

**Submission  
No 113**

## **INQUIRY INTO WATER AUGMENTATION**

**Name:** Mr Dugald Bucknell

**Date received:** 27 May 2017

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WATER AUGMENTATION COMMITTEE NSW PARLIAMENT

27th May 2017

Dear Sir/Madam

I have attached three(3) files which I consider relevant to your committee,

- 1) My submission to the Macquarie-castlereagh water resource plan - status and issues paper.
- 2) My submission to the amendments to the Northern Basin Plan
- 3) My goal and our logo. Please contact me if any of my issues need further explanation.

Yours faithfully Dugald Bucknell

**From:** Dugald and Justine Bucknell  
**Subject:** Submissions to Macquarie-Castlereagh Water Resource Plan - Status and Issues Paper  
**Date:** 11 January 2017 at 11:26 pm  
**To:**  
**Cc:** Dugald and Justine Bucknell



DPI Water  
Macquarie-Castlereagh WRP

### **Submission to Macquarie-Castlereagh Water Resource Plan - Status and Issues Paper**

Dear Sir/Madam

My family and I live at Quambone Station, Quambone. We operate a cattle grazing operation that covers approximately 20,000 hectares, and comprises land in and beside the Macquarie floodplain. Our family has owned, operated and lived on Quambone Station for 4 generations, since 1912.

Much of our country is dependent on flood plain inundation for its natural ecological sustainability and for us to meet our marginal costs of production. We have seen enormous reductions in the natural water flow over our country as a result of unsustainable, and ever increasing, water extraction since the 1980s. This has resulted in substantial economic loss and devastating damage to the natural ecology of our country.

We welcome the opportunity to provide comments on the DPI Water Status and Issues Paper ('the paper') relating to the development of the Macquarie-Castlereagh Water Resource Plan (surface water).

#### **Stakeholder Advisory Panel - floodplain grazier, cropping and horticultural representation**

We note that the paper calls for stakeholder engagement. However, while the paper notes that 80% of the catchment is used for grazing, cropping and horticulture, none of these industries, nor the people in them, are recognised as stakeholders in the MCWR plan.

As you know, water is not an unlimited resource and upstream diversion results in less water for downstream users. The extraction of water for water access licence holders, and for the environment, and for town supplies, comes by diverting water from natural water flows over floodplains. The Stakeholder Advisory Panel (SAP) currently excludes representation of people who have, in many cases, lived for multiple generations and over 100 years on land that depends on water to support lives, ecology and livelihoods. Fair government should ensure that these people are represented.

The fact that paragraph 2.2 of the status and issues paper does not even mention grazing, cropping and horticulture in the "Beneficial Uses of Water resources", demonstrates that without representation on the SAP, there will not be fair consideration of the concerns of these stakeholders.

***Recommendation 1: That the Stakeholder Advisory Panel include representation from grazing, cropping and horticultural interests representative of the catchment area occupied by these industries (80%).***

***Note - this representation must be by parties that are not conflicted via having an interest in water access licences.***

#### **Baseline Assessment of Effect of Existing Water Extraction required before principles pre-determined**

The status and issues paper states that it is "based on principles set out in the Murray Darling Basin Plan 2012, together with principles set out by the NSW Government." However, there has been no studies undertaken of the effect of extracted water by licence holders on other stakeholders, such as floodplain grazing enterprises downstream. In the absence of such a study, it is impossible to assess whether the existing water licensing arrangements are beneficial or detrimental to the entire community within the Murray Darling Basin, the people of NSW and Australia. Moreover, the costs to those that have suffered from lower water flows (ie downstream water users from upstream access licence holders) has not been considered.

However, the existing principles of the plan already state that some interest groups have a privileged position of having "no adverse impacts", or "no net reduction". The Government's responsibility to ensure that limited public goods are not appropriated and diverted to benefit a particular group of people cannot be met if the Government has made no assessment of the costs of diverting water.

Such a study should assess the productive capacity of the downstream country that received natural water flows prior to development/water licencing, and implied asset value if that productive capacity had been maintained (rather than be starved of water). The study should assess the current productive capacity of such country (taking into account the lower water availability as a result of upstream extractions). The study should also budget the economic effect of any new plan on downstream floodplain graziers.

The Murray-Darling Basin Authority has demonstrated that such a plan is entirely feasible (having completed a floodplain grazing study for the Condamine-Balonne). It is not reasonable for the principles in the MCWR plan to be determined in the absence of this information.

