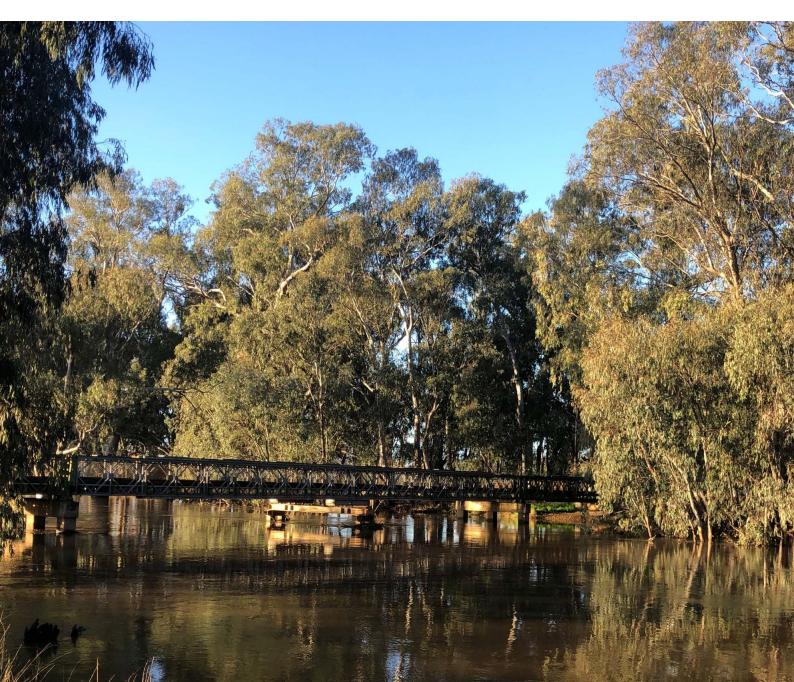
Draft Regional Water Strategy

Lachlan: Shortlisted Actions – Executive Summary



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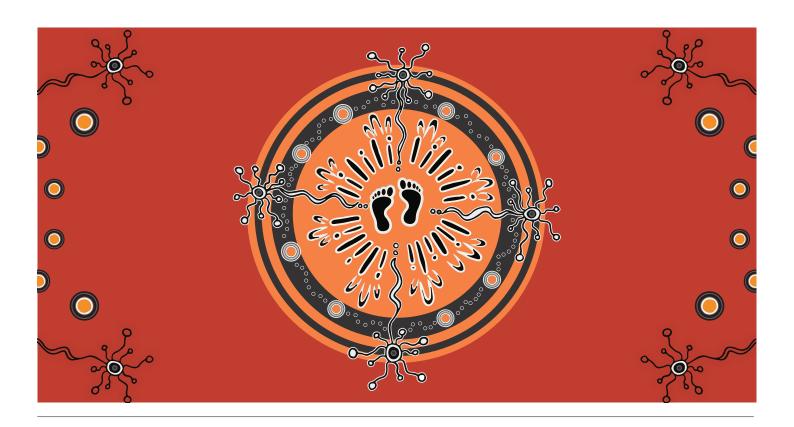
Cover image Image courtesy of Kevin Roche. Lachlan River, NSW.

More information water.dpie.nsw.gov.au/plans-and-programs/regional-water-strategies

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Acknowledging First Nations people

The NSW Government acknowledges First Nations people as the first Australian people and the traditional owners and custodians of the country's lands and water. First Nations people have lived in NSW for over 60,000 years and have formed significant spiritual, cultural, and economic connections with its lands and waters.

Today, they practice the oldest living culture on earth.

The NSW Government acknowledges the Nari Nari, Ngiyampaa, Wiradjuri, Barkandji, Maljangapa and Yita Yita people as having an intrinsic connection with the lands and waters of the Lachlan Regional Water Strategy area. The landscape and its waters provide the First Nations people with essential links to their history and help them maintain and practice their traditional culture and lifestyle.

We recognise the Traditional Owners as the first managers of Country. Incorporating their culture and knowledge into management of water in the region is a significant step towards closing the gap.

Under this regional water strategy, we seek to establish meaningful and collaborative relationships with First Nations people. We will seek to shift our focus to a Country-centred approach; respecting, recognising and empowering cultural and traditional Aboriginal knowledge in water management processes at a strategic level.

We show our respect for Elders past and present through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places where First Nations people are included socially, culturally and economically.

As we refine and implement the regional water strategy, we commit to helping support the health and wellbeing of waterways and Country by valuing, respecting and being guided by First Nations people, who know that if we care for Country, it will care for us.

We acknowledge that further work is required under this regional water strategy to inform how we care for Country and ensure First Nations people hold a strong voice in shaping the future for all communities.

Artwork by Nikita Ridgeway.

