

Regional Water Strategies,  
Department of Planning, Industry and Environment,  
Locked Bag 5022,  
Parramatta NSW 2124  
[REDACTED]

**Re: draft Border Rivers Regional Water Strategy**

Dear Sir/Madam,

Thank you for an opportunity to comment on the draft Border Rivers Regional Water Strategy (draft Strategy).

We live in Sydney but have a “bush” block at Duckmaloi, Oberon LGA. I have a keen interest in the preservation of our natural bushland, biodiversity and inland waterways. We have travelled extensively in central and western NSW. We are supportive of the various regional tourist initiatives that we encounter, and enjoy, during our travels. I am a member of various conservation organisations.

Inland NSW desperately needs a transparent and integrated strategic vision to ensure longer-term water security and reliability for NSW inland townships and industries. Such strategic vision will be critically important to develop appropriate water plans, policies and infrastructure investments able to mitigate and manage the impacts of a changing climate.

It is disappointing that this draft Strategy has been developed in the absence of a State Water Strategy provided for in the *Water Management Act 2000*. An overarching State framework that aligns with the intent of NSW water laws could facilitate informed decision-making processes at the local and regional levels to improve water use and management and guarantee water access for future generations.

An overarching strategy would ensure that consistent and co-ordinated regional strategies are developed with the capacity to take account of complex issues such as connectivity across and within water resources and the rights of First Nation peoples.

Overall, I feel there are basic failings in the draft Strategy that will limit its effectiveness to guide good local water planning for individual townships and its capacity to facilitate sustainable use and management of water resources within the Murray Darling Basin as required under water laws.

I have outlined my general and specific concerns below.

Yours sincerely

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## **GENERAL CONCERNS**

### **1. Purpose of Regional Water Strategies (RWSs).**

The stated purpose of RWSs is not clearly articulated.

In the draft RWSs generally there are statements such as “...bring together the most up-to-date information and evidence with a wide range of tools and solutions to plan and manage each region’s medium and long-term water needs.” and “...the NSW Government aims to achieve more resilient water resources for towns, communities, industries, Aboriginal people and the environment.”

However, it remains unclear how the purpose and intent of the draft RWSs fit within the legislative context of NSW water planning. Figure 5 of the Guide indicates a link between Water Resource Plans and RWSs in relation to Regulation but the flow lines for Infrastructure, Water use and water user behavior and Implementation of RWSs are not clearly articulated.

This means infrastructure and water policies could be developed that are inconsistent with the objects of the *Water Management Act 2000* “...to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations”.

This is major flaw within all of the draft RWSs exhibited thus far.

### **2. The draft RWSs lack rigor and transparency in options assessment process.**

The development of all Regional Water Strategies (RWSs) is long over due.

The NSW Auditor General clearly identified this in her recent report, Support for Regional Town Infrastructure. She observed that despite a 2014 government commitment to commence a regional water planning program only one RWS is complete. Due to this delay vast sums of taxpayers’ money have been directed towards projects that lacked transparent oversight or were not informed via strategic assessment priorities.

It is arguable as to whether the RWSs currently exhibited represent a change from this past government direction: the supposed evidenced-base, transparency and consistency of the options assessment process completely undermined by automatic inclusion of expensive “existing commitments” into the final portfolio of options to be ranked.

All options, including existing commitments should be fairly assessed via the transparent and rigorous process outlined in the draft WRSs. This is especially important since government assumes an improved water security in these commitments in the absence of business cases and cost-benefit-analyses.

### **3. Poorly presented and inadequate information on website.**

The Regional Water Strategies Government NSW webpage presents in a confused and dislocated way with information not centralised and accessible in any coherent way.

It seems that the documents about climate change modeling do not form part of the exhibition package for draft RWSs. This is a major oversight as this new information is critical in any meaningful understanding and public comment on the RWSs.

Despite a number of personal attempts it has been impossible to locate the Report of the Expert Panel chaired by the Chief Scientist that undertook independent review of the new climate model.

It is unreasonable for the community to be expected to accept government Fact Sheet statements that the method is “*fit for purpose*” in the absence of any independent review. The independent Review Report and full details about the new model should be included as part of a transparent public exhibition process.

