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

Re: draft Gwydir Regional Water Strategy

Dear Sir/Madam,

Thank you for an opportunity to comment on the draft Gwydir 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

[redacted]

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 (WRPs) 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 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 RWSs. This is especially important since government assumes improved water security in commitments have been automatically included 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 as confused and dislocated 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 to consider this 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 Gwydir draft RWS (Figure 11).

- The Macquarie-Castlereagh draft RWSS 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 reasonable 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 rigour 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. Attention to evidence based comments should occur across all draft RWSs.

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 RWSs, 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 RWS includes a sub chapter heading on this critical issue.

Future water use patterns in regards to land use activity, town water recycling, ground water use etc need to be considered in all draft RWSs. 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 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 RWSs 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 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[1] 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.

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.

[1] 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 access and 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 GWYDIR WATER RESOURCE STRATEGY

The enlargement of Tareelaroi re-regulating weir is extremely detrimental to the Gwydir Valley where significant deterioration of river health native fish population has been identified. This project will capture more environmental water and reduce flows into the important Gwydir wetlands and compromise connectivity with the Barwon-Darling River.

There seems a presumption in the draft Strategy that existing environmental deterioration can be addressed by bundling existing commitments such as Tareelaroi weir with options that may have environmental benefit for impacted downstream ecosystems. However, this represents a very skewed assessment process.

Genuine options to improve the **environmental health** of the Gwydir Valley are completely disadvantaged by the compromised options assessment process outlined in the draft Strategy.

These include:
Option 9: removal of constraints to delivery of environmental water. This is a project identified under the Basin Plan Constraints Measures and the Northern Basin toolkit measures. This project should be identified as a commitment.
Option 10: improved fish passage
Option 11: existing commitment – directing supplementary environmental flows
Option 12: fixing cold water pollution
Option 13: screening pumps to protect fish from being sucked out of the river
Option 14, 15 & 16: research into groundwater health and sustainable access
Option 17: existing commitment - active management to protect environmental water
Option 18: managing structures on floodplains
Option 20: restore water quality
Option 24: connectivity with downstream systems

Options to **improve connectivity** to downstream wetlands and important waterbird breeding habitat should be considered as part of the suite of options to improve the environmental health of the Gwydir valley.

Options to improve **water use efficiency** should be given high priority and include:
Option 3: Reuse, recycle and stormwater harvesting
Option 22: water efficiency opportunities – this option must include managing high evaporation rates from on farm storage.
Option 28: review drought of record and allocation process in water sharing plan
Option 32: impact of land use changes

Options that are related to **demand management** need to be prioritised over water supply. Access to water allocations is predicted to be reduced with a changing climate and current levels of over allocation will not be able to be supplied reliably. Subsurface or drip irrigation has potential to reduce water demand from intensive cropping and should be included as an option.

Some options likely to cause environmental harm **need to be removed** from the options lists. These include:
Option 26: addressing transmission losses (these are planned environmental water under the NSW *Water Management Act 2000*)
Option 27: new drought operational rules. Cutting the river off is not a good option

The draft Strategy identifies that **floodplain harvesting** makes up a third of Gwydir water use. This is a phenomenal amount of water that is currently unlicenced and unregulated. The cumulative impact of floodplain harvesting in the northern Basin has had a significant adverse impact on downstream river health, groundwater recharge and water security for downstream communities.