450 megalitres of groundwater was also made available in the Riverina area.

The NSW Government has also recently established a network of 13 Joint Organisations of councils, which will play a significant role in regional strategic planning, inter-government collaboration and advocacy.

7 That, if New South Wales does not withdraw from the Murray-Darling Basin Plan, the NSW Government renegotiate the basin plan with the federal government and other basin state governments to develop a more equitable agreement for New South Wales that better balances economic, social and environmental outcomes.

Noted

Following the passage of the SDL amendment to the Basin Plan and passage of legislation by the Commonwealth Parliament to reinstate the previously agreed northern basin amendments, NSW is committed to implementation of the Basin Plan outcomes in a way that balances social, economic, cultural and environmental outcomes.

On 19 December 2017, the Basin Plan Amendment (SDL Adjustments) Instrument 2017 (SDL adjustment amendment) was adopted by the Commonwealth Minister for Agriculture and Water Resources. In adjusting the Basin-wide SDL, the amendment reduces the water recovery target by up to 605 GL. This was achieved through an agreed package of supply measures, which ensure environmental outcomes, equivalent to those envisaged in the Basin Plan, will be achieved.

In June 2018, the Murray-Darling Basin Ministerial Council committed to developing and implementing an approach to achieve efficiency measures with neutral or improved socio-economic outcomes, informed by the results of the independent expert analysis.

Basin Ministers requested officials develop an efficiency measures work plan through to 2024 to deliver a pathway to achieving the remaining water recovery of 450 GL through efficiency measures with neutral or beneficial socio-economic outcomes. 62 GL of these efficiency measures must be delivered by June 2019 for the full 605 GL of the supply adjustment to come into effect. The pathway will be



considered by Basin Ministers in December 2018.

The Productivity Commission is undertaking a 5 year assessment of the effectiveness of the Basin Plan, and released a draft report on 30 August. One of the recommendations of the report is for the MDBA to release modelling demonstrating the benefits of recovering additional environmental water. The NSW Government welcomes the recommendation and suggests that this work could complement the work committed to at Minco to enhance the socio-economic outcomes of efficiency projects.

NSW will continue to seek the best possible outcomes for our communities in all aspects of Basin Plan implementation.

8 That the NSW Government support a federal Royal Commission into the administration of the Murray-Darling Basin.

Noted

There have been a number of compliance reviews over the last 12 months into water management including:

- Matthews Report (available <u>here</u>)
- Murray Darling Basin water compliance review (available <u>here</u>)
- Investigation into water compliance and enforcement 2007-17 (available here)

The NSW Government has responded fully to these reviews.

There has been a significant amount of work done in the last 12 months to improve the administration and management of water in NSW. This includes:

- the Water Reform Action Plan in December 2017 which detailed the government's response to improving management of water.
- creation of the Natural Resources Access Regulator in April 2018
- legislation to put in place a policy objective of "no meter no pump" in NSW
- commitment to 20 water resource plans by mid-2019
- commitment to further improving management of environmental flows.



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		The NSW Government is committed to seeing these reforms through and will publish regular progress reports against these reforms.
		In addition, the NSW Government is committed to the Basin Plan and is working closely with Murray- Darling Basin Authority and other states to progress and implement our obligations under the Basin Plan.
		There are already a number of governance processes in place to monitor progress and oversee the Basin Plan. This includes the Murray-Darling Basin Ministerial Council which considers major policy issues of common interest on the management of water and other natural resources of the Murray-Darling Basin as well as the Basin Officials Committee.
		A federal Royal Commission is not necessary. NSW is getting on with the job and it is important to focus efforts and resources on making sure these reforms are implemented quickly, effectively and transparently rather than conducting another review.
9	That, as a matter of urgency and irrespective of whether New South Wales withdraws from the Murray-Darling Basin Plan, the NSW Government call on the Murray-Darling Basin Authority to conduct a socio-economic review of the southern basin and publicly release its findings.	Supported – already in place The MDBA has conducted an extensive community scale socio economic review in the southern basin and has released the findings on its website (available here).
10	That the NSW Government invest in aquifer mapping	Supported – already in place All NSW groundwater resources have been mapped and categorised based on aquifer yield and water



across the state to locate potential new water storages.

quality.

