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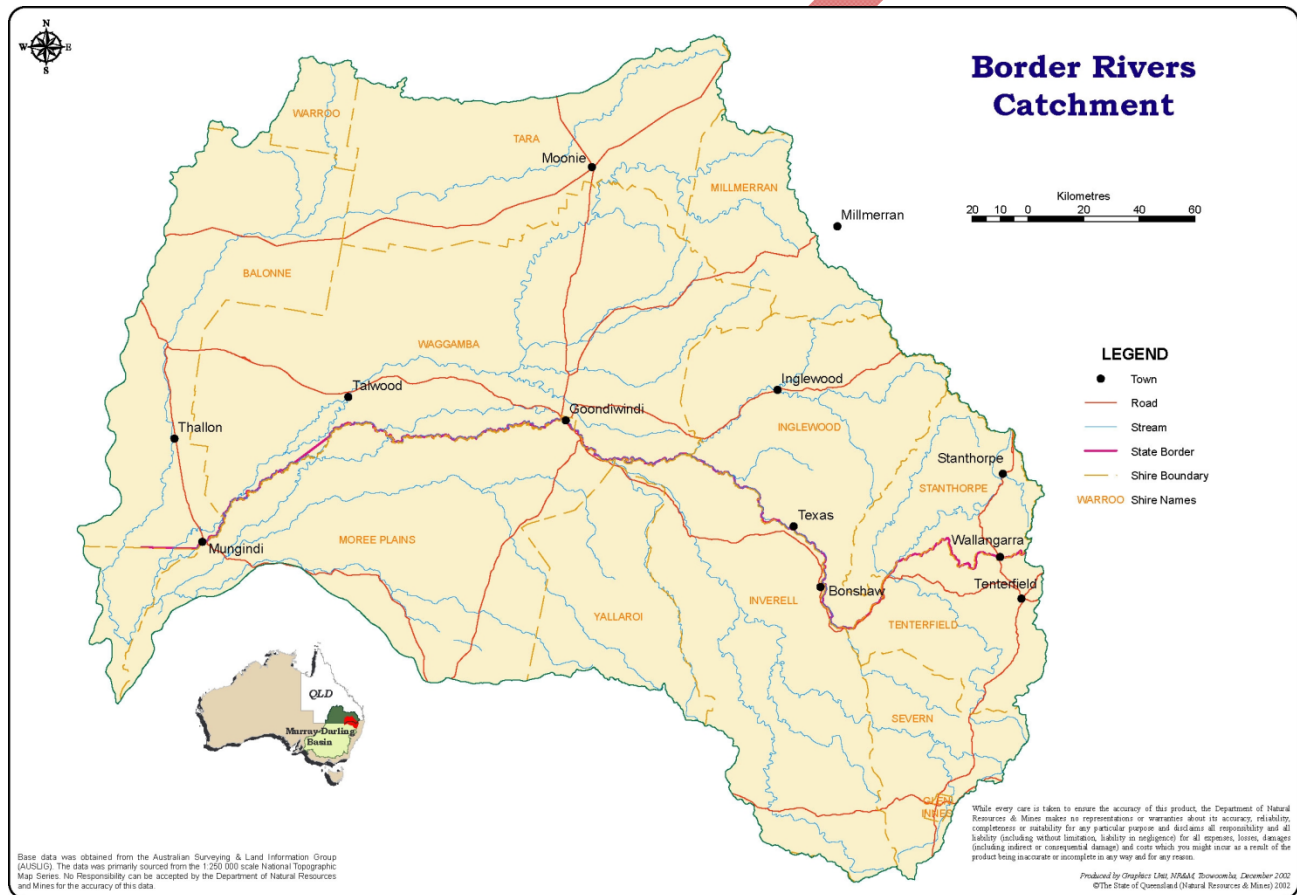
SUBMISSION TO THE HOUSE OF REPRESENTATIVES  
STANDING COMMITTEE ON REGIONAL AUSTRALIA  
ON  
THE INQUIRY INTO THE IMPACT OF THE MURRAY DARLING  
BASIN PLAN IN REGIONAL AUSTRALIA

