

Report Part 2

This response to the *Rationale for, and impacts of, new dams and other water infrastructure in NSW: Part 2* report by the Legislative Council Portfolio Committee No.7 Planning and Environment is focused on the following projects identified in the inquiry terms of reference:

- Dungowan Dam project
- Mole River Dam project
- Macquarie River re-regulating storage project
- Western Weirs project
- Menindee Lakes Water Savings project.

The NSW Government response to Part 1 of the Committee's report was tabled on 20 September 2021. A separate response will be provided to Part 3 of the report when it is released by the inquiry.

This response provides further information about these five projects and responds to the recommendations made in the report.

It should be noted that WaterNSW originally directed and was accountable for progressing the business cases for the Dungowan Dam and Mole River Dam projects and was engaged by the Department of Planning and Environment to complete business cases for the Macquarie River re-regulating storage and Western Weirs projects.

In September 2020, the Hon Melinda Pavey MP, former Minister for Water, Property and Housing made the decision to transition the projects to Water Infrastructure NSW, a division of the Department of Planning and Environment Water Group, whom from this point had a progressively increasing role in project governance, control and decision-making. Responsibility for NSW Government funded major water infrastructure projects that were being developed and delivered by WaterNSW officially transitioned to Water Infrastructure NSW on 1 September 2021.

Introduction

The NSW Government recognises the need to invest in long-term water security to build the resilience of our regional communities, protect and enhance the environment, improve water availability and increase water reliability for businesses. In her foreword to the NSW Water Strategy, the Hon Melinda Pavey MP, former Minister for Water, Property and Housing stated:

‘Every person in NSW – wherever they live – has a right to a secure water supply in their communities that is fit for purpose to build successful industries, support jobs growth and make our cities, towns and regions attractive places to be’.¹

Investment in critical water infrastructure is a priority for the NSW Government. This priority is of increasing importance given NSW water resources are under pressure from a growing population,

¹ Department of Planning, Industry and Environment (2021), [NSW Water Strategy](#), Department of Planning, Industry and Environment, NSW Government, p 4, accessed 1 November 2021.

changing industry and community needs, and a more variable climate. The NSW Government concurs with the inquiry's emphasis on the need to ensure sound investment decisions in the delivery of water infrastructure projects.

New Dungowan Dam and Pipeline project

Tamworth is the second largest inland city in NSW. It contributes more than \$3.26 billion to NSW's economy each year.² A number of businesses have sizeable investments in Tamworth, including:

- Baida Poultry's confirmed investments of more than \$600 million and 1,000 jobs
- Thomas Foods International's upgrade to increase productivity from 11,000 lambs to 13,000 every day, six days a week
- Teys beef abattoirs processing about 80 per cent of Woolworths meat for Australia.

As a key regional hub, Tamworth supports a broader population of more than 200,000 people living in remote areas to access businesses and key government services. Tamworth Regional Council has ambitions for the city to grow to 100,000 people by 2041.³ Access to safe and reliable water is central to achieving this vision.

The Tamworth community, industries, and aquatic environment along the Peel River experienced significant impacts and prolonged severe water insecurity during the recent drought in the years culminating in the summer of 2019-20. By the end of August 2019, the Peel Valley was declared to be in Stage 4 Critical Drought under the [NSW Extreme Events Policy](#). At the height of the drought, Chaffey Dam – Tamworth's major source of water supply – fell below 14 per cent and remained low until mid-2020 when inflows into the dam commenced.

In June 2019, as part of the drought response, the NSW Government announced \$5.3 million in funding would be used for water security projects to extend essential town water supply to Tamworth, Moonbi and Kootingal. This included a temporary weir at Dungowan and an 18.2km pipeline connecting Chaffey Dam to Tamworth.

Delivered by WaterNSW, MPC Kinetic and Tamworth Regional Council, the pipeline was operational by June 2020. The new pipeline eases pressure on Chaffey Dam supply by piping water to Calala Water Treatment Plant for treatment and distribution, eliminating water losses which previously occurred from delivering water to the treatment plant via the Peel River.

The Peel Valley community needs a multi-faceted approach to securing water supply to protect against increasing climate uncertainties. While the proposed new Dungowan Dam and Pipeline may be an important part of any approach for Tamworth's water supply, the Final Business Case for Dungowan Dam and the Namoi Regional Water Strategy will examine several infrastructure and non-infrastructure options for increasing the water security of Tamworth. A step change in storage capacity at the new Dungowan Dam would provide more flexibility in managing Tamworth's water supplies.