Groundwater availability and groundwater vulnerability maps have also been produced. The vulnerability maps are available online here.

Under the Water Monitoring Framework, the Department of Industry (DoI) is currently expanding the bore monitoring network within several porous rock sedimentary basins. In the 2018/2019 fiscal year this will involve the construction of approximately 77 bores to define, evaluate and monitor potential water impacts on deeper aquifer systems.

11 That the NSW Government invest in pilot programs to demonstrate the upscale capabilities of projects and new technology such as managed aquifer recharge schemes.

Supported - already in place

The NSW Government is investing in technologies to improve water management and water compliance efforts.

In March 2018 Dol invited proposals to pilot the use of technology for water monitoring and compliance activities. More than 50 applications were received from universities, other research organisations and the private sector. Successful applicants will receive a share of \$500,000 in grant funding to deliver a pilot or prototype of the technology by end June 2019.

Successful projects have been announced and include:

- University of Sydney has been awarded \$150,000 to the to test the feasibility of identifying crop types at a paddock scale from satellite data, helping to improve estimates of water use on farms.
- Australian National University has been awarded \$150,000 to develop a web-based application to view and interpret water harvesting and usage information and anomalies in water take information
- HydroSpatial Pty Ltd was awarded \$50,000 to develop a method to remotely audit water take by irrigated farms and monitor on-farm storage levels. This aims to provide a simple tool to identify potential anomalies in water take information for further investigation.



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	 University of NSW was awarded \$149,652 to develop an automated machine learning algorithm and map interface using remote sensing information to detect the presence, function and size of floodplain structures to complement techniques already used to identify floodplain structures.
	DPI Ag and the Cotton Research and Development Corporation have invested \$117,000 in the Innovative Solutions to Water Security study which will create a framework for the assessment of blue sky technology, storage and delivery solutions, and policy impacts/changes that would increase water security for agricultural water users.
	The Global Ag-Tech Ecosystem (GATE) was opened in March 2018 and provides a unique opportunity for agricultural technology developers to access DPI R&D expertise and to collaborate with technology providers, business services and investors to create commercialised products for the NSW agricultural

12 That the NSW Government urgently implement the full Water Management Compliance Improvement Package outlined in Mr Ken Matthews' interim report entitled Independent investigation into NSW water management and compliance, dated 8 September 2017.

Supported in principle

The NSW Government has committed to addressing the recommendations of the Matthews report through the Water Reform Action Plan (available here), and the agreed actions in the Murray Darling Basin Compact (available here).

Notwithstanding the above recommendation, that the NSW Government urgently prioritise the introduction of universal monitoring and metering

Supported

sector.

In June 2018, the NSW Government announced the draft NSW metering framework to implement the "no meter, no pump" objective.

Under this framework, the NSW Government is proposing to meter around 95% of existing licensed



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	arrangements for water extractions in the Northern Basin.	water take capacity. This meets the intent of both the Matthews and the Murray Darling Basin Review recommendations.
14	That the NSW Government conduct Indigenous consultation as an integral part of all strategic planning for the management of water in rural and regional New South Wales, including the examination of cultural flows.	Supported The NSW Government is consulting with First Nations people as part of the development of Water Resource Plans in partnership with Northern Basin Aboriginal Nations (NBAN) and Murray Lower Darling Rivers Indigenous Nations (MLDRIN). We have also consulted with the NSW Aboriginal Land Council and will endeavour to consult with native title organisations as well. The NSW Government recognises the importance of cultural practices in connection to rivers to support the overall health of Aboriginal communities.
15	That, if New South Wales does not withdraw from the Murray-Darling Basin Plan, the NSW Government continue to make representations to the federal and South Australian governments to initiate a comprehensive review of the current management of the lower lakes of the Murray-Darling basin in South Australia.	Supported Where such a review could benefit the communities of NSW, the NSW Government will consider representations to the Commonwealth and South Australian Governments.
16	That, if New South Wales does not withdraw from the Murray- Darling Basin Plan, the NSW	Noted The current trigger point for changing control of the Menindee Lakes between the NSW Government



Government renegotiate the management of water in the Menindee Lakes with the federal government so that the trigger point for the Murray-Darling Basin Authority to control water is increased from 640 GL to 800 GL.

and MDBA reflects the water requirements for NSW, which are met from the Lakes. The lakes currently transfer to NSW control at 480 GL, and then transfer back to MDBA control at 640 GL.