### **4. Inconsistency in the way modeling information is presented.**

It is important that RWSs facilitate integrated sustainable use and management of inland water resources. It is of assistance to the broader community if information is presented in a clear and consistent manner. This does not seem to be the case in each of the four draft RWS currently on exhibition.

For example graphs, that outline predicted impacts of a changing climate on inflows and dam storage levels, vary across all four RWSs.

- The Border River draft RWS presents Pindari and Glenlyon dam inflows as historic records against mean and 2018/19 inflows (Figure 8) and comparative climate scenarios of when combined level is below 5% (Figure 14). Statements about lower inflows such as “*median annual inflows could potentially decline by approximately 45% if the worst-case climate change scenario were to eventuate*” are not presented clearly in a supporting graph.
- The Lachlan draft RWS, presents annual Wyangala Dam inflow records that stop at 2015 and do not include 2018/19 inflows (Figure 10). Monthly inflows are presented clearly under three different scenarios and presumably these records also cease at 2015 but this is not clearly stated in Figure 12. Presentation of Wyangala storage behavior is based on four different climate scenarios and includes “near future climate change (stochastic and NARCLIM)”. This is the only draft RWS that presents this scenario but its meaning is not properly defined/described in the supporting Fact Sheet and the link to more information is broken.

- The Gwydir draft RWS, represents Copeton Dam inflows to include the current drought. However, it compares worst minimum inflow over 24 months against three climate scenarios (Figure 10). Monthly inflows are presented similarly to Lachlan draft RWS (Figure 11).
- The Macquarie-Castlereagh draft WRS presents monthly inflows for Burrendong and Chifley Dams similarly to the two above RWSs except for the inclusion of a degree of confidence range (Figures 10 and 11).

The presentation of information such as dam inflows should be consistent and accessible for the general public to understand the information and make comment.

The supporting Fact Sheet, New climate analysis informs NSW's regional water strategies provides an explanatory example of the application of the new model for the Gwydir River system. However, it uses a graph presentation that is not carried forward into the draft Gwydir RWS, (though it this approach seems to be used in the draft Border Rivers RWS Figure 14).

I have not highlighted other discrepancies between the draft RWSs and their supporting documents but it is important that NSW strategic water planning is about factual and evidence-based decision-making processes underpinned by modeling data clearly and consistently presented to the public.

The public's confidence in NSW government management of inland waters has been shattered over the past few years. Government promises to improve transparency and rigor is arguably empty rhetoric for those laypeople interested enough to try and understand any improvement in inland water use and management achieved by adoption of the draft RWSs.

Further the tone of the language differs between the Guide and the draft Gwydir RWS. In its explanatory note the guide compares observed records which indicated Copeton Dam levels had not fallen below 5% with the new modeling stating that this new data "...*painted a different picture: the results show that Copeton Dam could fall below 5% capacity for longer periods than previously understood....the probability of this occurring is small.*"

However, the draft Gwydir RWS states: "*Hydrological models updated with more sophisticated climate data for this strategy found that: long-term data beyond the observed records shows Copeton Dam could fall below 5%, although it is unlikely.*"

It could be argued semantically that "*small*" and "*unlikely*" could mean the same thing, but when they are used within an evidence based modeling context, as government is promising in the draft RWSs, they mean different things. Given the guide states a four-fold risk increase of Copeton Dam falling below 5% it is innocuous language to state this is "*unlikely*" in the draft Gwydir RWS.

## **5. Lack of integration of draft RWSs within Murray Darling Basin.**

The failure of NSW water planning to take proper account of the complex connectivity within and between water resources in the Murray Darling Basin has been a major contributing factor to the significant ecosystem collapse witnessed by the broader community.

The first four inland draft RWSs do not seem to address this failure to facilitate the integrated water management required under NSW water laws. Attention to the way individual RWSs relate and integrate with adjoining water systems is critical for water planning especially in the absence of an over arching State strategic focus.

Connectivity for water systems covered by the four exhibited draft WRSs, either to the Barwon-Darling or another connected water system, is not consistently addressed. Only the Border Rivers draft RWS specifically addresses connectivity to the Barwon Darling River with Graph 16 representing the outcomes under different climate scenarios of monthly flows to the Barwon River.

