

Submission to the Darling River Connectivity Stakeholder Reference Group.

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Thank you for the opportunity to provide comment on the Draft Critical dry condition triggers to reduce risk to environmental and human water needs discussion paper.

The process of community consultation around wholesale changes to infrastructure and management rules for the Menindee Lakes and Lower Darling/Baaka began in late 2018 under the then proposed SDLAM project. From the very first public meeting DPIE staff and project team members were told by the community that the current operational rules were not working and the Baaka and Menindee Lakes were in serious trouble. This sentiment was largely ignored by the project team until the appalling fish deaths of the 2018/19 summer.

There have been numerous inquiries into the fish kill events with recommendations and discussion papers released regarding the cause of the fish deaths, the answer is simple Millions of fish died in Menindee because there was a catastrophic break in connectivity in the Baaka and northern tributaries. This break in connectivity was underpinned by the existing Northern Basin Water Sharing Plans (WSP's)

The rules governing WSP's are unfairly weighted to extraction for financial gain, under Critically dry conditions the current Northern Basin WSP's failed the environment and communities at the bottom end of the river.

NSW DPIE (water) has stewardship of creating the rules that govern the Barwon Darling system in NSW, it is imperative that community feedback on rule changes that DPIE (water) seek from the communities down steam of Bourke all the way to Wentworth is listened to and considered going forward. It is also important that hard rules protecting connectivity are written into all WSP's. With hindsight of the recent NSW ICAC finding that extraction for irrigation had been unlawfully favoured in the decision-making processes for extraction in the Northern Basin, the priorities of water use as outlined in the water Management Act 2000 must also reinforced in WSP's.

"WATER MANAGEMENT ACT 2000 - SECT 58

Priorities between different categories of licence

58 Priorities between different categories of licence

(1) For the purposes of this Act, the following priorities are to be observed in relation to access licences--

(a) local water utility access licences, major utility access licences and domestic and stock access licences have priority over all other access licences,

(b) regulated river (high security) access licences have priority over all other access licences (other than those referred to in paragraph (a)),

(c) access licences (other than those referred to in paragraphs (a), (b) and (d)) have priority between themselves as prescribed by the regulations,

(d) supplementary water access licences have priority below all other licences"

Storage targets and critical dry triggers for Menindee Lakes.

The Menindee Lakes Stakeholder Group has been calling for a drought reserve of at least 18 months' supply for the Lower Darling to be held in Menindee (please refer to the actions list from the meeting held in Menindee May 2021 Appendix 1) The current draft proposed trigger of 195 G/l is inadequate to guarantee supply to the lower Darling for this time period. Recent history shows that when the 480 GL NSW control trigger was activated in late November 2017. The Menindee Lakes system was going into Summer with just over 300GL in lakes Pamamaroo and Wetherall (including smaller lakes connected to Wetherall). The fish kills started in the following December, 13 months later.

Full allocation of extraction on falling storage levels in 2016/17 and two failed wet seasons in the Northern Basin was all it took to plunge the Lower Darling into 18 months of cease flow, longer than any other period on record. The Environmental, Cultural, Social, Mental and Financial scars from this period will be present in the community for years to come.

Any storage target at Menindee needs to be communicated as a period of time i.e., 18 months. A set water amount (195 G/l) will have a different serviceable lifetime depending on time of the year a trigger point is reached (summer or winter) and should not be the preferred option. A time-based storage target will also enable river operators to adapt +/- with climate change as knowledge evolves.

“The 195 gigalitres proposed as a drought trigger includes retaining a volume of 50 gigalitres (which includes dead storage) in Lake Wetherell for a fish drought refuge. We have proposed that a Darling-Baaka restart allowance of 60 gigalitres is included in the next lower Darling water sharing plan. The allowance will apply whenever the total storage in the Lakes falls below 480 gigalitres. The first 60,000 megalitres of inflow to the Menindee Lakes that occurs after the Darling River at Weir 32 has ceased to flow for 10 consecutive days will be credited to the restart allowance. This will be used to restart the river through managed releases to minimise risks to water quality and aquatic species and may also be used to meet water orders along the lower Darling-Baaka. Water remaining in the restart allowance at the end of the water year will be carried over to the next water year, until the lakes exceed 640 gigalitres.”