Both NSW and the Commonwealth Governments have made substantial investments in reducing the critical reliance on a drought reserve in the Menindee Lakes, while enabling significantly improved water security for Broken Hill.

The NSW Government has put forward a concept proposal to modernise and improve the management of water in the Menindee Lakes, and will engage with the community and other basin states on the design and final form of this project.

The Menindee Lakes are operated by WaterNSW, however their operation is also subject to Murray-Darling Basin Agreement. Under the agreement, the Murray Darling Basin Authority can call on water from the lakes to meet demand downstream when the lakes' volume rises above 640 GL and until it drops below 480 GL. Over the past four and a half years, there has only been one major inflow event in the northern systems of the Basin. This occurred in the second half of 2016, when the Menindee Lakes peaked at 92%.

Changing the trigger levels as proposed requires the agreement of basin states to amend the Murray-Darling Basin Agreement, and could have significant implications for the rest of the Basin, including leading to a requirement for greater water recovery elsewhere, and jeopardising the delivery of the Basin Plan.

That, if New South Wales does not withdraw from the Murray-Darling Basin Plan, the NSW Government liaise with the Commonwealth Environmental Water Holder and the Murray-Darling Basin Authority to consider developing a formal

Supported

Legislative mechanisms are currently in place and can be used to protect environmental water. Temporary water restrictions using a section 324 order under the *Water Management Act 2000* were in place from 29 April 2018-22 June 2018 and were used to protect up to 31 GL of environmental water delivered for the Northern Connectivity Event.

The NSW Government recently introduced amendments to section 324 of the *Water Management Amendment Act 2018* which clarified that managing water for environmental purposes is a

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circumstance that can be considered to meet the public interest for the purposes of this section of the Act.

In regulated systems, planned environmental water events using held environmental water entitlements are already protected. The NSW Government is also considering active management in specific unregulated Water Sharing Plan (WSP) areas, which would enable held environmental water to be protected from extraction without the need for imposing temporary water restrictions.

In June 2018 the Government released the Better management of environmental water: Interim solutions package (available here). This sets out a package of interim solutions to be implemented for better managing environmental water and a roadmap for developing and implementing enduring solutions. Interim solutions could be implemented until revised water-sharing plans (WSPs) come into effect as part of the rollout of water resource plans (WRPs) required under the Basin Plan. Learnings from these interim solutions will inform enduring solutions to better manage environmental water.

This work includes consultation with communities to better understand potential benefits and impacts of options being considered and will identify possible mitigation measures. Where solutions involve changes to water sharing plans, consultation will align with existing processes.

That the NSW Government urgently undertake a review of all water sharing plans in New South Wales, that are yet to be reviewed, before their provisions are incorporated into water resource plans; and that these reviews include thorough public consultation.

Supported

As part of the preparation of the Basin Plan Water Resource Plans, the DoI has reviewed all regulated WSPs (Murray, Murrumbidgee, Lachlan, Macquarie, Namoi, Gwydir and Border Rivers), the Barwon Darling Plan and six groundwater WSPs in consultation with the public.

A public exhibition phase where all stakeholders can make comment on the revised WSPs will be held as part of the process.

That the NSW Government develop and implement public reporting mechanisms on the

Noted

An Intergovernmental Working Group (IWG) with New South Wales and Commonwealth agency representation was established in February 2018 to develop options on how the NSW Government can



use of voluntary contributions, known as rules based environmental water, and that access licenses and fixed charges should reflect this permanent reduction in entitlements.

deliver on its commitment to better manage environmental water.

In June 2018 the Government released the Better Management of Environmental Water: Interim Solutions Package (available here). The NSW Government is progressing the recommendations of the IWG's interim solutions package, which outlines a package of solutions that can be implemented between now and when water resource plans commence.