The NSW Government is committed to the Lachlan region having healthy, reliable and resilient water resources, so it remains a place where people want to live, work and visit, both now and for future generations. To do this, we need to make the best use of existing water resources and prepare for future uncertainty presented by a more variable and changing climate.

The Lachlan region

The Lachlan region lies at the geographic heart of NSW and includes stunning natural landscapes that change from mountainous terrain in the east to flat alluvial plains in the west. The region is home to many vibrant towns and communities, productive agricultural and mining industries, critical ecosystems and nationally important and culturally significant wetlands, including the Lake Cowal-Wilbertroy Wetlands, the Booligal Wetlands and the Great Cumbung Swamp.

The region is located within the traditional lands of the Nari Nari, Ngiyampaa, Wiradjuri, Barkandji, Maljangapa and Yita Yita Nations. These Nations have been caretakers of the Lachlan region for over 60,000 years.

The Lachlan region has access to surface water and good quality groundwater for towns, recreational use, cultural and environmental needs, and industry. Due to the region's highly variable climate, groundwater is an important water source for the region.

The Lachlan region is no stranger to extreme weather events. Severe and prolonged droughts are frequently followed by extensive rainfall events that can lead to flooding. Over the last few years, we have seen extended and large-scale flooding across the catchment. These extreme events pose challenges for the region, its water resources and all water users.

Like other regions across Australia, the Lachlan region will likely face a more variable and changing climate in the future. We need to prepare now for the transition to a scenario where we may have more variable and potentially less water available. We also need to set actions in motion to make smarter decisions about our water use and management armed with better knowledge and information to protect our most critical water needs.

The Lachlan Regional Water Strategy will provide a long-term strategic plan to enable communities, the environment and industries to be better prepared for a future changing climate. This will help keep the Lachlan region an attractive place to live, work and visit.

We need to ensure that the Lachlan Regional Water Strategy remains adaptable so we can meet the future needs of all water users and the environment and capitalise on future opportunities in the region. The Draft Lachlan Regional Water Strategy has been developed in parallel with 2 investigations undertaken by Water Infrastructure NSW: the Wyangala Dam Wall Raising Project and the Belubula Water Security Project. The interaction between these major water infrastructure investigations and Draft Lachlan Regional Water Strategy options and proposed actions is outlined in the consultation paper.

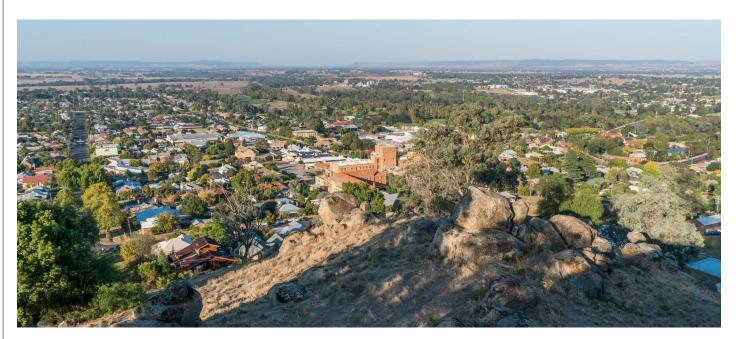
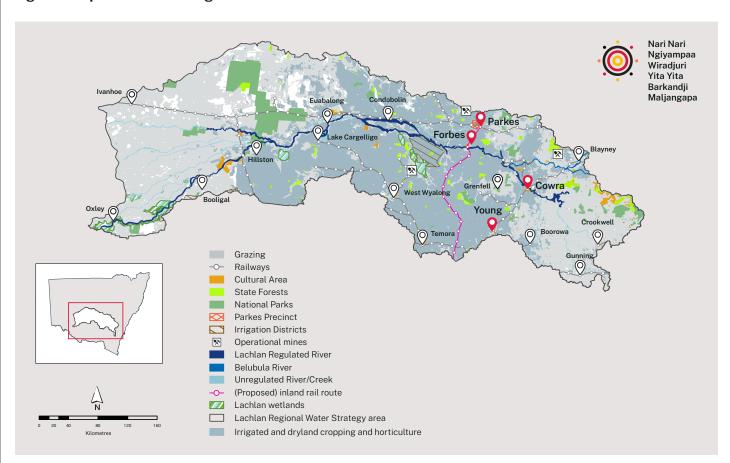


Image courtesy of Destination NSW. Bellevue Hill Lookout, Cowra.