I couldn't find information about predicted downstream connectivity under different climate scenarios in the other draft RWSs. I feel there should be improved attention to this important issue to ensure consistency and efficacy in NSW strategic inland water planning.

## **6. Lack of attention to how a changing climate will require changes to water use.**

While the new modeling data clearly indicates reduced inflows and lower storages not all draft RWSs address the response to water use patterns required in a more variable and changing climate. Only Border Rivers draft WRS includes a sub chapter heading on this critical issue.

Future water use patterns whether in regards to land use activity, town water recycling, ground water use etc need to be considered in all draft WRSs. Regional responses to water use in a changing climate will be different but a critical consideration in all future strategic water planning.

This is especially important for how regulated water is to be allocated in anticipation of reduced water availability for longer periods of time.

## **7. Failure to recognise current ecological condition of inland water systems.**

Part of the preparation of each Water Resource Plan (WRP) required NSW to undertake various assessments of the current condition of each WRP area. This included assessments of areas of high ecological value and the water levels in groundwater and/or aquifer water sources.

This should provide valuable information to inform the draft WRSs yet seems to have been ignored.

As indicated in Point 1 above, Purpose of RWSs, it seems from Figure 5 of the Guide that supporting plans and guides to WRPs such as Long term watering, water quality management and incident response are “sidestepped” in the preparation of RWSs.

This is a major oversight as the information about current condition of water sources and their dependent ecosystems is critical in planning for the future, especially with an increased dependency on groundwater extraction in drying landscapes and areas of recognised aquifer drawdown. Consistent with water laws is the need to protect water sources and ensure their future resilience in withstanding the impacts of a changing climate.

This should be forefront in strategic water planning however the draft RWSs seem to rely on a limited and somewhat perverse notion of “water resources”.

Testing the resilience of options in the draft RWSs is not the same as planning to ensure resilient water sources into the future. Planning for resilient water sources should be at the core of strategic water planning.

Clearly the capacity of water sources to withstand the extreme events identified in the draft RWS will depend on their current condition and their future management. This benchmarking will be critical in complex interconnected and over-allocated systems as they face the impacts of a changing climate.

It needs to be clarified as to whether the resilient water resources described in the draft Border Rivers RWS<sup>1</sup> as “...*those that are able to withstand extreme events, such as drought and flood, and/or adapt and respond to changes caused by extreme events.*” are synonymous with the water sources to be protected under water laws.

The Matthews Report and recent ICAC investigation into water management both identified significant concerns with the sidelining of the expertise of the specialised arms of government representing environmental interests. Good water management policy must take account of the ecological condition of all water sources but this is not reflected in the draft RWS.

## **8. Apparent failure to properly account for risk to future water availability in strategic water planning.**

Strategic water planning for future regional water security and reliability must take proper account of current/future identified and potential risks to water resources including to their water quality.

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<sup>1</sup> This was the only draft RWS observed to have a dictionary.

Comprehensive risk assessment was undertaken as part of the preparation of WRPs yet it is hard for the broader community to understand how government has incorporated the results of this risk assessment into its regional strategic water planning approach.

There is need for government to restore public confidence that strategic water planning will reverse ecosystem collapse, ensure future clean drinking water reliability for regional towns and an adequate quantity of cultural and spiritual water for First Nations people. How government intends to protect water sources from further degradation needs to be more clearly stated in the draft RWSs.

### **SPECIFIC CONCERNS FOR BORDER RIVERS DRAFT WATER RESOURCE STRATEGY**

As identified above the draft RWS has some features that should be included in all RWS ie recognition of the importance of connectivity with the Barwon-Darling water system and a sub chapter on water use in a more variable and changing climate.

However, the approach of the draft RWS to meaningfully address these key concerns is very disappointing.

Regarding connectivity with the Barwon-Darling: this important connectivity corridor is stated in the draft RWS to deliver “*..essential ecosystem flows..*” and essential for Aboriginal people’s health, wellbeing and connection to country.

The long-term average of total monthly flows from Border Rivers region to the Barwon are predicted to plummet for all months except April in the long-term climate change scenario. The median volume of water flowing in the Border Rivers region could reduce by 45%. The magnitude of high flow events occurring within 2-3 year intervals could be reduced by around 50%. The number of times both regulated and unregulated rivers could stop flowing could increase by about 20%.