The interim solutions package includes a roadmap that identifies further work to be progressed to implement interim solutions, as well as work required to inform the development of enduring solutions and ensure these solutions are evidence-based and take into account stakeholder concerns

This work includes consultation with communities to better understand potential benefits and impacts of options being considered and will identify possible mitigation measures. Where solutions involve changes to water sharing plans, consultation will align with existing processes.

The NSW Government is also committed to improving transparency around sharing, allocation and management of water resources.

20 That the NSW Government conduct a review of transparent flows and translucent flows in New South Wales water sharing plans before the provisions are incorporated into water resource plans.

Supported

On 6 July 2016, in response to community interest, the Minister announced a review of the flow rules to check that they are usefully serving their intended purpose.

In February 2018, NSW Government published the Translucency rules in NSW inland rivers – Scoping review (available here). The report represents a stocktake of the current rules in inland NSW regulated rivers; their diversity and intended purpose and an overview of options and implications for change.

As part of the review of WSPs, transparent and translucent flows are also being reviewed where they have been identified by stakeholders as an issue.

21 That the NSW Government clearly and publicly exhibit the precise roles of each of its water agencies to enhance

Supported – already in place

The NSW Government has released information on the roles and responsibilities of the water agencies in NSW. This information can be accessed here.

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	public knowledge.	
22	That the NSW Government boost funding and staff numbers for compliance and enforcement.	Supported – already in place The NSW Government has committed funding over the next two years to build a world-class water management, compliance and enforcement regime. The Natural Resources Access Regulator will more than triple the previous number of staff undertaking compliance and enforcement activities, to total thirty eight staff.
23	That the NSW Government ensure that the Department of Industry – Water, WaterNSW and the Office of Environment and Heritage work closely together to deliver a unified and collaborative approach to water management for the benefit of New South Wales, including the delivery of environmental water.	Supported – already in place The Department of Industry (DoI), WaterNSW and the Office of Environment and Heritage (OEH) are developing and implementing the regulatory framework for water management in regional NSW to achieve economic, social, cultural and environmental outcomes for the people of NSW. DoI, WaterNSW and OEH collaborate in a number of forums to manage water for the benefit of NSW. An interagency working group on environmental water was established in February 2018 to help inform the Government's development of interim and enduring solutions for better management of environmental water. This group includes, amongst others, representatives from DoI, WaterNSW and OEH.
24	That New South Wales water agencies and departments conduct effective consultation on the development and review of all water plans and strategies, by drawing on the expertise of regional communities.	Supported The NSW Government is developing 20 Water Resource Plans and revising existing WSPs in consultation with regional communities. NSW has established stakeholder advisory panels in seven regulated and one unregulated surface water systems plus a stakeholder advisory panel for the groundwater plans. The panels include representatives from other NSW agencies, aboriginal communities, water users, local government and environmental interests. There will also be a public exhibition phase as part of the plan development.



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		In addition, the Office of Environment and Heritage (OEH) is working closely with community stakeholders and other government agencies to develop and implement Long Term Environmental Watering Plans and the annual prioritisation of environmental water delivery.
		WaterNSW will seek community input in 2018 and 2019 into asset and operational solutions, as part of the 20 Year Infrastructure Options Study. It has established area-based Customer Advisory Groups (CAG) across rural and metro NSW as a primary forum for consultation.
the pri applic water notifyi	That WaterNSW commission	Supported
	the production of a mobile application for government water notifications, for example notifying predicted outflow levels.	The NSW Government continues to explore opportunities for information and transparency products.
		WaterNSW operates an automated notification system, the Early Warning Network (EWN), to notify the public of changes to dam releases and other water supply information.
		Real-time water data can be accessed via the WaterLive app, which is available for iPhone and Android. WaterLive allows users to create a watch-list on gauging locations they are interested in and be automatically notified when the flow or level gets to a certain height.
		The NSW Government has announced that investing in digital connectivity is one of the five priorities NSW Government will fund out of the \$4.2 billion of the proceeds under the Snowy Hydro Legacy Fund to be spent in regional NSW. The NSW Government will aim to make NSW mobile black spot free. In

26 That the NSW Government reconsider its management of water allocations so that general security irrigators receive a higher allocation at the start of a water year and

Noted

This has a direct impact on a range of water users, particularly during dry periods.

