



NSW Department of Planning and Environment - Water

Re: Submission of comment on the Murrumbidgee Regional Water Strategy

Dear Sir/Madam

I am writing on behalf of the Upper Murrumbidgee Demonstration Reach (UMDR) partnership to provide comment on the Murrumbidgee Regional Water Strategy.

The UMDR 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. Key partners of the UMDR include Bush Heritage Australia, the Australian River Restoration Centre, Upper Murrumbidgee Waterwatch, the ACT Government and the University of Canberra. Our work is supported by Local Land Services, NSW Fisheries and the Murray-Darling Basin Authority in recognition that it contributes towards the key outcomes which these organisations also seek. Our priorities include protecting and restoring riparian habitat, woody weed control, mitigating erosion, improving instream habitat and connectivity, supporting better flow management, as well as community engagement, capacity building and raising awareness within our catchment community to foster strong river stewardship into the future. The UMDR is a member of the Upper Murrumbidgee Catchment Network (UMCN). The UMCN is a community-based network of individuals and representatives from agencies and groups taking a coordinated approach to creating quality natural resource management outcomes for the upper Murrumbidgee catchment. Water management issues are of principal concern to the UMCN and we strongly support the issues raised in their submission on the Murrumbidgee Regional Water Strategy. Similarly, we also support the submission of Australian River Restoration Centre, which, as aforementioned, is one of our key partners.

The upper Murrumbidgee River encompasses the headwaters of Australia's third longest river. It is home to nine species of native fish; including one of the last natural, self-sustaining populations (in NSW and the ACT) of both Macquarie perch and Murray cod- both of which are nationally listed threatened species. The upper Murrumbidgee catchment is the home of the Stocky galaxias, found no-where else in the world. The upper Murrumbidgee River is set apart from the rest of the Murrumbidgee catchment in that its riverine ecosystems function as upland ecological river system- which are distinctly different from their lowland counterparts. The upper Murrumbidgee River was listed on the former Register of the National Estate. The upper Murrumbidgee River is culturally significant to the Ngarigo, Ngambri and Ngunnawal peoples. It is relied upon 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, cultural and economic values are underpinned by good river health and are critical to ensure a liveable and prosperous upper Murrumbidgee region. Healthy rivers, healthy native fish communities, healthy farmers and healthy communities are indispensable to one another.

Currently, the health of the upper Murrumbidgee River is regarded as poor and this underpins the urgency and importance of efforts to protect and improve it. A key factor affecting the health of the upper Murrumbidgee River is reduced flows, as more than 90% of headwater flows are diverted at Tantangara Dam as part of the Snowy Hydro Scheme. The ecological impacts of reduced flows include increased sedimentation of breeding and refuge habitat for threatened fish and other riverine species, impairment of ecological cues and reduced riverine connectivity allowing movement to complete essential life stages. These impacts are not fully recognised by the NSW Government's classification of the upper Murrumbidgee River as 'unregulated'.

In recent years high bacterial levels and blue green algal blooms occurring in the upper Murrumbidgee has seen the river having to be closed for recreational use in Canberra, as well as impacting rural and regional water supplies, highlighting the relationship between flows, river health and water quality. The 2017-2020 drought saw the upper Murrumbidgee cease to flow for the first time in its recorded history leaving the community of Tharwa critically short of water as it prepared for imminent bushfire threat. All of these issues are likely to become more frequent in the face of a changing climate and we are gravely concerned that this, coupled with a growing population in the region will be major factors which influence water security and resilience of our waterways in the future. This is complicated by the fact that water resources in the upper Murrumbidgee are managed independently across two state jurisdictions, the ACT and NSW.