Despite all of the above the best the government can propose in the draft RWS are proposals to regulate an unregulated river system that are stated as commitments rather than options and a possible option to prepare fish passage strategy. This provides clear demonstration that the draft RWS is not about sustainable use and management of NSW Border River flows but increased extraction from a water system already known to be over allocated.

Government commitments as part of the Northern Basin Toolkit measures should be fundamental to the strategic direction set by the draft RWS rather than a possible option.

Regarding the important matter of water use in a more variable and changing climate: even though the Border River draft RWS clearly identifies impacts on water resources arising from a variable and changing climate, that water access could be impacted by 40% and that current water sharing rules lack the capacity to manage future climate variability and more frequent and severe drought occurrences, the best the government can propose is a set of options that should be happening already and research into substituting cotton for higher value legume or speciality cropping, the results of which won't be available for 2022.

The draft RWS refuses to acknowledge that the current over allocation of water resources will only be exacerbated when the conditions of the predicted climate scenarios hit communities within the Border River region with catastrophic consequences. There is need for urgent genuine reform of water sharing plans managing access to both depleted surface and ground water resources and ensure sustainable levels of extraction. Great Artesian Basin water resources are also adversely impact by these unsustainable levels of current extraction.

This will be critical as floodplain harvested waters, estimated to represent about a third of water take within Border Rivers are brought into the licencing regime. The modeling underpinning the process to take proper account of floodplain waters is felt by many to lack rigour and transparency. It is impossible to access public information about the independent review which confirms for many that there are significant inadequacies and knowledge gaps in understanding how much water is being taken and the interconnectivity within and between complex water systems.

The draft RWS must set a strategic direction to genuinely achieve improved outcomes for river health, native fish, waterbirds and wetlands. Robust modelling is fundamental in working towards this achievement.

The options listed below **have merit** but likely unable to be funded because of the expensive proposed infrastructure projects stated as existing commitments in the draft RWS.

These are:

Option 10 : fish passage strategy

Option 11: screening pumps to protect fish from being sucked out of the river

Option 12: fixing cold water pollution

Option 13: restore water quality

Option 9, 14, 35, 36, 37, 40, 41: groundwater - managing salinity, monitoring, sustainable access, research, cross-border management, fractured rock aquifers

Option 15: managing structures on floodplains

Option 16 & 17: private land incentives and riparian restoration

Option 19: protecting environmental flows.

Option 20: Improve benefits of Planned Environmental Water

Option 21: active management to protect environmental water - should be identified as a commitment under the Northern Basin toolkit measures

Option 22: Improved management of unregulated rivers  
Option 23: improve connectivity with Barwon-Darling  
Option 24: protecting groundwater dependent ecosystems

Options that **improve First Nations capacity**, engagement and employment in water management, and that recognise the significance of cultural knowledge and improve cultural outcomes must be prioritised as commitments.

These are:

Options 42 - 51: Recognition of cultural knowledge, water rights and interests, Secure flows for cultural sites, Aboriginal River Ranger program

Options that **reduce water consumption** in towns and industry and **improve efficient use of water** should already be happening and must be stated as a commitment.

These are:

Option 18: impacts of land use change

Option 26: Reuse, recycle and stormwater harvesting

Option 27: water efficiency opportunities – this option must include managing high evaporation rates from on farm storage.

Option 30: review drought of record and allocation process in water sharing plan

Option 38, 39: extend cap and pipe the bores program, manage Great Artesian Basin

Any proposal to divert coastal waters to the inland (Option 8) is strongly objected to.

As indicated throughout my submission the proposed infrastructure projects identified as commitments undermine any meaningful strategic direction the draft RWS can set to drive sustainable water use and management in the Border River region. They are political commitments that have no evidence base or science to support them, let alone a required business cases.

Increased regulation will further alter the natural flow regime of rivers in the valley, impacting native species and ecosystems already severely affected by climate variability and over allocation.

In conclusion, the draft RWS is a disappointing document lacking strategic vision to achieve sustainable use and management of Border River water sources.

Thank you for an opportunity to comment.

Yours sincerely,

