I walk, think and feel this river every day
And, through summers long, have watched it fade.
A stream that still should glide
Has struggled on in fits and starts for fifty years.

A vale that should abound and thrive,
Where only scattered remnants still survive.
Vanquished 'goora-curra'[i] are bereft of trees
And winds blow bare soil into great brown clouds.

Lagoons, once sinuous across the plains
Shrink to stinking scum-fringed puddles.
Unless it rains. When water scrapes away
The last, precious, residues of clay.

Bereaved platypus die in muddy holes
Where once dragon flies were darting filaments of blue.
Colly, gill, meei, mungle: half-forgotten water words.
They lie on the map like reproaches.

Reeds. Birds. Water. All are gone.
Shy denizens of secret places; vanished all.
High up in the hills the 'recharge zone'
Is but a flayed, bleached and fractured place of stones.

Your photographs are sleight of hand. The river's
Corpse propped up on pillows, cosmetics carefully applied.
Soft focus lets the dead fish disappear.
Pictures hold no smell of putrefaction.

No spirit, life or soul. A plan of make believe;
'Flood plain harvesting' is the poacher's friend;
Where nature gives willingly her bounty unto man.
'Water rights', where the only rite of water is to run.

Capture the 'supplementary flow'! A wild animal
That needs control. Foolish humans want to
Change the world to suit ourselves.
Instead of changing self to suit the world.

A river that should murmur to the sea
Pausing in 'noble reaches' [ii] as it chatters down.
Arteries, veins and beating heart –
Reduced to forty policies, in draft.

When this river dies, then so shall I.

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[i] Long plains – roughly adapted from Kamilaroi language.
[ii] Mentioned by both Cunningham and Mitchell.

[redacted]

[redacted]

[redacted]

Regional Water Strategies
Department of Planning, Industry and Environment
Parramatta, NSW 2124

Dear Sir

It seems futile to send this – or indeed any - letter to the section that is responsible for producing water strategies. Unfortunately the modern process of seeking submissions, only for them to be ignored is totally entrenched. I would, however, like an explanation of why the policy document was not fact-checked, and why environmental agencies were not involved. I don't think that is an unreasonable request.

I write in respect of the proposed Peach Trees / Yellowbank dam, and the NSW government's 'regional water strategies'.

A summary of my complaint is:

i. The NSW government's failure to notify potentially affected landholders, or to acknowledge in the draft strategy 'options' that a dam at Gravesend would dispossess about fifty landholders,
ii. Omissions, errors of fact, bias and misinterpretation in the draft policy document DRWS Pub 20/303 which would lead a person with no local knowledge to support extremely flawed water management policies,
iii. A submission questionnaire that seems to have been deliberately designed to produce skewed results favouring certain options.

1. General comments on the Moree meeting and dam proposal.

A meeting was organised in Moree on October 23rd 2020 by NSW government staff. This was the first moment at which any local landowner became aware of the proposed dam, other than as a vague possibility. The meeting was, I am told, advertised in The Land Newspaper and The Gwydir News. Anyone who does not read those two publications could not have known of the meeting. That the convenors chose to hold a 'public' meeting in a town so far away from the site of a proposed development, in a different LGA, inadequately advertised and without informing affected landowners is a clear indication of the dubious nature of the proposed dam. Such a methodology is intended to prevent action or protest. It is also very obvious that 40,000 nut trees have just been planted to the west of the existing pecan farm; this alone is enough to put pressure on the water supply.

As someone who would lose my home and livelihood if this dam were to be built I feel very strongly about it. I own a small business in Moree which would also be adversely affected. As a tax payer I am furious at the proposed expenditure of public money for the construction of a dam that would dispossess up to fifty families, and benefit only a few corporations and individuals – some of which no doubt are foreign owned.

As a direct result of the Moree meeting, about 30 landholders spent four hours of our Sunday discussing a proposal that was originally discounted as impractical some forty years ago. Other landowners are travelling far afield to seek legal advice, and have made dozens of telephone calls. The situation is particularly unpleasant for the many Nationals stalwarts in the district, who feel that they are – quite literally – being sold down the river in exchange for their years of loyalty.

Possibly the most startling piece of information to emerge from the Sunday meeting was that on Thursday the convenor had shown to participants a map of the area that would be inundated. Fortunately, someone had a camera handy and quickly photographed it. Another participant subsequently asked for a copy to be emailed to her. The convenor replied that she was banned from sharing the image. So there we were on Sunday discussing a pirated copy of the map that could determine all our futures, but we are not allowed to see. The pirated map is headed "Gwydir Valley Priority Catchment Strategic Business Case".