² Tamworth Regional Council, [Economic Development](#), Tamworth Regional Council website, accessed 18 October 2021.

³ Tamworth Regional Council (2020), [Tamworth Regional Blueprint 100: Part 1](#), Tamworth Regional Council, accessed 1 November 2021.

The Dungowan Dam and Pipeline project will provide water users and their communities in the Peel Valley with improved water security and increased drought resilience and preparedness. More generally, the project is expected to:

- improve town water supply security and levels of service for Tamworth residents and businesses
- reduce the risk of severe town water restrictions during times of drought
- reduce the risk of insufficient general security allocations for agricultural users during times of drought
- deliver water savings from reduced transmission losses associated with the pipeline
- provide a broad range of opportunities for local businesses.

The NSW Government recognises the Dungowan Dam and Pipeline project is not without impact.

Rigorous assessments of the costs, benefits and financial impacts of the project, as well as an analysis of the water yield benefits, are currently being undertaken as part of developing the Final Business Case.

Another important part of project development is the Environmental Impact Statement (EIS). The EIS will play a critical role in identifying, evaluating and proposing measures to mitigate any environmental, social, and economic impacts of the project. While the Final Business Case will not be made publicly available, the EIS (which contains elements of the Final Business Case) will be publicly exhibited in 2022, and the community will have the chance to make submissions on the project and the proposed strategies to avoid, minimise and mitigate the impacts.

The NSW Government notes that many of the issues raised by the Committee in its report will be addressed through the Final Business Case and the EIS for the proposed Dungowan Dam and Pipeline project.

Recommendation 1

That the NSW Government investigate alternative options to ensure water security in the Peel Valley, including managed aquifer recharge, water efficiency and water recycling as a matter of urgency.

SUPPORTED

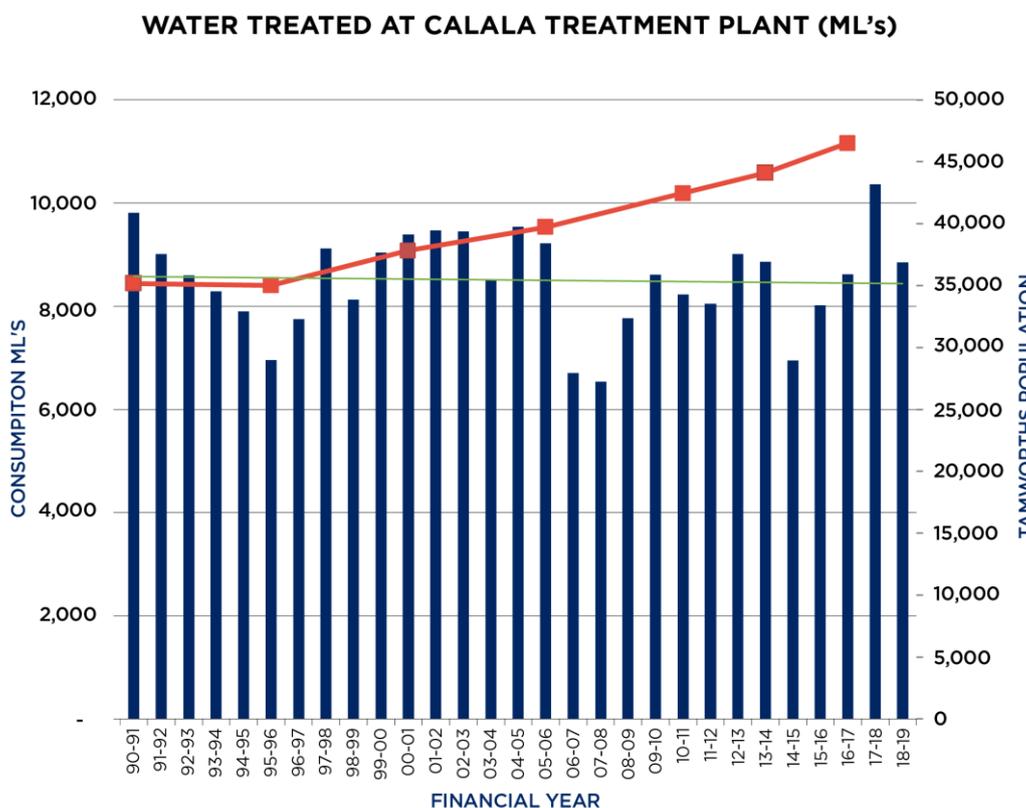
The most recent drought highlighted the vulnerability of Tamworth's water supply to extreme weather conditions. The NSW Government's climate change projections suggest that under a dry climate change scenario, there could be droughts significantly worse than anything we have experienced before. Addressing these risks will need a long-term strategy with a package of complementary measures to support Tamworth's water needs. This may include infrastructure and robust systems to:

- store water and move water
- ensure water is used efficiently
- recycle water where possible.