Figure 1. Map of the Lachlan region



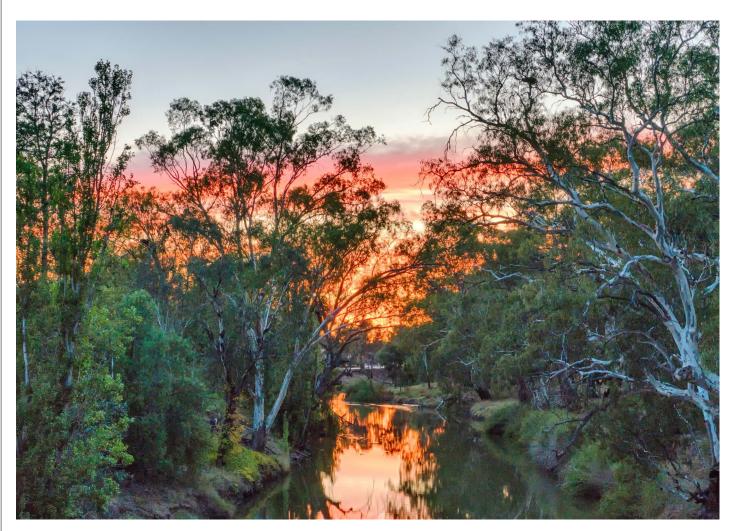


Image courtesy of Destination NSW. Lachlan River, Condobolin.

What is the purpose of the consultation paper?

The NSW Government is developing 12 regional water strategies that bring together the best and latest climate evidence with a wide range of tools and solutions to plan and manage each region's water needs over the next 20 to 40 years.

The first draft of the Lachlan Regional Water Strategy, including a long list of options, was released in September 2020.¹ Since then, we have taken on board stakeholder feedback, conducted further analysis to prioritise the challenges and shortlisted actions to help meet these challenges.

The Draft Lachlan Regional Water Strategy: Shortlisted Actions – Consultation Paper was first released for public exhibition in October and November 2022,² presenting the outcomes of this work, which is summarised in Figure 4.

Due to the extensive flooding that impacted communities across the Lachlan region at that time, a decision was made by the Department of Planning and Environment (department) to re-exhibit the consultation paper in 2023. This will allow people to engage with, consider and respond to the draft strategy under more appropriate circumstances.

The 2023 version of the consultation paper has been amended to include additional information about the challenges of, and our response to, flooding in the region.

No decisions have been made on the shortlist of proposed actions. We are seeking your views on the best actions for the region before a final strategy and implementation plan are developed.



Image courtesy of Destination NSW. Hughie Cameron Park, Hillston.

- 1. Full description of the region, its water resources and water needs are provided in the draft strategy, which can be viewed and downloaded at water.dpie.nsw.gov.au/plans-and-programs/regional-water-strategies/what-we-heard/lachlan-regional-water-strategy
- 2. The Draft Lachlan Regional Water Strategy: Consultation Paper can be viewed at: dpie.nsw.gov.au/lachlan-regional-water-strategy

What the future climate could look like in the Lachlan region

We don't know for certain what the Lachlan region's future climate will be like. It may be similar to what we have experienced in the past, or it may be more variable than we have seen in our lifetimes. Our analysis of different climate scenarios tells us that there could be more extreme events, hotter and longer droughts, higher evaporation rates, and more unpredictable rainfall events and variable river flows.

We need to plan for these uncertainties and continue to refine our understanding of the water-related risks in the Lachlan region to ensure people, the environment and industries can live and thrive in the future.

Figure 2. What the future climate could look like in the Lachlan region

Changing rainfall patterns

Changing rainfall patterns with potential decreases in **critical winter/spring** rainfall and **increases in summer/autumn** rainfall.



Potential less average annual rainfall.



More extreme events

Droughts could become **more frequent** and **rainfall** events could be **more intense.**

Higher evaporation

Potential increase in evapotranspiration by up to

5% by 2070



compared to levels between 1990 and 2009.

Changes in river flows

On average, total volume of water flowing each year in the regulated and unregulated rivers could reduce.





Lower inflows into Wyangala and Carcoar dams

Average annual inflows into the regions' main storages **could decline and storage levels could be consistently lower** under future dry climate projections.

What should we focus on first?

The Draft Lachlan Regional Water Strategy identified a range of current and future water-related challenges and opportunities.³ Following feedback from the public consultation and further technical analysis, we have identified 6 key challenges that should be the immediate priority for the region. Other water-related challenges described in the Draft Lachlan Regional Water Strategy are also important and can be revisited in future reviews of the strategy.



Managing water resources during more extreme events for people, industry, and the environment

Water management in the Lachlan region is challenging due to its variable climate and the extensive, low-gradient river system, which is subject to high system losses. Future climate change is predicted to bring more extreme events, warmer temperatures and higher evaporation rates which will stress the system and give it less time to recover. This will also likely bring more variable river flows, impact groundwater recharge and influence water supplies to all water users, including towns and communities, industries and environmental water holders.