***SUBMISSION DUE BY 5PM FRIDAY DECEMBER 17TH 2010***

Prepared by  
**TIM NAPIER**  
EXECUTIVE OFFICER

## INTRODUCTION

Border Rivers Food and Fibre (BRFF) represents the water users and entitlement-holders of the Border Rivers region of southern Queensland and northern New South Wales. These water-users responsibly utilise the water resources of the Macintyre Brook, the Dumaresq, Macintyre, Severn, Weir and Barwon River systems and the Eastern Recharge Zone of the Great Artesian Basin. Production from irrigated agriculture includes vegetables, herbs, stone-fruit, hay, cereals, coarse grains and cotton. Its contribution to the local economy exceeds \$500 million (farm gate) in average years.



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BRFF submits that there is no justifiable reason for any further water to be removed from productive extractive use in this valley. The claim for an additional 86 – 111GL for is invalid, and the prior environmental benefits of the current State plans are not taken into account.

The Guide portrays the Plan as a ‘blunt instrument’ in that it only has a single factor that it controls that impacts on environmental condition and that is water flows. There appears to be no other measures that it can invoke to influence environmental condition. The Basin Plan must be a socially and environmentally responsible plan that directs how sustainability will be achieved. For a truly sustainable state of the Basin to be achieved, a far more comprehensive and wide-ranging environmental plan is required, and this does not appear to be the intent of the Basin Plan as it is represented in the Guide. Factors such as flow management for improved distribution of flows, works and measures, land management practices, and natural resource management projects should all form part of the Basin Plan and not just simple water volumes. All these measures are fundamental in holistically managing the environment of the Basin and can influence the health outcomes either in place of or in addition to, simple water volumes owned.

A balanced Basin Plan process has far broader requirements and more enduring impacts than a water and environment plan can effectively provide. Communities expect active management of natural resources to be employed and investments made in works to achieve the best possible outcomes for the environment, but they also expect their social and economic considerations to be taken seriously by government and effectively planned-for and resourced.

This is all about confidence in the process and currently there is precious little of that.

We in the Border Rivers have a long history of prudent and conservative management of our water resources. There is no good reason why our community should be penalised for doing the right thing all the way along. We avoided the extremes of over-allocation seen elsewhere, we have adapted our production systems to suit our variable supply realities, we have been responsible stewards of our natural environmental assets, with our valley adjudged by the Sustainable Rivers Audit as the healthiest working river in the Basin despite the worst drought conditions on record, and have been constructive participants in the water reform process for more than 15 years. We have just experienced a substantial cut to our access to water through the state process and we now are faced with an additional cut despite there being no scientific justification provided for it.

There is no good reason to make cuts for our local environmental requirements as they are already sustainable.

There is no reason for us to forgo further water for downstream requirements as there is already more than enough provision for that built into current state plans.

#### ECONOMIC IMPACTS OF THE BASIN PLAN

Much has already been made of the laughable claims made in the Guide about the impacts of the Basin Plan only leading to job losses of 800 across the Basin. It has been comical to observe some academics stridently defending these figures from their remote university campuses, when

everybody else, the MDBA included, has been distancing themselves from those figures because of their obvious unrealistic and unrepresentative claims.

In the Border Rivers we estimate the following impacts:

- 800 jobs lost
- \$130 million (farm gate) in lost productivity

To reach these figures we have used figures from a Study on the value of the cotton industry alone to the Macintyre valley which was done in the mid 1990's which put the average employment in the industry in this valley at approx. 3200 people and gross economic value (farm gate) at just over \$500 million/yr. Using a simplistic but conservative assumption that the impacts are linear, given a 19 – 27% cut in water, one quarter of the gross numbers in that report are used. We have not adjusted for the relative values between 1995 dollars and 2010 dollars or the likelihood that a substantial permanent cut in economic activity will make some support businesses unviable so that they will close and not just put some staff off. We haven't tried to take into account the broader economic value to the community of the farm gate production value, but multiplier factors (3X, 4X, 5X ?) can be added to establish those numbers.