Such a plan would enable the community to determine the extent to which water licensing is merely the diversion of an economic benefit from one group to another, rather than the creation of a net benefit to the people of NSW (at the cost of environmental degradation).

Additionally, it is currently impossible to determine full cost recovery for water (as the full costs have not been assessed). This must also be required so that pricing of extracted water can be correctly calculated so that the user pays and full cost recovery principles can be applied.

The Macquarie-Cudgegong regulated WSP has already been in place since 2004 and Burrendong Dam has been in place since 1967. However, there has been no Government assessment on the negative impact of water extraction on grazing operations downstream. It is not reasonable, scientifically, socially or economically, nor consistent with the objectives of “providing for a healthy working Basin in the future”, to have principles that state that “there will be no adverse impacts on water available to water licence access holders”, without considering the negative impact (economically, socially and environmentally) on the areas that used to receive this water, prior to its extraction upstream.

***Recommendation 2: That the environmental, economic and social impacts of upstream water extraction on areas that received natural flooding (prior to the extraction of water for irrigation) down the entire Macquarie River and Floodplain downstream into the Barwon-Darling, be independently assessed and released publicly, prior to the Principles of the Plan being adopted.***

#### **Additional Principles**

As stakeholders who have seen natural floodwaters appropriated (without compensation), over a 50 year period, we have suffered huge economic loss.

We note that the following additional principles are only extending the same protections to downstream stakeholders, as are currently being offered under the plan to water access holders. Already, these downstream users have seen their water supplies drastically cut as a result of upstream water extraction.

The aim of the water reform process, including the initial development of water sharing plans (WSP) in NSW and the subsequent Federal legislation for a basin-wide plan, has been to redress the over allocation of consumptive water. However, the WRP principles regarding minimising change for WSPs over the 10 year period, and having no adverse impacts on water access licence holders is inconsistent with this.

***Recommendation 3: We consider that three additional principles in the Basin Plan are also critical considerations:***

- ***‘A water resource plan must be prepared having regard to whether it is necessary for it to include rules which ensure that the operation of the plan provides for natural flooding over pastoral areas, to ensure the economic, and environmental sustainability of natural floodplains.’***
- ***‘A water resource plan must be prepared to ensure that there are no adverse impacts on water available to graziers, croppers and horticulturalists on natural floodplains’.***
- ***A water resource plan should consider the economic costs of upstream water extraction on downstream water users and, if necessary, provide for a model to make good for the economic transfer of wealth from one water user to another.***

#### **Environmental Assessment of prior models**

The paper fails to recognise that the Macquarie-Castlereagh catchment supports (or did prior to the over allocation of water licences) the Macquarie Marshes, which is one of the few remaining sites in Australia to support large breeding colonies of native birds.

The status and issues paper does not contain an assessment of the accuracy of modelled water flow rates - heights and flood expectancies/duration that underpinned previous water sharing plans. Prior to the creation of a new plan, the accuracy of prior models compared to actuals needs to be assessed. Such an assessment needs to consider whether the models have accurately predicted water flows, particularly in relation to the life expectancy and breeding time frames of representative wildlife animals/birds/bugs/ and soil microbes etc.

***Recommendation 4: Assess the accuracy of prior models (of water flows, and the effect on the environment, prior to establishing a new plan***

#### **Uncontrolled Flows**

Based on our experience, the department does not have an adequate appreciation of the enormous volumes of water that are extracted via floodplain harvesting. Continued floodplain harvesting will have a devastating impact on downstream users. Moreover, the grant of floodplain harvesting licences, without a corresponding reduction in water access licences, will only mean downstream users of water (i.e. those that receive natural flows) are even further punished. This is contradictory to the MDBA goals of returning water to the environment.

***Recommendation 5: That the plan require specific removal of any floodplain harvesting structures, and if not removed within a 2 year period, that Government Authorities take remedial action (in addition to applying financial penalties).***

#### **EFRG**

We consider that there is a untenable conflict of interest for water access licence holders (above the designated floodplain) holding positions on the the Macquarie EFRG. We do not support any change to the function of the EFRG, however, we believe that the proper functioning of the EFRG is compromised when its membership includes persons with interests in water access licence above the designated floodplain.

***Recommendation 6: Membership criteria of EFRG to exclude persons with upstream conflicts of interest.***

### **Translucent flow trigger**

We support the removal of the translucent sub account so that all environmental water releases can occur having regard to the environmental needs downstream rather than an upstream trigger. Additionally, the maximum flow triggers for environmental flows is problematic as it creates the potential for litigation, and means that environmental needs are always subverted to water access licence holders - which contradicts the goals of the MDBA.

