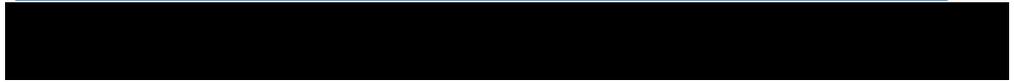




Peel Valley Water Users Association Inc

The only organisation that represents the Irrigation Industry in the Peel Valley



Response to the Draft Namoi Regional Water Strategy

(released March 2021)

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Notes:

1. The comments in this response relate to the Peel Valley, and are not intended to make representations on behalf of the Namoi Valley
2. The draft Namoi Regional Water Strategy consists of three separate documents totalling 358 pages. This response attempts to cover all the three documents in the draft strategy.

Executive Summary

The Peel Valley Water Users Association (PVWUA) has been representing the irrigation industry in the Peel Valley for many years. Its members include some two hundred licence holders who hold surface water licences from the Peel as well as Groundwater licences from the Peel Alluvium and other unregulated and regulated sources of water in the valley.

The members produce a wide variety of crops from their irrigation enterprises from fodder to grain to speciality products and their produce is an important part of the regional feedstock industry as well as the local equine sports industry at Tamworth.

In response to the Draft Regional Namoi Regional Water Strategy the PVWUA makes the following key points:

- The Strategy has been prepared without any input from the local irrigation industry and accordingly, lacks representation of appropriate stakeholders' views.
- As a result of this lack of consultation, the strategy contains incorrect statements, misleading statements, unsubstantiated statements and inappropriate inferences.
- The strategy fails address the key issue and to confirm whether the proposed Dungowan Dam will secure the water requirements of Tamworth Regional Council with a projected population of 100,000 in 2041.
- The environmental credentials of the Peel Valley are overlooked in the Draft Strategy with no recognition of the small irrigation water take or the unreasonable impost of an Environmental Contingency Allowance when other dams in the region are not so burdened.
- The Draft Strategy seems to indicate that it wants to change the Water Sharing Plans but we believe it does not have the same status as the Regional Water Sharing Plans which have been created after many rounds of consultation and engagement with all affected stakeholders, and have the legal status to deliver their plan.
- The Strategy has an overdependence on Modelling which has meant it has lost focus on the next 40 years.
- Many of the long list of options appear to be outside the scope of the Draft Regional Strategy to "deliver the right quantity of water, of the right quality, for the right purposes, at the right times" for the next 40 years.
- We believe other options to service the needs of the Tamworth Regional Council and subsequently, the irrigation industry, such as a pipeline from Keepit Dam, should be given more attention.

Because of these failings we believe the document needs much more consultation and work before it could be finalised and released to the general public. We look forward to the opportunity to participate in future consultation.

Each of these points is covered in more detail below.

The Draft Strategy has been prepared without any input from the local irrigation industry.

The local irrigation industry contributes a large share of the costs of water in the Peel Valley, yet the Peel Valley Irrigators views were neither sought nor considered during the presentation of the Draft Strategy. It is apparent that some other interested parties, such as the Tamworth Regional Council, were consulted. Regarding the modelling of future weather conditions, no mention is made in the document about input to the strategy from the Bureau of Meteorology. Was the BOM involved in the strategy, and if so, to what extent?

No mention is made in the strategy document about any involvement with Water NSW. Was Water NSW involved in the strategy, and if so, to what extent? Specifically, was the Water NSW Asset Planning team involved in compiling and assessing the list of options?

This flawed approach to consultation has meant there are some obvious problems with the Document which will need to be corrected before it can be considered properly.

As a result of this lack of consultation, the strategy contains incorrect statements, misleading statements, unsubstantiated statements, and inappropriate inferences.

Throughout the Document there are things that could be considered incorrect or inappropriate to the Peel Valley, with no recognition of the variety of environments and river conditions which are found in the Namoi Region.

For instance, there is no recognition that floodplain harvesting is restricted to the Namoi Valley and is not present in the Peel Valley. Similarly, harvesting water into Water storages is a practice in the Namoi Valley but not in the Peel Valley.

These, and other, incorrect statements have been highlighted throughout our response and they should be corrected before the Strategy is released.

The Strategy fails to confirm whether the proposed Dungowan Dam will secure the water requirements of Tamworth Regional Council with a projected population of 100,000 in 2041.

The draft strategy aims to “deliver the right quantity of water, of the right quality, for the right purposes, at the right times” for the next 40 years. During that time, the proposed Dungowan Dam will be completed, and the draft strategy acknowledges that Tamworth intends to reach a population of 100,000 people – about double the current population.

But the strategy does not clearly state whether the proposed Dungowan Dam will provide the required volume of water for that level of population. In a report prepared by GHD for Water NSW, Tamworth Regional Council’s own figures for the water needs of 100,000 people is around 24GL annually – far more than Council’s current entitlement of 16.4GL from Chaffey Dam.

Where does the strategy consider the shortfall in water availability will be sourced from? Why is this shortfall not highlighted as a crucial problem in the strategy? And why does the strategy not focus on solutions to this vitally important issue?

The draft strategy has failed to clearly state whether Council’s water security needs for the next 40 years will be met by the proposed Dungowan Dam. Therefore, it is impossible to properly prioritise the long list of options, and impossible to know whether any of them will address the significant shortfall.

The environmental credentials of the Peel Valley are overlooked in the Draft Strategy

Together, the Peel River irrigators and Tamworth Regional Council use less than 5% of the average annual flow in the Peel River and 95% of the long-term average annual end of stream flow from the Peel River enters the Namoi system.

The “environment” in the Peel Valley is entitled to more water from Chaffey Dam annually than all the Peel River irrigators combined. Moreover, once the “environmental water” enters the Namoi system it is no longer regarded as “environmental water”, and it is available to water users in the Namoi Valley. Why has this not been recognised in the draft strategy?

The volume of water used by irrigators in the Peel Valley is trivial compared to most other valleys in NSW, including the Namoi Valley. Some individual irrigators in the Namoi Valley hold an entitlement which is greater than the total annual extraction limit of all irrigators in the Peel Valley combined.

Both Keepit and Split Rock Dams are around 4 times the capacity of Chaffey Dam, and Copeton Dam is around 10 times the capacity. Why is Chaffey Dam, being the smallest dam in the region, the only dam in the region with an annual Environmental Contingency Allowance? Either all dams in the north west of NSW should have an annual ECA, or none should.

The Draft Strategy seems to indicate that it wants to change the Water Sharing Plans but we believe it does not have the same status as the Regional Water Sharing Plans which have been created after many rounds of consultation and engagement with all affected stakeholders, and have the legal status to deliver their plan.

It is illogical and unacceptable that Regional Water Strategies (which have had no input from stakeholders) could possibly have the authority to 'recommend changes to' the existing water plans that have already been developed with proper stakeholder consultation.

Water Sharing Plans are the legal instruments by which water resources are managed. These Plans are intended to provide certainty and security for all stakeholders, and the concept that an ill-informed and unrepresentative 'strategy' can take priority over the existing Plans and 'recommend changes to' them is unparalleled and completely rejected.

The statement that the strategy can 'recommend changes' ought to be removed from the strategy document.

Over the years, stakeholders have spent hundreds of hours developing the Water Sharing Plan, Water Resource Plan, and other documents relating to the use of water in the region. It is contrary to the basis on which all that effort was contributed to presume that an unsupported document would take precedence over the contributions of all stakeholders.

The Strategy has an overdependence on Modelling which has meant it has lost focus on the next 40 years.

The Strategy addresses the next 20 to 40 years. The priority of the strategy should be to focus on accurately predicting climate patterns over the next 40 years rather than attempting to predict climate patterns over 10,000 years.

Modelling is a tool that can be used to guide decision making. Modelling is not a reliable and accurate predictor of future events.

If modelling is such a dependable tool as the strategy suggests, where exactly was the severity of the 2017-2020 drought predicted, or the 2021 flood event? And when exactly is the next serious drought or flood predicted for the Peel Valley?

Figure 12 of the Guide implies that 10,000 years of climate variability risk data can result in plausible climate change projections. However, the reality is that out of the 10,000 years, there are only 130 years of recorded data which is reliable. There are about 500 years of 'reconstructed' historical data and the balance of the data is modelled future data. With only 130 years of actual data out of 10,000 years of 'data' (1.3%), there is enormous scope for error in the modelling outputs, both retrospectively and into the future. The accuracy of the early portion of the 130 years of actual data is probably suspect anyway, so there is probably less than 1% of reliable data.

Many of the long list of options appear to be outside the scope of the Draft Regional Strategy to “deliver the right quantity of water, of the right quality, for the right purposes, at the right times” for the next 40 years.

Many of the options in the Namoi Long List of Options do not appear to have any relevance to the objective of the strategy – namely to “deliver the right amount of water, of the right quality, for the right purposes, at the right times.” These options seem either to be designed to support proposed operational work packages or may have come from some other broader reform agenda. We would ask why they are being canvassed here rather than in the appropriate forum?

Other options to service the needs of the Tamworth Regional Council and subsequently, the irrigation industry, such as a pipeline from Keepit Dam, should be given more attention.

One of the key options considered but not pursued has the potential to provide long term security for the Tamworth Regional Council and in doing so, relieve some of the pressure on the irrigation industry. This option is to pipe water back from the Keepit Dam. The question of what licence or what water would be used could be addressed through two methods, either through diverting some part of the Peel River flow into the catchment of the Keepit Dam, or supplementing the licence through a process of on market purchase.

We believe these strategic options should be given more credibility in the Strategy with detailed consideration of this and other options which can provide high security long term water supply for Tamworth.

Comments on Selected Details in the Draft Strategy Document (The Guide)

- 1 Section 1.1 of the Guide (Page 5) states “Regional Water Strategies bring together the most up-to-date information and evidence with all the tools we havein an integrated package. The strategies are based on the best evidence and will aim to balance the different water needs and deliver the right amount of water, of the right quality, for the right purpose, at the right times. Led by the Department of Planning, Industry and Environment, we are preparing 12 regional water strategies.....with water service providers, local councils, Aboriginal people, peak bodies, and other stakeholders across NSW.”
 - Who exactly are the ‘other stakeholders’ who were involved in the preparation of the Namoi Regional Water Strategy?
 - How can the strategy possibly ‘balance the different water needs and deliver the right amount of water..... for the right purpose, and at the right times’ when key stakeholders (eg the Peel Valley irrigation industry) were excluded from the development of the Namoi Regional Water Strategy?
 - What appear to be noble objectives of the strategy are hollow and meaningless words because they are not supported by the facts.
- 2 Section 2.1 of the Guide (Page 11) states ‘Regional Water Strategies will work within, or recommend changes to, the policies and plans that guide how we manage our water resources in NSW.’
 - The Namoi Regional Water Strategy is an ill-informed and unrepresentative document which does not have the authority to recommend changes to anything.
 - There is no basis for this statement to remain in the strategy document.
- 3 Section 3.3 of the Guide (Page 32) contains 4 phases of ‘Community Engagement’.
 - None of the 4 phases in the development of each strategy include provision for any stakeholder consultation – the words ‘stakeholder’ or ‘consultation’ are not even mentioned.
 - Unless there is proper consultation with stakeholders from the Peel Valley, the final Namoi Regional Water Strategy will not have stakeholder support.
- 4 Section 3.4 of the Guide (Page 34) states ‘options in the draft strategies have been identified through
 - Previous studies and reports
 - Engagement with councils, joint organisations and Aboriginal communities
 - Expert advice from Government agencies’
 - It is inconceivable that all the relevant water stakeholders were not invited to participate in the identification of possible options
 - What are the reasons for the exclusion of key stakeholders from the Namoi Regional Water Strategy?
- 5 The same section (Page 34) states ‘the public consultation process will provide another opportunity to identify options and seek feedback on the long list of options’.
 - It is highly unlikely that any serious consideration will be given to any new options (or anything else) that is raised now that the draft strategy has been released, particularly because of the process documented in Figure 13.
For stakeholders, it would be the ‘first and only opportunity’ to participate.
It is inappropriate for key stakeholders to be excluded from the development of the strategy, and then as an afterthought, for them to be provided with ‘another opportunity’

to participate, when clearly there is insufficient time for any input from stakeholders to be adequately considered before the release of the final strategy report.