#### END OF STREAM FLOWS AS BASIN PLAN PERFORMANCE INDICATOR

See Appendix 1: "Issues Paper on the Mungindi End of System Flow Figure"

At 61%, the Border Rivers has the highest percentage of pre-development end of system flows of any of the developed catchments in the Basin. (Marsden Jacobs Report).

Quote from Appendix 1: "This simple example shows that the Mungindi gauge only accounted for **60.4%** of the net flow measured at Mogil Mogil and that, in this series of flows, **nearly 40% of the flow is not being measured at Mungindi**. Obviously, further hydrological modelling needs to be undertaken on this issue before any EOSF numbers can be confidently put forward as a realistic number, as Mungindi is a Hydrological Indicator Site for the Border Rivers in the Basin Plan."

#### EXISTING STATE PLANS

While most areas of the Basin are covered by their individual state Water Resource Plans we submit that great care should be taken when considering the performance of these plans to date, given the protracted drought conditions that have led to minimal water availability. In the Border Rivers, for example, the water reform process has been ongoing since 1994, a period of 16 years, with a steady and unrelenting reduction of water available for production. It is very easy for the uninitiated to assume that poor environmental performance is the result of poor planning on behalf of the states, where the real culprit is the lack of water caused by drought. Many of the Plans basin-wide and certainly both plans in the Border Rivers (NSW and QLD) have only recently come into force and their entire history of operation has been in the severe drought context. In assessing the State plans, it must also be recognised that large cutbacks have already been suffered by entitlement holders in this process. Individual cases vary, depending on their place in the system, and it cannot be objectively measured because of the nature of the previous management by the States, but the common belief is that most people have lost access to

between 20 – 50% of the water they used to get. It is important to note the difference between CAP's or SDL's and actual access. Entitlement holders have a volumetric limit on their licence but they also have access rules, particularly with regard to access to un-regulated flows. Some of the losses in the State planning were from lower limits being applied, but a greater amount was lost through the change in access rules, which were made for the benefit of the environment, both within this system and downstream.

1. These cutbacks have been made increasingly hard to bear by the ongoing severe drought conditions and low water availability. An additional planned reduction of water would stress many businesses to the point of being unviable.
2. On P. 254 of the Technical Background, discussing New Knowledge, it states that, "MDBA also notes that relatively little new information on the watering requirements of aquatic ecosystems has come forward since existing State Plans were made." We submit that if there is no new environmental science that could justify greater reductions than have already been made, so there is no defensible reason to reduce SDL's in the Border Rivers.
3. The State plans, even under severe drought conditions, have already increased markedly the end of system flows and guaranteed the ongoing environmental health of the Border Rivers.

As an area that was only relatively recently developed its water resources we find it bewildering that government are now deliberately undoing that regional development, by way of the Basin Plan. Barely 20 years ago, state governments were strongly encouraging farmers to take up water entitlements for irrigation and to develop new industries that would add wealth to local communities, the states and the nation as a whole. Many did so and remain as leaders in their industries and communities. These are now the communities who are expected by the same governments to take the pain for over-exuberant development in some cases as a result of those government policies of the time.