Droughts can limit the ability to deliver water to town off-take points and nationally significant wetlands. It can also result in multi-year low or zero water allocations to general security licence holders, which are mostly held by industry and environmental water managers. Towns and communities reliant on unregulated water sources could also experience greater risk of limited water supplies should unregulated streams experience more frequent low-flow or cease-to-flow periods.



Understanding flood risks to individuals, businesses and communities

The management of floods is an ongoing challenge for the Lachlan region and could worsen with climate change.

Given the flat landscape, many areas of the region are subject to flood risk. Development on the floodplain has meant that floods can significantly impact people and businesses, damage infrastructure, create safety risks and cause financial and economic loss. The devastating flood event in the Lachlan region in late 2022 highlighted the flooding risks to many communities in the region at an unprecedented and catastrophic scale.

Floods are also a vital natural process that support the region's ecosystems, providing benefits such as significant groundwater recharge and connections between rivers and their wetlands and floodplains, such as the Great Cumbung Swamp and Booligal Wetlands in the lower Lachlan River.

Local councils are primarily responsible for managing floods and flood risks within their boundaries with the support of the NSW Government, with roles and responsibilities outlined in the Flood Risk Management Manual and its toolkit.⁴ Despite this, achieving integrated flood management in multi-jurisdictional catchments like the Lachlan, can be challenging and requires effective coordination between state agencies and local councils.

^{3.} The draft Strategy (2020) can be viewed and downloaded at water.dpie.nsw.gov.au/plans-and-programs/regional-water-strategies/whatwe-heard/lachlan-regional-water-strategy

^{4.} Further information about the policy, manual and programs can be found at www.environment.nsw.gov.au/topics/water/floodplains/ floodplain-management-program



Improving water quality

Maintaining water quality is a key challenge for the Lachlan region as poor water quality impacts on ecological health, treatment costs for towns and industry productivity and has an effect on Aboriginal people's wellbeing and connection to Country.

Dissolved oxygen can be depleted during hypoxic black water events and harmful algal blooms – often caused by excessive nutrients – can lead to the death of aquatic plants and animals. Unseasonal temperatures can also directly contribute to fish deaths and high turbidity can reduce the light penetrating the water column and stress benthic plants. Salinity (both dryland and instream) can impact on vegetation leading to erosion and high turbidity as well as increase salt loads beyond the tolerance level of some native plants and animals.

Existing water infrastructure can also cause cold water pollution impacts which can reduce the range and abundance of native fish.



Addressing barriers to Aboriginal water rights

Aboriginal people in the Lachlan region have always been closely linked to rivers, creeks and groundwater sources, and their relationship to these water sources and wetlands is essential to culture, community and connection to Country.

Water management arrangements, a lack of water ownership, and poor access to waterways and culturally important sites; restrict Aboriginal people from fulfilling their cultural obligation to care for Country and fail to provide opportunities for Aboriginal people in the Lachlan region. Involving Aboriginal people more closely in decision-making processes around water management could enrich and improve our water management decisions and in turn provide employment and economic advancement opportunities for Aboriginal people, including youth.



Sustaining the health and resilience of the region's water dependent ecosystems

The river system, floodplains, swamps and wetlands in the Lachlan region provide habitat for many aquatic species, including birds and native fish. The lower Lachlan floodplain is home to 8 nationally important wetlands which feature areas of valuable river red gum forest and woodlands, blackbox woodland and lignum.

Existing water-related infrastructure, river operations and water extraction have influenced flow variability, water quality and the distribution of water throughout the catchment. These factors are causing a decline in native species and aquatic environmental health, especially at the end of the system. In addition, water cannot always be used effectively by environmental water managers when it is needed. The Lachlan region could see more changes to river flows, magnifying the negative impacts on riverine and floodplain ecosystems under climate change. Our challenge is to sustain the health and resilience of natural assets and ecosystems across all climate scenarios.



Supporting a sustainable and diverse regional economy

The industry profile in the Lachlan region is changing. Over the next 20 years, food processing and agriculture, mining and renewable energy production is expected to expand, aided in parts by upgrades to roads and transport links. Our challenge is to support new and existing industries in the context of a variable and changing climate and fully committed water resources.

A key focus for the Lachlan region is to provide conditions that make the region an attractive place to invest. Although industries have adapted to the region's climate, the variability in allocations to general security entitlements can create uncertainties and may deter new industries, including high value industries, from settling in the region.

New emerging industries and regional population growth will also likely create greater competition for available water resources, including groundwater. An increase in groundwater demand could push extraction close to (or above) the allowable limit and pose risk to the long-term sustainability of groundwater sources.

Addressing the challenges

In the future, our water sources and services may come under even greater stress. We need to use the knowledge we have gained during past extreme events to improve the way we manage our water resources so that communities, industries and vital natural assets in the Lachlan region can thrive.