For Moree residents, and particularly the larger farmers, the Gwydir shire is viewed as a sort of terra nullius; it is no joke to say that 'Gwydir lives don't matter' in their eyes. The loss of an undisclosed number of mostly family owned farms in the Gwydir shire is as nothing compared to the 'creation' of a few mostly casual jobs in Moree.

This old proposal has been re-activated without any preliminary cost-benefit analysis, without one single environmental impact study, without any assessment of Indigenous heritage and without even bothering to inform landholders. From the moment at which this became public knowledge no one can put their property on the market or make any infrastructure improvements. It would be commercial madness to do so. Literally overnight, our lives have been put in limbo at the behest of an employee of the NSW government planning department. Whereas with a normal sale, the vendor may hold off until he considers the market to be right, or to suit his own personal circumstances, compulsory purchase takes no account of such things.

Those who applied for documents by mail have received items not made available at the meeting, but not all the ones handed out on the day.

2. The results of Copeton

The construction of Copeton damaged the towns of Inverell and Bingara because of the loss of Copeton village, but was catastrophic for Moree. Inverell and Bingara have now largely recovered, but Moree will never regain its former importance. The town's population has fallen consistently since the late 1970s, a growing proportion of the surviving population is indigenous and belongs (through no fault of their own) to a low socio-economic group. Irrigation and agricultural mechanisation have destroyed a once flourishing economy. In the case of Stahman Farms, the decision to process nuts in Toowoomba severely limits any local economic benefit from the enterprise. Cotton, wheat and livestock leave the district unprocessed. It is well-known that the once vital Watercourse livestock fattening industry supported many more jobs than irrigation does today.

This very large dam has a relatively small catchment, and the original over-allocation of Copeton water has left the dam unable to cope with demand, in turn leading to what is euphemistically called 'flood-plain harvesting' to meet the shortfall. For as long as I have been in the district, irrigation water has been in short supply for all but a very few seasons. Your own policy document says that the dam has only filled four times, without mentioning how many times it has fallen below 20% capacity.

Add in the effects of climate change vastly increasing evaporation rates, and irrigation becomes even less sustainable than before.

3. Draft Regional Water Strategy document (DRWS Pub 20/303)

DRWS Pub 20/303 takes inaccuracy and misleading statements to a whole new level. I would not have bothered with commenting on it but for the fact that, as a government policy document, it shapes decisions. I have not fact-checked every page, but those that I have, show an extraordinary level of inaccuracy and an absence of adequate footnotes, which makes fact checking even harder. Photographs of brimming rivers and bountiful harvests do not in any way reflect the reality of the past two decades. Yes, there have been a couple of floods in the past twenty years, but dryness, heat, erosion, dried up dams, starving stock, empty rivers and dead fish are becoming the norm.

The authors have invented a 'Gwydir Region', with Moree at the centre and make eleven mentions of the 'Moree Special Activation Precinct' with new water requirements. Anyone unfamiliar with the district could be forgiven for believing that Delungra and Uralla use Moree as their regional centre. In reality Delungra is 35 km from the town of Inverell (pop 12,000+) and Uralla is 20 km from the city of Armidale. As a retailer I know that Moree has a relatively small business catchment, and almost everyone from Warialda east travels to Inverell. Parts of DRWS Pub 20/303 appears to have been constructed with an agenda to promote Moree.

The map on page eleven is a bizarre cartographic fantasy, which even shows as operational a railway that closed some forty five years ago and is now mostly demolished. The use of the same symbol for Pallamallawa (population 300, one pub, one school) and the major centre of Inverell is deliberately misleading. Despite a large number of 'options' that involve Aboriginal people, the authors apparently don't know that the Kamilaroi is only one of at least three Aboriginal nations in the Gwydir valley (Wolroi & Anaiwan being non-Kamilaroi peoples). The North Star water supply is mentioned, even though it belongs in a different catchment, but the Pallamallawa / Biniguy water supply is not mentioned at all, and for Gravesend different sections suggest that it is supplied by groundwater or by Copeton – take your pick.