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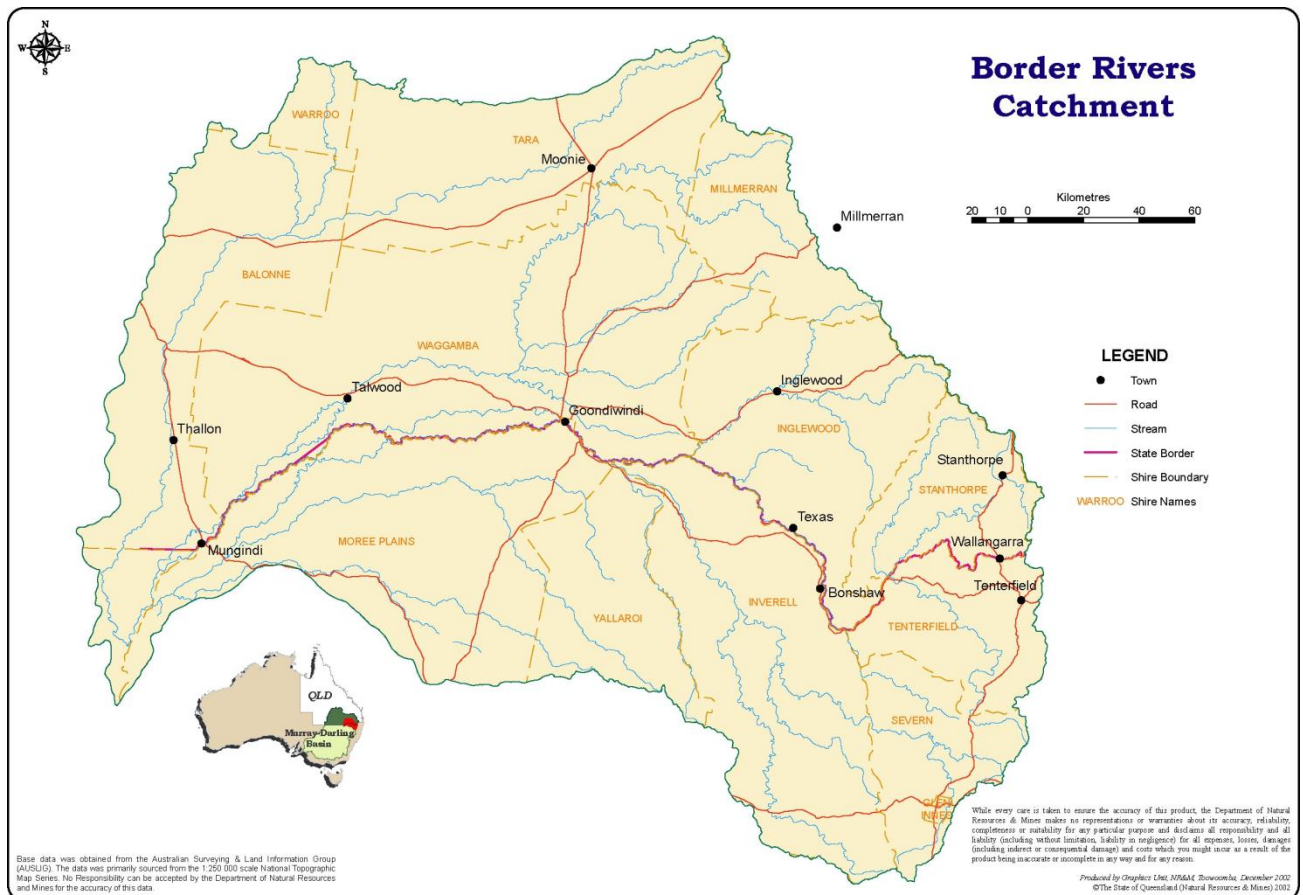
ISSUES PAPER  
ON THE  
MUNGINDI END OF SYSTEM FLOW FIGURE

DRAFT

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## INTRODUCTION

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## Background

It has long been acknowledged that the MUNGINDI gauge only gave a rough indication of the true flows that flow down the Barwon River from the Macintyre and its connected streams during higher flows. The acknowledged shortcomings with the gauge figures are to do with the gauge only being capable of measuring flows within the banks of the river at the gauging point, at Mungindi Weir (Refer to Fig 1). During periods of high flows (> 4.8m @ Mungindi), significant quantities of water leave the main channel of the river upstream of Mungindi. The main 'flood-runners' or effluent streams are the Boomi and Little Boomi Rivers, Whalan Creek, Gravelly Creek and Little Weir River.

A couple of streams enter the main river from the Queensland side as well, namely the Weir River upstream of Mungindi and the Moonie River downstream of Mungindi, but upstream of Mogil Mogil gauge. Most of the effluent streams are on the NSW side.

