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NSW Natural Resources Commission (NRC)

Water Sharing Plan (WSP) Review – *WSP for the Murrumbidgee Regulated River Water Source 2016*

RGA Submission – June 2023

Introduction:

Thank you for the opportunity to make a submission to your review of the Murrumbidgee WSP. This review is critical for our industry, as our success depends on reliable water access. As we'll demonstrate in this submission, water availability is not just tied to rainfall. Government policy – such as the NSW *Water Sharing Plans* – strongly influences reliability of our access as well.

Virtually all rice grown in Australia is concentrated in the Murray and Murrumbidgee Valleys of southern NSW. Like most irrigated agriculture, rice offers a good source of high-paid employment in these more remote locations.

Rice is an annual crop, that is typically switched 'on' or 'off' depending on water availability. There's a strong correlation between our expected access to water and the total rice area harvested in any given year.[1] Notwithstanding the challenges, rice production has done an excellent job of establishing itself in the highly variable climate of the Murray-Darling Basin.

Between 2008-2009 and 2018-2019, an average of 629,000 tonnes of rice was grown each year. This output was also achieved despite the consumptive pool reducing by one-third under the Murray-Darling Basin Plan. By comparison, production was closer to 780,000 tonnes per year between 1998-1999 and 2007-2008, which included a year of almost zero production due to the Millenium Drought.[2]

We think it's vitally important that NSW *Water Sharing Plans* be assessed for their ability to achieve productive, economic and social outcomes, as well as delivering for other water-use types within a particular system. Our detailed consideration of these particular issues is provided in the tables below.

[1] Rice farms in the Murray-Darling Basin - DAFF (agriculture.gov.au).
[2] Australian rice markets in 2020 - DAFF (agriculture.gov.au).

Table One: Has the Murrumbidgee *Water Sharing Plan* Been Successful?

***WATER SHARING PLAN* CONTENT.**	**RGA COMMENTARY ON THE PLAN'S 'SUCCESS' OR OTHERWISE.[3]**
Targeted Environmental Objectives:[4] Native fish/vegetation – enhance distribution, extent and population structure. Enhance longitudinal and lateral connectivity. Maintain water quality within target ranges.	It's very difficult to find comprehensive, long-term, monitoring and evaluation data for environmental water-use in the Murrumbidgee Valley. Certainly, nothing directly matches the objectives and indicators listed in this *Water Sharing Plan* in terms of specific geographic location and the timeframe for review. This must be rectified when this Plan is reviewed. It's not enough to set 'priorities' like those listed in the Murrumbidgee Plan, suitable measurement of progress should be a priority as well. The best RGA could find was monitoring reported by the Commonwealth Environmental Water Holder (CEWH) indicating: • Based on monitoring between 2018 and 2020: *floodplain creeks and connected systems (i.e. lakes and lagoons) are ideal habitat for native fish recruitment.*[5] • *Environmental water has supported the establishment of aquatic vegetation communities … over 2014-2020.*[6] • While no specific references could be found, general comments were made about water actions to[7]: 'reconnect wetlands' (page. 9); and 'support hydrological connectivity' and 'nutrient dispersal' (page. 12). • Water quality was described as 'stable' and largely 'similar' between 2014-2015 and 2017-2018[8] (page 14). As noted above, it's virtually impossible for any external stakeholder to specifically understand what role the Murrumbidgee *Water Sharing Plan* played in any of these reported outcomes. Given the level of scrutiny that consumptive water users are exposed to, this is an extremely poor double-standard set by the NSW Government.

[3] Unfortunately the NRC had not finalised its own data-collection at the time this submission was written. As such, the RGA has attempted to find all potentially suitable public data-sets in order to conduct its own assessments.
[4] All targeted objectives should be able to be 'directly measured so that success or failure to achieve the objective can be quantified'. [*Water sharing Plan*, Part 2 Notes].
[5] Monitoring - Murrumbidgee - DCCEEW
[6] Ibid.
[7] Commonwealth Environmental Water Office Long-Term Intervention Monitoring Project Murrumbidgee River System Summary report 2014-18 (dcceew.gov.au).
[8] Ibid.

