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Regional Water Strategy

Re: Submission of comment on the Murrumbidgee Regional Water Strategy

Dear Sir/Madam.

I am writing on behalf of the [redacted] partnership to provide comment on the Murrumbidgee Regional Water Strategy- specifically the 'What we heard' Report, the Murrumbidgee Discussion Paper: Draft Regional Challenges and the Draft NSW Murray and Murrumbidgee Modelling Results Report. Thank you very much for an extension of time to provide this submission.

The upper Murrumbidgee River is iconic- it is the headwaters of Australia's second longest river, it is home to nine species of native fish (including natural, self-sustaining populations of Macquarie perch and Murray cod which are both nationally listed threatened species and the Stocky galaxias), is culturally significant to the Ngarigo and Ngunnawal peoples, and is relied on by our rural and regional communities for irrigation, recreation and as the source water supply for Cooma (the home of Snowy Hydro) and Canberra (our Nation's capital). All of these important ecological, social and economic values of the upper Murrumbidgee are underpinned by good river health. However the health of the upper Murrumbidgee River is in a state of decline and this is likely to be exacerbated by increased future demand and climate change.

The previous submissions made by [redacted] as well as the Upper Murrumbidgee Catchment Network and the Australian River Restoration Centre highlighted the challenges that impede the sustainable management of the upper Murrumbidgee River as well made suggestions for improvement.

We were heartened to find that these concerns were largely reported in the 'What we heard' Report. We note that there were several points that were raised, yet not included in the report. These included to:

- ensure that environmental flow allocations do not contribute to passing baseflows released from Tantangara Dam, so that critical human and basic riverine needs are met first;
- increase the outlet capacity of Tantangara Dam to allow scouring flows above the current maximum of 1,500 ML/day;
- increase environmental allocations from Tantangara Dam to the Upper Murrumbidgee;
- review the way allocations are made to the Snowy montane rivers, which currently can involve difficult trade-offs between rivers; and

- calculate a sustainable diversion limit for the Upper Murrumbidgee.

The above are critical points that underlie the restoration of river health in the upper Murrumbidgee River and we would like to see that these be included in the "What we heard' Report.

We were disappointed to find that the complex challenges faced by the upper Murrumbidgee were not adequately described in the Murrumbidgee Discussion Paper: Draft Regional Challenges (Discussion Paper). We are also concerned that the ACT, which includes Australia's largest regional city, has not been adequately included in the Discussion Paper other than to note existing cross border arrangements.

These are major factors which underlie our region's future waterway health and water security. Unless they are properly considered the resultant Regional Water Strategy will not provide an adequate framework to support better water management into the future. To these ends we would like to see the Discussion Paper provide a more detailed analysis about the implications of the complex management arrangements in place in the upper Murrumbidgee and how these could be improved. We would like to see that the strategy take a more holistic and proactive approach which includes better inter-jurisdictional management arrangements between NSW and the ACT.

Feedback in regard to the Draft NSW Murray and Murrumbidgee Modelling Results Report (Modelling Report) is below.

- It would be helpful to better understand the rationale for using the A2 family of SRES scenarios in the climate modelling. The SRES scenarios are more than 20 years old and were superseded by Representative Concentration Pathways in 2014.
- The Modelling Report should clarify whether flow estimates for historical climate and long-term climate (Figures 14-16) include the impacts of river regulation by Tantangara Dam.
- Analysis is required of the impact of climate change on environmental water allocations for the upper Murrumbidgee that is consistent with the analysis in Section 6.2.5 of allocations for different entitlements in the Murrumbidgee downstream of Burrinjuck Dam.
- Further to the previous two points above, alternative scenarios for the operation of Tantangara Dam must be explicitly included in the analysis. At a minimum, these scenarios should encompass: (i) current governance arrangements under the SWIOID and Snowy Water License, (ii) releases from Tantangara consistent with the forthcoming Ngunnawal Cultural Water Management Plan, (iii) complete pass through of all reservoir catchment inflows through Tantangara Dam into the upper Murrumbidgee River (i.e. no diversions to Eucumbene), and (iv) minimum flow targets for Lobbs Hole.
- A justification is required for the definition of a cease-to-flow event as 1 ML/day given that many parts of the upper Murrumbidgee are very shallow due to the river's regulation and land-clearing in the catchment. In principle, the definition of a cease-to-flow event in relation to a specific gauge should reflect the actual physical context downstream of that gauge and not be assessed on the basis of an arbitrary value. For example, a cease-to-flow event at the Tharwa Sandwash would occur in advance and more frequently than one at the Lobbs Hole gauge a few kilometres upstream.
- In order to provide a trusted basis for long-term planning and dialogue between government and stakeholders, the full suite of modelling methods and assumptions

should be documented in detail to ensure that the work is replicable and/or transferable in future modelling studies of the upper Murrumbidgee by other government agencies, academic researchers, and consultants.

Further to our comment above please see below our responses to the survey which sought feedback for this consultation.

What is your main interest in or connection to the NSW Murray and/or Murrumbidgee regions?

The [redacted] is a regional partnership which aims to involve all catchment stakeholders in working together to improve and protect the health of the upper Murrumbidgee River for the benefit of native fish populations and the community.

Which of the following documents have you read?