At full flood levels there are also large quantities that flow over land in the general inundation of what is a very flat floodplain landscape. While all these flows are occurring, only the flows at the gauging point within the banks of the main stream are being gauged accurately. There have been undertakings made by QLD Department of Water that the hydrology figures would be updated and End of System Flow (EOSF) figures corrected for future planning purposes, but this has never been done. While some manual gauges are in place on the effluent streams, when the flows are occurring it is not possible to access those sites to read them. Common sense would suggest that automatic gauging stations be installed, but the frequency of these flood events apparently makes it unviable for that investment to be made.

The Border Rivers IQQM model, as used by both NSW and QLD departments in the course of the State planning process for the Border Rivers, acknowledged that the flow figures for the MUNGINDI gauge were not completely accurate and provided only a 'point of initialisation' for the Plans. The figure agreed on by both states for the End of System Flow (EOSF) figure in the IQQM was **60.8%** of pre-development flows and both plans were developed using that figure as a starting point.

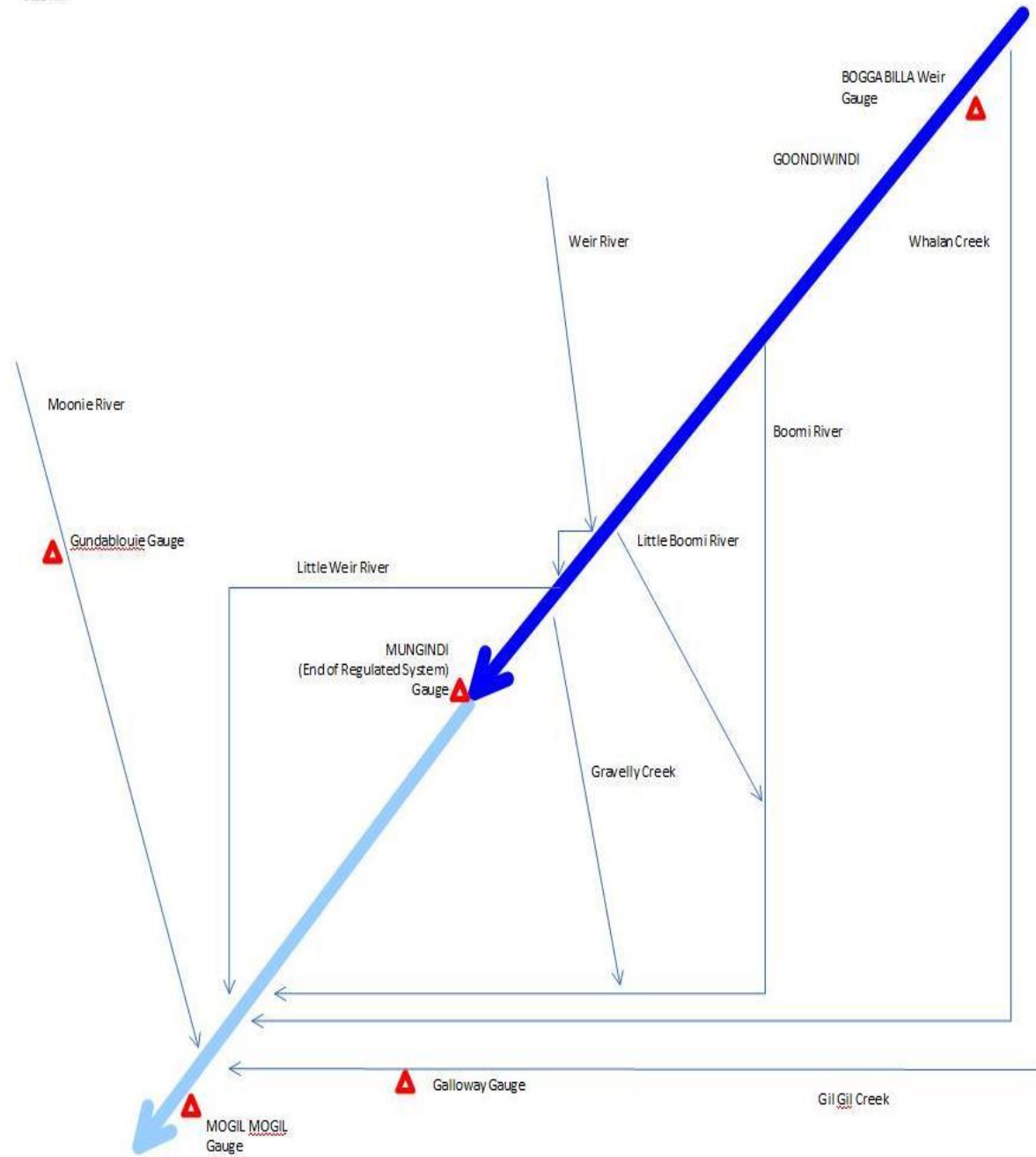
**The point is that, while that 60.8% EOSF figure may have been appropriate as an initialisation point for state plans, it is not an accurate measurement of that figure and as such cannot be used as a legitimate performance indicator in the assessment of the performance of the Basin Plan, or anywhere else where EOSF figures are used as an important indicator of hydrological condition of a stream.**

