



CENTRAL DARLING



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**BROKEN HILL CITY COUNCIL, CENTRAL DARLING SHIRE COUNCIL AND WENTWORTH SHIRE COUNCIL
JOINT SUBMISSION - DRAFT WESTERN REGIONAL WATER STRATEGY**

Dear Sir/Madam,

The Local Government Council's of Far Western NSW - Broken Hill City Council, Central Darling Shire Council and Wentworth Shire Council wish to provide the below joint submission on the Department's Draft Western Regional Water Strategy. These Councils represent the lower Darling River residents.

Purpose/Recommendation:

Broken Hill City Council, Central Darling Shire Council and Wentworth Shire Council object to the proposed critical dry condition trigger level of 195 GL for Menindee Lakes total storage capacity for implementing temporary water restrictions (once this trigger is reached there would be no releases beyond the minimum flow requirements from lakes Wetherell, Pamamaroo, Menindee, Cawndilla and Tandure).

Broken Hill City Council, Central Darling Shire Council and Wentworth Shire Council recommend that the critical dry condition trigger level to implement temporary water extraction restrictions should be at least 480GL held in Lakes Wetherell and Pamamaroo (dead water and undeliverable water should not be accounted for in the equation, i.e. when storage recedes there remains approximately 30GL of dead storage in Lake Pamamaroo, and a lesser amount of dead storage in Wetherell). In addition to the above the 195GL trigger in Menindee is too low, whether it be active or total storage, and the timing is not clear to protect future supplies or prevent mass fish kills if predicted future inflows do not materialise.

Therefore, a critical dry condition trigger level of 480GL would guarantee an 18 month to 2 year supply of quality water within the system.

Broken Hill City Council, Central Darling Shire Council and Wentworth Shire Council ONLY support the Murray Darling Basin Authority's 640GL/480GL rule for the management of the Menindee Lakes System, on the basis, when management returns to NSW control, the 480GL is held in lakes Pamamaroo and Wetherell and excludes any dead water component, with the primary goal to ensure the connectivity of the Darling and Murray Rivers.

Argument/Reason:

The NSW Government has promised to establish a 195 gigalitre drought reserve in the Menindee Lakes System for critical human needs and to maintain Lower Darling flows and have rejected to further a model that allowed for 18 months supply to the Menindee Lakes (two summers) due to the higher proportion of water required to be held in Copi Hollow and Pamamaroo to do this, resulting in higher levels of evaporation.

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The original purpose of the Menindee Lakes storage scheme is to capture water:

- The primary water supply for Menindee township and Sunset Strip.
- for stock, domestic and irrigation needs along the lower Darling River.
- to augment flows in the River Murray and assist in the water supply to New South Wales, Victoria and South Australia.
- for urban and mining needs at Broken Hill — the Menindee Lakes supply up to 10,000 ML of water each year to Broken Hill — and for other local communities (eighteen months supply) (although Broken Hill is now supplied by the Murray River pipeline, historically during dry periods and periods of drought 180GL was not enough for Broken Hill to have a quality water supply and caused significant health concerns and impacts to the liveability of the City).
- for flood management along the lower Darling River.
- to provide recreational amenity.
- For social, cultural and economic benefits to the Far Western NSW region.

NSW is responsible for operating the lakes to meet the needs of the region's communities and downstream along the lower Darling River, and also during flood events.

There is agreement that:

1. There is deep and passionate concern across all sectors of the lower Darling community about the river and lakes.
2. There is general community acceptance that climate change is impacting our weather and that we all must adapt to meet the emerging challenges.
3. The Menindee Lakes, lower Darling River and Great Darling Anabranch are rich in cultural and archaeological significance. The traditional owners, the Barkindji people, must play a key role to ensure cultural considerations are accounted for in any decisions.
4. The common consensus is that there needs to be flows to the lower Darling to deliver a healthy connected river to the junction of the Murray.

The first problem associated with the 195GL trigger for Menindee Lakes Total Storage, is that it only provides supply for 12 months but if evaporation is high from a hot windy summer it could be only 6 months supply as opposed to the original 18 months supply, and would likely not be quality guaranteed, therefore neglecting the impacts this will have on the social, recreational, and cultural fabric of the region along with the native flora and fauna in the way of fish habitat and scarce water birds due to further and longer periods of dry lakes.

The second and most significant problem is that the proposed trigger does not take into account the dead storage of the lakes. This is water that sits below the release points that cannot be released downstream or used for any purpose. This water eventually pools and heats and contributes to the fish kills witnessed during the last drought with the growth of blue green algae within the system harming the ecosystem.

Any further proposals should consider a trigger point that is based on an 18 month to 2 year supply for the Menindee Lakes Storage as well as ensuring the trigger points are based on active water within the system and that it does not take into account dead water storage.

It has been proven on several occasions from poor management that releasing water from the Menindee Lakes System has resulted in significant detrimental impacts on Menindee township, Wilcannia, Pooncarie, Broken Hill and surrounding areas. 195GL spread over all lakes had salt levels well above 800 EC and this quickly doubled with evaporation.