The above Quote from the discussion paper mentions a restart of the lower Darling of 60 G/l and a refuge of 50 G/l, also in the discussion paper there is mention of 96 G/l to run the Lower Darling for a 12-month period (the stated aim of the draft critical dry paper), also mentioned is a water quality trigger that weir pools will be flushed under certain critical dry conditions.

I will use the following hypothetical scenario

195 G/l Trigger reached, Nov 2022, 50 G/l drought refuge embargoed in top lakes leaving 145 G/l to run the river, assume evaporation of 30% (43.5 G/l) leaving 101.50 G/l summer releases of 350 M/l per day until mid-March further reduces storage by ~50 G/l leaving 51.5 in reserve, Water quality issue in Pooncarie weir pool in mid-March triggers water Quality release of 40 G/l to flush the system to the confluence of the Murray, 16.5 G/l left to run the system for 6 months until November 2023. Connectivity breached well before 12 months elapse. Lower Darling cease to flow August 2023. In December small flows past Wilcannia into a dry river reach the 400m/l per day for 10 days flow trigger to allow extraction in the Northern Basin, Menindee refuge is nearly depleted, remnant pools in the Lower Darling are drying up, under this scenario extraction could be allowed even though water will not reach Menindee?

There needs to be clear, hard rules around which trigger point has priority, the Menindee storage target and restart allowance must have priority above flow triggers in the northern tributaries and especially the those at Bourke and Wilcannia.

Trigger points and modelling for critical dry scenarios must be based on worst known case scenarios, inflow sequences from 2017 to 2020 are well documented, figures of a thirty percent reduction of inflows over the next five decades due to climate change have been suggested by members of the connectivity taskforce. Trigger points must err on the side of caution, fresh clean water is vital for the environment, better off to have it and not need it than need it and not have it.

Water Quality.

A good measure of connectivity is water quality, as a rule consistent flows equal better water quality.

The circulated discussion paper touches on water quality at select sites along the Lower Darling namely the three weir pools of Weir 32, Pooncarie and Burtundy weirs. During previous critically dry scenarios that had very low and cease to flow events in the Lower Darling there were large sections of different quality water moving through the system at any given time. Some sections of water were of low quality and some of them were terrible quality with elevated salinity, foul odour, green colour and a soup like thick, cloudy appearance.

To rely on feedback regarding water quality from three locations across more than six hundred and fifty kilometres of river from Menindee to the Murray is selling the community short. There are a multitude of locations at existing pump sites that have mains power and phone coverage where remote monitoring could be installed. While these remote sites may not be included as “water quality trigger” sites, they would certainly give river managers and the community advanced notice of declining quality and the ability to track and possibly dilute the worst quality sections before they become “suspended” in a weir pool.

Summary of points that will contribute to connectivity.

- The Menindee Lakes Stakeholder Group support a drought reserve of 18 months' supply for the Lower Darling in Menindee, the wider Menindee community **would not** support a 12-month supply target.
- Storage targets at Menindee must be expressed as a period of time not a static number, to accommodate for future climate change needs.
- Any storage target at Menindee must include an allowance for the Menindee community.
- Once critical dry classification levels are met at Menindee restrictions must begin in the northern basin regardless of time elapsed on the 120 day no flow trigger at Wilcannia and in other locations along the river. To ensure connectivity the Menindee targets must take priority over all other cease to pump rules in the northern basin.
- Critical Dry classification should begin once the storage target is reached and should end once the storage target plus 60 G/I restart has been achieved, this will help prevent a yoyo effect in dry sequences.
- In the event that the lakes are classified Critical Dry an allowance of XXXG/I (XXXG/I plus 60G/I restart) must be fully embargoed to Menindee?
- In the event the lakes are classified Critical Dry all inflows in the Northern Basin can only be extracted for critical human needs until such time as the storage target at Menindee has been or is predicted to be reached.
- The term "Meaningful contribution" should be deleted from the draft document and not further considered.
- When the Menindee lakes revert to NSW control under the 640/480 rule a daily flow maximum limit of ~1000 m³/day over weir 32 should be enacted to maximize time until the critical dry threshold is met, this would limit the ability of large downstream water orders pushing the entire northern basin into restrictions prematurely.
- A conveyance license for the Regulated Lower Darling should be created to underpin the Critical Dry scenario.
- Assumptions used to create rules around connectivity should be based on worst case scenario's not averages, during droughts weather is hotter with more sustained wind over smaller bodies of water creating evaporation rates at the extreme end of the scale.
- Water quality monitoring at regular intervals (less than 100 kilometers apart by river) during critical dry events is essential for underpinning community preparedness for water quality issues and assisting river managers to deliver the best water quality outcome possible.

