

## SUBMISSION TO DRAFT PANEL REPORT ON INDEPENDENT ASSESSMENT OF SOCIAL AND ECONOMIC CONDITIONS IN THE BASIN

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This submission will concentrate on Draft Recommendation 2 which states:

“The Australian Government should time further water recovery to match the capacity to deliver water to where needed to achieve enhanced environmental, social and working river outcomes. This approach means slowing further recovery in the Basin and accelerating efforts to relax delivery constraints.”

I am appalled that this independent panel continues to support “further water recovery” to “achieve enhanced environmental’ outcomes and calls for “accelerated efforts to relax delivery constraints”, when there is plenty of evidence to show that that the 450GL simply is unachievable and undeliverable with relaxation of constraints unviable and unrealistic due to the massive environmental, social and economic impacts.

It should be noted that the MDBA’s own figures state that with various buckets of environmental recovered from just prior to 2009 till 2019, the total amount of water already recovered to the environment is 3,573GL, far in excess of the 2,750GL required under the Bas. in Plan.

The Panel should be recommending that the 450GL upwater and relaxed constraints strategy be abandoned immediately.

The Enhanced Environmental Outcomes in Schedule 5 of the Basin Plan are aspirational and ambitious in the extreme and it has been shown by the experience of the September 2016 floods that these cannot all be met.

The September 2016 floods sent in excess of 60,000ML/day for 5 weeks over the South Australian border. This is exactly the proposed flow required by the MDBA to ‘enhance environmental outcomes’ however this still did not clear the Murray mouth sufficiently to withdraw continual dredging for more than a few days. Ensuring the mouth of the River Murray is open without the need for dredging in at least 95 per cent of years is impossible.

David Dreverman, MDBA Executive Director River Management, conceded in the Senate Estimates Hearing February 28<sup>th</sup> 2017, that the flood flows over the SA border of in excess of 60,000ML/day for 5 weeks from 11<sup>th</sup> November to 18<sup>th</sup> December and peaking at 95,000ML/day during the 2016 floods were not sufficient to scour the Murray Mouth of sand. Mr Dreverman stated he was surprised as they were expecting a *“little bit more scouring.”* Dredging recommenced on 9<sup>th</sup> January 2017, despite the fact that flows *“hit 75,00ML/day over the Murray Mouth barrages”* stated Mr Dreverman.

The Panel should note that the above 2016 flood flows over the SA border for the 5 week time frame replicated exactly the MDBA proposed flows to the SA border under the Basin Plan, necessary to achieve ‘enhanced environmental outcomes’

The problem is, to achieve such flows, means massive flooding impacts upstream, where Tocumwal flows in 2016 were gauged at 204,000ML/day.

The Upper Murray and Upper Goulburn systems are the main drivers of the proposal to deliver large volumes, (60,000ML/day-80,000ML/day) of water to the Lower Murray, Coorong and Murray Mouth in order to keep it open 95% of time, yet the possibility of achieving these flows is virtually unachievable due to the actual river channel capacity and natural chokes in the systems, such as the Goulburn at Molesworth-9,500ML/day, the Barmah choke- now 7,000ML/day( MDBA Barmah Choke Fact Sheet), the Murrumbidgee at Tumut-9,300ML/day, together with the massive losses that occur with evaporation and attenuation when overbank floods flow across our very flat, very hot and arid landscape.

The theory of constraints, whereby whatever obstruction is preventing the system from achieving a higher output is removed, in reality, when applied to river systems and the vagaries of nature simply cannot work due to the hundreds of constraints within each key focus area, which are all interdependent not only in their own area and river system, but on all downstream systems as well. Some of these myriad constraints are river channel chokes of 7,000- 9,500GL/day in the 3 major river systems, river travel time, run of river losses, individual tributary flow contribution, flow duration and inability to coincide tributary flows with downstream flows, lack of perfect real-time forecasting of rainfall and streamflow and of course the socio-economic impacts of flooding on public infrastructure and the thousands of hectares and hundreds of businesses that belong to private property owners

The flat, hot, arid terrain through which the river systems so slowly wend their way towards the Murray mouth and Southern Ocean means that due to evaporation and attenuation it is totally impossible to provide flows that will keep the Murray Mouth open 95% of time without dredging.

\*The Murray at Albury takes 4 weeks to reach South Australia.

\* To get 1 megalitre to Mildura requires 3 megalitres to be released from Eildon.

\* The Murray at the confluence with the Goulburn is still 1992 kms from the Murray Mouth and a mere 124.9 metres above sea level.

\*All tributaries worthy of naming are in the upper reaches of our main rivers.

\*The Goulburn below Shepparton has virtually no tributaries.

\* At Albury the stream gradient of the Murray is 125mm/1km(5inches/km) down to Wentworth, which is a mere 33 metres above sea level.

\*Mildura is still 878 kms from the Murray Mouth but only 34.5 metres above sea level.

The run of river losses due to the above physical factors are enormous.

**The Constraints Management Strategies** cannot be delivered by 2024. The strategy has been stalled for 4 years, as basin state proponents, Victoria and NSW realise the current projects are unviable and unachievable. There has been no contact with communities or landowners in general during this period.

The Constraints Strategy projects under the Phase 2 Assessment Guidelines Section 3.1 will not be compliant as they will fail to be operational by 2024 –“ *This criterion reflects the requirement of the Basin Plan and the IGA Protocol that all supply and constraint measures must be ready to enter into operation by 30 June 2024 (cl.7.12 of the Basin Plan and Table 1 of the IGA Protocol). In order for the measure to satisfy the criterion, the proponent will have to demonstrate that the measure will be designed and implemented to enter into operation by 30 June 2024.*”

*This document also clearly states under Eligibility Criteria- “ If the business case does not satisfy all relevant eligibility criteria, the measure will be assessed as ineligible and no further assessment will be undertaken.”*

Under the Assessment Guidelines the Goulburn River Constraints Business Case should be thrown out with no further assessment taking place.