- 6 Section 3.5 of the Guide (Page 36) states 'During the COVID-19 pandemic, community sessions will be conducted through webinars and phone calls'.
 - Many of the relevant issues are complex and detailed, and in regional areas with poor communication technology, it is not appropriate to attempt to deal with them through a webinar or phone call. Given the non-existent rate of community transmission of the virus and the on-going program for vaccination of the population, it is important that future meetings with stakeholders are held in person or postponed until that becomes possible.
- 7 In Attachment 2 of the Guide, (Page 45) under the heading "using natural variability and climate change in our risk assessment" the statement is made that 'We have confidence in this stochastic method as it is statistically robust and has been applied to water resources around the world for several decades.'
 - What documentary evidence can you provide to support the statement that the stochastic modelling method has been applied to water resources around the world for several decades, and evidence that the method is statistically robust?
 - The statement that you have confidence in the modelling method, is in conflict with the very next paragraph which states 'The impacts of climate change on rainfall are still highly uncertain, as shown in the wide variation in projections of changes in rainfall from Global Climate Model results.....Processes to deal with this uncertainty are complex and would take further research to resolve satisfactorily, which is not possible at this stage of the regional water strategies.'
 - If the strategy has 'confidence in this stochastic method as it is statistically robust and has been applied to water resources around the world for several decades', then will you please use this modelling method to accurately predict the date of the next drought and the date of the next flood in the Peel Valley. And why was this modelling method not used to accurately predict the severity of the 2017-2020 drought, or flood event in 2021?
 - Modelling is a tool to assist with decision making, and it is not an accurate predictor of future events.
- 8 Attachment 2 of the Guide deals with New Climate Datasets and covers various climate issues and modelling issues.
 - There is no mention of the Bureau of Meteorology in this section. To what extent has the BOM been involved with the Namoi Regional Water Strategy?
- 9 In Attachment 2 of the Guide, (Page 46) under the heading 'Expert review of method', the strategy states 'The expert panel found.....the factoring in of NARCLiM projections is fit for purpose.....'
 - Can we please have a copy of the expert panel's report which draws this conclusion.
- 10 In Attachment 4 of the Guide, (Page 54) under the heading 'Developing the Assessment framework' and sub-heading 'Expert Advisory Panel', membership of the panel consisted of various governmental and economic participants, to provide '...objective and transparent methodology...'
 - There was apparently no representation from water user groups on the expert panel. How is it regarded as 'objective and transparent' to have no representation from water user groups in the consideration of options to address water related issues?
- 11 In Attachment 4 of the Guide, (Page 55) under the heading 'Options assessment process'
 - There is no consideration of input from key stakeholders (eg the irrigation industry)
 - Exactly who comprises the independent Review Committee in Stage 4?
 - The proposed new Dungowan Dam will not be subjected to the prioritisation process for options. But given the criteria in the 4 stages in the options assessment structure, would the new Dungowan Dam have been shortlisted? And would it have been approved?

Comments on Selected Details in the Draft Strategy Document – (Namoi Regional Water Strategy)

- 12 In the Overview, under the heading ‘Water in the Namoi Region’ the statement is made (Page 13) that ‘Increased groundwater demand in some areas, particularly during drought periods, is causing a decline in groundwater levels in the Namoi region. This decline is exacerbated by reduced recharge from surface water and rainfall in the Peel alluvium and’
- Can you please provide empirical evidence to support this statement relating to the Peel alluvium?
- 13 In the same section a statement is made (Page 13) about floodplain harvesting ‘in the region’.
- it ought to be more clearly highlighted in the strategy document that there is no floodplain harvesting permitted in the Peel Valley
- 14 In the same section a statement is made (Page 14) that ‘agricultural businesses also rely on these high flow events’.
- We understand that agricultural businesses in the Namoi Valley may be able to pump water into off-farm storages from high flow events, but the same does not apply in the Peel Valley. Unless you can identify any agricultural businesses in the Peel Valley that rely on high flow events, please amend the wording of this statement.
- 15 In the same section a statement is made (Page 14) that ‘From 2017-2020 long sections of the Namoi River did not flow.’
- That statement is correct. Throughout recorded history, it has often been the case that inland rivers in NSW did not always flow. Henry Lawson wrote about paddle steamers being stranded in Bourke in the drought of the 1900’s. In 1906, Dorothea Mackellar (who held property interests in Gunnedah) wrote the poem ‘My Country’ which includes the immortalised words ‘of droughts and flooding rains’. The fact is that NSW inland rivers often run dry in drought and that is what happens naturally in the hot, dry, and arid regions of North western NSW, and that is what has happened for centuries.
 - Inferring that this is anything unusual is distorting the facts. Inferring that a continuous flow is required in the Namoi River (or other rivers in the region) is changing the natural environment into an artificial man-made environment, with unknown long-term consequences.
- 16 In the same section a statement is made (Page 14) that ‘Large regional cities like Tamworth experienced severe water risks in the recent drought.’ The facts are:
- At no stage during the 2017-2020 drought did Tamworth ever have less than 12 months’ supply of water. Is that a severe risk?
 - Tamworth Regional Council is also reluctant to impose water use restrictions on high water-use businesses such as abattoirs (of which Tamworth has 3) because they threaten to relocate elsewhere. Exactly who is the beneficiary of Council’s policy in this regard?
 - Tamworth is on a publicly stated trajectory to increase population from 43,000 in 2019 to 100,000 in 2041. The logic behind this aspirational proposed expansion, without the required water security to support the expansion, needs to be seriously examined.
 - Tamworth is in a hot and arid zone of North West NSW. The concept that residents of towns in this zone can always expect green lawns and lush gardens is unrealistic. Council is conflicted by the need to maintain sales of water to generate revenue, and the need to conserve water because of the hot and dry summers.
- 17 In the same section under the heading ‘Definitions’, (Page 15) the definition of water security is – ‘The NSW Government’s guidance around an appropriate security of supply for sizing town water supply headworks is the 5/10/10 rule. Under this approach, the total time spent in drought

restrictions should be no more than 5% of the time, restrictions should not need to be applied in more than 10% of years, and when they are applied there should be an average reduction of 10% in water usage.'

- Who created this rule, when was it created, and who participated in the decision?
- Where is this rule documented?
- This 'rule' may be an acceptable rule in coastal NSW towns, but it is unachievable and unrealistic in inland towns in hot and arid regions of North Western NSW such as Tamworth.
- Attempting to achieve an unachievable 'rule' is in nobody's interest.

18 In Section 1.3.3 under the heading 'What Councils have told us so far' the statement is made (Page 31) that 'Many Councils – such as Tamworth are planning for significant growth, which would increase demand on water resources. Tamworth council is projecting 10% to 40% growth by 2041.'

- A projected range of 10% to 40% growth is meaningless – what is the real figure for the actual projected increase in population?
- Anyway, this statement is incorrect, and the authors of the strategy should have known at the time of developing the draft strategy that it is incorrect. Tamworth Regional Council has released 'Blueprint 100' which is a plan to increase population from 43,000 in 2019 to 100,000 by 2041. This represents a population growth of 133%. Nothing like either 10% or even 40%.
- Tamworth Regional Council was a contributor to the Namoi Regional Water Strategy, so at least their figures for projected growth should have been reported accurately in the strategy document.
- Why is this fundamental figure so wrong, and what else in the strategy document is also wrong?

19 In the same section, the statement is made (Page 31) that 'During drought, groundwater levels around Gunnedah and Curlewis have declined, causing concerns that the continuation of drought may threaten the water security of these towns. Improved information on groundwater is needed in some areas. Improved modelling is needed to ensure that groundwater planning and use is sustainable.'

- If the groundwater levels are declining, no amount of modelling will increase the water levels. The projected growth for the Gunnedah region (or indeed any region) cannot be supported without access to real water, not modelled water.

20 In the same section the statement is made (Page 31) that 'During extreme dry periods, water users and industries, including mining operations and agriculture, trade and compete with each other for the available water supplies.'

- This is a naïve generalisation which is incorrect in the Peel Valley. There are currently no mining operations in the Peel Valley.
- General Security Regulated water users in the Peel Valley rarely receive 100% allocation of their entitlement, and in dry periods regularly receive 0% of their entitlement. Therefore, there is no competition such as the strategy implies in the Peel Valley.

21 In Chapter 2 under the heading 'Snapshot', the statement is made (Page 37) that 'the most recent drought has been the worst on record'. But –

- The lowest 10-year average rainfall in the Peel Valley occurred in 1937-1946, the second lowest was 1918-1927, and the third lowest was 1895-1904. The period of the most recent drought does not rate compared to these three droughts.
- Rainfall in the Peel Valley in the most recent drought 'was 2% lower than the previous worst 36-month drought'. We need the actual figures to see whether this 2% difference is significant. Please supply the actual figures that were used to calculate the 2% difference.

- 22 In the same section, the statement is made (Page 38) that - ‘However, our enhanced climate modelling shows that *based on current population sizes*, towns relying mainly on surface water could continue to face water security risks under a dry climate change scenario.’
- Tamworth is a city that relies mainly on surface water, so by definition Tamworth could continue to face water security risks in future – based on the current population size.
 - However, Tamworth Regional Council has embarked on ‘Blueprint 100’ – a council initiative to double the current population to 100,000 residents by 2041. This initiative will only compound the future risks with water security unless council secures an additional water source – separate from the proposed new Dungowan Dam.
 - Why does the strategy document not address this vitally important issue?
- 23 In the same section the comment is made (Page 38) that – ‘The Regional Water Strategy provides an opportunity to begin planning for worst-case scenarios. We will need to pull every lever we have – infrastructure, changes to licences and rules,’.
- What exactly is meant by this statement?
 - Please provide details of exactly what proposed changes to licences and rules have been discussed or are being proposed by the authors of the Draft Strategy.
 - If there have been no specific changes to licences and rules discussed, then this statement should be removed from the strategy.
- 24 In the same section under the subheading ‘Increased water security and reliability are essential for industry and economic development’ , the statement is made (Page 38) – ‘The region is home to some of the most productive agricultural, meat processing and mining operations in NSW. Expansion of food processing industries may change water demand, or place further pressure on water resources.’
- Planning approval should not be granted to any proposed new operations if there is insufficient water available.
 - No existing industries or residents should have their existing water supply jeopardised by any proposed new operations, when it is well known that the existing water supply cannot meet the needs of new water-intensive industries.
- 25 In the same section the statement is made (Page 38) that – “Variable water availability creates challenges in balancing these industries’ water requirements with providing reliable supplies for expanding and new industries.”
- There should be no challenges involved – Unless councils can guarantee to meet the water requirements of expanding and new industries, planning approval should not be granted by councils to those industries. To grant approvals in such circumstances is reckless and inappropriate.
- 26 In the same section, the comment is made (Page 38) that – “We need to identify and adopt innovative demand and efficiency measures to support these industries and council aspirations for growth.”
- Council’s aspirations for growth should be developed within the constraints that are present including geography, services and water security
- 27 In the same section, the comment is made (Page 38) that - “Diversification of industries may provide opportunities to reduce requirements for water, and dependence on water supplies.”
- The intent of this statement is unclear
 - No amount of diversification will reduce the current requirements for water by existing high water-use industries.
 - Is the strategy essentially suggesting that, to diversify the dependence on water supplies, no new high water-use industries will be approved? If that is the intent of the strategy, then it should be very clearly stated.

