

Macquarie-Wambuul Water Security Project

Project overview

The Macquarie-Wambuul Water Security Project is investigating options to improve water security and reliability and support a healthy river environment.

The project focuses on the Macquarie-Wambuul river system which is part of the Macquarie-Castlereagh catchment in central west NSW.

The region is experiencing increasing pressures on water security and reliability due to climate change, population growth and inefficiencies in water delivery. The project aims to improve water security and reliability and support a healthy river environment.

The project focuses on:

- strengthening town water security for Dubbo, Warren, Nyngan and Cobar
- improving delivery efficiency during drought
- protecting the environmental and cultural values of the Macquarie Marshes.

Project funding

The NSW and Australian Governments are jointly investing \$9.35 million to develop a Full Business Case, with the Australian Government's contribution provided through the National Water Grid Fund.

A Full Business Case is the final stage in an extensive phased approval process that is mandatory for any infrastructure project and is crucial for enabling the government to make decisions on whether they will fund the infrastructure delivery.

The funding supports a suite of detailed technical studies, including economic, engineering, environmental and cultural heritage assessments. The NSW Government is leading the work and engaging with our communities to identify the most suitable options.

Findings from the Full Business Case – expected in 2026 – will guide future investment decisions.

Options being investigated

Between 2024 –2025, the department investigated options aligned with the Macquarie-Castlereagh Regional Water Strategy.

These include:

- a regional pipeline connecting Dubbo to Nyngan and other towns
- using some of Burrendong Dam's flood mitigation zone to increase water storage
- a new weir to potentially replace Gin Gin Weir located between Warren and Narromine
- other options identified in the regional water strategy, including consideration of accessing groundwater during a drought.

These options have been assessed to understand their economic, social and environmental impacts and benefits.

Shortlisted option - increasing access to groundwater during drought

The Central West is one step closer to improved water security, with a preferred option for further assessment in the Macquarie–Wambuu Water Security Project locked in to progress to the next phase.

It follows the thorough assessment of four possible solutions to shore up water supplies in the catchment and to support a healthy river system, particularly for the Macquarie Marshes.

Coming out on top as the most viable option to boost drought resilience for the region is to enable Dubbo Regional Council to increase its access to groundwater when Burrendong Dam reaches a critically low level.

This would improve water reliability for the town, greatly reduce reliance on the dam and free up surface water for nearby communities such as Nyngan and Cobar.

Work is currently underway to further assess the viability of this option, including what infrastructure will be required and to assess regulatory pathways including:

- **Infrastructure investigations** – assessing what new infrastructure may be required, such as expanding the bore network south of Dubbo and constructing a pipeline connecting to the water treatment plant. This work ensures groundwater can be accessed at the scale needed during extreme drought conditions.
- **Licensing and regulatory assessments** – examining how temporary access to additional groundwater could operate during extreme events, including the rules and approvals designed to safeguard the aquifer and ensure any potential effects on other groundwater users are appropriately managed.

These will be assessed in the Full Business Case to understand their economic, social and environmental costs and benefits to help inform future government funding decisions.

Project benefits

Expanding Dubbo Council's access to groundwater during drought will deliver a range of advantages for the region, including:

- increased drought security for Dubbo residents through additional bores and pipeline infrastructure
- indirect benefits for surrounding towns, such as Nyngan and Cobar, as reduced demand from Dubbo frees up surface water
- improved regional resilience and protection of the environmental and cultural values of the Macquarie-Wambool river system.

Stakeholder engagement

Stakeholder engagement is an important part of developing the Full Business Case. The Water Group is committed to building and maintaining respectful, trusted and collaborative relationships with our communities and stakeholders to ensure water infrastructure projects achieve the best possible outcomes.

We will keep communities and stakeholders including local government, environmental groups, First Nations communities and agricultural representatives informed as the final business case is developed.

Information about upcoming stakeholder engagement will be available on the project webpage.

What We Heard

A What We Heard report capturing feedback from early engagement from 2024 to 2026 is available on the project webpage. Overall, feedback to date reveals strong support for the project's overarching aims to improve water security and reliability including support for a healthy river environment.

Next steps

Work is currently underway to further assess the viability of this shortlisted option including inviting community feedback. From mid-2026, the department will finalise the Full Business Case, which is expected to be submitted by late 2026. This will provide the evidence needed to recommend and guide future government investment decisions for the project.

Find out more

To find out more:

- visit water.dcceew.nsw.gov.au/mac-wambuul-water-security
- email water.enquiries@dcceew.nsw.gov.au
- phone 1300 081 047.

