



NSW Department of Planning and Environment


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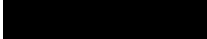
Dear Regional Water Strategy Team,


RE: Feedback regarding the Murray Regional Water Strategy- Climate and Hydrological Modelling, and Regional Challenges


Thankyou for the opportunity to provide feedback to the Draft Murray Regional Water Strategy which includes Climate and Hydrological Modelling and Regional Challenges.

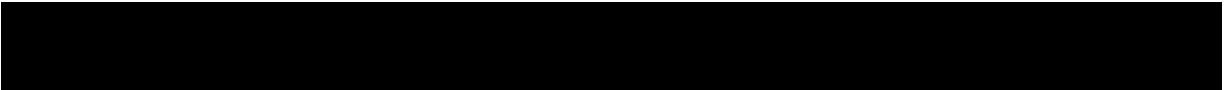
 encourage Governments charged with developing future water sharing policy in the face of a changing climate to take action to encourage diversity in irrigation water use between those with high per/ML returns that need absolute certainty of supply in all years, and those that can thrive utilising more variable irrigation water availability.

Importantly, in a changing climate, water managers should not develop policies that enables a small cohort of irrigators to achieve the maximum possible return per/ML at the expense of whole irrigation communities. More adaptive irrigated industries that are better suited to utilising irrigation water in wetter years and can reduce the area irrigated in droughts must be encouraged through an adaptive and thoughtful water sharing policy.

 is concerned that the reference to more extreme dry scenarios outlined in the report, without the balance of some of the more positive outlooks that were also developed, may encourage some groups to call on further universal reductions to water diversions for agriculture.

 recognises the current interstate and NSW Murray Allocation policy and practice for all water users is at its core well designed to recognise a changing climate, and how water can be shared in seasons with less water available.

Although not everyone agrees with the certainty surrounding a changing climate, and particularly the impact on future water availability,  acknowledge and recognise its importance in shaping government action, and that for any future government, climate change science and improved scenario modelling will be a cornerstone of government policy. Importantly we note the significant



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difference in the report in regard to historic water availability (both 130 year and long term), and the dryer-end forecast based on significant climate change predictions.

As the 'long-term historical modelling' has considered, we are cognisant that there will be a changing climate and even higher water supply variability, requiring climate adaptation by all. We understand that a repeat of the drought sequence experienced early in the 21st century, 2007-2009, or even worse, is plausible and could occur in a future series of seasons. We also agree with the statement in the modelling report that *'using a dry future climate scenario may not be the most appropriate upon which to solely base our future water decisions'* and would consider it appropriate for the NSW Government not to make any water sharing decisions based on this dramatic scenario modelling in the near future.

After a number of water management changes that occurred in the Murray in 2004/5, it is now clear that improved resilience could be developed through water managers recognising the trends towards lower utilisation of water relative to annual volumes allocated and that there may be opportunities to further adjust allocation policy to become more adaptive, recognising greater climate variability.

We want to reiterate our concerns outlined in our submission to the RWS on the long list of options (May 2022) in regard to updated climate and hydrological modelling and regional challenges. To prepare for a drying and more variable climate, we want to see the allocation framework reviewed (RWS - Option 9) and investigate land use change and more carefully consider the projected population growth impacts on water resources (Option 14).

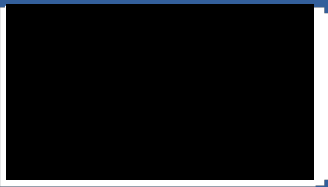
Quoting the Commonwealth Government, for climate adaptation to be successful¹ it should:

- be place-based, community-led and values-driven so that adaptation is tailored to the specific areas and communities that will be impacted.
- involve everyone, because there are a range of related impacts and different levels of government, households, businesses and community organisations all have different but complementary roles in an effective whole-of-nation response.
- be underpinned by recorded data, the best possible science and considered analysis to inform decision-making, to help prioritise areas for adaptation, and to enable decision-makers to choose the best responses.

We want to see the water allocation framework and the protection of irrigated agricultural diversity prioritised for adaptation. There needs to be recognition of the importance and value of supporting diverse irrigated agriculture as an adaptive strategy, regardless of changes in overall water availability. Like all water users, [REDACTED] is committed to opposing strategies which will lead to irrigated agriculture being decimated through policies that further narrow the type of agriculture that leads to further reductions in water use relative to announced allocation, and reduces diversity in irrigated cropping throughout the NSW Murray Valley.

¹ DCCEEW website - policy on climate adaptation. [<https://www.dcceew.gov.au/climate-change/policy/adaptation>]

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We do not want to see the continued encouragement² of moving from 'lower value' to 'high value' irrigated crops at almost any cost (under the guise of enabling communities to economically adapt). Such measures have the potential to conflict with valley-wide resilience if we move into a period with a dryer climate and more variable rainfall and run off.

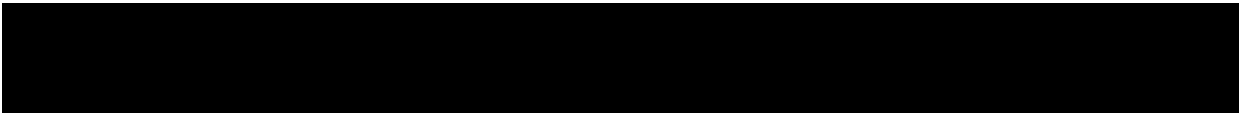
Under the current allocation framework, the implications of overly conservative water storage policies that in future may result from attempting to conserve water for 'higher priority uses' and the potential for consecutive 0% annual allocations to NSW Murray General Security Entitlement holders (or GSE) will inevitably mean wiping out communities of irrigators, businesses, jobs, and processors in large areas of the Murray Valley. This is on top of the impacts of any further environmental water recovery through 'buy-backs' currently proposed by the Commonwealth.