- 28 In the same section under the sub-heading “There are opportunities to improve connectivity to the Barwon-Darling system” the statement is made (Page 39) that – “Delivering environmental flows to the end of the system Is a challenge due to and the relatively low current volumes of held environmental water.”
- This is a provocative, unsubstantiated, and inaccurate generalisation, and it should be removed from the strategy document.
 - Regarding the Peel Valley:
 - (a) The Namoi Valley receives the benefit of 95% of the end-of-stream flow from the Peel River annually. On average, the irrigators, and Tamworth Regional Council (combined) use less than 5% of the end-of-stream flow. The entire 95% contribution to the system from the Peel River should be treated as environmental water, and clearly the Peel Valley makes a significant contribution to the Barwon-Darling system.
 - (b) The total of the annual Environmental Contingency Allowance (5,000ML) and the annual CEWH held water (1,257ML) is greater than the annual extraction limit for Peel River irrigators. Clearly, The environmental water provided by the Peel Valley to the Murray-Darling Basin system is generous.
 - (c) Note that once this environmental water leaves the Peel Valley and enters the Namoi Valley, it is no longer treated as environmental water and is available for use in the Namoi Valley. This is an absurd situation, and the Peel Valley is simply gifting 6,257ML annually to downstream users in the Namoi Valley – without any credit.
 - (d) The Peel Water Sharing Plan is the only water sharing plan in this region that contains a specified volume water for an Environmental Contingency Allowance. Unless all other water sharing plans in the region also have an Environmental Contingency Allowance implemented, the Peel River irrigators are at a disadvantage and are being discriminated against. The Environmental Contingency Allowance in the Peel Valley is an anomaly and should be removed because it cannot be justified.
- 29 In the same section a comment is made (Page 39) that – “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.”
- For centuries, there have been occasions when there has been no flow from the upstream river systems into the Barwon-Darling system. It is contrary to the natural cycle, and creating an artificial environment to propose a flow 100% of the time. Because of the environmental credentials of the Peel Valley, no further demands for environmental water from the Peel Valley are justified.
- 30 In the same section a comment is made (Page 39) that – “The regional strategy looks at ways to improve connectivity across the region and with the Barwon-Darling River.”
- The strategy ought to seek the views of all stakeholders before proceeding any further with the insular approach that has been documented thus far.
- 31 In the same section under the sub-heading “There are challenges meeting environmental needs” a comment is made (Page 39) that – “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.”
- This is another provocative, unsubstantiated, and inaccurate statement which ought to be removed from the strategy document.
 - On what grounds exactly is the statement based that the ecosystem health of the Peel River is poor?
 - On what grounds exactly is the statement based that Peel’s fish community is in very poor health?

- 32 In the same section, (Page 39) another reference is made to floodplain harvesting
- Floodplain harvesting is not permitted in the Peel Valley, and that fact needs to be highlighted in the strategy document.
- 33 In the same section (Page 40) under the sub-heading “We need to better manage groundwater resources” there are statements which are very generalised and vague in nature.
- What may apply to groundwater in areas such as Quirindi, Wee Waa, Burren Junction and Narrabri may be quite different to the Peel Valley.
 - Any groundwater options that are considered must be relevant to a specific area and not applied across the whole region.
- 34 In Section 2.1.1 under the sub-heading “The region cycles between wet and dry periods”, a statement is made (Page 44) that – “Rainfall during the drought (2017-2020) was 2% lower than the previous 36-month drought on record in the Peel Valley.”
- Please provide the actual figures for each relevant period that were used to calculate a worsening of 2% in recorded rainfall?
 - A worsening of 2% may not be significant.
- 35 In the same section, (Page 45) regarding Figure 8 –
- Figures representing inflows into Chaffey Dam and Dungowan Dam are only reliable after the date of their construction. Prior to construction, the figures are hypothetical and ought not to be relied upon.
- 36 In the same section under the sub-heading “The recent drought has been more severe than other droughts”, a statement is made (Page 50) that – “Recent drought conditions in the region have been some of the worst on record”.
- This statement contradicts with Figure 10b, which clearly shows:
 - (a) The lowest 10-year average rainfall in the Peel Valley was 1937-1946
 - (b) The second lowest 10 years was 1918-1927
 - (c) The third lowest was 1895-1904.
 - The lowest rainfall on record over a 10 year period would constitute a drought, so why is the strategy implying that the 2017-2020 drought is the worst on record?
- 37 In Section 2.1.2 under the heading “Wet and dry cycles have occurred in the past”, a statement is made (Page 52) that “on some occasions [each wet and dry period] maximum duration was up to 60 years”.
- This statement is apparently substantiated in an internal Departmental document referenced in footnote 20. Can we please have a copy of this report?
- 38 In the same section (Page 53) under the sub-heading “A future climate could be more variable, with shifts in rainfall seasonality and higher evaporation”, various possible scenarios are presented, but
- Most of the predictions relate to a future date which is beyond the 20-40 year focus of this strategy, and they are therefore not relevant to this strategy
 - The projections of higher evapotranspiration are based on the period from 1990 to 2009. Please explain why this period was selected from 130 year of recorded data as the basis for calculating a potentially higher evapotranspiration rate?
 - The final paragraph states that “We are not expecting to see impacts of these magnitudes in the short term” This strategy is focussed on the short term – namely the next 20 to 40 years, and therefore the whole commentary on predicted climate variability in the longer term should not be such a major part of this strategy.
 - The final paragraph also states that “We have an opportunity to put plans in place to make sure we are we are prepared and resilient if these changes to the climate eventuate”. If

they don't eventuate, given that the modelling is based on a "worst-case dry climate scenario", then what?

- Figures 14 and 15 (Page 54) refer to the "Namoi Region", and the predictions are highly hypothetical. The Namoi Region covers 43,000 square kilometres, ranging from cool, high rainfall areas to semi-arid low rainfall areas. At any point in time, the climate can be highly variable throughout the region. Comparing averages from a selected modelled future period with another selected modelled future period for the entire region produces hypothetical and unreliable scenarios.

39 In the same section, (Page 55) the next heading states "There is a high probability of the most recent drought re-occurring."

- This is an overly dramatic heading for the facts that are presented in this section, and they do not support the message that the heading conveys.
 - (a) There is a chance that similar conditions to the 2017-2020 drought may occur once in the next 100 years
 - (b) There is a chance that similar conditions to the 2017-2020 drought may occur 5 times in the next 100 years, but only if the worst case from dry scenario climate modelling was to occur.
- The facts indicate that it is not very likely that there is a higher probability of the most recent drought re-occurring in the next 100 years
- But in any case, the whole section is irrelevant because the strategy does not predict a re-occurrence of the 2017-2020 drought conditions within the 20 to 40 year timeframe of the strategy.

40 In the same section under the sub-heading "Floods are a feature of the past and the future", a statement is made (Page 61) that "During Flood events, landholders on the floodplain may capture water to use for agricultural purposes."

- This statement is incorrect in the Peel Valley, where no floodplain harvesting is permitted. This statement should be corrected in the final version of the strategy.

41 In the same section, a statement is made (Page 61) that "Poor catchment management, vegetation clearing, and flood control exacerbate the negative impact of floods".

- Not everyone would agree with the generalisation that there has been poor catchment management in the Peel Valley. What evidence is there to support this wide-ranging statement?

42 The final paragraph in this section (Page 62) contains the sentence "As part of the regional water strategies we have modelled a dry climate change scenario. Under a wet climate change scenario, the flooding projections would look quite different."

- That statement highlights a fundamental flaw with the strategy. While the strategy acknowledges that there are wet cycles and dry cycles, the strategy has chosen only to report on the modelling of a worst case dry climate change scenario.
- The reliability of the strategy's predictions is therefore questionable.

43 In Section 2.2.1 under the heading "Surface water resources in the region", a statement is made (Page 65) that the region's water users access floodplain harvesting to capture floodwater flows in farm dams.

- This is not the case in the Peel Valley where floodplain harvesting is not permitted, and the final strategy document should be amended to correct that fact.

44 In the same section under the sub-heading "Major Rivers and Dams", a statement is made (Page 66) that "[Chaffey Dam] was constructed to regulate river flows and augment Tamworth town water supplies".

- This statement is only half true

- The fact is that Chaffey Dam was primarily constructed for irrigation in the Peel Valley is intentionally overlooked by the strategy, and it demonstrates the bias of the document towards Council purposes rather than representing the interests of all stakeholders equally.
- The final version of the strategy document should be amended to correct this distortion of the facts, which is a significant inaccuracy.
- The statement that “Chaffey Dam also supports the irrigation industry was added as an afterthought and does not correct the omission of the fact that Chaffey Dam was primarily constructed for the irrigation industry in the Peel Valley.

FISHING PROHIBITED
WITHIN 150 METRES
OF THE SPILLWAY OR
ALONG THE DAM WALL

1300 662 077

CHAFFEY DAM

PURPOSE:

REGULATION OF THE NATURAL FLOW OF THE PEEL RIVER TO MEET IRRIGATION, STOCK AND DOMESTIC REQUIREMENTS IN THE PEEL RIVER VALLEY AND TO AUGMENT THE WATER SUPPLY FOR THE CITY OF TAMWORTH.

TECHNICAL DETAILS:

STORAGE CAPACITY....62,000 megalitres AREA SUBMERGED....600 hectares
MAX. WATER DEPTH.... 30 metres CATCHMENT AREA.... 42,000 hectares

MAIN WALL

HEIGHT.....54 metres
LENGTH OF CREST.....430 metres
WIDTH OF CREST.....8 metres
MAX. WIDTH OF BASE....195 metres

SPILLWAY AND OUTLET WORKS

TYPE..."Morning-Glory" spillway tower, incorporating multi-level outlet works, discharging through an 8 metres wide by 10 metres high egg-shaped conduit to a dissipator.

SPILLWAY CAPACITY.....77,800 megalitres/day

OUTLET WORKS

MAX. DISCHARGE CAPACITY....1,100 megalitres/day

NO TRESPASSING
THIS SIDE



- 45 In the same section, (Page 66) the next paragraph contains a statement the “governments are investing \$480 million in augmenting Dungowan Dam by up to 22.5 GL....”.
- This statement is incorrect and should be corrected in the final version of the strategy
 - The capacity of the proposed new dam is 22.5GL, not 28.8GL as implied in the statement in the strategy.
- 46 In the same section, (Page 66) the following paragraph contains the statement that “The pipeline can be used during drought when Chaffey Dam is below 20%. Work is also under way to consider how the pipeline might be operated in the future outside of drought.”
- If “work is also under way”, why have no affected stakeholders been invited to participate in the discussions?
 - There are many licence holders in the local area, as well as downstream of Dungowan who would be affected by any changes – all of whom contribute financially to the costs of Chaffey Dam - and it is inappropriate to exclude them from discussions on the topic.
 - Any changes to how the pipeline would operate outside of drought would require a change to the Peel Water Sharing Plan, and it is not appropriate to make changes to Water Sharing Plans without consultation with all stakeholders.
- 47 In the same section, Table 1 – “Major Dams in the Namoi Region” (Page 67) demonstrates that Chaffey Dam is the only dam in the region with a requirement for a fixed volume of Environmental releases on an annual basis.
- There is no requirement for a fixed volume of environmental flows from Keepit Dam, even though it has more than four times the storage capacity of Chaffey Dam.
 - While the table indicates that “environmental flows” are provided from Split Rock Dam – which is also about four times the storage capacity of Chaffey Dam, there is no fixed Environmental Contingency Allowance specified in the Namoi Water Sharing Plan from either Split Rock Dam or Keepit Dam.
 - Why is the Peel Valley, with the dam having the smallest storage capacity, the only valley in the region with a specified volume of annual Environmental Contingency Allowance?
 - This situation requires attention as part of the strategy – either all dams in the region should have a fixed volume of Environmental Water required annually, or no dams should.
- 48 In the same section, (Page 68) in the text box headed “Dungowan Dam”, there is a statement that “The project, together with Chaffey Dam, aims to Improve general security reliability by sustaining a future level of irrigation as Tamworth grows”
- Would you please provide further information to substantiate this statement, which has not been made previously, or elsewhere?
 - When Chaffey Dam was augmented from 62,000ML to 102,000ML in 2016, general security irrigators were promised an improved general security reliability because of the upgrade. That promise remains unfulfilled, as demonstrated by the years of low AWD’s and zero AWD’s since the augmentation was completed.
- 49 In the same section, under the sub-heading “Unregulated Rivers and Creeks”, a statement is made (Page 69) that Barraba relies heavily on unregulated surface water supply.
- The statement is not correct.
 - In 2014 a pipeline from Split Rock Dam to Barraba was completed at a cost of \$15.2 million.
 - Tamworth Regional Council’s own website lists Split Rock Dam as the water source for Barraba.
- 50 In the same section a statement is made (Page 69) that “Tamworth [relies] partly on unregulated surface water from the Upper Peel.”
- On exactly what unregulated water sources in the Upper Peel does Tamworth partly rely?