***Recommendation 7: Remove the translucent sub account***

### **End of system flow target**

We support a variable end of system flow target because the entire environment, including our grazing operation requires inundation and dry periods as part of the natural environment.

***Recommendation 8: introduce a variable end of system flow target.***

### **Supplementary access triggers**

We support an increase in supplementary access triggers because it is the only water that can mimic the natural environment (i.e. because it is below the dam). Additionally, there should be low flow protection. That is, access licence water should not be extracted from tributary flows below supplementary trigger flow levels because this is critical for drought-support flora on riverbanks and resilience of plant species on riverbanks.

***Recommendation 9: increase supplementary access triggers combined with low flow protection***

### **Replenishment flows and supplementary triggers**

On multiple occasions, supplementary water has been given when all stock and domestic, and replenishment flows have not been met. We support rules that stock & domestic and replenishment flows must be fully met prior to allowing supplementary water to be extracted. These rules have not been applied.

***Recommendation 10: breach reporting by the river operator of any rules that have not been applied be part of the plan.***

### **Flood mitigation zone rules**

We do not support any proposal to change the operating rules of the flood mitigation zone, for obvious reasons. This simply amounts to increasing extraction from the river system, when it is already overallocated and is not consistent with the principles of the Basin Plan.

***Recommendation 11: do not change the rules for the flood mitigation zone.***

### **No support for reduction in EWA**

We strongly object to any consideration of a reduction in the EWA or the EWA shares. We depend on this water and without it our land is unable to support livestock and therefore a reduction would cause us even further severe financial hardship. Additionally, the ecological welfare of the river system and floodplains have been enormously damaged as it stands, and a reduction in the EWA will exacerbate this.

***Recommendation 12: Do not reduce EWA***

### **Increased transparency in water use.**

The water is a community resource and the community, particularly those downstream who no longer receive their natural water flows should be able to see how much water is extracted by each water access licence user at all times. This should be updated weekly so that the community has full transparency. Transparency in the allocation of public goods is a basic principle of good governance. Increasing transparency will, over the longer term, improve trust in the plan.

***Recommendation 13: that a fully interactive, transparent, publicly available website that shows every extraction from the river system be created and maintained by the Department as part of the plan.***

### **Climate impact on Water Cycle of Greater NSW**

There has been a significantly greater understanding in the last few decades of man-induced climate change. It is not unreasonable to posit that the damming of the Macquarie River and the associated reduction in natural flooding throughout the Murray Darling Basin has a significant impact on the rainfall and water cycle of all of NSW east of the Great Dividing Range. Given the importance of the agricultural sector to NSW, a full climate study of the impacts of the disruption to the natural water cycle of evaporation, condensation, cloud, rain, runoff, riverflows, needs to be undertaken to assess whether the enormous reduction in natural floodwater is causing long-term damage to the ecology of much of NSW, and the associated economic impact on its residents.

***Recommendation 14: undertake a complete climate study of the effect of the damming and water licensing regime on the rainfall and water cycle of greater NSW***

### **Social Benefits from Increasing Stock and Domestic Entitlements**

Communities and towns that are in the lower floodplains have collapsed in population, employment opportunities and economic

wealth creation for business owners. We support an increase in the domestic and stock entitlements to undo some of the damage that has been incurred in these communities as a result of water transfers upstream to large license holders. This water should not reduce the environmental water flow, as this is the little water that makes its way to the lower floodplains. What is required is more water downstream, rather than a renaming of the category under which it is not extracted from the river system.

Water has not been shared equitably in the Macquarie River System. An increase in stock and domestic entitlement would go some small way to addressing this.

***Recommendation 15: increase stock and domestic entitlements for downstream users for social cohesion.***

**Research required to meet the Objectives of the Plan**

To assess whether the existing, and any new, Basin Plan meets the objective of providing for a healthy working Basin into the future, and the net benefit or cost of the Plan, there must be an assessment of the following 4 questions:

1. The number of hectares developed/benefited (50,000 hectares) as opposed to the number of hectares degraded (unknown).
2. The number of people that have been enriched with greater access to water as opposed to the number of people dispossessed of water.
3. The extent of any net economic benefit (having regard to an assessment of the economic losses downstream as a result of the extraction of water from the system).
4. The environmental costs of water extraction on the entire downstream river system, floodplains and greater NSW'
5. The social costs of transferring water away from downstream areas and the dislocation of those communities

***Recommendation 16: a complete economic, environmental and social cost study into the affect of water extraction on downstream environments***

We note that DPI Water states that it will acknowledge all submissions in writing, and we would appreciate a response to the issues raised in our submission.

