Comments on Options

- diversification of water supplies (solution Dungowan) Namoi Water does not have a view on the dam upgrade expect to state that there is no clarity regarding where the "extra" water is coming from? There remain significant barriers to this project and they should be assessed carefully.
- Namoi Water members do not support any proposal to merge the water storage infrastructure of the Namoi and the Peel. Several past submissions have been made on this matter and to quote one Peel farmer "why would you give the Namoi a broken leg too? We already have one there is no sense in crippling two valleys". This relates not only to pricing but also market issues and the real risk of water shift. The problems of the Peel are clearly created by IPART keeping the fixed charge low and increasing the number of sleeper licences to the point that there are such a small number of Peel farmers actually farming primarily due to the cost of water and poor returns for the industries available in the climate/environment unless they are of intensive or industrial nature.
- protecting natural systems such as improving river connectivity, please provide how you intend to do this without having an impact on the existing water licence reliability? The removal of fish barriers is laughable, Namoi farmers committed to three weirs when Keepit was upgraded (Mollee, Gunidgeria and Weeta Weirs) for an estimated cost of $10 million for the fish offset. Given Fisheries and Water NSW have spent the last **8 years** debating the quantum of fish passage the price of Mollee blew out to $10 million and we still have no evidence that the fish are passing through because there is no baseline data. Further Gunidgera has been delayed over the last three pricing determinations and now is under a new cost sharing of 80% being funded by the farmer instead of 50/50 as per the agreement when the fish offset was approved. This does not meet with your principle of affordable cost structure. How government can grossly inflate the cost of infrastructure to such an extent by bureaucratic delay is beyond an episode of utopia and these issues should be clearly noted in this report.

Context

The millennium drought was not the drought of record for the Namoi. Where have the community insights come as per the snapshot comments on page 23? Which community and government agency collated these responses?

The aim to bring together updated information to plan for medium to long term water needs is supported however as above how this was done is not clear given the lack of engagement with water users as a key stakeholder.

The NSW Government agreed in the Water Management act 2000 to a triple bottom line approach.

It is unfortunate that steps 1, 2 and 3 were done without consultation with regional communities. It is a consistent criticism across NSW that these plans have been done in silo engagement without transparency in the early formative stages.

1.3.2 Existing studies

The 20 year infrastructure plan was not costed, it is a cobbled wish list of options that were presented and not discussed nor adjusted after feedback from stakeholders.

The Long term environmental water strategy is a commonwealth document that is to inform how environmental water should best be used. It has significant gaps in the

assessment of risk and this was highlighted in the feedback to the Namoi Water Resource plan. Attached to this document is our submission on that plan and we STRONGLY reject the use of this document in any context other than as information about how water “might” be used in different climate scenarios.
“We have continued to talk with councils and water utilities about their thoughts on what the Namoi Regional Water Strategy could cover.” As per the above it appears the lack of engagement with all stakeholders has limited the scope of the strategy as being primarily about town water supply. If this is the engagement model and outcome then the strategy should be adjusted to reflect the actual approach taken. To make statements about connectivity, water models and water sharing plans there should have been significant engagement with a broader range of affected stakeholders. Covid is no excuse for non engagement with other stakeholders.

Page 32 supports the view that this document is focussed on town water supply, perhaps it can be reframed on this basis as it is clear there is limited effort on the other components of water management within the region.
Responding to drought, of the $4 billion how much has been spent in the Namoi? How much has actually been spent and what outcomes were delivered in terms of physical infrastructure and changes to water security? What is the change in NSW Water security as a result of this funding?
Opportunities and Challenges
“If we do nothing, towns that rely primarily on surface water could face more extreme water security risks under the worst-case climate change scenarios”. Given the ground water resources of the Namoi provide for a significant risk management tool against this issue where has this been included in the modelling of water availability, community requirement and assessment against shocks and changes? Please provide a response to this question.
“The Namoi region provides water for critical human and environmental needs downstream—contributing, on average, 24% of the inflows into the Barwon-Darling River” This statement is false in the context of drought and extreme low supplies. The Namoi is not connected consistently to the end of system nor is the Barwon Darling. This is not just a function of upstream demand it is a function of water availability and rainfall.
“Securing intra-valley connectivity from the Peel and Manilla Rivers into the Namoi River will be critical to securing end of system flows to the Barwon-Darling River” Again this statement appears to have been made without looking at the data, 95% of the Peel flows into the Namoi. In a drought sequence the river drys up and does not connect unless it is released water.
“The overall ecosystem health of the Namoi region (including the Peel River) is poor and the region’s fish community is in very poor health.” Again this is a broad brush statement, the health of the Namoi and Peel in hydrology is good, the impacts on fish are largely to do with introduced invasive species, over fishing, poor riparian management and fish passage (as well has barriers to restocking).