The Final Business Case for the Dungowan Dam and Pipeline project will examine infrastructure and non-infrastructure options for increasing the water security of Tamworth.

In addition, the NSW Government is currently developing a Regional Water Strategy for the Namoi Valley. This strategy encompasses the Peel Valley and considers additional options to help address water security concerns for Tamworth. The draft Namoi Regional Water Strategy, published in 2020, identified several options for addressing water security issues including managed aquifer recharge, water efficiency and water recycling. The Regional Water Strategy when finalised will recommend specific options which are likely to be workable and beneficial in the Peel Valley and which merit more detailed assessment.

Alongside this, Tamworth Regional Council has been active for some time in seeking cost effective ways to make better use of the already available water. Since the 2006-2007 drought, the Council has invested heavily in reducing per head demand for water with considerable success. As shown in the following graph⁴, average annual water consumption has not increased despite significant increases in population.



A plant for treating industrial wastewater has been proposed by Tamworth Regional Council as part of a plan to expand the meat processing industry in the area, and the NSW Government is supportive of further development of this proposal.

⁴ Tamworth Regional Council (2020), [Submission to the NSW Legislative Council Portfolio Committee No 7 – Planning and Environment, ‘Inquiry into the rational for, and impacts of, new dams and other water infrastructure in NSW’](#), Parliament of NSW, p 4, accessed 1 November 2021.

Recommendation 2

That the NSW Government note the significant concerns raised in relation to the Dungowan Dam and Pipeline Project and ensure these concerns are adequately addressed as part of any independent planning process to assess the project. These significant concerns include:

- ***its high cost***
- ***limited additional water yielded***
- ***impact of climate change resulting in reduced rainfall events and reduced water inflow into dams in the Peel Valley***
- ***irreversible ecological impacts on fish species, platypus and general river health.***

SUPPORTED

The Final Business Case will include a comprehensive assessment of the costs, benefits, and environmental and financial impacts. Key inputs into the Final Business Case include:

- hydrological modelling based on paleoclimatic data and taking into consideration climate change, which will confirm the anticipated yield (currently estimated to be around 6.3GL a year)
- detailed cost estimates based on technical inputs
- estimates of the impacts on ecology (terrestrial, riparian and aquatic, including floodplains, fish, birds and river health) which have been obtained from detailed field studies
- estimates of any potential impacts on Aboriginal cultural heritage
- any potential impacts on downstream users
- the costs associated with avoiding, mitigating or offsetting any identified impacts on ecology, Aboriginal cultural heritage and downstream users.

The Final Business Case will also include an analysis of both infrastructure and non-infrastructure options, in line with the requirements of Infrastructure NSW, Infrastructure Australia and NSW Treasury.

In delivering water infrastructure on behalf of the NSW Government, Water Infrastructure NSW must comply with relevant statutory planning assessments and approval processes as well as relevant NSW Government guidelines, including the [NSW Government Business Case Guidelines](#). These guidelines have been developed to ensure all business cases developed are robust, defensible, in line with best practice and able to provide the Government with the information it requires to make sound investment decisions.

Water Infrastructure NSW must also comply with the [Infrastructure Investor Assurance Framework](#) (IIAF), administered by Infrastructure NSW. The IIAF outlines the process every project must follow in its assessment, including independent peer review, gateway reviews, periodic health checks, risk-based reporting and monitoring by Infrastructure NSW.

Under the IIAF, the Dungowan Dam and Pipeline project is classified as a Tier 1 project. This means it will be required to pass through all seven Gates in the framework and will be closely scrutinised at regular intervals by both Infrastructure NSW and the NSW Government. Once the Final Business Case is completed, it will be independently reviewed before the NSW Government considers whether to proceed with an investment decision.