- How much water (on average) is provided to Tamworth by unregulated water sources in the Upper Peel?
- 51 In the same section a statement is made (Page 69) that “Many landholders have harvestable rights dams for later us on irrigated crops. An estimated 21GL/year is taken by harvestable rights dams across the region.”
- The statement that harvestable rights dams across the region capture 21GL annually is questionable – where is the evidence for this statement?
 - How many harvestable rights dams are there in the Peel Valley, where are they, how large are they, and how many are used for irrigation purposes?
- 52 In the same section (Page 70) under the sub-heading “connectivity between the Peel and Namoi catchments, and with the Barwon-Darling River”, there are various statements about the benefits of connectivity along the river systems.
- However, there is no mention in this section that historically, both the Peel and the Namoi Rivers often ran dry during periods of low rainfall. This was particularly evident prior to the construction of the major dams in the region.
 - The following section under the sub-heading “Surface water resources under climate change conditions” (Page 71) states that the “end of system flows in the Namoi River have stopped about 20% of the time” in the past 130 years (no figures are given for the Peel River)
 - The implication in the statement on connectivity is that rivers in the region should always flow and not be allowed to run dry. But that is contrary to the natural cycle (even before any dams were constructed) and creates an artificial “man-made” environment that does not mimic the natural cycle at all. Does anybody really understand the long-term implications of deliberately changing the natural cycle of events?
- 53 This section also highlights a stark difference between the Peel Valley and the Namoi Valley.
- The Peel Valley is at the headwaters of the Namoi/Peel region, so it does not receive any significant inflows. Yet the Peel River discharges more than 95% of the annual average end-of-stream flow into the Namoi River system.
 - Meanwhile, the Namoi Valley system receives the discharge from the Peel system, plus another equivalent volume of water from the McDonald and other systems.
 - But despite this large inflow, the Namoi Valley only contributes 24% of its annual end-of-stream flows to the Barwon-Darling system
 - This large discrepancy ought to trigger an investigation into the requirement of 5,000ML of Environmental Contingency Allowance annually in the Peel Valley, particularly since the ECA is not treated as environmental water once it enters the Namoi Valley.
 - This absurd situation must be addressed – either as part of the final strategy or as part of the ongoing review of the Peel Water Sharing Plan. Either all valleys in the region should have a fixed Environmental Contingency Allowance applicable annually, or none should.
- 54 On Page 71 a statement is made that: “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 between: the Peel River and the Namoi River”
- This statement in the Strategy requires substantiation
 - Exactly which communities downstream of the Namoi Region have been requesting additional measures to improve connectivity?
 - On what grounds are the requests based?

- What requests, exactly, have been made, and can we please have a copy of the list of them?
- Why is it appropriate for the Namoi Regional Water Strategy to consider connectivity issues between the Peel River and the Namoi River without full stakeholder involvement?

55 In the same section, (Page 72) Figure 21 requires further explanation.

- Apart from the plotted graphs, what do the shaded areas represent?
- The note below Figure 21 states “Bands represent 95% confidence intervals for each Plot”. What does this note mean?
- How can you have 95% confidence in figures that are modelled on around 1% of recorded data (at best 130 years out of 10,000 years)

56 In the same section under the sub-heading “on-farm storages and floodplain harvesting” statements are made (Page 72) that “There are an estimated 445 on-farm storages in the Namoi region, with a combined capacity of approximately 251,000ML.....Water is stored in these private on-farm dams for use on irrigated crops Most of these storages are located on the plains adjacent to the Namoi River.”

- How many off-farm storages that are used for irrigated crops are in the Peel Valley?
- What is the total combined capacity of those storages in the Peel Valley?
- Unless the strategy can identify any significant storages of this type in the Peel Valley, the final strategy document should be amended to reflect that such storages only occur in the Namoi Valley.

57 In the same section under the same sub-heading, (Page 73) there appears to be the only acknowledgement that “There is no harvesting from floodplains in the Peel Valley.”

- The final strategy document should highlight the fact that floodplain harvesting in the region occurs exclusively in the Namoi Valley, and that is another significant difference between the two valleys.

58 In the same section under the sub-heading “Recycled Water” a statement is made (Page 74) that Tamworth Regional Council supplied 4,563ML of recycled water for re-use.

- How much of that water was supplied to the effluent re-use farm, and what other applications was the recycled water used for?
- Is it correct that the build-up of effluent has already caused a salinity problem on the re-use farm?
- If that is the case, why is it not listed as a barrier to investing in recycled water?

59 In Section 2.2.2 under the sub-heading “Minor alluvial groundwater sources” a statement is made (Page 77) that “in 2019/2020 approximately 33% of the water flowing down the Peel River was lost to evaporation or seeped into the alluvial source The draft regional water strategy includes an option for further investigation of the connectivity between surface water and groundwater and the implications for water allocations.”

- The level of connectivity between surface water and groundwater varies considerably along the length of the Peel River, and the level of connectivity in the Namoi Valley is probably quite different to the Peel.
- There are long-running and unresolved issues in the Peel Valley regarding the level of connectivity, and several landholders can demonstrate that there is no connectivity between these water sources on their property.
- It would be inappropriate for the Namoi Regional Water Strategy to further investigate connectivity across the region without the involvement of affected stakeholders from the Peel Valley.

- It would also be inappropriate for the Namoi Regional Water Strategy to consider any “implications for water allocations” without the involvement of relevant stakeholders from the Peel Valley.
- There are several alluvial groundwater users in the Peel Valley who can clearly demonstrate that there is no evidence of connectivity between surface water and alluvial groundwater on their properties. Their evidence must be considered before the Namoi Regional Water Strategy considers any options which may involve changes.

60 In the same section under the sub-heading “Major alluvial groundwater sources” statements are made (Page 77) that “Alluvial groundwater extractions in the Namoi Region are some of the highest in the Murray-Darling Basin”, and “In 2005, the Achieving Sustainable Groundwater Extraction program addressed the unsustainable groundwater use in the Namoi Region.”

- The Namoi Regional Water Strategy covers the whole of the Namoi/Peel catchment, and it should be more clearly identified that these comments are specifically attributable to the Namoi Valley and not the Peel Valley.
- The Namoi Regional Water Strategy document appears to treat the “Namoi Region” and the “Namoi Valley” as synonymous and interchangeable terms, but it is inaccurate to do so.

61 In the same section, under the sub-heading “Groundwater opportunities” a statement is made (Page 80) that “During periods of drought with limited surface water availability, water users rely more on groundwater.”

- The statement implies that water users alternate between water sources. This implication is incorrect in the Peel Valley, where few water users have access to both water sources.

62 In the same section under the same sub-heading statements are made (Page 80) that “managed aquifer recharge may be able to be developed in the Namoi Region”, and “Managed aquifer recharge can be an effective way to manage and dispose of treated wastewater.”

- What involvement have stakeholders (users of the groundwater resource) had in the development of this proposal to date, and what involvement will stakeholders have in any further discussions and decisions on this proposal?
- What authority does the Namoi Regional Water Strategy have to propose the deliberate contamination and pollution of a natural water resource?
- This proposal needs much more investigation and discussion with all affected stakeholders.

63 In the same sections, the following paragraph (Page 80) states “Groundwater opportunities in the Namoi Region rely on better understanding ... of the groundwater systems, and providing greater transparency around how regulators and government will make groundwater management decisions.”

- Stakeholders (namely groundwater users) need to be involved in the process
- There has been no transparency, nor any consultation with stakeholders to date.
- Much more knowledge about the groundwater systems in the Peel Valley is required before there is any need for the involvement of regulators or government in decision making.

64 In the same section, a statement is made (Page 81) that “[continuing to improve our knowledge of groundwater] could also help communities make informed decisions about which water sources to access at different times.”

- This statement implies that water users or communities have a choice in the water source that they use.
- It is incorrect to imply that water users or communities have that choice.

- 65 In Section 2.2.3 “Water and the Regional Environment” under the sub-heading “Current environmental Challenges” the opening paragraph states (Page 86) “The overall ecosystem health of the Namoi Region (including the Peel River) is poor. The region’s fish community is in very poor health, and the riverine vegetation condition is considered poor.”
- Can you please provide evidence which substantiates this statement regarding the Peel Valley?
 - The footnote which is referred to (70) only quotes another report known as the “Sustainable Rivers Audit 2” prepared in 2012, and this report is not available to us. Can we please have a copy of this report?
 - Unless there is evidence to substantiate this statement, it should be removed from the strategy document.
 - There are concerns that unless the inaccuracies in the strategy document are corrected, the strategy document itself will be quoted in future, and reliance may be placed on statements that are incorrect.
- 66 In the same section, a statement is made (Page 87) that “Currently, around 14.9GL of general security water entitlements are held for the environment in the region (Figure 24). These entitlements are managed by the Commonwealth Environmental Water Holder. The Murray-Darling Basin’s Northern Basin Review recommended the local recovery target in the Namoi be 20GL, which signifies a shortfall in required water”.

This paragraph raises the following questions:

- What is the figure for the volume of water held by the CEWH in the Namoi Valley?
 - The Environmental Contingency Allowance in the Peel Valley (5,000ML annually) is not managed by the CEWH.
 - Why does the strategy not challenge the apparent “shortfall” of 5.1GL in required environmental water? The Namoi Valley (including the Peel Valley) comprises 4% of the Murray-Darling Basin and contributes 3.2% of the Basin’s water. Therefore, on what basis does the strategy consider it appropriate to contribute a further 5.1GL in environmental water?
- 67 In the same section Figure 24 (Page 87) shows environmental water volumes in the Namoi region. The note to the table states “The draft Water Sharing Plan for the Peel Regulated Water Source 2020 provides for an Environmental Contingency Allowance of 5GL (annually) which is stored in Chaffey Dam. The Draft Water Sharing Plan for the Upper Namoi and Lower Namoi Regulated River water sources 2020 does not provide for an Environmental Contingency Allowance.”
- Why does the Namoi Regional Water Strategy not identify this as a problem?
 - Both Split Rock Dam (Upper Namoi) and Keepit Dam (Lower Namoi) are about 4 times the storage capacity of Chaffey Dam, yet they have no Environmental Contingency Allowance. Why is the smallest dam in the region the only one which has a specified volume of Environmental Contingency Allowance?
 - Why is the Environmental Contingency Allowance from the Peel Valley available for use by Namoi Valley water users, and not treated as environmental water in the Namoi Valley?
 - Why is the Peel Valley discriminated against by the requirement for an Environmental Contingency Allowance, while the other dams in the region do not have the same conditions imposed?
 - The Namoi Regional Water Strategy should recommend that either an Environmental Contingency Allowance is imposed on all storages in the region, or none of the storages.
 - The current situation is absurd and unjustifiable. The Namoi Regional Water Strategy should highlight this fact prominently.
- 68 In the same section under the sub-heading “Impacts of future climate variability on the environment” (Page 88). various gloomy scenarios and predictions are presented. However, they are all based on modelling under a worst-case dry climate change scenario.

- Is it considered a responsible and representative approach for the Namoi Regional Water Strategy to only present scenarios that are based on a worst-case dry climate change scenario?
- Although the statement is made that “these impacts may not necessarily occur – they are based on a deliberately conservative dry climate change scenario”, that qualification will probably not be quoted when the gloomy projections and illustrations are referred to in other future documents.

69 In the same section a statement is made (Page 92) that “a more variable climate means that coordinated and concerted efforts will be required to protect and enhance the regions vital environmental, economic, social and cultural assets into the future.”