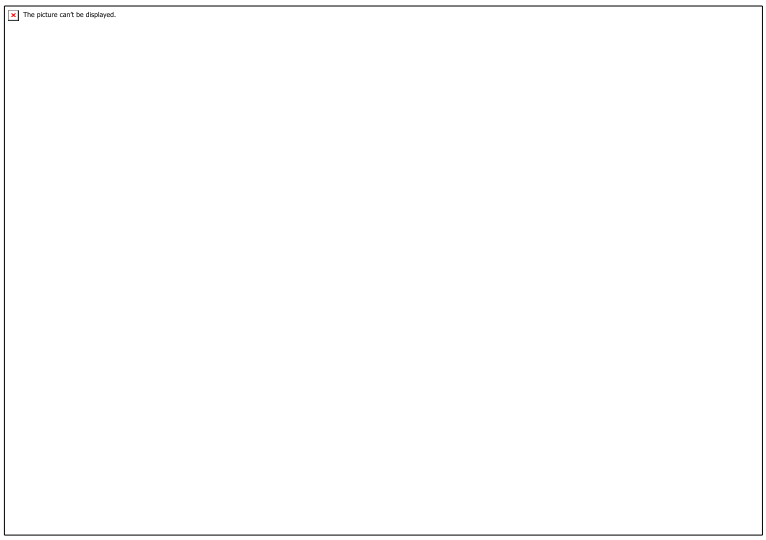
“There is potential for increased likelihood of mass deaths.” There has been a long history of fish deaths across all river systems in extreme drought, this is not new.

When you trap fish in small area and you have an inversion of climate removing oxygen this results if fish deaths. This was a function of mulitple issues, not just the drought.
We have an already altered system, rail and roads impact on how water moves across the landscape farming practices in particular landscape management affects water movement. We have regionally developed towns because of storages and water security. The statement that we could further regulate the river or natural flow regime is not necessarily going to result in negative impacts.
Evidence has been used to determine resilience targets as per our catchment action plan, these are a far better method to assess changes to the catchment system.
Namoi Water strongly recommends the Regional Water Strategy use the risk resilience products developed by the Namoi CMA as a starting base for assessing the challenges and impacts on the region.
The opportunity to explore ways to mitigate risks and improve fish passage should be looked at as to why and who pays.
“We need to better manage groundwater resources.”
This statement is insulting, the Namoi Farmers voluntarily gave up water long before the department recognised the issue of declining water levels. They led the way in terms of assessing groundwater conditions and ensuring sustainability.
It is recognised the Namoi is one of the most developed groundwater systems, it also has one of the largest monitoring networks, it also has some of the most proactive farmer bodies in terms of understanding risks, and managing water sustainably. We have engaged on Groundwater with our hydro closely since the development of the Water Sharing Plan, we implemented reporting structures to manage compliance, we provide ANNUALLY to our farmers the hydrographs for their zones and we regularly request status updates from the department. To date our groundwater model that was supposed to be updated in the first iteration of the WSP has not been updated, we are still waiting now 3 years overdue for a peer review of the groundwater model. We engage our own hydro to review the model and consider data requirements to ensure we can manage the resource without causing decline. The statements around groundwater in this section are uninformed and without context.

“We need to use groundwater more sustainably, innovatively and efficiently to provide a secure supply for towns and industries during dry periods and continue to support vital ecological processes and assets.” In this case has the RWS team looked at the hydrographs around the town bores and considered where impacts occur? There is limited irrigation surrounding most town water supply bores, Namoi Water looked at the hydrographs during the drought and then matched this to the groundwater atlas to determine if extraction was impacting town water supply. It is not clear how the RWS team can make this statement given the detail of the data that would have been available to them. for this planning process.

Climate
Can the RWS re-run the climate data with the last 18months included, as it would change all the graphs presented to the community on storage volumes, rainfall and climate. Whilst using droughts to prepare for the next one is prudent, to suggest that

this is the “new norm” is also inappropriate.
Given the climate records and predictions are highly variable, whilst the Stochastic is a new method it is not necessarily a silver bullet to preparation for variable climate which includes both wet and dry. The data shows that Split Rock is a white elephant, its expensive, it doesn’t fill very often and the region would have been better off with an augmented Keepit.
“During times of low flows, extraction of water for harvestable rights may reduce the available water for the environment and other essential needs.”
Is the strategy suggesting that harvestable rights can be switched off and on? It is largely stock dams and fill by gravity without the capacity to prevent inflow.
The further we go into this submission the more irritating the 24% average annual inflows is – it is mind boggling that in a document that is primarily about drought management for town water supplies that this is even relevant in the context of planning. Over 90% of this connectivity is when it floods. Please look at how often the Namoi connects in low flows under natural compared to current development, how the water sharing plan compares to current conditions. The data suggests that the Namoi is delivering significant improvements in low flow connectivity as a result of headwater storage and regulation.
“However, some communities downstream of the Namoi region have been requesting additional measures to improve connectivity between water sources. This means that the Namoi Regional Water Strategy will need to consider connectivity…”