In order to determine any potential environmental impact of the project, the NSW Government is undertaking a range of environmental investigations including water quality, biodiversity, geological, heritage (including European and Aboriginal cultural heritage) and aquatic studies. Field surveys in combination with background monitoring information, literature and database reviews are being used to assist in determining existing background conditions. This information, together with the hydrological modelling, is being applied to assess the impacts of any changes resulting from the construction and operation of the new Dam, such as on fish species, platypus and general river health. Terrestrial biodiversity surveys will assess impacts to vegetarian and fauna species as a result of construction of the dam and inundation.

The EIS is currently being prepared to meet the Secretary's Environmental Assessment Requirements (SEARs), which were issued in July 2020, and will specifically include the issues detailed in Recommendation 2. Regulatory agencies in both the NSW and Australian Governments have been, and will continue to be, consulted during the preparation of the EIS to ensure that impact assessments meet the SEARs and agency requirements.

Once completed, the EIS will be publicly exhibited and submissions will be sought from the community. The NSW and Australian Governments will then determine whether the project can receive planning approval.

The NSW Government recognises that the proposed Dungowan Dam and Pipeline project may have an impact on the ecology and biodiversity of the Peel River. Strategies to offset any impacts biodiversity of the Peel River and land to be inundated will be presented in the EIS where impacts cannot be avoided or mitigated.

Mole River Dam project

The northern and far western valleys in NSW experienced the worst drought on record between 2018-19. This includes the Border Rivers, where the proposed Mole River Dam is located. The Border Rivers is a large catchment and its water supply is serviced by three catchment dams and on-farm storages for both NSW and Queensland users.

The NSW Government is undertaking detailed investigations into a proposed rockfill dam (with dam size to be finalised as part of any Final Business Case) on the Mole River, approximately 20 km south-west of Tenterfield. A new dam in the Border Rivers region could help secure water in flood sequences so that in drier times more water is available to communities, agriculture, and the environment. It may also increase water reliability for farmers, improve town water supply security and provide better flood mitigation.

Recommendation 3

That the NSW Government take urgent action to improve consultation with First Nations stakeholders regarding the cultural impacts of water infrastructure, to ensure they feel respected and that the consultation is genuine.

SUPPORTED

The wisdom and experience of local Aboriginal communities plays a critical role in informing the NSW Government's approach to water infrastructure projects, especially when it comes to respecting and preserving cultural heritage. Water Infrastructure NSW is committed to improved and continuous engagement with communities, including delivery of meaningful engagement across the entire life cycle of projects with a focus on achieving tangible outcomes for Aboriginal

communities. To demonstrate this commitment, Water Infrastructure NSW has prepared a draft [Strategy for delivering Aboriginal community outcomes](#) (the ACO Strategy) which puts Aboriginal engagement and inclusion at the centre of how it delivers on objectives.

Water Infrastructure NSW is aware that significant allegations have been made by members of the Gomeroi and Ngarabal Aboriginal community in relation to the Aboriginal Cultural and Heritage Assessment undertaken for the proposed Mole River Dam project. The NSW Government is taking these allegations very seriously and Water Infrastructure NSW is working in partnership with the local Aboriginal communities to ensure these allegations are investigated and addressed, and that any further work does not cause the community distress. Culture and spirituality are deeply personal and sacred to Aboriginal communities and Water Infrastructure NSW recognises that Aboriginal Cultural and Heritage Assessments and all engagement with First Nations peoples must be carried out with the highest degree of sensitivity and respect.

As an initiative under the ACO Strategy, Water Infrastructure NSW has already established a dedicated team to guide ongoing engagement with Aboriginal communities across NSW. The Water Infrastructure NSW First Nations Engagement Team (consisting entirely of Aboriginal staff) oversee consultation to ensure engagement process, protocols and approaches are respectful and culturally appropriate. During the past six months, this team has developed a program of engagement that will enable a better understanding of the cultural values that are of significance to Aboriginal communities. This will help ensure these values are integrated into decisions around infrastructure projects planned now and into the future.

To support project engagement with Aboriginal communities, Water Infrastructure NSW has developed a First Nations Engagement Framework which articulates a model for engagement, partnership and collaboration between Aboriginal communities, government, and agencies. The framework provides a Charter and engagement principles that we hope will deliver true co-operation and honest partnership with First Nations peoples in developing and implementing water infrastructure projects and programs. The underpinning principles for this framework are inclusion and the removal of barriers to participate.

The Water Infrastructure NSW First Nations Engagement team will continue to facilitate engagement with Aboriginal communities at each stage of the proposed Mole River Dam project, ensuring that local history and culture is thoroughly considered and respected as part of the process. This approach is anticipated to significantly enhance and deepen the consultation with Aboriginal communities in the Border Rivers region.