Appendix 1.

Actions list following Menindee Stakeholder Group Meeting held Friday 7 May 2021

Connectivity

All water sharing plans must provide real connectivity with end of valley flow targets to the downstream plan etched in law.

18-month supply for Lower Darling

- Minimum 18-month supply for Lower Darling
- Clear rules to manage FPH take consistent with Supplementary water access rules.
- All northern valley licenses be linked to storage levels at Menindee as were Barwon Darling C class licenses prior to the changes to the 2012 plan
- Restrictions on carry over extraction if Menindee is below 18 months. This can be a condition of all licenses linked to the above dot point
- Clear rules on releases from MLS in order to preserve 18-month storages.
- Defined flow targets at Burtundy weir and at other strategic locations across the basin to provide real connectivity.

Review of currently submitted WSP's, stronger emphasis on end of valley flow targets for all northern Valleys, review of current low flow rules threshold in particular 30,000 megs at Bourke being a single event total not consecutive event total and flow triggers at Wilcannia, 90-day rule, 10-day rule.

Detail further action to address current failings of Anabranch Environmental flow regimes.

Going forward release more information on why rules are changed (risk benefit analysis science based etc.)

Commitment from DPIE to increase consultation in Menindee on Northern Basin rule changes that will affect flow such as Flood Plain Harvesting and carryover rules.

Define how future Water Sharing Plan's will address climate change and reduce extraction for irrigation to ensure the environment doesn't get short changed.

Clearly outline what NSW see as NSW issue that can be fixed by NSW, what will require other states to work together, or is federal responsibility. Time line on who is doing what and when.

Provide information on Regional Water Strategies, especially the western RWS

NRC whole of Basin Review. When will it start, timeline to completion?

Clear and workable rules on delivery and storage of cultural water.

Define and clarify cease to flow definition, how long before a cease to flow does any valley lose connectivity. (200 megs a day over Wilcannia does not ensure connectivity) what is acceptable to community as cease to flow and connectivity.

Address the failings of having Northern and Southern Basin boundary in the middle of a river system not at its lowest confluence.

Provide definition of what is critical human need and how that will be protected.

Provide definition of what is critical environmental need and how that will be protected.

Provide definition of cultural water needs and how it will be delivered.

Provide definition of what is acceptable quality for cultural, environmental and critical human needs.

Investigate introduction of conveyance license to better protect Basic Landholder Rights.

Circulate proposed changes to current WSP's that will address connectivity under the current round of WSP reviews.

Provide details on how inflow data and modelling will be improved to enable smarter decisions.

Provide details on annexation Warrego River/Toorale/Boera regulator water management from NPWS to Water NSW.

Toorale management is not consistent with the priority of water use per the water management act 2007 or 1902 Are NRAR looking into this

Provide details on progress to redefine the 640/480 rule as active water under the Murray Darling Agreement.

SDL

Highlight benefits of any project for Menindee/Barka Communities. These benefits need to be real and achievable and not Department spin.

If no target (i.e., 106 gigs) is to be achieved, any proposed project outcomes need to be clear.

More information on any project, risk benefit analysis, science based, local wisdom included.

Outline what are the base line flows that the department accept and how would that measure up to community expectations for any project at Menindee.

Update on the status and costing of the Menindee Old Town Weir project and timeline for completion.

Develop and circulate costing and location of fish ladders to improve fish passage along the Baaka. Include redesign Pooncarie, Main weir/Block Dam, Wilcannia elsewhere there is a choke.

General

Community consultation has been substandard, Outline what will that be changed into the future and how local wisdom can be better applied to management.

Consultation should result in real change. Community feel consultation to date is only “ticking the box”.

Update on progress on Wilcannia weir and timeline to completion.

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