WATER SHARING PLAN CONTENT.	RGA COMMENTARY ON THE PLAN'S 'SUCCESS' OR OTHERWISE.[3]
Strategies to Achieve Targeted Environmental Objectives: Maintain compliance with **extraction limits**. **Reserve water** to 'partially mitigate' altered flow regimes. **Reserve water** to 'maintain longitudinal and lateral connectivity'. **Reserve water** to 'support environmental watering events'. Help manage downstream environmental/**water quality** events.	With respect to **extraction limits**, those listed in this *Water Sharing Plan* have been annually reported on under Murray-Darling Basin cap compliance arrangements, and commencing on 1 July 2019, arrangements related to Basin Plan SDLs. When cap reporting ceased on 30 June 2019, the Murrumbidgee Valley was 3,777 GL in credit.[9] The Murrumbidgee has also been compliant with the new SDLs, for the two water years where public information is available. In terms of achieving environmental outcomes under the Murrumbidgee *Water Sharing Plan*, the blunt instrument of **reserve water** is in many ways now obsolete. We're at a point where best-practice advice is now recommending: *The focus of the next phase of reform should be to ensure that environmental water is managed efficiently and effectively to deliver agreed (and. where possible, better) outcomes.*[10] This should mean that 'more water' is no longer the default instrument of choice, especially when non-water options can address issues more efficiently, and with less impact on other water-users. To illustrate: • Carp now make-up between 80% and 90% of all fish biomass in the Murray-Darling Basin.[11] Currently, this is arguably the biggest threat to native fish populations. None of the solutions under the *National Carp Control Plan* recommend recovering more water from the consumptive pool in order to address this issue. Instead, all options revolve around direct intervention within these systems, targeting the carp and reducing its numbers. • The last three water years have been characterised by record-breaking floods. These above-average flows generated **water quality** problems that were not going to be addressed by adding **reserve water** into the system. Instead, these challenges could only be addressed by direct intervention, for example through the creation of oxygenated refuges for native fish.[12]

[9] Transition Period Water Take Report 2018–19 (mdba.gov.au) (page. 39).
[10] Inquiry report - National Water Reform 2020 (pc.gov.au) (page 50).
[11] National Carp Control Plan - DAFF (agriculture.gov.au)
[12] Murray valley annual surface water quality report: 2021-2022 (nsw.gov.au) (page 11).

WATER SHARING PLAN CONTENT.	RGA COMMENTARY ON THE PLAN'S 'SUCCESS' OR OTHERWISE.[3]
Targeted Economic Objectives. Provide **water trading** opportunities. Maintain/improve **access to water for agriculture**. Maintain **suitable water quality**.	**Water trading** is a poor lead objective for this *Water Sharing Plan*. While trade is essential for drought resilience and boosting productivity, its effect is extremely negative when it's used to recover water for the environment. To illustrate, the Commonwealth is currently intent on purchasing 10 GL from the NSW Murray consumptive pool. Extrapolating on recent research conducted for the Victorian Government[13] this purchase round is expected to create a loss in production of $40 million per year, and will likely lead to more volatile annual allocations within the remaining consumptive pool. This research also suggests that while the buy-back in the Murray may be 10 GL, consumptive water-use could reduce by as much as 20 GL. **Access to water for agriculture** requires improvement, our comments below in relation to 'underuse' cover this in detail. **Suitable water quality** is an inappropriate objective. Annual economic production from water-use would be better.
Strategies to Achieve Targeted Economic Objectives. Provide for allocation and licence trade. Provide a **stable/predictable water-sharing framework**. Provide for **water access flexibility**. Manage extractions to the limits set in the *Water Sharing Plan*. Provide for (licensed) **supplementary access**. Reserve a share of water to mitigate poor water quality.	**Stable/predictable water-sharing framework:** This requires improvement in order to be fully effective. Our comments below, in relation to underuse, apply here as well. We also think more can be done to improve the responsiveness of early-season allocations, especially when storages are full. Reverting back to 'lowest inflow' assumptions even when rainfall is high is counterintuitive. In addition, the 'fullness of storages' should not be a primary block for making water available. **Water access flexibility** and optimised **supplementary access** are set to become less achievable under the Murray-Darling Basin Plan. To illustrate, as at 30 June 2021, the NSW Murray was more than 20% below its SDL. It wasn't until 15 months later, in October 2022, that additional supplementary access was announced aimed at bringing consumptive use closer to the SDL. Learning from this lesson, the Murrumbidgee Plan should provide a much faster response to better support productivity.
Performance Indicators – Economic. Economic benefit of water-use/movement to **'higher value' uses**. Economic **benefit of trade** (volume & price; licences & allocation). Water quality measurements.	The current performance indicators for economic production are extremely narrow, and in no way reflect the importance of water for industries that are dependent upon it, as well as the communities they support. **'Higher value' use** is an extremely out-of-date policy concept and should be removed from this *Water Sharing Plan.* If an indicator highlighting the **benefit of trade** remains, then the impacts of trade need to also be considered as well. Importantly, as noted above, water-dependent industries frequently support communities, yet the needs and expectations of these communities have been ignored in this *Water Sharing Plan*. An indicator reflecting this should be added.