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Evaporation in the Menindee Lakes has been reported to be as high as 3 metres per annum and averages over 2 metres per annum. (Though we dispute these figures, they are the figures used by the NSW government). And should be used to determine a guaranteed 18 month to 2 year supply of water.

The vast majority of evaporation occurs in the summer months and this will significantly affect water levels and the quality of stored water. It will require Lake Pamamaroo at capacity (300GL) and another 180GL in Lake Wetherell to guarantee an 18 months to 2 year supply for the lower Darling and Menindee township.

If the suggested figure of 195 GL is used and spread across all lakes it cannot guarantee an 18 months supply. It would mean water levels stored would be below 3 metres in many parts of the Lakes. This would mean the maximum guaranteed reserve would be one summer or as little as 6 months supply.

Lake Pamamaroo is 5.5 metres deep and holds over 300GL, this and another 180GL held in the Darling River of Lake Wetherell would give a guaranteed supply of 18 months to 2 years even if we had a summer evaporation rate of 3 metres, it would leave enough water for supply until the next summer period. Quality, though poor, would still be significantly better than if water was spread across all Lakes.

Because of evaporation (rate stated by the NSW government, over 2m pa average and up to 3m) the figure of 195GL cannot guarantee an 18 months supply even if all 195GL is kept in Lake Pamamaroo and if the water is spread out across Lakes, 6 months is all that could be guaranteed, though quality could be very poor, if not completely unusable, depending on depths of held water and evaporation levels.

The lowest amount of stored water that can guarantee 18 months to 2 years supply is 480 GL held in Lakes Pamamaroo and Wetherell.

When the Menindee Lakes have been dry it has caused significant environmental, economic, social, cultural and health impacts on the region's communities, for example:

- Economic loss to the region due to a decrease in tourism to the Menindee Lakes System and townships. The area has received significant visitation since the refilling of the lakes and this has provided a significant economic and social boost to the community.
- Water and the connection to it are an important part of Aboriginal cultural identity and the quality of life. Indigenous communities were unable to continue cultural practices that have been a part of their lives for generations, due to a lack of cultural flows. This has severely impacted the mental health of many and not just our Aboriginal population in the community and has had dire consequences and anecdotally it is believed it has triggered suicide.
- Poor water quality was the cause of skin disease in children of the Central Darling and Wentworth Shires.
- Long-term changes to the Lakes natural ecology including erosion, changing water temperatures, removal of habitat for fish breeding, reduced supply of organic material and nutrients, a reduced water quality and a build-up of salt, has all contributed to outbreaks of blue-green algae and mass fish kills. The Barwon-Darling contains important environmental assets. For example, at least four resident fish species are listed under the *NSW Fisheries Management Act 1994*. The 'Lowland Darling River aquatic endangered ecological community' is also listed under the same NSW Act. The 'Lowland Darling River aquatic endangered ecological community' is also listed under the same NSW Act. Additionally, Murray cod and silver perch are listed on the International Union for the Conservation of Nature red list of threatened species, and also listed under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.

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- Changes to environmental processes of the Menindee Lakes System has ultimately restructured the food supply, therefore either resulting in the death or migration of water birds and native animals leading to further changes to the natural ecological systems. The Barwon-Darling River is a "dryland river", which means it is naturally prone to periods of extensive low flow punctuated by periods of flooding. The presence of Murray Cod who are the sentinels of permanent waterholes tells us that deliverable water must be maintained in the Lakes to ensure that this species and others can survive the dry non-flow periods.

The proposed 195GL will not sustain a viable supply. Even if the proposed 195GL did not include dead storage it would not be sufficient to supply quality water for 18 months. The 195GL spread over all the lakes would be shallow and subject to evaporation that would quickly increase salt levels beyond those that would be required to maintain a healthy ecosystem. Furthermore, the timing of the trigger is not clear to protect future supplies or prevent mass fish kills if predicted future inflows do not materialise

The trigger limit would require at least 480GL of water held between Lake Pamamaroo and Lake Wetherell to meet a quality 18 month to 2 year supply. This supply would be sufficient to ensure the quality would be acceptable and not result in water, when released, to cause mass fish kills downstream along with other toxic blooms developing.

Broken Hill City Council, Central Darling Shire Council and Wentworth Shire Council support the Murray Darling Basin Authority's 640GL/480GL rule for the management of the Menindee Lakes System, only on the basis, when management returns to NSW control, the 480GL is held in lakes pamamaroo and wetherell and excludes any dead water.

We have all lived through the ecological catastrophe that was the result of poor management of the lakes. We witnessed the destruction of the river system, the mass fish kills, the loss of native water birds and native flora and fauna; and the resultant impact on the economy of the region and the health and well-being of our communities, whose lives and livelihoods were so deeply affected.

We implore the NSW government to listen to the river communities, to ensure the health of the river system through connectivity of the Darling and Murray Rivers.

Yours faithfully,



CR TOM KENNEDY
MAYOR
BROKEN HILL CITY COUNCIL



MR BOB STEWART
ADMINISTRATOR
CENTRAL DARLING SHIRE COUNCIL



CR TIM ELSTONE
MAYOR
WENTWORTHSHIRE COUNCIL