There is a limit to the amount of water that can be sustainably taken from rivers and groundwater sources without causing short- and long-term impacts, such as other users being deprived of reasonable access to water, and permanent damage to our vital ecosystems. Surface water and most groundwater sources in the Lachlan region are fully committed and some water sources are under stress.

The Lachlan Regional Water Strategy is an adaptable long-term strategic plan that is developed so that communities, the environment and industries can be better prepared for a future changing climate. While we may have to make some difficult choices, there are opportunities to advance the needs and aspiration of Aboriginal people in the Lachlan region; enhance town water security; support the resilience of industries; restore river, wetland and floodplain habitats; and support alternative water supplies that do not add further pressures to finite water resources.

We have identified 3 priorities to meet the challenges for the region. Each priority is supported by a suite of actions. In shortlisting these actions, we have considered our existing state and federal legislative requirements, including the requirements of the Basin Plan.

Shortlisted actions under each priority are listed in Attachment A.



Priority 1: Build resilience to climate extremes

Our new climate research provides an opportunity to enhance existing policies on extreme events and ensure they are fit-for-purpose for addressing and mitigating more severe conditions in the future. It also provides us with an opportunity to explore more flexible approaches to our water allocation and accounting framework that could help us proactively respond to prevalent climate conditions whilst ensuring water use remains within existing extraction limits. Closer integration of land and water planning will be equally critical to better protect our water resources and the environment as well as better manage growth in the region.

Aboriginal people have insights and experiences that could add significant value to strategic water planning whilst helping to build climate resilience and provide opportunities for Aboriginal people to have a stronger voice in water management.

With the development of the NSW Groundwater Strategy,⁵ we also have an opportunity to improve our understanding of the region's groundwater sources and the interactions between surface water and groundwater so that these groundwater resources can be protected and sustainably used now and into the future.

Actions under this priority focus on building resilience through a more holistic, inclusive and transparent approach to planning, whilst doing the groundwork to enhance water security in the region especially during droughts. This priority also includes actions to improve coordination between State and local government in relation to climate resilience and enhancing support to councils to manage floods and flood risks.

Priority 2: Improve catchment health

Improved catchment health in the Lachlan region will support the environment, economy and liveability of our communities. Catchment management practices that include floodplain planning, wetland restoration, and riparian maintenance help to mitigate flood risks by reducing runoff and improving natural floodplain storage. Similarly, through enhanced water retention and groundwater recharge, healthy catchments can better withstand periods of drought. Additionally, healthy catchments provide recreational opportunities and support cultural values associated with water resources.

Actions under this priority will lead to improved catchment health by supporting natural resource management activities, addressing water quality issues and removing constraints to environmental water delivery. There are also actions to protect cultural assets and address non-compliant structures on floodplains.

Priority 3: Support a strong and sustainable economy in a capped system

The Lachlan region lies at the geographic heart of NSW, leveraging its position along nationally significant rail and road corridors that encourage further industry development as well as population and job growth. The industry profile of the Lachlan region is changing and new and expanding industries will drive further demand for water and increase competitive pressure on existing water resources.

Actions under this priority seek to strengthen the resilience of the regional economy to climate-related challenges by providing access to the new climate datasets, supporting industry adaptation efforts and back research efforts to better understand water use in the region. As our understanding of the region's climate enhances, we need to start a conversation with communities about how we should share water resources during times of scarcity and during times of abundance. There is also an action to support water-related employment, training and economic opportunities for Aboriginal people.

These opportunities will help to meet the priorities and actions of the NSW Water Strategy,⁶ support the statewide Aboriginal Water Strategy and align with NSW's commitment under the Murray–Darling Basin Plan.

^{5.} Department of Planning and Environment, NSW Groundwater Strategy, water.dpie.nsw.gov.au/plans-and-programs/nsw-groundwater-strategy

^{6.} Department of Planning and Environment, NSW Water Strategy, www.dpie.nsw.gov.au/water/plans-and-programs/nsw-water-strategy



The proposed actions to support these priorities are in Attachment A. We want your views on whether these actions are the best way to prepare the region for the future.

The proposed actions can help to position the Lachlan region for a future where well-managed, sustainable water resources are available for thriving communities, towns, industries, places and ecosystems. They can give us a better understanding of the vulnerability of the region, put in place measures to improve the region's resilience and establish the conditions for using our existing water resources more efficiently, effectively and sustainably.

Implementing some of the actions may involve difficult decisions that may impact when water is available for different uses. Many of the proposed shortlisted actions will need more detailed analysis and engagement. By starting to consider the benefits and implications of implementing the actions now, we will be in a better-informed position to make difficult decisions, should the need arise.

When will the actions be implemented?