The initial Goulburn River Constraints Business Case failed the Phased assessment guidelines of eligibility criteria, was withdrawn, yet has been re-written in order to be re-assessed. The revised business case sat in Canberra for over 3 years from 2016 to late 2019, as the Department of Agriculture and Water Resources(DAWR), would not approve it as the maximum flow of 40,000ML/day at McCoys Bridge was opposed by Victorian Water Minister Neville and reduced to 17,000ML/day, with a 3,000ML/day buffer, gauged at Shepparton.

Apparently DAWR have now approved the business case for the Goulburn at the reduced rate, but the Victorian Government have not released this document to landowners and the public.

The Constraints projects and the recovery of the 450GL are totally interdependent and cannot and should not proceed. A full and detailed Cost/ Benefit Analysis of the social, economic and environmental issues has never been undertaken.

There are a large number of insurmountable problems that cannot be overcome with the constraints strategy, including inability to negotiate easements with landowners, refusal of GMW to accept legal liability and the transfer of risk to their customer irrigators, impossibility of overcoming the myriad of physical constraints throughout the river systems, including many chokes in the river channel capacity.

The fact is, that the Constraints business cases are based solely on the premise that the reduction in river flows and floods are the result of over extraction of irrigation water and development of on-stream water storages with-holding flows, so that there is no longer the same number and volume of flood flows in our river systems. The MDBA have refused to acknowledge that the basin no longer consistently receives the rainfall, run-off and in-flows to produce the historical flood flows on which they have based constraint strategy flows. Nor has it taken into account the drastic reduction of inflows caused by the major bushfires in the High Country in 2006-2007 and the catastrophic 2009 Black Saturday Murrindindi fire in the Goulburn Catchment. Science tells us that these inflows will be reduced for the next 100 years as new forest growth takes up extra water.

There has been no sign of adaptive management by the MDBA with regard to climate change.

The Goulburn River Constraints Business Case 2014 was based on the MDBA's 114 years hydrological flows model and 55 years(1960-2014) of historical flood flows, so therefore the Victorian proponents( DELWP AND GBCMA) followed the strategy that the Goulburn flood flows should be as follows:

- 1) A recommended 7-10 events( optimal 8) in every 10 years of 25,000ML/day at Shepparton between June-November for a duration of 5 days( Includes natural events)
- 2) A recommended 4-6 events (optimal 5) in every 10 years of 40,000ML/day at Shepparton between June-November for a duration of 4 days ( includes natural events).

The MDBA failed to acknowledge the real step change in climatic conditions which have occurred since the start of the Millenium Drought in 1997. From the 1950's through to 1996 the Goulburn system and its tributaries experienced consistent floods in the majority of years except during dry or drought periods which lasted 1-2 years. On the Yea River, which is an unregulated stream, we would receive between 1-5 floods nearly every year and these rose and receded very quickly.

Since 1997 we have been lucky to get ONE flood every 4-5 years.

- 1) 1997-2004 No floods
- 2) 2005 flood in February due to 4 inches overnight;
- 3) 2010, 2011, 2012, we had 3 flood years at the breaking of the Millenium Drought
- 4) 2016 September flood, which in the Goulburn system was small compared to the other catchments in the MDB

## 5) No floods since 2016

The above Goulburn Constraints flow figures were revised in 2016 to 25,000ML/day at Shepparton for 7 years in every 10, including natural events, with a peak of 30,000ML/day.

Victorian Water Minister Neville, understanding the severe impacts that would occur from proposed overbank flows, then made the following statement on Constraint Strategy flows in the Goulburn River:

- Environmental flows reduced to 20,000ML/day at Shepparton, including a 3,000ML/day buffer
- In-channel flows only -no overbank flooding
- No flooding of private property without the consent of landowners
- No compulsory acquisition of easements

This reduction in flows, as stated by Minister Neville, in the Goulburn River means that it will be impossible to achieve the proposed 80,000ML/day to the South Australian border, as the Upper Murray and Goulburn are acknowledged as being the drivers of such flows.

From 2012-2013 the MDBA developed the Constraints Strategy, which incorporates a feasibility study with overarching evaluation criteria stating that the proposed measures-:

1. must be technically feasible, that is possible and achievable,
2. is likely to be cost effective considering the qualitative estimate of the potential supply contribution or likely improved delivery of environmental water- the initial Goulburn Constraints Business Case was scrapped by the Victorian Government because it could not deliver more than 3-4GL supply contribution and the cost blew out from \$31-\$47 million to \$139 million
3. is likely to achieve its intended outcomes- The Hydrologic report shows 'relaxed constraints' make little difference to keeping the Murray Mouth open 95% of time
4. the risks and impacts associated with the proposed measure are manageable and acceptable- the September 2016 floods clearly showed impacts were unacceptable to private landholders and shire councils.

There is plenty of evidence to show that the Constraints Strategy projects have failed the evaluation criteria.

Unfortunately the Constraints Management Strategy was passed into legislation prior to any investigation of its viability, so that \$1.775 Billion is being utilised to reverse engineer projects in a futile attempt to replicate natural events that only ever occur when 3-4 of the major river systems experience floods at the same time.

The Panel in recommending further water recovery to achieve 'enhanced environmental outcomes' by accelerating relaxation of delivery constraints is showing its ignorance of the socio-economic impacts that will be caused by implementation of constraints strategy projects and the 450GL upwater.

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END OF SUBMISSION