The Water Management Act 2000 and WSP rules require full high security allocation to be provided before water is allocated to general security licenses. To do otherwise poses an unacceptable risk to high security users such as town water supplies in time of dry conditions.

collaboration with Data61, Dol is investigating knowledge information products that will support licence holders to access near real-time and licence information to support their own water management and self-compliance. Prototypes will be developed for regulated, unregulated, and groundwater sources

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	that allocations should instead be based on a water equation for supply and demand in New South Wales, as recommended at Recommendation 5.	A water equation, or water demand and water balance is used in the modelling that underpins allocations.
27	That the NSW Government ensure that carryover is an insurance mechanism for irrigators and other users, rather than as a replacement for higher allocations at the start of a water year.	Supported Carry over allows water users to manage risks through their own business processes. It is available in all inland surface water systems and the majority of groundwater systems. Stakeholder advisory panels are considering carry over where it is relevant to their work in developing Water Resource Plans.
28	That the NSW Government consider designating conveyance as an environmental flow.	Noted The primary purpose of conveyance flows is the transfer of consumptive water and in many cases these would not meet the outcomes established for environmental flows. The timing, rate and quality of water flow are key attributes that determine whether flows are beneficial for the environment. Conveyance flows may be unseasonal, of unnatural temperature and represent an unnatural flow regime and are unlikely to meet environmental objectives. Without significant changes to the delivery pattern of conveyance flows it would not be appropriate to designate them as environmental flows.
29	That the NSW Government review the amount of water that environmental water holders can carryover in New South Wales dams.	Noted The States have agreed under the Intergovernmental Agreement on implementing water reform in the Murray-Darling Basin that the characteristics of licensed entitlements held for environmental use will not be enhanced or diminished relative to like entitlements held and used for other purposes. This includes that they will be subject to no less favourable conditions, including with respect to fees, charges, access to allocations, capacity to use, trade and carryover, than like entitlements held for



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		other purposes.		
30	That the NSW Government request the Independent Pricing and Regulatory Tribunal to conduct a review of the water market including considering whether it is operating transparently, efficiently, and fairly so as to eliminate market manipulation.	Supported in principle An independent review of water markets in NSW was conducted by Aither on behalf of the NSW Government in March 2017. The review can be accessed here .		
31	That the NSW Government adopt an automated process for allocation trade approvals, similar to the Victorian Water Register.	Supported in principle WaterNSW is responsible for customer water licensing, transactions and information services, and is committed to providing efficient and timely services to its customers. WaterNSW has recently centralised all water information from multiple agencies' websites (available here). WaterNSW currently operates interstate trading with Victoria and South Australia, ensuring all interstate trades are electronically matched. WaterNSW continues to collaborate to further streamline and improve allocation trading, including a proposed review and replacement of the Water Market Systems which will then enable further automation of processes such as allocation trade.		
32	That the NSW Government review the 100 GL inter-valley transfer account balance limit in the Murray, with a view to increasing the limit, as it is a factor in the pricing differential	Noted Those participating in trade should not adversely impact the water availability or security of those not involved in trade. The Inter valley trade (IVT) account balance reflects the volume of undelivered Murray water present in Murrumbidgee storages. The larger the volume (IVT account limit) the greater the potential impact on		