Recommendation 4

That the NSW Government note the significant concerns raised in relation to the Mole River Dam project and ensure these concerns are adequately addressed as part of any independent planning process to assess the project. These concerns centre on the significant negative impacts of the construction and operation of the dam, including:

- ***impacts on supplementary water users***
- ***irreversible ecological impacts on native vegetation, fish and migratory birds***
- ***impacts on First Nations people and cultural sites.***

SUPPORTED

The Strategic Business Case for the proposed Mole River Dam has been completed and will be presented to the NSW Government to determine next steps.

As part of the Strategic Business Case, the following assessments were undertaken:

- environmental and hydrology assessments on potential impacts to supplementary water users and environmental flows
- biodiversity impacts, and
- impacts on First Nations people and cultural sites.

These assessments were undertaken in compliance with SEARs issued for the project in July 2020. The outcomes of these assessments have been included in the Strategic Business Case and will inform any decision about further development of the project.

If the proposed Mole River Dam project proceeds, many of the issues raised by the Committee in its report will be addressed through the Final Business Case and EIS. A Final Business Case would include a comprehensive assessment of the costs, benefits and financial impacts of the proposed project and an EIS would specifically include the items detailed in Recommendation 4. While the Final Business Case will not be made public, the EIS (which contains elements of the Final Business Case) will be publicly exhibited and available for comment.

Macquarie River re-regulating storage project

The Macquarie Valley has a highly variable climate, with severe droughts occurring once every 20 years on average over the last 125 years.

The 2017-2020 drought was extreme and placed the region's water sources and communities, industries and ecosystems that rely on them, under acute stress. Current studies suggest the region will face an even more volatile climate in the future with a higher chance of more frequent severe droughts occurring as well as more severe, though less frequent, floods.

To help plan for these future climate risks, the NSW Government is investigating a suite of measures to improve water security, reliability and resilience, while also improving access to water for Aboriginal people to allow them to meet their spiritual, cultural, environmental, social and economic needs. The suite of measures is set out in the long-list of options in the draft Macquarie-Castlereagh Regional Water Strategy, which was on public exhibition from 25 September until 13 November 2020 and then re-opened until December 2020.

One of the options being considered is a re-regulating storage on the Macquarie River at Gin Gin to replace the existing 120-year-old damaged weir structure, which presents a barrier for fish in the river. The proposed storage comprises a gated weir and fishway and aims to:

- increase water efficiency and reliability
- contribute to a long-term increase in available water for communities and towns
- mitigate social and economic risks associated with losing access to water.

The delivery of new infrastructure on the Macquarie River will require a review of operational rules and relevant water sharing plan rules. The optimal combination of options to improve water security in the mid-Macquarie region will also be contingent on whether other opportunities for water efficiency, reuse/recycling and other infrastructure and non-infrastructure changes can be found. These more innovative measures, which will be an essential part of integrated water

management strategies, will be critical in the development of regional water strategies and may require refinement or reassessment of some of the infrastructure options.

Recommendation 5

That the significant negative ecological impact on the riverine environment of the Macquarie River re-regulating storage project be fully and adequately addressed as part of any independent planning process to assess the project.

SUPPORTED

Water Infrastructure NSW is preparing the Final Business Case for the Macquarie River re-regulating storage project, which will include a comprehensive assessment of the costs, benefits, and environmental and financial impacts. The NSW Government notes that many of the issues raised by the Committee in its report will be addressed through the Final Business Case and the EIS.

Studies to inform the EIS are currently underway in line with the SEARs issued in July 2020. These studies specifically cover the issues detailed in Recommendation 5. The SEARs require detailed ecological assessments, including the project's potential impacts on the entirety of the Macquarie Marshes.

As part of the EIS, a Biodiversity Development Assessment Report including an aquatic and terrestrial assessment of the potential and likely impacts of the project, will be prepared. This Report will assess the ecological impacts from Burrendong Dam to the end of the Macquarie Marsh system.

Regulatory agencies in both the NSW and Australian Governments have been, and will continue to be, consulted during the preparation of the EIS to ensure that impact assessments meet the SEARs and agency requirements.

The NSW Government will also consider any complementary projects or actions that might be required to mitigate or offset any impacts.

Western Weirs project

There are 28 weirs along the Barwon-Darling and Lower Darling Rivers that are being investigated under the Western Weirs project. The NSW Government recognises a number of these weirs are in poor condition, and across the region there is no system level functionality, with flow regulation limitations, barriers to fish passage and town water supply concerns.