- We recommend that the words “including all stakeholders” be inserted following the words “coordinated efforts”.

70 In the same section under the sub-heading “opportunities and existing arrangements to protect and enhance environmental flows”, (Page 93) the first paragraph refers to daily releases of 3ML from Chaffey Dam and the 5,000ML Environmental Contingency Allowance.

- Why is the 3ML daily environmental release from Chaffey dam not included as part of the 5,000ML Environmental Contingency Allowance?
- Why has there never been any justification provided for the requirement of 5,000ML of environmental water in the Peel Valley annually?
- Why has there never been any documented confirmation of the measurable benefits received from the 5,000ML of environmental water in the Peel Valley annually?

71 In the same section a statement is made (Page 95) that “Under drought or long-term dry conditions, flexibility in the delivery of environmental water is needed. Long term climate changes may require an increase to environmental watering volumes and a more flexible approach in the management of environmental water.”

- What evidence are these statements based on?
- Before any dams were built, inland rivers sometimes ran dry. Why is that unacceptable now if it is the natural condition that applies to inland rivers?
- If the Namoi Regional Water Strategy recommends any changes to the volume of environmental water requirement based on a “worst-case dry climate change scenario”, then the recommendations are not valid.

72 In section 2.2.4 under the sub-heading “Groundwater quality”, a statement is made (Page 99) that “.... However, a better understanding of water quality in under-committed groundwater systems may support growth in use of these groundwater sources – for example fractured rock groundwater systems in the New England Fold Belt.”

- This statement is incorrect.
- In 2019, the extraction limit for the fractured rock water source in the Peel Valley was reduced (without any consultation) from around 77,000ML to 15,874ML. At this new level, the resource was 98% committed, but since the reduction was implemented Water NSW has continued to approve new fractured rock licences.
- We recommend that this inaccurate statement needs to be corrected in the final version of the strategy document.

73 In the same section, the statement is made (Page 99) that “Groundwater salinity is a key challenge in the Namoi region.”

- This statement is incorrect with respect to the Peel Valley.
- We recommend that the word “Valley” should replace the word “region”, because there is no known groundwater salinity problem identified in the Peel Valley.

74 In Section 2.2.5 “Managing water in the Namoi Region” under the sub-heading “Dealing with extraction limits”, the statement is made (Page 102) that “We have heard from some councils that the allocation process for the Peel alluvium water source needs to be reviewed. In particular, we have heard that given the connectivity between surface water and groundwater in the Peel system, there may need to be further restrictions on groundwater licences during extreme droughts when surface water licences are also heavily restricted.”

- Specifically, which Councils provided the opinion to the Namoi Regional Water Strategy?
- On what basis is that opinion based?
- There are very different levels of connectivity between surface water and groundwater systems along the length of the Peel River.
- There are long-running and unresolved issues related to the level of connectivity between surface water and groundwater systems in the Peel Valley.
- This is an example of an opinion which is based on biased and ill-informed opinion rather than facts.
- We recommend that this statement should either be corrected or removed from the final version of the Namoi Regional Water Strategy.

75 In the same section (Page 104) under the sub-heading “Regulated River Licences”, Table 2 is misleading as it implies that General Security Water users are the highest water users in the Peel Valley.

- The fact is that on an annual basis, general security water users have access to less water than Tamworth Regional Council, and less water than the environment – which is not even listed in the table.
- We recommend that this table either requires significant clarification, or removal from the final version of the strategy document.

76 In Section 2.3.2 under the sub-heading “Water for Tamworth – a growing regional city in the Peel Valley”, the statement is made (Page 122) that “Tamworth Regional Council Is planning for a population of 100,000 by 2041. Population growth will increase demand for water and is a key challenge for the region.”

The questions that the Namoi Regional Water Strategy should address are:

- Why is TRC planning for a population of 100,000 if the water security for that population is not guaranteed? This appears to be a negligent and reckless aspiration.
- Will the proposed Dungowan Dam guarantee the water security that TRC requires?
- If not, how does TRC propose to meet the required level of water security?
- If Dungowan Dam does guarantee TRC’s future water security, will residents and industry in the Tamworth region be required to pay more for water?
- And will TRC be granted a new licence to access water from the proposed Dungowan Dam? If not, what licensing arrangements will TRC make for accessing water from Dungowan and Chaffey Dams, and what impacts will those new arrangements have on existing licence holders’ access to water and costs of water?

77 In the same section a statement is made (Page 125) that “the following could be investigated Developing alternate water licence structures such as a “critical human needs licence Changes to water use or securing water for critical human needs in the Peel valley will need to consider potential impacts on other water users and the environment.’

- Any discussions on any proposed changes that impact on existing water users should involve all the affected parties.

78 In section 2.3.4 “Water use in a more variable and changing climate”, the statement is made (Page 144) that “Preparation of the Regional Water Strategies provides us with an opportunity to invest in options that help mitigate or manage these risks.”

- This statement is only true if the information in the strategies is accurate and supported by the stakeholders
- Again, the tables in this section are based on a worst-case dry climate change scenario, and it is questionable whether the entire strategy should be prepared on that basis.

79 In chapter 3 in the textbox titled “Snapshot”, the statement is made (Page 147) that “to identify these options we have drawn ideas from previous studies, experience with the Millennium drought, community and local council consultation, and government reforms and programs.”

- Please provide the reasons why stakeholders (such as the irrigation industry) have been discriminated against by not being invited to participate?
- Members of the irrigation industry contribute to the local economy, pay council rates, employ local staff, support local businesses, and pay a significant share of the cost of water operations. It is irrational that this impacted sector of the community has been deliberately ignored by the Namoi Regional Water Strategy.
- With due respect to all the highly qualified staff who prepared the Strategy, most irrigators in the Peel Valley are in daily contact with their irrigation systems, and many have five generations of accumulated knowledge of their local water environment. It is beyond belief that this source of knowledge was deliberately ignored during the development of the strategy.

80 In the same section in the textbox titled “Not all options will be progressed”, the statement is made (Page 148) that “ We will first seek feedback on those options before undertaking a formal assessment process.”

- From exactly whom will the Namoi Regional Water Strategy seek feedback?
- Unless the Namoi Regional Water Strategy includes all stakeholders, the final version of the Namoi Regional Water Strategy is unlikely to have the support of the community.

Comments on the Namoi Long List of Options

- (Note - The Namoi Long List of Options in the Draft Namoi Regional Water Strategy document contains 56 options.
- The Same 56 options are contained in the separate document titled Namoi: Long List of Options
 - But some options are numbered differently in each document.
 - This causes unnecessary confusion, which could easily be avoided in the final report by using a consistent numbering system in both documents

1 Proposed new Dungowan Dam

- Agreed that it is proceeding, and we support this option
- We need to clearly understand whether it is guaranteed to supply TRC's water security requirements for a population of 100,000 in 2041.
- We need to understand the costs of water for residents and businesses.
- We need to understand the TRC licensing arrangements, and the impacts of these arrangements on access to irrigation water (and the costs thereof) from Chaffey and Dungowan Dams

2 Inter-regional pipelines

- We agree that investigations should proceed

3 Intra-regional pipelines

- We agree that investigations are important and should proceed
- Although the first two are less relevant to the Peel Valley, the third, fourth and fifth options all are very relevant to the water supply at Tamworth and the regional irrigation industry and deserve careful consideration.
- Regarding the proposed constant operation of the Chaffey to Tamworth pipeline, all affected stakeholders should be involved during the process of investigations.

4 Suspension of Water Sharing Plan provisions for environmental water

- Agreed.

5 Investigate advanced water treatment technologies for towns

- Agreed, on a user-pays basis.
- Waste water treatment plants are suitable for treating water where there are water quality issues. However, any reverse osmosis plant which reduces the average salinity of the water which it is treating, does produce a concentrated brine or high salt stream of waste which must be disposed of. In many cases this can be a significant problem and cost. That said, Tamworth Regional Council (TRC) should have a vested interest in treating their waste water for potential reuse in agricultural or industrial uses. For TRC, there will be factors of cost and environmental impact and usage which will need to be balanced.
- The idea that water treatment might unlock new sources of water such as sodic or saline groundwater seems unrealistic, as these water sources are generally of low supply and are committed.

6 Re-use, recycling and stormwater projects

- Agreed, on a user-pays basis.
- This is really an issue for the TRC to consider and it would seem that the logical thing would be to reuse and recycle as much storm water as is feasible and practical.

- 7 Connect the Peel River system to Quipolly Dam
- Much more information and the involvement of affected stakeholders is required before this option is worthy of investigation
 - However, the concept of connecting the water supply of smaller communities into the larger supplies of the largest towns in the area would give more security to the small town involved. There must be more economical options, such as accessing groundwater from the regional area, but a desktop investigation would soon make the options for Quirindi a little clearer.
- 8 Managed aquifer recharge (Peel)
- Not agreed - there is insufficient reliable information on this option, particularly if recharge using wastewater is contemplated.
 - This option has worked in some other areas, but it seems unlikely to be appropriate in the Peel region. The areas of potential recharge have yet to be identified and the beneficiaries for the recharged aquifers also would need to be clarified. There are many technical questions that would need to be answered before anyone could support releasing regulated water from the Chaffey dam to recharge an aquifer for later supply to the Tamworth Regional Council or the Irrigation Industry. Losses in the system, efficiency of recharge, efficiency of extraction etc would all need some clarity.
- 9 Reliable access to groundwater by towns
- Agreed, on a user-pays basis
 - This option seems more pressing for towns outside the Peel Valley and perhaps is best investigated by the TRC and the DPIE
- 10 Investigate opportunities for dual water systems
- Agreed, on a user-pays basis
 - Again, this is an issue for the TRC and DPIE to consider as there are feasibility issues to be considered. In Tamworth the critical issue for residents is supply of water for gardens, not just supply of potable water. However, in the industrial area, potable water is being used for some industrial purposes where alternatives might be available.
- 11 Investigate the development of a water access licence for critical human needs
- Not agreed until more detailed information is provided
 - We are unaware of any evidence that would support the development of a new class of licence for critical human needs in the Peel Valley, and unless any compelling evidence is provided to us, we cannot support this option.
 - This issue is one for the water utility which must prioritise water for residential use over water for commercial use. There must be other ways for doing this and we would be concerned about the creation of a new category of licence which could mean that councils lost the discretion to deal with increasing water restriction on a week by week basis rather than having their responses codified by the licence category.
- 12 Investigate groundwater desalination for industry
- More detailed information is required.
 - Where in the Peel Valley would this option apply?
 - If desalinated water was made available, will the user bear the whole cost?
 - We are happy for a desktop review of the feasibility of desalination as a method of supplying water for industry, but it is not a cheap option and would probably be ruled out on cost in any detailed assessment. In some cases, it may be possible that industry is prepared to pay a higher cost in a trade-off for higher security.