Connectivity is undefined, what is the level of water required for critical human needs in downstream communities? Where is this articulated and quantified for the Namoi RWS to even consider how it would contribute to this outcome?
Menindee Lakes is one of NSW most inefficient shallow storages, the evaporation rates are the highest in the state. The lakes are not natural they are artificial and the public works reports which one assumes the RWS team has take the time to access from the archives to determine the “natural” versus the “manmade” requirements.
The NSW Government appears to be confusing this issue given the Land and Water Commissioner report NSW River Data Project does not appear to have been taken

into account. Cease to Flows pre and post 1950 have not significantly changed. What has changed is the releases from Menindee by the Commonwealth drawing down the lakes from full storage rapidly in 2016/2017.
https://www.industry.nsw.gov.au/__data/assets/pdf_file/0008/163754/barwon-darling-menindee-lakes-and-lower-darling-data-package-july-2019.pdf
Floodplain Harvesting
"The total surface area of on-farm storages in the Namoi catchment is estimated to be about 104 km2— nearly twice the area of Sydney Harbour (55 km2). These private on-farm storage structures capture rainfall runoff or store water extracted from the region's rivers and aquifers, including supplementary water from tributary flows. Water is stored in these private on-farm storages for use on irrigated crops. These storages help to buffer the variability in water availability in the region and periods of reduced supply. Most of these storages are located on the plains adjacent to the Namoi River."
Why do we use Sydney harbour here? Why don't you contextualise this and compare how much headwater storage the Namoi has to other valleys? Why don't you compare north to south in terms of headwater storage and then water charges? Why do we have on farm storages? Where is your reference to the EP & A act? Where the reference to the government river operator in the 1960's advising farmers they would have to store water on farm because it could not be delivered? Where is your reference to the Commonwealth funding of storages in the Namoi for efficiency that has created an additional 90 000 ml of farm storage? Is FPH significant in the Namoi in terms of other water sources and in terms of the volume of water available when FPH is stored or captured? There is no context here in terms of when large amounts of FPH is taken it is when there is a major flood and as a proportion of the event the department have already modelled this is less than 1% of the overall flow. This data was available to you because clearly you have a range of FPH data in terms of storage numbers this work was done by the department and should have been included in this report, but appears to have either been misused or cherry picked.

Groundwater

In terms of compaction the plan rules provide sufficient protection, they are overly conservative and to date the recent study of subsidence in the Lower Namoi has not detected any change.
The decline of 2m was accepted as part of the Water Sharing Plan is variable across the groundwater zones and has not occurred consistently, again this is a broad statement that can be misconstrued. Zone 12 is unique and is not as a result of groundwater abstraction and it is well known that this is a function of a range of issues relating to unregulated access, resource constraints and access in adjacent groundwater zones.
Water and the regional environment
"Very little riverine or floodplain land is under conservation.64" Namoi Water is not sure why conservation management is necessarily the answer here. If we manage our riparian areas in the manner in which the catchment action plan proposed with fencing of riparian zones, cell grazing and allowing grasses to stabilise the banks it demonstrates that conservation aims can be met.

Figure 23 GDE, Please note these are possible GDE systems given the lack of data informing this model the groundwater team provided clear commitment that this work would be referenced appropriately. It is not an indication of GDE, it is possible presence, this data has not been ground-truthed and nor has the reliance relationship been proven. Namoi Water strongly objects to this data being used contrary to the commitment provided by the researcher, by the Groundwater team and in the Namoi Groundwater sharing plan.

HEVAE is also not ground trothed – the tools being referenced in this report have been cobbled together using a “greenness” index from spatial mapping. Namoi Water notes that the peer review of the EES method acknowledge the significant gaps in this method and it would only be used along riparian areas as that is the area that the CMA conducted square meter floristic studies using ecological some 10 years ago now. Please correct your report to reflect this uncertainty.

Page 85 the Namoi contributes a significant portion of flows in floods. Please correct this misrepresentation in the report. This is not a European river, this is not a snow melt system, the Namoi is an ephemeral River system that connects with rain fall. Please reference it as such.

“Diversions can impact on native fish populations, with a single water pump removing up to 800 native fish per megalitre of water extracted.73 There are 2,317 pumps ranging in diameter from 200 mm to 1250 mm are distributed across the Namoi and Peel River systems.”