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	between the Murray and	third-parties. The impact is realised under very wet or very dry conditions.
	Murrumbidgee valleys.	In wet conditions, and full storages, the airspace occupied by the undelivered Murray water prevents the capture of inflows and the increase in Murrumbidgee water allocation - a third-party impact.
		In very dry conditions, the 'cost' of delivering IVT water to the Murray in terms of transmission losses is disproportionately high and is socialised, thus creating third-party impacts.
		The 100 GL IVT account limit was set at a level that represents the appropriate balance between benefits for water users who trade entitlements and potential impacts on third-party (non-trading) water users. It equates to about 5% of general security allocation in the Murrumbidgee regulated river water source. This limit has general acceptance by water users in both the Murray and Murrumbidgee systems.
33	That the NSW Government encourage the Commonwealth Environmental Water Holder, through the Council of Australian Governments, to publicly release up-to-date information about the amounts of water held in its accounts and to generally improve its public reporting.	Supported in principle
		The Commonwealth Environmental Water Holder (CEWH) reports annually on its water availability and water use at a water source and Basin scale.
		See a publication on Commonwealth environmental water allocations and carryover in regulated Basin catchments, available here . There is also information about water use in catchments, available here .
		Detailed information on Commonwealth holdings is also available here.
		The CEWH has reported extensively on the Northern Connectivity Event, with weekly reports published online while the event was in progress.
		The NSW Government will continue to support appropriate transparency by the CEWH.
34	That the NSW Government work with stakeholders to analyse the electricity cost	Supported The NSW Government acknowledges the energy cost challenges faced by irrigators. Work is currently underway to develop a suite of projects that will look at viable options to better manage this challenge.
	challenges for irrigators.	go.
35	That the NSW Government:	Supported in principle



- (a) conduct a feasibility study into the augmentation of Burrinjuck Dam, and
- (b) subject to the findings of the feasibility study, construct a new dam wall or extend the existing dam wall for Burrinjuck Dam.

The NSW Government is developing regional water strategies to identify opportunities to improve medium and long-term regional water security. Strategy development builds on the best available data, including long-term climate information and regional NSW population forecasts. The NSW Government may consider a number of infrastructure options (including enlarging Burrinjuck Dam) when developing a regional water strategy for this area.

That the NSW Government, subject to the findings of the WaterNSW feasibility study, construct a dam at Cranky Rock, or other suitable location within the Lachlan River Valley, including the augmentation of existing water storages.

Supported in principle

The NSW Government is developing regional water strategies to identify opportunities to improve medium and long-term regional water security. Strategy development builds on the best available data, including long-term climate information and regional NSW population forecasts. The NSW Government is considering infrastructure and policy options to improve water security as part of the Lachlan Regional Water Strategy.

WaterNSW has assessed a number of water security options in the Lachlan valley, including a new dam at Cranky Rock. More information about the study can be found online here.

That the NSW Government support the continuation of the Irrigation Farm Modernisation Project and other programs and incentives offered in collaboration with the federal government to increase water efficiency in the agricultural sector.

Supported in principle

The Sustaining the Basin Irrigated Farm Modernisation project (STBIFM) is administered in NSW by DPI Ag in partnership with the Commonwealth Department of Agriculture and Water Resources. The project commenced in June 2012 and will be finalised by 30 June 2019.

The NSW Government is investigating new opportunities for irrigation infrastructure upgrades to achieve water use efficiencies that contribute to the Basin-wide target of 450 GL "further efficiencies [upwater]" under the Basin Plan.

As agreed by the Murray Darling Basin Ministerial Council on 8 June 2018, the Commonwealth

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Government has launched a new Basin-wide infrastructure program. The Commonwealth launched the Water Infrastructure Program in July 2018. This program will assist in recovering remaining gap-bridging water required by June 2019 and progress the recovery of water through efficiency measures with neutral or positive socioeconomic outcomes. In NSW, this initial expression of interest for the recovery of remaining gap bridging water will include urban, industrial, off-farm, and water metering infrastructure.

In parallel to this work, NSW is working with other basin state governments to develop additional program criteria to ensure on-farm investment has neutral or beneficial socio-economic outcomes and on a workplan for delivery of further investment in water efficiency up to 2024. Additional program criteria could take into account wider regional impacts and the impact of cumulative implementation of programs. The criteria and workplan are due to be delivered to the Ministerial Council in December 2018.

That the NSW Government conduct a study into the benefits of on-farm water storages and develop best practice guidelines for irrigators, and ensure this advice is in alignment with the Murray-Darling Basin Plan.

Noted

The NSW Government has supported the development of an on-farm water storage fact sheet and video series focusing on the management and maintenance of on farm water storages.

This series has been produced as part of a collaborative effort between the Department of Primary Industries' Sustaining the Basin Irrigated Farm Modernisation (STBIFM) project, CottonInfo, the North West NSW Irrigation Australia Limited Regional Committee and North West Local Land Services.