- 13 Joint exploration for minerals and groundwater with the NSW Geological Survey
- We do not support this option at this stage - more information is required before this option can be supported
 - The fractured rock system in the Peel is fully allocated and it is not realistic to consider exploration as a way of increasing the water supply without considering whether anyone could access the water. Current allocation of fractured rock groundwater is around 15,000ML and supplies have usually been of modest rate of supply and interrelated with other fractured rock bores in the area.
- 14 Water security for small communities
- Agreed - We would support any attempt to improve the reliability of water supply for small communities.
- 15 NSW Fish passage strategies
- Agreed in principle, but more information is required
 - Some fish passages can cost several millions of dollars to construct, and the important question is – who pays? These assets are for the good of society, and it is unreasonable to expect the cost to be borne mainly by water users.
 - The principle of remediation of fish passage structures is one that we would support but we are concerned that the cost and the benefit need to be weighed up before the seven proposed sites could be acted on. We think they should be prioritised and then acted on over a period.
- 16 Providing incentives to landholders to conserve and rehabilitate riparian, wetland and floodplain vegetation
- More information is required
 - No significant wetlands and floodplains exist in the Peel Valley, and some of the described works are unlikely to be practical in the Peel Valley.
 - We are cautious about supporting programmes for landholders to get grants to rehabilitate areas. The current process is very difficult and cumbersome to navigate, the principles are unclear, and the uptake of grants would be very low. Better to spend the money on more positive programs involving demonstration, easier approvals for works and less restrictions on what can be undertaken.
- 17 Cold water pollution mitigation measures
- More information is required
 - Likewise, cold water pollution measures need to be considered carefully. The Peel experience at Chaffey Dam needs to be looked at before any capital expenditure at Keepit is undertaken.
 - However, the idea of not releasing cold water into a river in the summer especially makes a lot of sense and should be possible.
 - Who pays?
- 18 Riparian Habitat Restoration and re-establishing threatened species
- More information is required
 - This option appears to be a duplication of work that is already being undertaken by government departments, agencies, and community groups.
 - This option also sounds like a waste of money with habitat mapping etc. More productive would be the fencing off of riparian areas with the exclusion of livestock allowing the regeneration of the riparian riverbank areas. Governments are always only going to be able to reach a very small number of landholders unless they engage broadly with field days and demonstrations etc. In fact, fundamentally, the government seems to have moved away from its responsibility to engage with the public in a productive way before trying to implement its policies.

- 19 Diversion screens to prevent fish extraction at pump offtakes
- More information is required
 - What is the evidence that this option is required?
 - What evidence is there for the statement that on-farm costs would be reduced or extraction efficiency would be improved?
 - This may be more applicable to the irrigation areas west of the Peel River but is not an issue of substance in the Peel River irrigation areas.
 - Who Pays?

- 20 Modification and/or removal of floodwork structures causing adverse impacts
- Probably not applicable in the Peel Valley
 - We fail to see the positive contribution that this measure would make without more detail.
 - It may also have other impacts which have to be considered.

- 21 Implementation of surface water quality mitigation measures
- More information is required
 - This option appears to be a duplication of work that is already being undertaken by government departments, agencies, and community groups.
 - This sounds like a good outcome, but we are concerned that it requests an additional water quality allowance as well as the existing volume of planned environmental water and licensed environmental water allocations. This places increased pressure on both town and irrigation water supplies when really, the existing environmental water should be better managed. An obvious example is the three ML a day release from the Chaffey Dam during periods when the Peel River is flowing strongly. This water could be held in reserve for water quality mitigation as an example of better water management.

- 22 Improve connectivity with downstream systems
- We disagree with the comments aimed at increasing connectivity from the Peel Valley to the Namoi Valley.
 - We are not responsible for commenting on the Namoi to Barwon-Darling connectivity
 - This measure has the potential to make a big impact on irrigation access to water, if the review of water sharing plans were to result in some reduction in the water available for irrigation.
 - Irrigation in the Peel, especially in the unregulated systems is related to flow levels in the rivers and creeks which provide the water. Almost without exception, these water sources have stopped being accessed long before there is a problem with connectivity at the bottom end of the river system. The management of environmental water to improve connectivity is a sensible idea, especially given some of the less sensible rules applying to environmental water management at the moment.
 - The management of first flow events to promote connectivity has to be refined.

The following comments appear elsewhere in this response:

- The Peel Valley is at the headwaters of the Namoi/Peel region, so it does not receive any significant inflows. Yet the Peel River discharges more than 95% of the annual average end-of-stream flow into the Namoi River system.
- Meanwhile, the Namoi Valley system receives the discharge from the Peel system, plus another equivalent volume of water from the Macdonald and other systems.
- But despite this large inflow, the Namoi Valley only contributes 24% of its annual end-of-stream flows to the Barwon-Darling system
- This large discrepancy ought to trigger an investigation into the requirement of 5,000ML of Environmental Contingency Allowance annually in the Peel Valley, particularly since the ECA is not treated as environmental water once it enters the Namoi Valley.

- This absurd situation must be addressed as part of the ongoing review of the Peel Water Sharing Plan. Either all valleys in the region should have a fixed Environmental Contingency Allowance applicable annually, or none should.

23 Revise Water Sharing Plan provisions for planned environmental water

- More information is required, and all stakeholders should be involved in discussions on the topic
- We are opposed to increasing the environmental water available from the Chaffey Dam in response to proposed modelling of future rainfall quantities. The current environmental water allocation should be managed more strategically, released only when really needed, not on a less urgent basis, and definitely not when the river is already in a healthy flow condition.

The following comments appear elsewhere in this response:

- The Namoi Valley receives the benefit of 95% of the end-of-stream flow from the Peel River annually. On average, the irrigators and Tamworth Regional Council use less than 5% of the end-of-stream flow. The entire 95% contribution to the system from the Peel River should be treated as environmental water, and clearly the Peel Valley makes a significant contribution to the Barwon-Darling system.
- The total of the annual Environmental Contingency Allowance (5,000ML) and the annual CEWH held water (1,257ML) is greater than the annual extraction limit for Peel River irrigators. Clearly, The environmental water provided by the Peel Valley to the Murray-Darling Basin system is generous.
- Note that once this environmental water leaves the Peel Valley and enters the Namoi Valley, it is no longer treated as environmental water and is available for use in the Namoi Valley. This is an absurd situation, and the Peel Valley is simply gifting 6,257ML annually to downstream users in the Namoi Valley.
- The Peel Water Sharing Plan is the only water sharing plan in this region that contains a specified volume water for an Environmental Contingency Allowance. Unless all other water sharing plans in the region also have an Environmental Contingency Allowance implemented, the Peel River irrigators are at a disadvantage and are being discriminated against. The Environmental Contingency Allowance in the Peel Valley is an anomaly and should be removed because it cannot be justified.
- Just because the Natural Resources Commission makes a recommendation (without stakeholder consultation) does not mean that the recommendation is either valid or acceptable.

24 Improve understanding of water use in unregulated water sources

- Agreed in principle, but who pays?
- Increasing the level of understanding by DPIE would be useful. In practical terms, the measurement of water pumping in the more ephemeral streams is not going to deliver much benefit and should be approached on a cost benefit basis. In many cases in the upper valley, the measurement of the unregulated water is not going to add to the management of the system at all and should be the lowest priority compared with the larger unregulated water users on the lower Namoi valley where the volume is much larger and more critical.

25 Ability to re-direct supplementary flows that are in excess of needs

- More information is required - we do not have enough information about the potential impacts of this measure to comment properly.
- The level of supplementary flow extraction in the Peel Valley is low.

- Supplementary flows are more a feature of the Namoi Valley and not as applicable in the Peel. Supplementary flows are available for some Namoi Valley landholders to pump into on-farm storages.
- The determination of trigger levels should be set in conjunction with all stakeholders
- Stakeholder consultation for the Namoi Surface Water Resource Plan does not eliminate the need for stakeholder consultation on any future decisions on this topic

26 Improved understanding of groundwater processes

- Agreed in principle, provided that all stakeholders are involved in discussions on the topic.
- We would support the improved understanding of groundwater systems but would caution against preconceived ideas of what the outcome will be of the improved understanding. Climate variability data should only be expanded with caution as the last few years have been way outside the normal range and must be looked at as an outlier result.
- Please provide details of the “Numerical groundwater model” that is apparently currently under development for the Peel Valley

27 Implementation of a groundwater quality monitoring program

- More information is required
- It is disingenuous to quote the uranium concentration in one extremely small area of the groundwater source in the region and imply that groundwater quality in the whole region can be naturally poor. This instance is a naturally occurring localised anomaly that does not warrant region-wide “modifications”.
- Updating the current DPIE water monitoring network to include some water quality aspects is a good idea. However, we would not agree that bore licencing needs to be restricted by consideration of water quality issues. This is a commercial decision and should be left with the proponent of the bore.
- Any discussion on this topic should include stakeholders from the groundwater source.

28 Reducing the risk of sediment compaction due to over-extraction of groundwater

- More information is required
- What evidence is there to demonstrate that this is a problem in the Peel Valley?
- Considering recent investigations have found negligible evidence of groundwater related sediment compaction, this program seems to be totally unnecessary.

29 Protecting ecosystems that depend on groundwater resources.

- More information is required, and all stakeholders should be involved in discussions
- How does this option reconcile with the proposal for recharging aquifers using wastewater?
- The protection of groundwater dependent ecosystems during a long period of drought would not be something that just happens. It would seem obvious that these ecosystems would have evolved in response to drought as surely as the rest of the landscape. Trying to protect them by means other than the judicious release of the environmental water under the control of the environmental water manager is not required in our view.

30 Improving information about impacts from State Significant Development and State Significant Infrastructure projects on water

- More information is required
- “This option would make the impacts on water by these projects more transparent” – there is an obvious need for more transparency and consultation with all stakeholders.
- “In consultation with other agencies...” – why is there no recognition of the need for consultation with stakeholders?
- We believe that current Environmental Impact Studies produced by proponents of these projects have more than enough detail on the impacts on water resources in their material and trying to add to that information would not do anything in improving outcomes. If the

Department of Planning believes the information should be improved, then they can adjust their assessment guidelines accordingly.

31 Water efficiency projects (Towns and Industries)

- More information is required
- “collaboration between state government, local councils, and key stakeholders....” – it is agreed that stakeholders should be involved – as they should have been since the beginning of the strategy’s development
- We would prefer to leave commentary on this issue to the Tamworth Regional Council.

32 Improve water supply reliability

- Except for one, all the options are in the Namoi Valley
- The only idea to consider here is a new 10GL off-river storage at Tamworth.
- We understand that the one option in the Peel Valley (10GL of off-river storage for TRC) has already been completed, so we offer no comment on this option.

33 Review of Water Markets in the Namoi Region

- More information is required
- This is not the subject of the Peel Valley Water Users Association’s interest in the Namoi Strategy and we leave comment to others.
- Fundamentally, increased trading also leads to increased usage as a percentage of entitlement and continues to exacerbate the issues around water being overcommitted in the valley, especially in the Peel where the general security entitlement for irrigation is considerably larger than the average usage.

34 Review urban water restriction policy

- TRC is reluctant to impose water restrictions early because considerable profit is generated from water sales
- As towns in the region draw town water from different water sources, why is there a need for consistent rules rather than specific rules that are appropriate for each separate water source?
- This is an issue for state government and local council authorities.

35 Implementing the Great Artesian Basin Strategic Management Plan

- Our understanding is that no water in the Peel Valley is sourced from the Great artesian Basin, and therefore this option is not relevant to the Peel Valley
- Confirmation is requested that this understanding is correct, and that this option therefore has no impact in the Peel Valley.

36 New Drought Operational Rules (Namoi and Peel Rivers)

- The operational rules for the Peel Valley are documented in the relevant Water Sharing Plan, and any changes to those Plans should involve consultation with all stakeholders
- The NSW policy is a response to the extreme conditions that applied during 2017-2019. However, any updating of the climatic record should be assessed for its impacts on the outcomes of the models which use that data to ensure the extreme weather events do not unduly influence the modelled outputs.

“However, this approach can lead to severe impacts on threatened species and ecological communities, especially those that require permanent water”

- We submit that there are no threatened species or ecological communities in the Peel Valley that require permanent water because, prior to the construction of dams, all rivers ran dry

during dry periods and the threatened species and ecological communities all had to adapt to thousands of years of dry times.

- It is not appropriate to imply that these groups suddenly require permanent water.
- If this option is adopted the natural environment will be manipulated by humans, and those threatened species and ecological communities will exist in an artificial man-made environment which is substantially different from their natural environment.