In section 2.1, it is curious that the authors have used a website called 'Climate Kelpie', rather than the BOM to provide an assessment of temperature anomalies (p36). On the same page they suggest that summer storms "cause flooding", rather than low pressure systems causing the rain and floods being the result of the inability of the soil to absorb moisture. On page 38 we are told that average rainfall could increase by 66 mm during wet periods! Two paragraphs later it is disclosed that average rainfall is likely to decrease by 13%, and rainfall events are liable to become more intense in the period 2060 to 2079. It would be more useful to discuss trends over the past twenty years, as intense local rain events have already increased. Evapotranspiration is forecast to increase, as are temperatures, with more days over 35 and 38 degrees, but these statements are not referenced and are of limited relevance. Heatwaves and higher night time temperatures have more impact on evaporation than individual hot days. A glance at Murray Darling temperature anomaly graphs shows a fairly bleak picture of what has already happened. If these trends continue and intensify not only is the water system already stressed, but is likely to become more so. The use of 'average scaling factor' as the scale in graphs on page 39 renders them meaningless to the average reader.

On the subject of droughts, three major droughts are identified in the first paragraph (excluding 1919-20 which was particularly serious), but although the period March 2017 to February 2020 was

the driest on record, it is not described as a drought. The most remarkable statement in the whole document (p 40 para 4 & repeated verbatim on p 33) is

> "Between February 2018 and February 2020, Copeton Dam experienced is second lowest 24-month inflow volume on record (54 GL). The lowest was 53 GL in the24-months to January 1920."

The footnote that is meant to reference this item is simply a long list of allocation statements, so it is of no use at all as source reference. If the people writing this document don't even know when Copeton was built (1973) and don't bother to reference their material, then there is no hope. The worst case scenario, identified by the authors as having a small probability, is an inflow of as little as 17 GL in one year. Given the global scientific consensus that we are already into widespread anthropogenic climate disruption it is hard to see how this probability can be fairly discounted as 'small'. The authors suggest that "By comparison, the average 24-month inflow volume is likely to be similar to the historical record if the future climate is consistent with our long-term historical climate projections". Leaving aside the problem inherent in "historical climate projections", the science of anthropogenic climate change suggests that the paleo-historical record now has limited usefulness as a predictor.

On page 44 we are told that the most recent significant flood event in the Gwydir was in September 2016 (para 2). The river peaked at 4.3 metres, and a minor flood warning was issued at Moree. By contrast in 2011/12 the river peaked in Moree at over 10.5 metres, and was the largest flood in living memory. It is quite clear that the figures quoted in that paragraph are drawn from a different catchment where there were major floods in 2016.

The person writing the climate section has not so much massaged the information, as pummelled and re-shaped it. By largely ignoring records of the past thirty years as evidence of massive changes that have already happened, and by focusing on possibilities for the period 2060 on, the immediate problem is ignored. Careful use of language helps, for example;

> "Our new modelling looked at a range of plausible climate scenarios for the Gwydir region to understand how future climate risks may impact on water licences in the regulated Gwydir River. They show that, overall, the future climate in the Gwydir could increase the water security risk for almost all water users." (p 78)

Anyone who reads the rest of the document carefully and checks other sources will find that already rainfall is becoming erratic, heatwaves are increasing in intensity and duration, evaporation is increasing correspondingly, and water infiltration into the soil is decreasing. The climate is already changing, future climate risks will impact, and will increase water security risk. Of that there is no doubt at all. Why try to pretend that these things are distant possibilities?

The low catchment health of the Myall Creek is mentioned, but extraordinary levels of erosion and turbidity in the Horton River and Warialda Creek are not discussed.

4. The Submissions Process & Gwydir Long List of Options (PUB 20/304)

Members of the public are permitted to comment on the forty options, but only by means of a questionnaire that has to be returned by November 13th 2020. Not only is it ludicrous to expect quick responses to a very complex set of documents that were issued in late October, but the on-line version requires each question to be 'answered' before proceeding to the next. This effectively forces respondents to prioritise their five most important strategies without being able to say that they are mostly nonsense. It includes potentially prioritising towns against each other – encouraging

respondents to suggest that the Uralla water supply somehow outranks Bingara, as an example. The areas in which comment is permitted are also very limited; a question is devoted to stochastic modelling techniques about which I have no knowledge, and it is fair to say that other respondents will also know nothing. The questionnaire 'should' take about fifteen minutes to complete; so far I have devoted at least ten hours to assessing it and gathering further information.