A critical feature of the final Lachlan Regional Water Strategy is making sure we identify clearly what actions and investments are needed now and those that will or may be needed further into the future. The strategy considers a 20-year timeframe, aiming to chart a progressive journey that enables us to meet existing challenges, identify and prepare for foreseeable coming challenges and lay the groundwork for adapting to future uncertainties and changed circumstances.

Following public consultation, we will develop an implementation plan that will set out when we plan to commence each action and what we plan to achieve by when. The implementation plan will also identify key partners in effectively delivering these actions, including local councils, other government agencies, local community groups, local Aboriginal communities, environmental managers and industries.

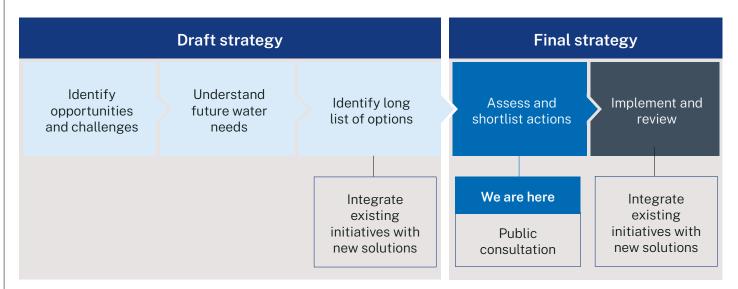
Not all proposed actions will be commenced at once, and funding will be a key consideration in planning when and how the actions will be implemented. The regional water strategies will be a key tool in seeking funding as future opportunities arise.

We want your feedback on which proposed actions should be prioritised for implementation over the next 3 to 5 years and which ones should be implemented in the medium or longer term.



Image courtesy of Kevin Roche. Lachlan River.

Figure 3. Lachlan Regional Water Strategy delivery timeline



How to have your say

Your voice is important. The Lachlan Regional Water Strategy: Shortlisted Actions – Consultation Paper is on public exhibition from 22 September 2023 to 12 November 2023. Supporting information is available at dpie.nsw.gov.au/lachlan-regional-water-strategy

You can also have your say by providing written feedback to the Department of Planning and Environment by midnight on Sunday 12 November 2023 via:

Web: dpie.nsw.gov.au/lachlan-regional-water-strategy

Email: regionalwater.strategies@dpie.nsw.gov.au

We would also be interested in your thoughts on:

- whether any of the proposed actions in this consultation paper should not be shortlisted and why?
- how the proposed actions should be staged and which actions should be implemented first?

Please note that all submissions will be published on the Department of Planning and Environment's website, unless you let us know in your submission that you do not wish the content to be released.

We will be holding community engagement sessions to give participants an understanding of the context for the regional water strategy and an overview of the key proposed priorities and actions. Details of these sessions can be found at the website listed above.



Image courtesy of Destination NSW. The Swinging Bridge, Canowindra.



Attachment A: Lachlan Regional Water Strategy – shortlist of proposed actions

Figure 4. Proposed water security challenges and priorities for the Lachlan region

Vision

Support the delivery of healthy, reliable and resilient water resources for a liveable and prosperous region.

Objectives

Deliver and manage water for local communities Recognise and protect Aboriginal water rights, interests and access to water Enable economic prosperity

Protect and enhance the environment

Affordability

Regional challenges to meet our vision and objectives



Managing
water
resources
during more
extreme events
for people,
industry,
and the
environment



Understanding flood risks to individuals, businesses and communities



Improving water quality



Addressing barriers to Aboriginal water rights



Sustaining the health and resilience of the region's water dependent ecosystems



Supporting a sustainable and diverse regional economy

Priority 1

Build resilience to climate extremes



Action 1.1-1.9

Priority 2

Improve catchment health



Action 2.1-2.7

Priority 3

Support a strong and sustainable economy in a capped system



Action 3.1-3.5

Figure 5. Lachlan Regional Water Strategy - location of shortlisted actions

• Improve Undertake Improve · Investigate water Increase understanding of public security for small participation natural communities in water groundwater sources, resource information including interaction management on water management Investigate with surface water activities availability Implement local expansion to regional · Review how Upgrade and water supply grid initiatives to Integrate deliver cultural groundwater can automate strategic Improve coordination outcomes support secure existing land and between State and and reliable access public rewater Increase local government for towns regulating planning employment regarding extreme structures • Enhance groundwater and business Improve events in the midopportunities modelling capabilities coordination Enhance existing and lower and dialogue support to local Lachlan with local councils with stakeholders respect to flood risk management **Aboriginal** Groundwate planning people **Environment** Communities Towns Euabalong Parkes Forbes O Grenfell 🛇 Young Crookwell O Boorowa Industry sustainability **Floodplains Water quality** River management Fish passage Conduct an · Support the industry climate Reduce salinity development and impact study and improve soil implementation Improve river Install fish erosion in the · Investigate water of the Lachlan operation passage upper Lachlan Floodplain and drought Install pump Management · Review Lake Support system contingency screens Plan and address **Brewster Water** water delivery measures in · Investigate cold floodplain Efficiency efficiency hydrological water pollution structures Project models measures Legend: Unregulated River/Creek Grazing Parkes Precinct Irrigation Districts Railways (Proposed) inland rail route -0-Cultural Area Operational mines Lachlan wetlands **%** State Forests Lachlan Regulated River Lachlan Regional Water Strategy area National Parks Belubula River Irrigated and dryland cropping and horticulture