The flows that have occurred in the valley between August and December 2010 provided an excellent opportunity to get a more accurate picture of what the actual flows are in total. This series of events had large flows coming down the main river and breaking out into its effluent streams and overland flow channels, but little in the way of inflows locally, which can introduce misleading figures at the downstream gauging point of MOGIL MOGIL.



**Fig. 1 Border Rivers Stream Schematic**

BR Stream-Flow Chart  
Thursday, 25 November 2010  
9:13 AM



As shown in Fig 1, the effluent streams Whalan Creek, Boomi River, Little Boomi River and Gravelly Creek all re-join the main river (Barwon River) above the Mogil Mogil gauge, as does the Gil Gil Creek. The Moonie River also joins above Mogil Mogil, but the gauge at Gundablouie can be used to subtract that figure from this example

## END OF STREAM FLOW CALCULATIONS

Data sourced from NSW Office of Water Real-time Data website

Flow event: 1 <sup>st</sup> August to 14 <sup>th</sup> December 2010			
Gauges		ML	
416002 Boggabilla Weir		1551601	
416001 Mungindi Weir		767716	
416052 Galloway		12048	Gil Gil Creek flows in the Barwon just below this gauge
417001 Gundablouie		82171	Moonie River flows into the Barwon just below this gauge
422004 Mogil Mogil		1360212	
Mogil Mogil less Galloway and Gundablouie			1265993
Mungindi flow as % of net Mogil Mogil flow			60.4

This simple example shows that the Mungindi gauge only accounted for **60.4%** of the net flow measured at Mogil Mogil and that, in this series of flows, **nearly 40% of the flow is not being measured at Mungindi**. Obviously, further hydrological modelling needs to be undertaken on this issue before any EOSF numbers can be confidently put forward as a realistic number, as Mungindi is a Hydrological Indicator Site for the Border Rivers in the Basin Plan.

While this series of flows was a 'medium sized flood', in larger events the proportion of actual flows measured by the Mungindi gauge would obviously be far smaller given the extra amounts bypassing the Mungindi gauge via overland flow channels and general inundation.

This paper is not intended to be a detailed analysis of the Mungindi EOSF problem, but is intended to be an indicator that the accepted figure of 60.8% is not accurate for the purposes that the MDBA seems to be intending to use it, namely as an indicator of stream condition. We submit that the figure should not be used for any other purpose than that for which it was intended, as the initialisation figure for the Border Rivers State Plans. This demonstration should bring to the attention of the MDBA that the true figure for the Border Rivers End of System Flow is not known accurately, but is in fact higher than the 60.8% figure commonly used throughout the Basin Plan Guide.

Local knowledge and a common sense view suggests that it is **greater than 70%** of pre-development flows, making it far more sustainable than the figures used in the Guide would indicate.