This series fills a gap in the information resources currently available to farmers on key aspects of storage management. The online fact sheets published on the CottonInfo website and the accompanying Youtube videos cover three critical topics: storage survey for accurately measuring volumes; storage maintenance; and minimising storage evaporation and seepage loss.

Information in this series can be found at: 'Storage survey for accurate volumes' factsheet (available here).

You Tube video: On-farm storages: surveying to determine accurate volumes (available here).



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		'Storage maintenance: prevention is better than a cure' factsheet (available <u>here</u>).
		You Tube video: On-farm storages: benefits of a maintenance program (available here).
		'On farm water storage: Minimising evaporation and seepage loss' factsheet (available here).
		You Tube video: On farm storages: minimising evaporation and seepage (available <u>here</u>).
39	That the NSW Government collaborate with local governments in flood prone communities to create and implement education campaigns about floods and ways to mitigate flood damage.	Supported in principle
		The NSW Government recognises the challenges that many councils face in accessing sufficient expertise and funding to address floodplain management issues, including floodplain risk management planning, the construction and ongoing operation of flood mitigation works and development of public education programs.
		OEH awarded \$8.06 million in the 2017-18 financial year to 60 new projects to understand and mitigate flood risk across the state. OEH provides a range of support materials to assist Councils to create floodplain risk management plans.
40	That the NSW Government consider establishing a stormwater and/or flood harvesting pilot program for flood mitigation in the Northern Rivers.	Noted
41	That the NSW Government	Supported – already in place
	pursue a review of the National Disaster Relief and Recovery Arrangements through the	The Natural Disaster Relief and Recovery Arrangements (NDRRA) have been reviewed and the Commonwealth has issued the new Disaster Recovery Funding Arrangements (DRFA). The DRFA will



	Council of Australian Governments.	be implemented nationwide on November 1, 2018.
42	That the NSW Government through the Office of Environment and Heritage increase funding allocations to local government for flood mitigation works and floodplain	Supported in principle The NSW Government recognises the challenges that many councils face in accessing sufficient expertise and funding to address floodplain management issues, including floodplain risk management planning, the construction and ongoing operation of flood mitigation works and development of public education programs, and provides funding to local government.
	risk management plans.	Currently across NSW there are around 170 active flood grant projects funded by OEH valued at around \$36 million. Funding under the program has been kept at a consistent level over recent years.
43	That the NSW Government publicly recognise the flooding risks posed by environmental flow targets in the Murray River.	Supported The Murray-Darling Basin flow targets in the Murray River are intended to be achieved via the constraints relaxation projects included in the package of projects which contributed to the 605 GL reduction in water recovery under the SDL adjustment mechanism.
		NSW has nominated three constraints relaxation projects in the Murray, Murrumbidgee and Lower Darling and is joint proponent with Victoria for another in the Murray.
		Flows targeted under these projects are all below the minor flood level.
		The Government recognises the potential for environmental water releases to impact landholders. A landholder negotiation framework is being developed which will facilitate negotiations between affected landholders and government.
		The Dol will work closely with affected stakeholders and the community to develop a workable framework for all parties involved.
		Improved river operational tools will assist in ensuring that the risk of flooding caused by the convergence of natural flows and planned environmental events will be managed.



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44	That, if New South Wales does not withdraw from the Murray-Darling Basin Plan, the NSW Government urge the Murray-Darling Basin Authority to factor in the flooding risk caused by the Barmah Choke when setting environmental flow targets.	Supported Flows through the Barmah Choke will be considered as part of constraints projects. Basin governments are exploring capacity sharing arrangements under current and future operational constraints when demand exceeds capacity at the Choke. This will assist in managing the risk of unintended inundation of land and ensure that there is clarity and equity about arrangements when demand exceeds the capacity for water delivery via the Choke.
45	That the NSW Government re- establish the Yarrawonga to Wakool Junction Constraints Advisory Group to advise and consult on the impacts of high flow targets and strategies to reduce flooding risks.	Supported Consultation with stakeholders, landholders, and community members to provide their views, knowledge, and input is considered a key component for the successful delivery of all SDL projects. Existing stakeholder engagement and communications plans for each of these projects will be reviewed and implemented as part of the next phase of project implementation, to coordinate and support consultation on various aspects of the project. Advisory bodies, including one for the Yarrawonga to Wakool Junction Constraints Relaxation project, will be re-established as states and the Commonwealth enter the next phase of the projects, enabled by additional Commonwealth funding to support engagement activities, detailed design and statutory approvals.
46	That the NSW Government finalise its Urban Stormwater Harvesting Policy by 31 December 2018.	Noted Stormwater harvesting has been identified as one of the key water policy challenges in NSW. The NSW Government is committed to the development of this policy in consultation with urban water managers.