Priority 1

Build resilience to climate extremes

Legend



Managing
water
resources
during more
extreme events
for people,
industry,
and the
environment



Understanding flood risks to individuals, businesses and communities



Improving water quality



Addressing barriers to Aboriginal water rights



Sustaining the health and resilience of the region's water dependent ecosystems



Supporting a sustainable and diverse regional economy

Proposed action	Summary	Challenges addressed
Action 1.1 Establish a coordination approach involving all levels of Government, to implement local council and town water-related actions under Priority 1	Establish an enduring coordination approach in partnership with local councils and local water utilities in the Lachlan region to support the implementation of town water-related actions under Priority 1, and improve coordinated, timely decision-making regarding extreme events (including drought and flood).	
Action 1.2 Support councils to improve flood risk management in the Lachlan region	Enhance the existing support provided by various state agencies to local councils with respect to flood risk management planning, through ongoing direct support and improved coordination via proposed action 1.1.	
Action 1.3 Upgrade the existing hydrological models for the Lachlan catchment to better represent river operations and drought contingency measures	Improve the representation of river operations and drought contingency measures in the Department's hydrological model for the Lachlan Regulated River in order to investigate options to optimise system wide operations across the catchment and inform future environmental water management decisions.	

Proposed action	Summary	Challenges addressed
Action 1.4 Develop ongoing arrangements for participation of local Aboriginal people in water management	Support existing and new Aboriginal groups to develop an Aboriginal Water Advisory Committee in the Lachlan for involvement in water management activities and decision making.	Ċ <u>©</u> ; \$₹}}
Action 1.5 Support groundwater use for towns and communities	Undertake a detailed review of how groundwater can support secure and reliable water access for towns in the Lachlan region.	
Action 1.6 Investigate water security for small and remote communities	Investigate the merit of building a new hydrological model for the Upper Lachlan (above Wyangala Dam) and utilise the new regional water strategy climate datasets to better understand the water security risks for small towns and communities in the Upper Lachlan region.	
Action 1.7 Investigate the need to further expand the regional water supply grid	Explore, in partnership with relevant local councils, the expansion of the regional water supply grid. This could include strategic upgrades to existing major distributors and work that could help link parts of the pipeline distribution network.	
Action 1.8 Improve the understanding and management of groundwater resources in the Lachlan region	Improve management by better understanding groundwater dependent ecosystems, establishing sustainable future extractions limits, quantifying the risk of unused licences, preparing a guideline to act on declining groundwater levels, and investigating surface and groundwater connectedness.	
Action 1.9 Better integrate strategic land and water planning	Work across government to better integrate future strategic land use and water planning so that water resources can be considered upfront in future land use planning processes. This action would also consider projected population and industry growth trends and identify water-related gaps in the current land use planning framework.	



Image courtesy of iStock. Lachlan River, Reids Flat.

Priority 2

Improve catchment health

Legend



Managing
water
resources
during more
extreme events
for people,
industry,
and the
environment



Understanding flood risks to individuals, businesses and communities



Improving water quality



Addressing barriers to Aboriginal water rights



Sustaining the health and resilience of the region's water dependent ecosystems



Supporting a sustainable and diverse regional economy

Proposed action	Summary	Challenges addressed
Action 2.1 Reduce salinity and soil erosion in the Upper Lachlan and Belubula catchment	Prioritise rehabilitation areas to improve soil retention on site and reduce sediment and salt transfer to waterways in the Upper Lachlan and Belubula catchments in partnership with local groups such as Landcare.	
Action 2.2 Protect and rehabilitate regionally significant riparian and instream habitats in the regulated Lachlan River	Build on existing land management programs and other local initiatives to support whole-of-catchment programs to improve river health and ecosystem resilience in the Lachlan River downstream of Wyangala Dam.	
Action 2.3 Upgrade and automate existing public re-regulating structures in the mid- and lower Lachlan to build the functional resilience of critical ecosystems	Progress a system level assessment of existing re-regulating structures in the mid- and lower Lachlan with a view to identify critical infrastructure upgrades.	
Action 2.4 Mitigate the impact of water infrastructure and disruption of natural flows on native fish	Progress work to seek the installation of fish passages at priority barriers in the Lachlan region and build on existing government commitments, which continue to encourage and incentivise the installation of diversion screens at priority sites.	
Action 2.5 Review and evaluate the Lake Brewster Water Efficiency Project	Review and evaluate the adaptive management processes associated with the Lake Brewster Water Efficiency Project and investigate ways to fully fund the implementation of monitoring and evaluation plans.	**** ();