[13] Social-and-Economic-impacts-of-Basin-Plan-water-recovery-in-Victoria.pdf

Table Two: Additional Recommendations for Improvements.

ISSUE	DESCRIPTION	ADVICE
1. Translucent & Transparent Flows.	The complexity and opaqueness of environmental provisions is an enduring stakeholder criticism of this *Water Sharing Plan*. Each year, it's impossible to tell how much water will be 'put aside' for the environment, and how much of this volume will take-up precious storage space in the Valley's dams.	The NSW Government has previously recognised these limitations of the Murrumbidgee *Water Sharing Plan*, and several times has committed to a comprehensive review which has still not commenced. This review is critical to: • Simply the Plan's rules – such as those for translucent and transparent flows – to they can be more readily understood and publicly accepted. • Maximise the environmental outcomes that can be achieved. • Ensure all water-use types under this Plan are as efficient as possible, which becomes increasingly important under a progressively volatile climate.
2. Underuse.	The Murray-Darling Basin Authority (MDBA) has publicly confirmed a number of times[14] that: *there is nothing in the Basin Plan that restricts take reaching or being maintained at the SDL.*[15] Despite this, in the first two years following formal commencement of Basin Plan SDLs: (i) in the 2019-2020 water year, approximately 1600 GL of consumptive surface water was unused across the Basin[16]; and (ii) in the 2020-2021 water year this figure was 825 GL.[17] As of June 2023, the reports for 2021-2022 hadn't been released.	There are two matters important for the Murrumbidgee *Water Sharing Plan*: • Firstly, any revised Murrumbidgee Plan should include specific provisions that require the Valley's water to be managed in a way that facilitates consumptive use up to the SDL. • In addition, a new economic indicator should be included in the Plan that reports on the lost production resulting from each water year's underuse. For example, in the Murrumbidgee Valley, this figure would have been close to 500,000 additional tonnes of rice in 2019-2020.[18]

[14] WRP-new-projects-operational-improvements-or-amended-water-sharing-arrangements.pdf (mdba.gov.au)
[15] SDL = sustainable diversion limit.
[16] Murray–Darling Basin sustainable diversion limit compliance outcomes 2019–20 (mdba.gov.au) (p. 25).
[17] Sustainable Diversion Limit Registers of Take 2020-21 (mdba.gov.au) (p. 16).
[18]. In the 2019-2020 water year, use in the Murrumbidgee Valley was 485 GL under the SDL (ref. footnote 6 above). Approximately 1 ML of water produces approximately 1 tonne of rice.

ISSUE	DESCRIPTION	ADVICE
3. Planned Environmental Water.	Tied to the underuse point made on the previous page, it's also critical that consumptive water not be taken out of the Murrumbidgee Valley by stealth. The MDBA and the NSW Government utilise very different definitions of Planned Environmental Water, or PEW. Critically, the MDBA says that PEW cannot be used for any other purpose[19], whereas, under the NSW framework: *water that becomes available as a result of more efficient delivery may be made available for allocation under available water determinations.*[20]	Under the MDBA's chosen interpretation of PEW, water can be moved to the environment without compensating consumptive users. This is directly inconsistent with the Murray-Darling Basin Plan implementation approach. It is important that the Murrumbidgee *Water Sharing Plan* reflect the Murrumbidgee *Water Resource Plan* text on pages 52 and 53[21] to ensure consumptive users are fairly protected.

[19] WRP position statement 3A determining planned environmental water (mdba.gov.au)
[20] Murrumbidgee Surface Water Resource Plan (SW9) (mdba.gov.au) (page 61).
[21] Ibid.