Yours faithfully

Dugald Bucknell

# QUAMBONE PASTORAL CO. PTY LTD

Quambone Station  
QUAMBONE NSW 2831

Basin Plan amendment submissions  
Murray–Darling Basin Authority  
GPO Box 2256  
CANBERRA ACT 2601

20th February 2017

Dear Sir/Madam

## RE: OBJECTION TO PROPOSED AMENDMENTS TO THE NORTHERN BASIN PLAN

I wish to object to the proposed amendments to THE BASIN PLAN, including the reduction from 390GL of recovered water. The only longterm satisfactory result is a sizeable dramatic increase in recovered water.

My reasons are as follows:

A. The following information has been omitted, hidden or manipulated:

1) The “on ground” SFI’s (site specific flow indicators) in the Macquarie have not been met.

2) The “without development” readings have not been included on all diagrams, tables and graphs.

3) The “maximum dry periods between events” over the 114 year modelling period for the Macquarie in “Whole of north table A2” page 174 - (hydrologic modelling for the northern basin review )(HR) are missing. (like the birds that breed in that dry period)

4) Figure 5 HR page 27 “end of system flows” without development on the Macquarie is 870 GL. On the Macquarie water balance HR page 186 “without development” outflow is 760GL.

5) Figure 5HR page 27 “end of system flows” baseline on Macquarie is 640GL; On the Macquarie water balance HR page 186 baseline outflow is 577 GL.

6) The two types of recovered water, BUYBACK or WATER EFFICIENCY, should be accounted for separately and diagramed, tabled and graphed separately on all occasions.

7) “Water Efficiency” recovered water should have a neutral status, as there has been no effective loss of irrigation production, jobs, local town purchases or other socio economic effects.

8) “BUY BACK” recovered water has had a capital dollars injection into those communities.

9) “BUY BACK” irrigation land can be returned to full cropping with increased area, with removal of headlands, roads and irrigation channels, thus retaining jobs, local town purchases and other socio economic effects.

10) There has never ever been a full economic study done on the effects of water extraction on downstream landholders, community and environment. This should still be done by local governments, state departments of land, water, agriculture, development, environment and treasury as well as federal government departments of agriculture, environment, development and treasury.

B. The undocumented subsidisation of the irrigation industry by downstream communities which is wealth transfer disguised as productivity.

11) A Macquarie floodplain grazing study needs to be completed, similar to the MDBA’s Condamine Balonne grazing study. My accountant applied my business account figures to the Balonne grazing study and found that I have lost (due to up stream irrigation) over the last three years \$361455, \$593071, and \$649,126. That is an average of \$10000 per week profit, that I am sending up stream to the irrigators. A great subsidy from my family and the tax payers of Australia.



12) The loss of land asset capital value due to the above income loss (see no.11) using capitalisation lease rate of 5% is ~ 10 million dollars, thus over the Northern Basin is potentially Billions of dollars.

13) The above loss of unimproved capital value of land in the Macquarie floodplain as a result of the removal of water to extractive use irrigation land, where it is not valued for Local Government rating purposes, has meant for local government to achieve the same total \$ rates income, all other rate payers have had increased rate payments, achieved through various mechanisms.

14) The above will apply to all shires in the Northern basin.  
(see no. 13)

15) I live in the Coonamble shire, as does about 25% of the Macquarie floodplain, it lies directly east of the Macquarie Marshes. Historically it receives most of the evaporation and rain that comes over from the marshes. It is most disappointing that a socio economic study was done everywhere else, but Coonamble, as it is totally non irrigation. This would have made for a good comparison with Warren for loss of productivity and jobs. This should be done before any more water is taken.

16)The loss of employment and employment opportunities in the Quambone, Carinda and Coonamble areas has markedly decreased our population and had flow on affects such as, the number of students at the Quambone school between 1976 and 1980 was as high as 90 students. The school now has 16 students. Coonamble used to have both sheep and cattle sale yards.Cattle fat sales once a week and at peak times twice a week during the 1970's and 80's along with store sales each month.Last year it had 7 sales in total for the year. Sheep sales stopped many years ago.