The Murrumbidgee Regional Water Strategy is an opportunity to provide a holistic overview and pathway forward to support more effective management of the upper Murrumbidgee River system. It is timely, coming at the time of the review of the Murrumbidgee Unregulated Water Sharing Plan and the next upcoming review of the Snowy License. Resolving the complex management arrangements are sorely needed to achieve better water management outcomes for the upper Murrumbidgee. Together these provide an important opportunity to bring the upper Murrumbidgee up to date with water reforms in NSW and the broader Murray-Darling Basin, which has so far been overlooked.

Our submission aims to provide comment on the Murrumbidgee Regional Water Strategy in regards to improving the ecological health of the upper Murrumbidgee River and its resident aquatic species- which is the key focus of the UMDR.

General comment on the draft strategy includes:

The management arrangements and jurisdictional complexity which apply to the upper Murrumbidgee are unique and therefore require specific consideration. Some of the water management arrangements such as the operation of the Snowy Hydro Scheme and the management of water resources within the ACT may fall outside of NSW Government jurisdiction, yet they have important implications for water security, reliability and resilience. While the strategy does acknowledge this, it did not provide adequate analysis about the implications of such fractured management arrangements and how these could be improved.

Given the complexities that exist in the upper Murrumbidgee, these issues should be given specific consideration, analysed in full, and a proactive approach taken to address current shortcomings. Given the uniqueness of the upper Murrumbidgee catchment compared to the rest of the catchment it should be subjected to its own prioritisation process when considering options for improvement.

The upper Murrumbidgee River should be included as a key environmental asset, given its unique upland ecology and as the home of at least three nationally listed threatened fish species, including one which is found nowhere else in the world.

The Murrumbidgee Regional Water Strategy's addresses seven key challenges and provides options under each of these 'themes'. Our comment regarding the relevance of each of these to the health of the upper Murrumbidgee River is below.

- 1) Inadequate water management framework to meet the needs and aspirations of Aboriginal people, which also prevents Aboriginal people from fulfilling their rights and obligations to care for Country under their law and customs.

The challenges and issues detailed under these options apply to the upper Murrumbidgee. The management of the upper Murrumbidgee River by its Traditional Custodians is key to re-establishing the health of the upper Murrumbidgee River. The strategy does not explain how cultural water entitlements apply to the upper Murrumbidgee River and how this works in relation to the operation of the Snowy Hydro Scheme. Furthermore cultural values and sites need to be better known, which requires resources and better support of Traditional Custodians to be involved with water management. The relationship between provision of environmental water and improving river health and improving outcomes for Aboriginal communities needs to be better understood in the upper Murrumbidgee catchment. There also needs to be a better mechanism whereby Traditional Custodians in NSW and ACT can be part of co-designing management arrangements. Options 1, 4, 5, 6, 7 and 8 are relevant to the upper Murrumbidgee.

- 2) Current water sharing arrangements that are based on only 120 years of recorded data, which limits our understanding of how vulnerable the region could be to future extreme events. The upper Murrumbidgee is vulnerable to drought impacts and there is a high reliance on surface water. There needs to be a review drought rules for the upper Murrumbidgee for critical human water needs, water quality, and threatened species. Key assets (human- eg for fire fighting, ecological- eg refuge holes for fish and cultural) that we need to plan to protect need to be identified via undertaking a comprehensive audit. Given the reliance of the ACT on the upper Murrumbidgee River, assets in the ACT which directly rely on the river should be included. Option 9 is relevant to the upper Murrumbidgee River. Options 10 and 11 refer to the 'regulated' parts of the Murrumbidgee catchment- however the operations of Snowy Hydro (which regulate the upper Murrumbidgee River) are also relevant in regard to drought. Snowy Hydro has a requirement to release a base passing flow from Tantangara Dam- which becomes important at times of low flow from unregulated tributaries. Currently this flow may be substituted by environmental flows as both are allowed to be extracted once released. Such substitution should not be allowed to occur, especially in dry times. Environmental flows released from Tantangara Dam should be protected at all times as they support the ecological health of the river.
- 3) Insufficiently integrated land and water planning and management, which can lead to population and industry growth occurring in areas that have pre-existing water availability constraints. The issues raised for option 14,15 and 16 apply to the upper Murrumbidgee. Option 15 needs to include making water management within both and between jurisdictions more transparent to the community and allow for input by the community such as via a community advisory panel. Existing catchment programs such as the UMDR, Rivers of Carbon and Landcare should to be considered and supported in future programs. Option 16 should include a recommendation to bring forward the Snowy License review and also to ensure that that the scope of the Snowy License review is sufficiently broad so it can adequately address the issues facing the upper Murrumbidgee.