The Western Weirs project aims to:

- ensure water is available to meet critical human needs
- ensure the health of the river and environment is maintained and enhanced
- protect Aboriginal peoples' rights and interests through infrastructure, policy and operational changes.

Recommendation 6

That the NSW Government, as part of the Western Weirs project, investigate options such as the use of groundwater and off-river storage, as a possible alternative to building new weirs or expanding weirs.

SUPPORTED

The Western Weirs Strategic Business Case is exploring a range of options to address water security, weir conditions and improve connectivity along the Barwon-Darling and Lower Darling including weir raising and upgrades, groundwater, off-stream storage, water tanks pipelines, and non-infrastructure options.

Consistent with [NSW Government Business Case Guidelines](#), a comprehensive suite of options that contribute towards meeting the project objectives have been considered. Previous studies, technical experience as well as learnt experiences from the Millennium and 2017-2020 droughts have been used to formulate a long list of non-infrastructure, weir infrastructure and alternative (non-weir) infrastructure options that may be suitable for far west towns. The non-weir infrastructure options include use of groundwater and off-river storages.

On completion of the Strategic Business Case, the NSW Government will decide on whether any of the infrastructure or non-infrastructure options, or a certain combination of options, should be progressed through a Final Business Case.

Menindee Lakes Water Savings project

The NSW Government recognises that the Menindee Lakes Water Savings project needs to strike a balance between a desire to maximise water savings, and protecting the significant ecological, cultural heritage and socio-economic values that exist in the Menindee Lakes, Darling-Baaka and Great Darling Anabranch.

The NSW Government recognises that for the Menindee Lakes Water Savings project to proceed, more work is required to achieve community support. In April 2021, the Murray-Darling Basin Ministerial Council agreed for NSW to rescope the Menindee Lakes Water Savings project given the impacts of recent severe drought and significant concerns around ecological outcomes, reduced amenity, impacts on traditional owners, whole of system connectivity, and lack of community support for the project in the form originally envisaged under the Murray-Darling Basin Plan.

The NSW Government is investigating a range of initiatives for the Darling-Baaka River system as part of rescoping the Menindee Lakes Water Savings project. These measures are part of a new '*Better Baaka*' program.

The *Better Baaka* program is investigating a range of measures for the Darling-Baaka River system, taking a holistic, system-wide approach to water infrastructure planning and operations in the region, working in tandem with changes in water policy and strategy. A key focus of the program will also be on delivering important social and economic outcomes for local First Nations communities, by enhancing tourism and education, and creating employment opportunities, while also protecting and enhancing cultural heritage.

The *Better Baaka* program was developed through closely considering the feedback received from the community over a number of years, particularly regarding the need to improve connectivity, environmental, cultural and community outcomes. Consultation with the community on the program and its initiatives commenced in October 2021. The NSW Government is steadfast in its undertaking that it will not proceed with projects that do not have broad community support.

The *Better Baaka* program will seek to address a range of water issues important to local communities, such as water security, reducing the frequency and length of time towns have to live

with temporary water restrictions and the reconfiguration of upstream supply. The program proposes a two-pronged approach to deliver multiple benefits and outcomes for communities, including for First Nations communities:

- **Infrastructure solutions** delivering better system operational flexibility and improved fish habitat and movement
- **Operations and Rules** to more effectively achieve environmental outcomes.

The infrastructure component of the *Better Baaka* program combines a range of new and existing initiatives including:

- **Morton Boolka enhancement:** infrastructure works to allow traditional owners to apply cultural watering activities in Cawndilla Creek. Work would create some physical separation between the lakes to improve management of the lower and upper lakes while ensuring almost permanent water in Cawndilla Creek and support First Nations employment and local tourism, mitigating any associated risks such as water quality issues.
- **Weir modifications (Menindee):** construction of a new fishway at Lake Wetherall and upgrading Weir 32 that could assist in opening up fish passage, improving operational control and managing adverse water quality conditions.
- **Weir renewals on the Darling:** including for example upgrading weirs at Pooncarie, Bourke and Collarenebri to provide greater town water security, improvements in fish passage and better capacity to manage Northern Basin flows.
- **Weir modifications and decommissioning:** consider a range of options including:
 - modifying weirs at Brewarrina, Tilpa, Mungindi and Louth
 - assessing the ongoing use of some non-town weirs along the Barwon-Darling Baaka
 - Looking at how to improve connectivity at these sites with further assessments and consultations to occur
 - reinstating rock bar habitat at multiple sites along the system to increase fish passage, improve fish habitats and water quality, and return diverse flows.
- **Wilcannia Weir:** upgrading Wilcannia Weir by increasing the weir height, installing a new fishway and allowing dual operation to increase town water security, improve fish passage, improve water quality and deliver First Nations employment and training opportunities. This project is currently underway and the EIS is being prepared.
- **Toorale Water Infrastructure project:** in addition to the removal of Peebles Dam (completed in 2019) the project which is currently underway involves modifying Boera and Homestead Dams to install fishways and pass higher rates of flow to:
 - improve fish passage
 - increase maximum flow rates into the Darling River
 - support and maintain First Nations cultural values.