We reviewed the 'What we heard' Report, the Murrumbidgee Discussion Paper: Draft Regional Challenges and the Draft NSW Murray and Murrumbidgee Modelling Results Report.

What are the main reasons you have not read some or all of these documents?

Not all the documents were relevant to the upper Murrumbidgee.

To what extent do you agree or disagree that these are the key water-related challenges for the Murrumbidgee region?

Challenge 1: Ensuring resilient water supplies for regional centres, towns and communities in a changing climate (strongly agree).
Challenge 2: Improving the health and resilience of aquatic and floodplain ecosystems (strongly agree).
Challenge 3: Addressing barriers to Aboriginal people's water rights and access (strongly agree).
Challenge 4: Supporting agriculture and emerging industries (agree).

Please outline the reasons for your answers to the previous question.

All of the above water related challenges are relevant to the upper Murrumbidgee River.

Our region also includes the ACT which is Australia's largest regional centre and will influence our regional population and water demand into the near to mid term future. The ACT relies on the upper Murrumbidgee River flowing out of NSW upstream for its future water supply and some of the surrounding NSW regional towns also rely on the ACT for water supply. Better interjurisdictional management arrangements are needed.

The Snowy Hydro Scheme currently captures more than 90 percent of average inflows to Tantangara Dam, diverting this water inland and away from the upper Murrumbidgee River. Natural pre-dam inflows are estimated to have averaged 260 gigalitres per year, but the total release over the last ten years has summed to only 179 gigalitres. This reduction of flows results in a range of impacts on the health of the Upper Murrumbidgee River, all of which are being exacerbated over time with increasing and ongoing social, cultural and environmental costs. These include:

• Ecosystem health rated in very poor condition, with the fish community rated as poor to extremely poor (Sustainable Rivers Audit 2008). Silver perch are now functionally extinct in the system.

• Sedimentation is creating barriers to connectivity and reducing habitat for a range of species, including fish and platypus. This is due to reduced flow conditions which allow the sand to accumulate. Sedimentation is also reducing water availability for water users.

• Periodic flushing flows are infrequent and totally ineffective in some reaches downstream of the dam, meaning that even fine sediment and bacteria cannot be cleaned out.

Despite this, the river still retains areas of high ecological significance, with critical aquatic habitat for several nationally threatened species, including Macquarie Perch & Murray Cod.

We are highly concerned that future pressures are likely to exacerbate the situation. Climate change will lead to an overall reduction in flows, this is coupled with an increase in water demand (from ACT and NSW) as our region continues to grow. Other compounding issues are a lack of on-ground compliance and critical knowledge gaps which are hampering better flow management decisions. If no action is taken we fear that the health of the upper Murrumbidgee will suffer imminent further decline.

There are currently no provisions for cultural water flows in the upper Murrumbidgee, i.e. water entitlements legally and beneficially owned by Indigenous Nations of a sufficient quantity and quality, to improve the spiritual, cultural, environmental, social and economic conditions of those Indigenous Nations. Beyond water entitlements, government agencies must ensure Indigenous Nations have the opportunity to play a lead decision-making role with regards to water planning and management. This is fundamental to ensuring future river health in both the short- and long-term.

The agricultural and rural residential sector is a large part of our catchment community.

Please provide details of any additional water-related challenges for the Murrumbidgee region that you think should be included.

As stated above- We were disappointed to find that the complex challenges faced by the upper Murrumbidgee were not adequately described in the Discussion Paper. This need to be amended and include a detailed analysis about the implications of the complex management arrangements in place in the upper Murrumbidgee and how these could be improved.

The discussion paper should note that the Snowy Hydro Scheme currently captures more than 90 percent of average inflows to Tantangara Dam, diverting this water inland and away from the upper Murrumbidgee River. Natural pre-dam inflows are estimated to have averaged 260 gigalitres per year, but the total release over the last ten years has summed to only 179 gigalitres. This reduction of flows results in a range of impacts on the health of the Upper Murrumbidgee River, all of which are being exacerbated over time with increasing and ongoing social, cultural and environmental costs. Only reference to the Snowy River was made in this regard to the Snowy Hydro Scheme in the paper.)

Furthermore we would like the paper to acknowledge that environmental flows released from Tantangara Dam are not protected from extraction under the current NSW Water Sharing Plan. This is due to the fact that the upper Murrumbidgee is considered to be ‘unregulated’. Furthermore the current provision of environmental flows are insufficient to support the health of the river.

We are also concerned that the ACT, which includes Australia's largest regional city, has not been adequately included in the strategy other than to note existing cross border arrangements. We would like to see that the strategy takes a more holistic and proactive approach which includes better inter-jurisdictional management between NSW and the ACT.

As mentioned above- other compounding issues are a lack of on-ground compliance and critical knowledge gaps which are hampering better flow management decisions. Resources and capacity to support monitoring and adaptive management are insufficient to support water management. Climate change is a major challenge for our regions future and will affect flow availability. Flow availability will exacerbate risks such as sedimentation and water quality. Sedimentation should be included as a risk for the upper Murrumbidgee.

Further feedback on the key water-related challenges for the Murrumbidgee region.

Please see points raised above and in our previous submission.

The [redacted] is happy for our details to be shared in the record of submissions. Please note that this submission does not necessarily reflect the view of any one of our partners. Please do not hesitate to contact the [redacted] if you would like any further information.

Yours sincerely,

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