17)The loss of evaporation in the floodplain and especially the Macquarie Marshes has obviously lowered the quantity of cloud and thus rainfall, on average Coonamble grows 5kg of wheat per hectare per millimetre of rain. The unknown here is the loss of rainfall figure, but, the CSIRO released on Tuesday 14TH February 2017 a new study into wheat yield decrease in the last 26 years due to climate rainfall change.This needs to be incorporated into the Northern Basin Plan before any changes are made.

18) The change of flood and flow regime caused by upstream banks and water regulation has caused channelisation of the floodplain. The long-term cost of this is unknown, but will be substantial to rectify.

C. Government subsidies, funded by the public purse, through unpaid debts:

19) The subsidised cost of water including, but not limited to, infrastructure such as dams, weirs, buildings. Regulated water users should be paying a commercial rent on these assets to the people of N.S.W

20) The cost of the MDBA Buybacks and efficiency programs, should be made a loan to the irrigation industry and charged at government interest rates. It has always been known by the irrigators, floodplain graziers and government that there has been overallocation and over extraction of water and yet these irrigators have continued to develop irrigation.

21) The cost of government subsidised programs such as,  
-employment efficiency programs  
-water storage building  
-private irrigators infrastructure operators program  
-modernisation of infrastructure program  
-healthy floodplains project (used to develop floodplain harvesting)

At last count these programs are believed to have cost \$320 million in the Macquarie over 50000 irrigated hectares, this is \$6400 per hectare!!! All of this should be brought to account and paid for by the irrigation industry.

22) All government water employees and their associated costs- e.g cars. Including MDBA, Scientist and their programs etc. These costs have all been created because of water extraction.

23) In the mining industry to obtain a mining extraction license, they have to agree to restore and rehabilitate damaged country, and put down plans and deposit money towards future costs. This to save the public purse from huge unexpected expenses in the future when they go bankrupt and disappear overseas. This rule should be instigated for the water extraction industry as well.

D. Additional environmental damage:

24) The loss of environment on and off the floodplain. How many hectares of land have been degraded or moved down the desertification scale in the Macquarie, verses the widely spruced by Irrigators and The MDBA, 50000 hectares of irrigation that has been developed.

25)The loss of native wildlife, once the HR 100 year models have been implemented, due to dry spells (inadequate flooding) being longer than the breeding span of native wildlife.

26)The loss of resilience of native flora such as water grasses e.g Reeds and floodplain assisted grasses e.g. gum grass and lignum. this is already occurring since the change from natural flows and can be easily seen with this last flood event, which MDBA should be studying. Places on the lower Macquarie which should be very vibrant at the end of this flood event are thin spindly with reduced seed production and are much less capable of withstanding the next dry event.

E. The solution.

27) At Carinda the unregulated irrigation industry has converted low production sheep and goat country into high potential irrigation country, especially for cotton as it prefers hot dry and longer day length, as a result higher quality and higher yields are achievable. Water loss (evaporation and soakage) have been the perceived problem. This is over come now with the environments water allocation as “without development” the same amount of loss would have occurred naturally, so a percentage of the loss could be considered to be environmental. Obviously, adjustments would need to be made to pumping heights to allow correct Barwon-Darling connectivity.

28) Full cost recovery, as discussed above, of all regulated extracted water based on the quantity of water extracted which would be much higher than unregulated Extracted water also needing full cost recovery.

29) Figure 5 End of system flows page 27 of the HR hydrologic modelling review has long term average end of system flow difference between “without development and baseline” being 230 GL per year, this must be the total Human extracted use figure, the total of

regulated and unregulated water. Separate the two figures, for ease of debate, say the regulated is 200GL and the unregulated is 30GL. [adjust these for the Final Basin Plan].

Store in Burrendong dam three years supply of regulated water. Let the irrigators sort out there 200GL per year and that is all they are allowed as that is what they get at the moment. No supplementary, no floodplain harvesting, no tributary flows. Only dam water. This increases irrigators security to 100% and does not decrease there average long term extraction. All the remaining water in the dam is for actively managed environmental water.

The flood mitigation zone (FMZ) is managed firstly for flood mitigation and secondly for the environment.

Tributary flows below Burrendong dam are unmanaged (mother nature) environment water.

The unregulated water users can continue to use 30 GL per year.

The environment would survive if the MDBA and governments would guarantee [640 GL plus Final basin plan] average “end of system flows”.

Could you please confirm receipt of this submission.

Yours faithfully

*Dugald Bucknell*

Dugald Bucknell  
Director  
Quambone Pastoral Co.

**Fat Ducks MEANS Fat Cattle**



**SAVE THE MACQUARIE MARSHES**