Proposed action	Summary	Challenges addressed
Action 2.6 Support place-based initiatives to deliver cultural outcomes for Aboriginal people	Support Aboriginal organisations and communities to develop tailored projects for their communities. This action would aim to move away from centralised decision-making and develop a flexible program that can be adapted and is driven by the principle of self-determination and collaboration.	
Action 2.7 Support the development and implementation of the Lachlan Floodplain Management Plan and address floodplain structures	Support the development of a valley-wide, connected floodplain management plan for the Lachlan region and help identify current floodplain works that do not meet the plan requirements.	



Image courtesy of iStock. Township, Forbes.

Priority 3

Support a strong and sustainable economy in a capped system

Legend



Managing
water
resources
during more
extreme events
for people,
industry,
and the
environment



Understanding flood risks to individuals, businesses and communities



Improving water quality



Addressing barriers to Aboriginal water rights



Sustaining the health and resilience of the region's water dependent ecosystems



Supporting a sustainable and diverse regional economy

Proposed action	Summary	Challenges addressed
Action 3.1 Improve public access to climate information and water availability forecasts	Improve existing platforms and products to provide information about water availability and climate change in a format tailored for water users and their business planning needs in the Lachlan region.	
Action 3.2 Investigate water use in the Lachlan region	Undertake a detailed investigation into water use and water user behaviour in the Lachlan region. This work is a precursor to investigate how surface water use in the Lachlan Regulated River Water Source tracks against the water sharing plan extraction limits.	
Action 3.3 Undertake a climate impact study	Undertake, in consultation with industry, a comprehensive long-term study of the impacts of climate variability and climate change on future water availability to determine the resilience of water dependent industries to future climate change – including understanding the socio-economic impacts on secondary industries.	\$2 £0
Action 3.4 Support employment and business opportunities for Aboriginal people in the Lachlan region	Support Aboriginal business development opportunities in the Lachlan region, some of which may require access to water resources. This action would also investigate ways to expand water-related employment opportunities for Aboriginal people in the Lachlan region, including by establishing cultural water officers and/or river rangers.	

Proposed action Summary

Challenges addressed



Action 3.5 Support system water delivery efficiency measures

Upgrade the Department's hydrological model to better represent the effluent streams in the mid-Lachlan to undertake a more detailed assessments of the benefits and costs of the mid-Lachlan efficiency measure option.

In addition, continue the conversation with industries and communities in the Lachlan for ways to enhance water efficiency measures in the region.

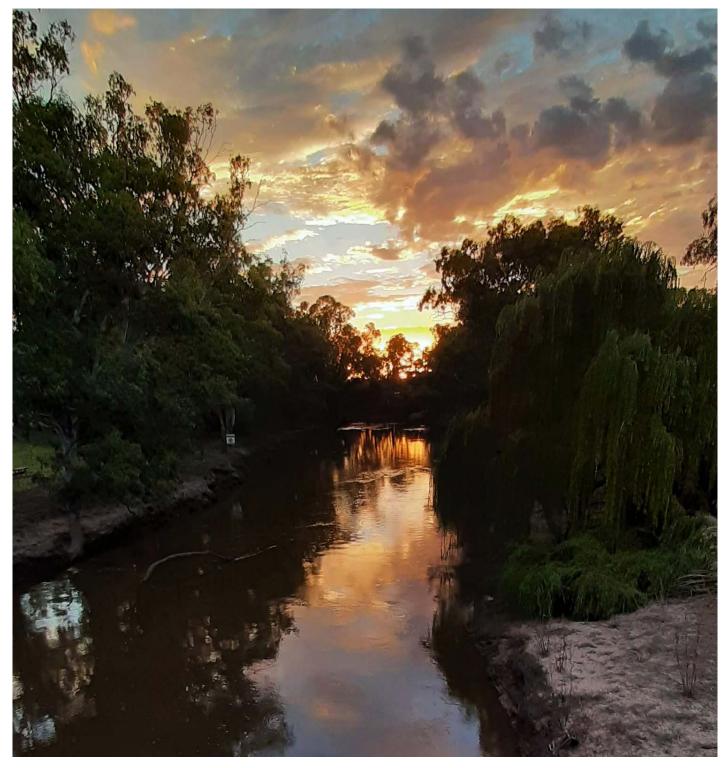


Image courtesy of Amanda Ind. Condobolin, NSW.

Department of Planning and Environment