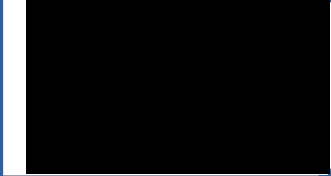
Given the projection that the climate in future will be even more variable, we ask that there is an opportunity created for further expansion of the recent policies which have enabled allocation of more water during periods of high rainfall and high stream flows, which we have referred to as a 'wet year allocation policy'.

This is because under a 'dry future climate' scenario (within the context of the current allocation framework):

- **High value per/ML crops (almonds, stone fruit, grapes)** have little or no flexibility in regard to annual water demand, (although some of these crops are undoubtedly effective in terms of raw \$/ML generated in *most* years). The risk to these crops from having very low volumes of available water in a reduced pool during a prolonged drought would be catastrophic for those engaged in these industries. High value permanent tree crops incur a significant upfront investment per Ha to develop, and require at least a decade of year-on-year water certainty to provide a financial return. There is very little scope for these crops to survive without water for a single season.
- **Lower value per ML applied crops (rice/cereal/pasture)** have a much greater deal of flexibility in their water demand and should form a large component of typical NSW Murray Valley water demand. The risk of having no water in some seasons is painful for broadacre irrigators of annual crops (the dominant group of users within   area of operations) in the short term, but these users can quickly recover. This recovery can be enhanced through the considered and adaptive introduction of increased allocations in wetter seasons.

² 'Encouraging' refers to the policy of the last two-decades to encourage modernisation and shift to high value agriculture (i.e., economics policy to enhance business by growing high value crops, development approvals, water entitlement and allocation trade policy, carryover policy, Commonwealth funded water-for-infrastructure, federal government taxation policy which encourages more horticultural developments.





Our industries will not survive on zero or even regular minimal allocations, and nor will a large new area of high value horticultural crops, because the allocation framework is too rigid and not well designed for a more 'highly variable future, (larger) changes in seasonal rainfall and unpredictable'- which is what the modelling tells us we should expect in the future.

Specifically, if there is a rapid and reactive response and changed water conservation policies as a result of the modelled dry future, that further prioritises water conservation for 'high value crops' by simply putting more water each year into reserves to maintain insurance for 'high value' crops, it will result in even less water being allocated to NSW Murray General Security Entitlements. This will reduce water availability for the growers of annual crops in all seasons; reducing the extent of irrigated agriculture and forcing broadacre irrigators to seek new employment. This will change the regional landscape, population-mix and the dependent economy throughout a large area of the NSW Murray Valley.

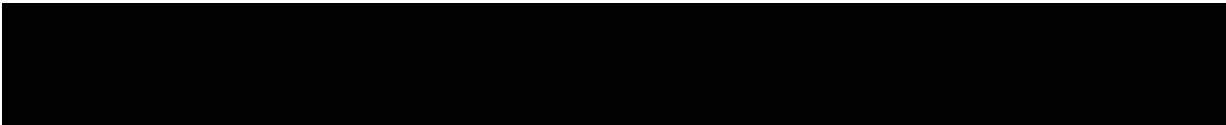
As an 'irrigation' water service provider, [REDACTED] is aware that in successive dry years, water infrastructure bills payable by irrigators using very little water may go unpaid, infrastructure will not be utilised (and may become stranded) and there will be potentially devastating circumstances for communities.


Without a policy that shares the burden of changing water availability, the NSW Murray's irrigators could all be severely impacted by several successive dry years. There is no argument that the NSW climate and therefore water availability is variable, and therefore [REDACTED] encourage Government policy makers to work with the entire spectrum of water users to create the most resilient community of water-users, to encourage water-use diversity and whenever possible, to make the most of the opportunities where there is more water available.

To support irrigators during the future extended dry periods, there is an opportunity to provide upside flexibility into Murray allocation policy, that allows the farmers to access a greater volume of available uncontrolled or surplus flows in years when surpluses clearly exist. It is noted NSW has made small but significant steps towards this end in the Murray Valley during recent years³. These measures have been well-received by irrigators, have not impacted water security for other users, and do not appear to have placed any significant upward pressure on upper-use limits (or SDL's) now firmly embedded in water planning framework throughout the Murray Darling Basin in NSW.

When making any further decisions related to future water management and water sharing, and particularly future decisions based on this modelling, we urge the government to be transparent in all dealings. Key areas and activities by NSW Water managers where [REDACTED] believe increased transparency and meaningful consultation will build trust include:

³ In recent much wetter seasons, NSW have increased announced allocation of NSW Murray GS allocations (to 110%) and of NSW Murray Supplementary licence volumes (to 110%)



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- Reviews, application and management of the Snowy Hydro licence, and the related water releases to the Murray system
 - Dealings with other state agencies in Victoria and SA in regard to issues that will impact NSW Murray users.
 - Any proposed changes to the management of the Darling River water resource, both above and below Menindee.
 - Discussions within NSW agencies, and with other state and Federal agencies, related to reducing or altering 'run-of-river' or *Murray Conveyance* allowances, and potential savings in these very large volumes set aside for river losses.

In short, high levels of transparency build trust and empowers all parties to make better informed decisions. Any Basin strategy, or Murray river operating strategy, or change to sharing policy is flawed without the cooperation and shared vision of the Commonwealth, Victoria, and South Australian Government, in particular actions taken during an extreme drying event.

In addition, special attention is required to monitor any changes proposed by Snowy Hydro Ltd because of the important role SHL has played for more than 70 years in providing a significant base flow to the Murray river in almost all seasons.

Thankyou again for the opportunity to provide feedback.

Yours sincerely,

