

DPIE-Water  
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### **Submission to draft Regional Water Strategies for Lachlan and Macquarie-Castlereagh**

Central West Environment Council (CWEC) is an umbrella organization representing conservation groups and individuals in central west NSW working to protect the local environment for future generations.

We welcome the opportunity to provide comment on the options presented in the draft Regional Water Strategies for the Lachlan and Macquarie-Castlereagh Region. However, it would have been preferable to comment on a 20 year State Water Management Strategy first, to provide a clear direction for management of scarce water resources into the future.

CWEC acknowledges the new climate modelling work undertaken to better inform the water management planning process in NSW. However, the release of the Chief Scientist review of that work would provide a better understanding of the basis for the predictions up to 2060.

We note that increased temperatures, increased evaporation rates and drier soil conditions are predicted, leading to less rainfall runoff, even with a predicted increase in rainfall intensity. These forecasts indicate that the best approach to managing diminishing water availability is to concentrate on demand management because supply will decrease.

The health of river and groundwater sources are already under threat due to over allocation and poor management under current climatic conditions. The millennium drought and most recent intense 2018 – 2020 drought are a foretaste of climate change. Important wetland areas suffered significant stress and productive groundwater sources were permanently drawn down to lower levels.

CWEC does not support the proposed instream infrastructure as a sustainable way forward. These projects will further the decline of river health and threaten any remaining opportunities to enhance wetland resilience in the Lachlan and Macquarie regions.

The key objective of the Regional Water Strategies should be the sustainable management of available water resources.

## 1. Lachlan Region

### 1.1 Proposed instream infrastructure

CWEC objects to the proposed raising of Wyangala Dam wall and augmentation of Lake Rowlands Dam in the Lachlan catchment. Any additional impoundment of large volumes of surface flows will significantly impact downstream ecosystems, groundwater recharge, downstream communities and the function of floodplain processes.

We note that the draft Lachlan strategy indicates that '*Coordinated action and planning across the region should support environmental outcomes, improve movement of native and threatened fish species, and meet ecosystem targets for important assets and areas like the Booligal Wetlands, Lake Cowal and the Great Cumbung Swamp.*' (p 37).

The raising of Wyangala Dam wall and larger impoundment at Lake Rowlands will counter any other actions to improve environmental outcomes in the Lachlan.

These projects will alter the shares in current Water Sharing Plans by capturing planned environmental water. This will cause a failure to meet the requirements of the Murray-Darling Basin Plan.

These projects are hugely expensive and are likely to become stranded assets under future climate predictions.

The public funding directed towards increased water storage would achieve more cost effective and more sustainable outcomes if invested in demand management projects.

### 1.2 Better solutions to water security

The draft Lachlan strategy fails to recognise a major opportunity to improve demand management and irrigation industry efficiency.

Investment in fixing the leaky channels in the Jemalong Irrigation District could provide the same water savings and increase in general security license reliability as the proposed capture of an additional 650GL in a raised Wyangala Dam.

The predicted long term annual average increase of 22.5 GL could be achieved more cheaply and more sustainably by improving the efficiency of the irrigation district.

CWEC recommends that this option be given the highest priority.

### 1.3 Better options for flood protection

The argument that more floods need to be captured in dams is not the best solution for flood mitigation. The example used in the Lachlan that the Newell Highway was inundated for 6 weeks during the 2016 flood indicates that the highway needs to be lifted above the floodway with suitable culverts. This would be a better use of public investment and would provide regional employment.

The draft Lachlan strategy indicates that the 2016 flood was important for improving the conditions of the Lower and Mid-Lachlan floodplains and wetlands, which suffered significantly during the Millennium Drought. It also triggered the largest waterbird breeding event in 20 years. During large floods, flows can also connect to the Murrumbidgee region. (p 48)

Increasing the capacity of Wyangala Dam as a flood mitigation measure will prevent the important wetland areas in the Lachlan from receiving the duration of flood flows needed to sustain successful waterbird breeding events. This will cause a failure to meet international agreements to protect habitat of migratory bird species.

### 1.4 Support for options to improve environmental outcomes

CWEC fully supports the options presented in the Lachlan draft strategy to improve the viability of native fish populations. These are options 11, 14 and 18.

We also support options 15 – 17 as a means of improving river health.

An additional option is needed to improve connectivity to wetlands and the Lower Lachlan.

Options 21- 23 to research groundwater health and sustainable access are critical and must be undertaken prior to considering any increased access to groundwater sources for water security purposes. Some areas of productive aquifers in the Lachlan have already been overused causing a permanent drop in water levels. This can lead to aquifer collapse and loss of an important ecological, social and economic water source.