37 Review of surface water accounting and allocation process

- Any review relating to the Peel Valley should involve all stakeholders
- A more conservative water allocation process will have an impact on cost recovery, and any shortfalls in cost recovery should be funded entirely by the beneficiary of the water (namely councils, but more specifically Councils' ratepayers)
- Any review of the climatic data used in the water modelling should make sure that the outputs of the model are reviewed to ensure that the incorporation of extreme data has not skewed the results and unduly influenced the model output. Further, we are not in favour of reviewing the allocation of water in the linked Peel Regulated River and alluvium systems in light of the recent drought. The groundwater allocations were reduced to 51% in the Peel Valley when the surface water was reduced to 0%. This seemed like a reasonable outcome and allowed some modest maintenance of irrigation production in a dry time when the local demand for Lucerne hay and fodder for stock and horse was at its highest.
- We also do not support the addition of an extra provision for cultural flows. During times of drought in the past, rivers were reduced to low or no flows and it seems unreasonable that the cultural users should have special provisions for flow during periods when the irrigators have no or minimal access and the residential population are on tight water restrictions.

38 Investigation of licence conversions

- It is naïve to suggest that there is flexibility to transition to higher value enterprises in the Peel Valley. The crops grown in the Peel Valley are the highest value crops suited to the area, and there is no reason to suggest that growers are deliberately growing crops of lesser value. About 15 years ago, the Peel Valley Water Users Association enlisted the assistance of the (then) Department of Agriculture to identify any higher value crops that could be grown in the Peel Valley, and there are none.
- This has not been raised in any of our discussions and it is a solution to a problem that does not exist. Significant consultation would need to be undertaken and it is hard to see any benefit.

39 Improved data collection

- Agreed in principle that improved and quality data is always useful, but more information is required
- Again, any proposed change to the Peel Water Sharing Plan should involve all stakeholders
- Improved data collection is, of itself, a worthwhile thing to pursue, but our concern is that the move seems to be to collect data for the sake of it. We believe that a clear plan of why the data is needed, what use it would be put to, and efficient ways of collecting it need to be considered first. We also consider the idea of state-wide uniform metering requirement to be a dangerous idea. Every time a state-wide scheme is planned, there is a huge amount of time having to understand why it may not be appropriate and then confirming that the users are reasonably going to become compliant with the regulation. This usually far outweighs the modelled cost savings from the state-wide uniform plan.

40 Training and information programs

- Agree in principle, but more information is required
- Publicly sharing data and the involvement of all stakeholders in decision making would be a good first step

- We are very cautious about the actual impact on the numbers of changing the climate data and think the government needs a very careful and wide ranging program to convince the users that the new modelled data is an improvement. Water trading rules also need some clarity.

41 Maintain amenity for regional towns during drought

- The justification for this option requires further clarification.
- Most towns in the Namoi catchment are in a hot, semi-arid climate. As part of the climate, hot and dry summers occur regularly and are understood and expected by the community.
- People who are looking to relocate to the area should understand the climatic features of the region before making the decision to relocate to the area, and if the prevailing conditions do not meet their requirements they should choose to relocate to a location which more suits their needs.
- Regarding TRC's feasibility into weirs on the Peel River, this should involve all affected stakeholders. Installing a new weir on the Peel river close to Tamworth may help enormously with the water supply reliability and needs to be thoroughly investigated.
- However, the proposal may be contrary to environmental needs, and the cost of the weirs and associated fish passages should be borne entirely by the beneficiary – namely Tamworth Regional Council.
- The idea of maintaining minimum water levels in Keepit for water skiing during a drought is interesting. However, we believe that the strategy should concentrate on the supply of water for residential, industrial and irrigation use whilst protecting environmental values. Not much use losing your job so you can go water skiing.

42 Improving understanding of low water availability on water dependent industries

- Agreed in principle, but this option should be low priority because there is probably low payback for the effort involved.
- It is incomprehensible that in the 2 places that collaboration is mentioned, stakeholders are not mentioned. On what basis is the input from joint organisations, Government Departments, or academia considered better informed than local stakeholders on this topic?
- This is important, particularly in relation to the industrial scene around Tamworth. However, caution should be used in making too much of models using the last three years data in case they fundamentally skew the output of the models.

43 Sustainable access to groundwater by all users

- Agreed in principle, but any resource extraction limits needing to be set in response to this option would require extensive consultation and discussion with the users.
- Again, systematic state-wide processes are often doomed to fail if they are not broadly accepted by the community because they seem inappropriate and are often not worth the cost.

44 Improved transparency in managing groundwater resources sustainably

- Agreed in principle, provided that all stakeholders are involved in discussions on the topic.
- There is no “transparency and certainty to water users about actions that the NSW Government will take to manage groundwater resources” unless stakeholders – including water users – are involved in discussions on the topic.
- The intent of this option is unclear, but increased transparency in calculating the AWD figures would be good. We do not believe that aboriginal cultural values have an allocation directly granted to them and as a result think that this is not the place to consider their preservation.

45 Land use change and population growth impacts on water resources

- This option seems entirely unnecessary as both Tamworth Regional Council and DPIE are already considering these issues.

- Projected population growth should be based on the availability of a secure water supply, not on Council's aspirations.
 - The Namoi Joint Organisation of Councils is welcome to conduct any project for their own internal use, but the findings should not be imposed on other stakeholders because the findings would inevitably be biased in the Councils' favour.
- 46 Integrating Aboriginal knowledge into groundwater decision making
- We would support his basic process improvement; however, Aboriginal science and knowledge are one source of information in groundwater decision making, but equally so is stakeholder input.
 - In many cases current landholders are fifth generation owners of properties, and their science and knowledge are equally valuable.
 - If Aboriginal knowledge is integrated into groundwater decision making, then stakeholder involvement is also required.
- 47 Culturally appropriate water knowledge program
- We would not support this program. There is a lack of evidence that this is a problem in the first place, or that this program would help solve the problem if it was identified.
- 48 Water dependent cultural practices and site identification project
- More information is required on how this proposal would operate in practice
 - Mapping and describing these sites would possibly be a useful resource for aboriginal knowledge.
- 49 Secure flows for water dependent cultural sites
- More information is required on this option.
 - Aboriginal people would understand that prior to the construction of dams, and prior to the arrival of white man in Australia, waterways in the Namoi region often ran dry during dry periods.
 - Where is the evidence for the need to improve the consistency of flows to cultural sites during drought?
 - Who pays for this proposal?
- 50 Shared benefit project (environment and cultural outcomes)
- More information is required on how this option would operate in practice.
 - What is the evidence that this option is required to be considered?
 - We could support the concept of using environmental flows to help support culturally important sites but would not support the separate granting of any allocation to cultural flows if it came at the expense of existing licence holders.
- 51 Regional Cultural Water Officer employment program
- More information is required on how this option would operate in practice.
 - What is the evidence that this option is required to be considered?
 - Who pays for the program, and what are the tangible benefits from the program?
 - We do not think that it is necessary to appoint any person into this sort of role and think that the idea is flawed. For instance, there is not a government funded irrigation flows Water Officer, nor a residents Water Officer, yet both those groups of people have to interact with government on their own time and at their own expense.
- 52 Establish a regional Aboriginal Water Advisory Committee
- More information is required on how this option would operate in practice.
 - What is the evidence that this option is required to be considered?
 - Who pays for the program, and what are the tangible benefits from the program?

- This appears to be duplicating the opportunities that already exist for Aboriginal people to contribute to water matters.

53 Water Allocations for Aboriginal communities

- Where is the evidence that this option is required?
- Where is the evidence for the statement that “Aboriginal people’s rights and interests are not adequately recognized or provided for in current water laws ... “?
- Aboriginal people are part of the communities in which they live, and they have the same rights and interests as every other member of the community.
- Funding for water allocation to support culturally significant sites is a lot different to funding for pumps and irrigation infrastructure. We might support the former, but we definitely would not support the latter whereby the government gives money to Aboriginal groups to start up irrigation ventures.

54 Co-management investigation of Travelling Stock Reserves

- What evidence is there to justify the requirement for this option?
- Travelling Stock Reserves hold significant importance to all people equally, not just Aboriginal people in isolation.
- This is not an idea that we would support. Travelling stock reserves are well managed under the current regime.

55 Aboriginal cultural water access licence review

- More information is required about why this review is necessary
- We would not support any improvements to the licence system which meant that there were licences issued in direct competition with the current general security water licences for whatever purpose. If the special purpose licences issued for cultural purposes were anything other than on a very small scale, they would be seen to be directly taking away from the residents, industry and irrigators who hold the current general security licences.

56 River Ranger Program

- This appears to be a duplication of services that are already provided by existing agencies.
- We think this program is unnecessary and would often be confusing where there would be seen to be several government employees involved in the same issue. Surely a better approach would be for the state government to increase its employment of aboriginal members so that the public service, had a higher proportion of aboriginal workers.

Comments on the Options not Progressed

Comments have only been offered on options which may affect the Peel Valley.

Inland diversion – small scale diversion from the Macleay River

- More information is required on the details of the project, the quantity of water provided, and the reasons for rejection of this option

New Dungowan Dam – 40GL/60GL

- These options all “could improve water availability in the Peel Valley”.
- Many questions have remained unanswered:
 - Will the 22.5GL dam guarantee water security for Tamworth Regional Council with a population of 100,000 in 2041?
 - Other than TRC, will any other stakeholder benefit from the water stored in the new dam?
 - Who will pay for the water from the dam, and what charges apply?
 - What licencing arrangements apply to TRC’s access to water from the new dam, and Chaffey Dam after the new dam is operational?

Chaffey networked with 22.5GL/40GL/60GL Dungowan Dam

- No reason has been given for not considering the networking of the two dams using the pipelines that will be in place once the new dam is completed.
- This option deserves further consideration

Chaffey Dam second augmentation 180GL/120GL

- More information is required on the reasons why these augmentation options were rejected

Keepit to Tamworth pipeline with Keepit Dam (Namoi Yield) augmentation

- What is meant by “Namoi yield”?
- In 2019, Water NSW costed the Keepit to Tamworth pipeline at \$128 million.
- Why has this option been rejected based on “low economic yield”?

Split Rock transfer pipeline

- Does this option refer to a Split Rock to Tamworth pipeline? If so, Water NSW costed the option at \$120 million in 2019.
- Who are the “customers” who did not support this option?
- More information is required on the reasons why this option has been rejected.

Small scale inter-basin transfer from Apsley

- What does “small scale” mean?
- One option that was considered by Water NSW had the capacity to store the equivalent of Copeton Dam (1,364,000GL) – substantially greater than Keepit, Split Rock, Chaffey and Dungowan *combined*. Hardly “small scale”. Our understanding at the time was that Water NSW did not favour this option because of the cost, however, the cost at that time included a hydro power generation facility, which should not have been factored into the total cost because it was intended to be privately operated.
- Why was this option rejected based on “low economic viability”?

New Dam on Mulla Creek

- As this assessment was apparently performed by Tamworth Regional Council, there is a question about the impartiality of the outcome.
- Does this option warrant a second look by Water NSW?

New Dam on Swamp Oak Creek

- As this assessment was apparently performed by Tamworth Regional Council, there is a question about the impartiality of the outcome.
- Does this option warrant a second look by Water NSW?

Copeton to Tamworth pipeline

- As this assessment was apparently performed by Tamworth Regional Council, there is a question about the impartiality of the outcome.
- Does this option warrant a second look by Water NSW?
- How can this option have a “similar supply benefit” when Copeton Dam is so much larger than any other dam in the region, and larger than all of the other dams in the region combined?

Comments on Finalising and Implementing the Strategy, and the Attachments to the Strategy Document

4.1 Finalising the strategy

- Why is a face-to-face engagement with Aboriginal communities given a priority, but no engagement with stakeholders is even mentioned?
- Who will review the regional water strategy when the equivalent water sharing Plans are reviewed?

4.2 Implementing the strategy

- In this section, a statement is made that “We want to be clear about how we work with communities ... to ensure: ...
 - We have the right partnerships
 - We are transparent
 - We can check with those on the ground and lived experience”
- As stakeholders, we submit that none of those statements is correct, as there has been no stakeholder involvement, no transparency, not the right partnerships in place, and there has been no checking with people on the ground and with lived experience to date.

In the same section under the textbox headed “your voice is important” the opening sentence states “We have prepared this draft strategy to continue our discussions with you ... “

- This statement is incorrect and misleading.
- There have been no discussions with us, as stakeholders, to date so there is no continuance of anything at all

The final paragraph also states, “we will also continue to meet with local councils, local water utilities, Aboriginal communities and other stakeholders.”