- 4) Vulnerable town water supplies and amenity, which are key factors in fostering liveable and vibrant regional towns and maintaining the wellbeing of communities. This theme is relevant to the upper Murrumbidgee. Part of option 22 should include understanding how maintenance of amenity can also support instream health and assets (eg release flows to reduce algal blooms will also protect fish). The strategy should seek to understand how flows in the upper Murrumbidgee protect key issues/areas of ACT amenity along the river.
- 5) Degradation of riverine and floodplain ecosystems, which has led to a loss of native vegetation and wetlands and a decline in the conditions of fish communities and waterbird habitats. The Murrumbidgee is the critical habitat of threatened aquatic species which require protection despite increased demand on the water source. This theme is very relevant to the upper Murrumbidgee River. Options 25, 16, 27, 30 and 31 are relevant to the upper Murrumbidgee.

Within the draft strategy option 30 is mentioned to address review of environmental flow rules in the Water Sharing Plan to allow the protection of environmental flows from extraction downstream of Tantangara Dam. Other priorities include allowing more flexibility as to how environmental water is planned for (currently it needs to be planned a year in advance) so it can be used to complement natural events, allow the ability to hold water between years and upgrading the offtake on Tantangara Dam to allow the capability to restore channel scouring flows. The latter would also assist to manage/prevent future dam spilling events as required by Snowy 2.0.

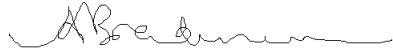
Adequate resourcing for an ecological response monitoring program and annual reporting to the community about the environmental flow program should be established. A funded catchment restoration program including both ACT and NSW is a priority to protect threatened fish species and improve the health of the river. This program should link in with existing programs such as the UMDR, Rivers of Carbon, Landcare and Local Land Services. An audit of ecological assets and sites in the upper Murrumbidgee and the flow regime required to support them must be carried out to support the restoration plan and watering actions.

- 6) Limitations of existing water infrastructure, delivery and operations, which hinder efficient water delivery. Limits to water availability in times of drought and as climate changes, which increases competition for water and could hinder growth and prosperity of the region's industries. Option 41 is relevant to the upper Murrumbidgee, and should include releasing water from the Snowy Hydro Scheme into the Murrumbidgee via Burrinjuck Dam, rather than via the Tumut River, with benefits to upper Murrumbidgee River health. An upgrade of the offtake on Tantangara Dam would assist with water delivery and allow for ecological benefits (such as sediment scour) which are currently prevented and contributing to the decline in the river's health.
- 7) Future pressures are likely to exacerbate the situation. Climate change will lead to an overall reduction in flows, coupled with an increase in water demand 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. Option 44, 47, 50 and 53 are relevant to the upper Murrumbidgee. Option 44 should complement an audit of ecological assets and sites (as mentioned above). Option 47 should work with existing stakeholders and programs and aim to engage Traditional Custodians. Option 53 is highly relevant as the upper catchment is likely to be severely affected by fire as demonstrated during 2019/2020. Planning

to protect important assets during and post bushfire needs to include planning to protect ecological as well as cultural assets and sites.

Thankyou for your consideration. Please note that this submission has been provided on behalf of the UMDR partnership. As such it does not necessarily represent the specific views of any one of our partners. Please do not hesitate to contact me if you would like further information.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Antia Brademann', written in a cursive style.

Antia Brademann
UMDR Facilitator
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22 May 2022