### 1.5 Support for options supporting First Nations communities

CWEC fully supports the options that improve First Nations capacity, engagement and employment in water management, and that recognise the significance of

cultural knowledge and improve cultural outcomes. These include options 19, 20 and 41 – 48

### 1.6 Support for options to manage demand

CWEC recommends that options to improve water use efficiency should be given the highest priority in the regional planning process. These include options 9, 24 and 34.

As outlined above, improved efficiency measures in the Jemalong Irrigation District will save water, improve reliability and provide more water for town water supply.

### 1.7 Weirs

CWEC does not support option 39 to build more weirs in the Lower Lachlan. A better option would be to conduct an inventory of all weirs in the Lachlan system and remove those that are in poor repair, are not essential and impede fish migration.

This would achieve improved ecological benefits at a lower cost than constructing fishways.

## 2. Macquarie Castlereagh Region

### 2.1 Proposed Instream Infrastructure

CWEC strongly objects to the inclusion of the Macquarie River re-regulating storage project being presented as Government commitment number 1 in the draft Macquarie Castlereagh strategy. We note that it is the business case that is listed as the commitment, yet the impression the strategy gives the public is that the project itself will proceed.

CWEC strongly objects to the project going ahead. The project will capture unregulated flows and regulate them, reducing flows to the internationally recognised Ramsar listed Macquarie Marshes, and reduce the connectivity of the Macquarie with the Barwon. The re-regulating project has a long way to go before it is approved under various State and Commonwealth legislation.

An alternative option that should be in the final Macquarie Castlereagh strategy is to rebuild the current Gin Gin weir at its current working height of about 4 metres, with the fishway that WaterNSW has had a legal obligation to build since 2011.

### 2.2 Better solutions for managing demand – bulk water customers

CWEC believes there are opportunities in the Macquarie Valley to decrease water demand from the irrigation industry by reducing evaporation from on farm storages.

- Phase out the flood irrigation of cotton and implement drip irrigation
- Cover on farm storages with floating panels. Some of the more innovation solutions are fitted with solar panels.

Given that general security irrigation is the biggest user of water in the Valley, CWEC feels that reducing demand for bulk water for irrigation is imperative and should be presented as a suite of high priority options in the final strategy.

### 2.3 Better solutions for managing demand – town water supplies

CWEC supports many of the options presented that potentially lower the demand for water in urban areas. Options 4, 5, and 34.

Innovative solutions such as managed aquifer recharge processes, reuse and recycle storm water projects are important options 7 and 3. CWEC also supports option 34, Market measures to support Dubbo's town water supply.

CWEC would like to see even more innovative solutions to offset water supplies in remote communities, for example SOURCE Hydropanels <sup>TM</sup><sup>1</sup> in conjunction with rainwater tanks could provide a base level of drinking water in remote communities, and negate the need for all of the pipelines being proposed.

### 2.4 Support for options to improve environmental outcomes

Connectivity between the Macquarie and the Barwon is critical to maintain for the health of both river systems, and the aquatic life they support. *'On average, 21% of the flows in the Barwon-Darling come from the Macquarie-Castlereagh catchment over the long term'. (p 58 Draft Macquarie Castlereagh strategy)*  
CWEC strongly supports option 31.

CWEC fully supports the options presented in the Macquarie Castlereagh draft strategy to improve the viability of native fish populations. These are options 15, 20, 21, 22 and 16.

Options that address constraints to the delivery of environmental water are supported by CWEC, options 23, 19, 18, 17, 14 and 24.

### 2.5 Support for options to improve the understanding of groundwater

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<sup>1</sup> [www.source.co](http://www.source.co)

Groundwater sources are under stress in the Macquarie Valley: *'Extensive use of groundwater has led to a decline in water levels in some areas, particularly around Dubbo and Narromine.'* (p 66 Draft Macquarie Castlereagh strategy).

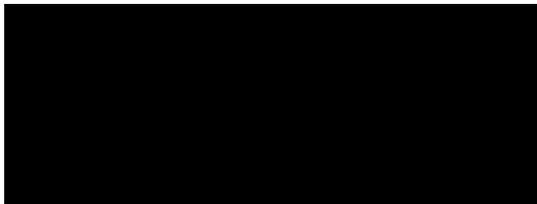
During the height of the water crisis in 2019, Dubbo Regional Council recorded levels of perfluoroalkyl and polyfluoroalkyl substances (PFAS) in all operational bores in Dubbo. In six of the bores, the levels were above the Australian standards for drinking water and recreational water guidelines.

CWEC strongly supports all options in the draft Macquarie Castlereagh strategy that support improved understanding and monitoring of groundwater sources. Options 25, 26, 27, 28, 38 and 39.

## 2.6 Support for options supporting First Nations communities

CWEC fully supports the options that improve First Nations capacity, engagement and employment in water management, and that recognise the significance of cultural knowledge and improve cultural outcomes. These include options 29, 30 and 42 to 49.

Contact:



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