- **Water for cultural and environmental outcomes:** involving the strategic purchase of 15GL of water in the Northern Basin to improve connectivity between northern tributaries and the Barwon/Darling Baaka systems, improve cultural and environmental outcomes.
- **Menindee Local community benefits:** building a cultural environmental education centre in the area, improving access to, and the safety of, Main Weir Road, and improving amenities to help promote First Nations culture, kickstart tourism and provide employment opportunities for First Nations communities
- **Town Water Supply:** A range of projects are already underway as part of the NSW Government's Safe and Secure Water Program to improve water security and quality for local towns along the Darling-Baaka system, drought mitigating off-river water supply options and improving storage, while ensuring fish passage outcomes.

The *Better Baaka* program aims to address a number of environmental and community concerns, notably in relation to the Menindee Lakes Water Savings project, with an aim to improve management of flows to help support water connectivity, promote strong Basin outcomes and improve infrastructure by taking a system-wide strategic approach to its planning. The expected benefits from the *Better Baaka* program include:

- **Connectivity** – help manage flows and support fish passage to help the river to stay healthy.
- **Ecological** – improved ecological outcomes, such as enhanced fish habitats and reinstated fish passage.
- **First Nations** – increased employment opportunities for Aboriginal people, such as supporting cultural and environmental education tourism in the area, through business and employment opportunity under the [Aboriginal Procurement Policy](#), and by supporting River Ranger Programs.
- **Socio-economic** – a strengthened visitor economy at Menindee, through the building of a cultural and environment educational centre, upgrading recreational facilities at Copi Hollow and building a fishing and viewing platform at Menindee. In addition, it is anticipated that building the local economy in a way that supports and promotes the local community will lead to improved mental health and social well-being outcomes.

Recommendation 7

That the NSW Government prioritise restoring river connectivity and river flow in the Lower Darling and Menindee Lakes system.

SUPPORTED

The NSW Government has taken a number of important steps to improve river connectivity and river flow in the Lower Darling and Menindee Lakes system.

The *Better Baaka* program intends to use a systems approach to improve connectivity between the north and south of the Murray-Darling Basin, deliver on the Murray-Darling Basin Plan, and provide cultural, environmental, and socio-economic benefits to the region. The *Better Baaka* program is currently considering how NSW can:

- address a range of water issues important to local communities, such as water security, temporary water restrictions, floodplain harvesting reform and reconfiguring upstream supply
- engage communities on how to improve fish passage across 2,000km of the Darling-Baaka system, building on initiatives including the Western Weirs project and NSW Fish Passage Strategy
- deliver social and economic outcomes for Aboriginal communities by enhancing tourism, as well as increasing education and employment opportunities.

In addition to the work under the *Better Baaka* program, a full suite of connectivity options will be published for community consultation as part of the draft Western Regional Water Strategy. The draft Western Regional Water Strategy will have a particular connectivity focus and will address water management issues that affect the health of the Darling-Baaka. The draft Western Regional Water Strategy will be released for public exhibition in 2022.

The NSW Government has also established a Connectivity Stakeholder Reference Group which has commenced discussions on connectivity data and modelling, along with some of these connectivity options. Papers from the meetings are published online at:

<https://www.industry.nsw.gov.au/water/what-we-do/stakeholder-engagement/connectivity>

As an interim measure, and to address recommendations from the [Independent Panel on First Flush](#), the Department of Planning and Environment is developing and consulting with stakeholders on proposed flow targets to trigger temporary water restrictions after an extended drought, under section 324 of the *Water Management Act 2000*. These flow targets will also be included in the Western Regional Water Strategy

Recommendation 8

That the NSW Government honour its commitments to restoring the health of the environment and healthy rivers under the Murray Darling Basin Plan in a way that has the support of communities along the entire length of the Darling River.