Options include "Co-Management Investigation of TSRs". The idea that because TSRs reach watercourses they are somehow part of the water system in a way that agricultural land is not, is interesting. Equally, to suggest that TSRs are culturally important to Indigenous people is unusual, and that Indigenous people find it hard to access TSRs is ludicrous. Everyone has the same level of access, regardless of race creed or colour. Many of the options are similarly trivial, costing a few hundred thousand dollars, and having no direct impact on the availability or management of water across the catchment.

The Gravesend Dam option estimates a saving in evaporation of 29.1 GL a year. Presumably this is a proportion of something, but without knowing what the figure is quite meaningless. Quite how it might provide flood mitigation remains to be seen, unless the storage is emptied well before rain.

In the considerations section, turbidity is not mentioned, although page 59 of DRWS Pub 20/303 does mention lower water quality throughout the catchment. Nor is the Moree/Inverell powerline mentioned, although it would have to be moved. Perhaps this is already in the preliminary costings? Most serious of all it mentions as a consideration potential inundation of land around weirs, but not upstream of the proposed dam.

Up to ten of the 'options' are either to undertake research, or require further research. The very idea of proposing options that have not been subject to any sort of testing or checking is extraordinary. It is noticeable that those options already discarded have been subjected to some level of benefit / impact analysis which should also have been applied to other proposals before they are made public. It is also very obvious that in the abandonment of two other proposed dam sites impact on landholders was not a reason for abandoning the proposal!

5. Omissions
    a. To put forward 40 ideas without any costing is ridiculous, especially when affordability is a stated objective of the strategy's development.
    b. A failure to address the long-standing problem of over-allocation in the original licenses.
    c. A marked reluctance to use Commonwealth or international datasets. Climate and weather are global. "Climate change is also influencing the Australian climate. Australia's climate has warmed by around 1.4 °C since 1910, while southern Australia has seen a 10–20% reduction in cool season (April–October) rainfall in recent decades". http://www.bom.gov.au/climate/enso/ (accessed 8.11.20)
    d. There is no in-depth assessment of river and catchment health, although a lack of baseline information on these topics was identified as an issue by the BRGCMA fifteen years ago. Indeed one could be forgiven for thinking that the disbandment of the CMAs was a means of dismissing the problems they were put in place to address.
    e. A total, dismal utter failure to address the inter-relatedness of all rivers in the Murray Darling Basin. Whilst individual raindrops that fall here do not expect to reach the ocean, the health of the lower sections is dependent on the health of the upper sections. Extraction here directly impacts rivers lower down.

f. Whilst fish and water birds are mentioned, other birds, reptiles and mammals are not discussed.
g. The mass fish deaths that were such a feature of 2019 are not mentioned.
h. The NSW government's own NARCliM projections are a great deal more pessimistic than those quoted in DRWS. For example heatwaves are not mentioned in DRWS but NARCliM says "According to the NARCliM output, the northern interior of NSW is where the number of heatwave events (HWN) will increase (about 3.2 heatwaves/year), as will the frequency of heatwave days (HWF; ~5% of days) http://www.ccrc.unsw.edu.au/sites/default/files/NARCliM/publications/TechNote5.pdf (accessed 8.11.20)

6. The Forty First, Forty Second & Forty Third Options.

41. Make a fair assessment of whether irrigation can continue, and how much is sustainable. Instead of attempting to magic desirable conclusions out of a mountain of unfavourable evidence, look at the reality of evidence available, particularly trends and events of the past thirty years (as presented by Australian and state government scientists). The assessment would include the reality of groundwater extractions, the reality of NARCliM projections and be illustrated with photographs showing the reality of what residents have faced in the past two decades. It could well lead to the dismantling of 'growth' projects and much of the irrigation industry. Compensating irrigators would almost certainly be a great deal cheaper than building a dam to store non-existent water for an irrigation industry that is likely to collapse anyway. The resulting reports would be written by scientists skilled in assessing risk and probability rather than by people who are demonstrably unable to fact-check their own work.

42. The cheapest, most easily implemented and sustainable option has not been suggested as possible. Increasing soil organic matter, planting of trees and encouragement of permanent deep-rooted perennial pastures in the catchment will dramatically increase the ability of the landscape to absorb water. This helps in the recharge of sub-artesian aquifers, reduces flash-flooding and holds large quantities of moisture in the soil. That additional moisture moves slowly through aquifers. The amount of additional moisture held in the soil by increasing soil organic matter depends on the authority cited, but it is very significant.

43. Study transmission losses in the Gwydir system. I have found transmission loss studies for other catchments, but not for this one. That study would inform reporting on option 41.

Yours faithfully

[redacted]