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47	That the NSW Government immediately commence a dialogue with Israel to study its innovative water management practices with a view to making recommendations to the Council of Australian Governments regarding the adoption of such practices in New South Wales and Australia.	Supported The NSW Government signed a Research & Design Memorandum of Understanding with the Israel Innovation Authority in 2016, with water technology being one of the key focus areas. The NSW Government supports innovation in water management practice including demand management, urban water conservation, novel water production technologies and advanced treatment technologies (desalination, biological treatment and energy) and production. The NSW Government works with partners from across Australia and around the world to ensure that the most appropriate and cost effective management solutions are investigated and applied.
48	That the NSW Government: as a matter of priority, expedite the repair of the Burrendong Dam temperature control curtain then report on the suitability of the Burrendong Dam temperature control curtain in remediating cold water pollution with a view to installing effective solutions to cold water pollution in other severely affected New South Wales dams.	Supported The cold water pollution curtain at Burrendong Dam is in the final stages of being repaired after extensive redesign and re-engineering by WaterNSW. Once the device is fully repaired and tested, the trial of the device as a means to address cold water pollution can recommence. It is expected that the device will be operational in the 2018/19 water year. The Burrendong Thermal Curtain was designed to suit the release configuration/intake tower of the Burrendong storage. The suitability of the thermal curtain at other sites is contingent on a range of factors. A prioritised proposal to remediate cold water pollution in the NSW Murray-Darling Basin has been developed by DPI Fisheries focusing on optimising existing infrastructure and/or using thermal mixing technology at priority dams.
49	That the NSW Government:	Noted
	request funding from the	All water delivery, whether it is consumptive or environmental, has the potential to cause cold water



	federal government to remediate cold water pollution	pollution impacts. CEWH currently pay significant usage fees and charges determined by IPART on their water portfolio to support the delivery of water and to maintain infrastructure.
	work with the Commonwealth Environmental Water Holder to limit the effects of cold water pollution during environmental	Potential other Federal funding sources that could be used to address cold water pollution impacts include the Northern Basin Toolkit and a similar program for the Southern Basin.
		A prioritised proposal to remediate cold water pollution in the NSW Murray-Darling Basin has been developed by DPI Fisheries focusing on optimising existing infrastructure and/or using thermal mixing technology at priority dams, which should be used to guide future funding requests.
		CEWH, in consultation with NSW agencies, currently take potential impacts of cold water pollution into account during their annual planning to minimise any impacts from planned releases.
50	That the NSW Government review the impact of ground debris in national parks and state forests on blackwater events that cause fish kills.	In the development of the Long Term Watering Plans for the Murrumbidgee and Murray/Lower Darling valleys, OEH has analysed the natural flooding history of the major riverine forests (including the Barmah/Millewa) and developed objectives, targets and Environmental Watering Requirements to minimise the occurrence of severe blackwater events. A more natural frequency of flushing of these forests will result in reduced organic loads and more beneficial carbon transfer from the forest to the river. Long Term Watering Plans will be rolled out across the Murray-Darling Basin.
51	That the NSW Government review the effects of regulated flows on riverbank slumping.	Supported
		The River Styles Framework is being used to investigate geomorphic condition of rivers in NSW and assess their recovery potential. The effects of regulated flows on riverbank slumping are considered through the assessment process. Recommendations for recovery actions are incorporated into priority action targets for LLS and DPI Fisheries Fish for Habitat programs.