SUPPORTED

The NSW Government remains firm in its commitment to deliver the economic, social, cultural and environmental outcomes intended under the Murray-Darling Basin Plan.

As noted above, NSW Government is undertaking a rescope of the Menindee Lakes Water Savings project, and the rescoped project will now feed into a broader program of work under the *Better Baaka* program.

The NSW Government is also committed to using the best available science in defining the outcomes of its Sustainable Diversion Limit Adjustment Mechanism (SDLAM) projects and is upgrading current models to reflect new record inflows and cease to flow events to attain the most relevant data. The NSW Government maintains that new or amended SDLAM projects and complementary measures will be needed to address any difference between the projected water savings in 2017 and realised water savings at project completion.

This approach will contribute to NSW Government efforts to achieve a balanced outcome at the Menindee Lakes, but also allow flexibility for adaptive management and incorporation of new science.

Water security options in NSW

In August 2021, the NSW Government released the [NSW Water Strategy](#), which provides a high-level, strategic approach to increase resilience of the state's water services and resources over the next 20 years. The strategy clearly articulates the water resource management and service delivery framework and policy context for NSW, including how the Murray-Darling Basin Plan and state-wide, regional, metropolitan and local strategic water policy and planning frameworks work together.

The NSW Water Strategy is part of a suite of long-term water strategies including 12 regional and two metropolitan water strategies which set out the approach to maintaining and building the resilience of the state's water resources, including in response to climate variability and change.

The NSW Government has also identified 14 initial commitments under the [Future Ready Regions Strategy](#), six of which focus on the goal of achieving sustainable, secure and healthy water resources:

1. Fast track investigations into new groundwater supplies in western NSW.
2. Better integrate land-use planning and water-management decisions.
3. Implement a state-wide water-efficiency framework for regional towns and cities.
4. Improve water-use decision-making for the resources sector.
5. Establish a Water in Mining Advisory Committee.
6. Investigate standardised water restrictions, with a focus on greater certainty during severe drought.

These commitments support the NSW Water Strategy and draft Regional Water Strategies.

The NSW Government is also investing in, and supporting, local governments and local water utilities to resolve water security risks and issues:

- The \$1 billion [Safe and Secure Water Program](#) provides NSW Government co-funding to help regional towns remove risks and issues to water quality, water security, and the environment.
- Working in partnership with local water utilities and the wider water sector on the two-year [Town Water Risk Reduction Program](#) (2021-22). The purpose of the Program is to develop and implement a new approach of working together that enables local water utilities to manage risks and priorities in town water systems more strategically and effectively and, as a result, reduce risks in regional NSW communities over time.

Recommendation 9

That the NSW Government further investigate alternative options for ensuring water security, such as managed aquifer recharge and water banking for the regulated rivers of NSW.

SUPPORTED

Action 6.8 of the NSW Water Strategy commits the NSW Government to investigate and enable managed aquifer recharge in NSW. Managed aquifer recharge uses below-ground aquifers to temporarily store water. The aquifer acts as a water bank – water is diverted into the aquifer

through infiltration ponds or injection wells during times of plenty, and later redrawn using bores in times of scarcity. Water that would have otherwise evaporated becomes available for use.

The Department of Planning and Environment is in the early stages of investigating managed aquifer recharge as an option for improving town water security and to possibly support the agricultural sector in NSW. The regional water strategies will also identify potential locations where managed aquifer recharge could be an option.

The scientific and regulatory framework around managed aquifer recharge is important. Some aquifers are more suitable than others and there are considerable scientific and engineering challenges to delivering solutions that are cost-effective. The Department of Planning and Environment will also work through a range of policy and legislative issues relevant to getting managed aquifer recharge up and running. This is an important piece of work to avoid unintended impacts on existing groundwater users and environments, such as soil salinisation, and to make sure there are viable sources of water to put into managed aquifer recharge schemes including sources other than water from regulated rivers (e.g. recycled water).

If carefully designed, managed aquifer recharge has the potential to be a significant opportunity to improve water security in NSW, with benefits for towns and possibly the agricultural industry.

© State of New South Wales through Department of Planning, Industry and Environment 2021. The information contained in this publication is based on knowledge and understanding at the time of writing (November 2021). However, because of advances in knowledge, users should ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate departmental officer or the user's independent adviser.