- This statement is incorrect and misleading
- No meetings with stakeholders have occurred prior to the release of the draft strategy document, which is a major error on behalf of the authors of the document and the participants in the process.

Attachment 1 – Targeted stakeholder engagement

- This section of the document highlights the bias of the document in favour of Councils, and demonstrates that key stakeholder groups have been excluded from the process of developing the strategy
- Members of the irrigation industry in the Peel Valley contribute to the local economy, pay council rates, employ local staff, support local businesses, and pay a significant share of the cost of water operations.
- It is irrational that this affected sector of the community has been deliberately ignored by the Namoi Regional Water Strategy.

Comments on Tamworth Regional Council's Proposed Submission on the Draft Namoi Regional Water Strategy

Tamworth Regional Council considered the Draft Strategy at the Ordinary Council Meeting held on 23rd March 2021. This was the second time that Councilors had an opportunity to consider the strategy, as Council had not only participated in its development, but were also provided with a pre-release copy of the document and invited to make comments before the draft strategy was publicly released. This approach is highly discriminatory against the other affected stakeholders and has led to outcomes which are heavily biased in Council's favour.

Whilst we have not seen Council's submission, some of the proposed issues were publicly documented in the Council's Business Papers for the meeting on 23rd March 2021, and we make the following observations on Council's proposed issues:

"The NSW Government and DPIE are to be congratulated on the draft strategy as it is the first comprehensive attempt to look at the issues involving water management in the Namoi and seek a solution."

PVWUA Comment:

- We disagree.
- The NSW Government and DPIE are to be condemned on the draft strategy because it does not contain any input from one of the main financial stakeholder groups in the Namoi/Peel, namely the irrigation industry.

"Council considers that the definitions for water security and reliability need to be the same"

PVWUA Comment:

- Agreed that involvement from all stakeholders should result in consistent definitions of terms.

"The possibility that a centre may run out of water on occasion is not possible for a centre the size of Tamworth"

PVWUA Comment:

- Tamworth Regional Council should consider its aspirations for population growth within the constraints that exist such as geography, services and water security.
- The strategy does not state whether the proposed Dungowan Dam will meet the needs of a population of 100,000 (and associated industry growth) by 2041.
- Tamworth Regional Council was a party to the development of the strategy. The new Dungowan Dam and Tamworth's growth to 100,000 are factors that are projected to occur during the term of the strategy document, yet the strategy does not clearly state that Tamworth's water security will be met once the population reaches 100,000 and the proposed Dungowan Dam is completed.
- The draft strategy is failing to deliver the right quantity of water to the right place at the right time unless this requirement is met.
- The final strategy document should be amended to include a clear statement on this vitally important matter.
- If Tamworth Regional Council's water requirements for a population of 100,000 are not met by the proposed Dungowan Dam, either arrangements for additional water need to be put in place as a matter of urgency, or the population growth to 100,000 is unsustainable and cannot proceed.

“For a growing centre, water security should not just be assessed based on present demand, but also into the future when growth will place further demands on supplies.”

PVWUA Comment:

- This statement is self-evident, and it describes the purpose of the strategy. If Tamworth Regional Council considers that the strategy does not meet that objective, then the strategy has failed.
- However, on this critical point, the strategy is silent as to whether the proposed Dungowan Dam will meet the water security needs of Tamworth in 2041 with a population of 100,000, and a projected annual water consumption of around 24GL compared to Council’s existing entitlement from Chaffey Dam of 16.4GL. Why?

“Council supports the Dungowan Dam and pipeline project as a big component in securing Tamworth’s water supply into the future.”

PVWUA Comment:

- We also support any project that stores additional water in inland NSW
- TRC does not confirm that Dungowan Dam will secure Tamworth’s water requirements for a population of 100,000.
- This is a vitally important matter that has been ignored in both TRC’s submission and the strategy document itself. Why?
- The final strategy document should be amended to state whether the Dungowan Dam either will, or will not, meet TRC’s water requirements for a population of 100,000 (and associated industry requirements) by 2041, with a projected consumption of 24GL.

“Council agrees that much further work is required to better understand groundwater, including the linkages between surface water and alluvial water”

PVWUA Comment:

- Agreed, and the “further work” should involve Peel Valley stakeholders, many of whom are affected groundwater licence holders, and many of whom can clearly demonstrate that there is no connectivity at all between surface water and alluvial groundwater on their properties.
- Many of the statements in the draft strategy document relating to connectivity are either incorrect or misleading and require correction in the final version of the strategy document.

“Council believes groundwater users should contribute to the cost of storage where one of the reasons for releasing water from the storage is for aquifer recharge.”

PVWUA Comment:

- This proposition is rejected
- There is no evidence to support most statements on connectivity between surface water and groundwater in the Strategy relating to the Peel Valley, so this statement is not based on facts.
- Is Council suggesting that all groundwater sources downstream of all dams in NSW should share the costs of the Dam, or only the Peel Valley? If only in the Peel Valley, then why discriminate against groundwater users in the Peel Valley?
- This is an opinion expressed by one group in NSW, which would not be supported by other stakeholders in the region, nor probably stakeholders elsewhere in NSW.

“As part of the consideration of changes to present water sharing rules, consideration needs to be given to the lack of incentives for a centre to save water if the water saved is sold to another customer.”

PVWUA Comment:

- This is an inaccurate comment by TRC.
- All stakeholders save water, and all stakeholders benefit from the water saved.
- Many irrigators in the Peel Valley do not use their full entitlement each year, and the water saved is available to all other customers.
- All irrigators save water when there is a reduced AWD (“Allocation”), or a zero AWD, and the water saved is available to all other customers.
- Therefore, this statement by TRC is rejected because it is complete nonsense.

“The Peel Valley is relatively unique when considering the percentage of entitlement from Chaffey Dam held for town water. As a result, there may need to be solutions developed that are unique to the Peel Valley.”

PVWUA Comment:

- The Peel Valley is either unique, or it is not unique. It cannot be “relatively unique”.
- Is the Peel Valley unique? Which other dam in NSW has a similar percentage of entitlement held for town water?
- Any solutions that are developed for Chaffey Dam should involve all stakeholders, including those who pay a large share of the costs (namely the Peel Valley irrigators)
- Chaffey Dam was constructed primarily for the irrigation industry in the Peel Valley, and it is inappropriate for TRC to infer that special solutions might have to be developed to provide TRC with an even greater share of water from Chaffey Dam than irrigators.

“Whilst Council supports making water available for the environment, the present 3ML per day releases from Chaffey Dam, regardless of downstream conditions should be reconsidered. Council has previously suggested the 3ML per day release could be stored in the dam and released as part of a block release which will ensure sufficient water is released to address any environmental concerns identified.”

PVUWA Comment:

- We also reject that there is any justification for a 3ML per day release regardless of downstream conditions.
- We also agree that this environmental water should only be released “to address any environmental concerns identified.”
- We further recommend that any environmental water releases should be counted as part of the 5,000ML annual Environmental Contingency Allowance.
- Neither during the development or the review of the Peel Water Sharing Plan was there any discussions with stakeholders about this additional volume of environmental water, and it is not appropriate to create a new requirement for environmental water outside the terms of the Peel Water Sharing Plan.

“At Split Rock Dam ...”

PVWUA Comment:

- No comment on this matter as it is outside the boundaries of the Peel Valley.

“Council supports the investigation and roll-out of recycled water options”

PVWUA Comment:

- We agree with further investigations being undertaken, but the topic is outside the domain of the irrigation industry in the Peel Valley.

“Option 11, which suggests the creation of a critical human needs water licence needs careful consideration”

PVWUA Comment:

- We agree that careful consideration is required, involving all affected stakeholders
- If this option is not supported by Tamworth Regional Council (who were a major player in the development of the strategy), where did it come from, and who is the beneficiary of the proposed option?
- More information is required around the evidence that purportedly demonstrates a need for the creation of a critical needs water licence. In the absence of a demonstrated need, the option is rejected.

“Option 38, the voluntary conversion of licences should include investigation of the buy-back of sleeper licences in the Peel, and if that were undertaken, what, if any, benefits that would produce in terms of water security.”

PVWUA Comment:

- Any proposals for licence buy-backs, including the evaluation of benefits, should be undertaken with the involvement of all stakeholders, including those directly affected.
- This option refers to voluntary, not compulsory conversion of licences. Any attempt to compulsorily acquire licences in the Peel Valley without consultation would not be supported.

“Food processing to meet the objective of critical human need by placing a weighting factor on the value proposition of sustaining food production.”

PVWUA Comment:

- The intent of this statement is not clear because the wording is poor.
- Food processing facilities should be located where adequate water is available. They should not be in areas where there is inadequate water, and their demands for water impact on all other residents and industries.
- What is the definition of “food processing to meet the objective of critical human need”?

“The operation of the Chaffey Dam to Tamworth pipeline remain operational at all times.”

PVWUA Comment:

- This proposition is rejected because it is contrary to the terms of the Peel Water Sharing Plan, it is contrary to the rules on which the pipeline was approved and constructed, and the impacts on affected stakeholders have never been investigated, considered, or discussed with the stakeholders.

“That the Keepit Dam to Tamworth pipeline be considered”

PVWUA Comment:

- Agreed
- Water NSW costed the pipeline at \$128 million in 2019
- This pipeline appears to be a very justifiable project in its own right.
- Coupled with the PVWUA recommendation to investigate the diversion of the Peel River into Keepit Dam, there are compelling reasons for further consideration of either, or both the diversion and the pipeline.

Conclusion and Recommendation

We recommend that the Draft Regional Strategy for the Namoi Region take note of the comments we outlined in the Executive summary:

- The Strategy has been prepared without any input from the local irrigation industry and accordingly, Lacks representation of appropriate stakeholders' views.
- As a result of this lack of consultation, the strategy contains incorrect statements, misleading statements, unsubstantiated statements, and inappropriate inferences
- The strategy fails to confirm whether the proposed Dungowan Dam will secure the water requirements of Tamworth Regional Council with a projected population of 100,000 in 2041
- The environmental credentials of the Peel Valley are overlooked in the Draft Strategy with no recognition of the small irrigation water take or the unreasonable impost of an Environmental Contingency Allowance when other dams in the region are not so burdened.
- The Draft Strategy seems to indicate that it wants to change the Water Sharing Plans but we believe it does not have the same status as the Regional Water Sharing Plans which have been created after many rounds of consultation and engagement with all affected stakeholders, and have the legal status to deliver their plan.
- The Strategy has an overdependence on Modelling which has meant it has lost focus on the next 40 years.
- Many of the long list of options appear to be outside the scope of the Draft Regional Strategy to "deliver the right quantity of water, of the right quality, for the right purposes, at the right times" for the next 40 years.
- We believe other options to service the needs of the Tamworth Regional Council and subsequently, the irrigation industry, such as a pipeline from Keepit Dam, should be given more attention.

The Peel Valley Water Users association believes that the Draft Strategy needs to recognise that the lack of consultation with the local irrigation industry has led to flaws in the report. We recommend that substantial work should be undertaken prior to the release of the final strategy to address each of the queries that have been raised in this response. We recommend that the incorrect statements should be removed, the misleading statements should be corrected, the unsubstantiated statements should be substantiated or removed, and the inappropriate inferences should be clarified.

The Draft Strategy does not focus on the long term issue of water supply for the Tamworth Regional Council given its aspirational growth strategy and options which may address the issue of water security in the longer term have been excluded from the long list of options.

Furthermore the serious questions raised around the Environmental Contingency Allowance by the PVWUA should be addressed to ensure consistency across the Region.

In summary, in its present form, the Draft Strategy document is not adequate. It has not concentrated on the long term strategic options open to the Region. Many of the options put forward do not fit within the Draft Strategy's stated objectives and have to be accordingly discounted.

Unless this work is undertaken, together with the participation of stakeholders, the strategy will remain unsupported by a large group of affected financial stakeholders in the region.

We remain available to further discuss our comments.