

Barbara Webster

Broken Hill, 2880

21/05/2018

Submission to the Murray- Darling Basin Royal Commission – community consultation.

To the members of the SA MDB Royal Commission, and concerned public,

Dear Sir/ Madam,

Thank you for the privilege to submit this letter on behalf of the once was mighty Darling River and The Menindee Lakes. I am Barbara Webster, live and work in Broken Hill, and am extremely concerned with the destruction of the magnificent Darling River and Menindee Lakes, having experienced 30 years of regression of its health.

I'd like to acknowledge the Baakandji Language Group, both past and present, being the Traditional Owners of this land and their River, The Baaka, the Darling River. I also acknowledge their deep grief at the mismanagement of their River, knowing that they have been trying to negotiate with the government for the health of their river for over 40 years. **Sacred River**

I was also a resident of Menindee. I hope you are aware that the silent thousands of people in the outback, where I live, are rather overwhelmed by the whole process required to make these submissions, and have learnt to treat these processes with limited hope as the previous "community consultations" have only resulted in disastrous outcomes for the Darling River and the Menindee Lakes. It is the very large water licence holders that can, and no doubt do, employ very clever people to write their submissions for them, to lobby parliamentarians, to convince the policy makers and authorities of the benefits of their desires. But all their success is miniscule to what has always been The Baaka, The Darling River, & Menindee Lakes.

For as long as those large companies who worship spreadsheets and economic growth at the environments expense, control the policies governing the rivers and ground waters, the profit-orientated public to whom nothing is sacred will oversee the heinous criminal act of choking the Barka, (The Darling River). The Darling River, The Barka is The Mother, the Lifeblood of the Baakandji people, (traditional owners for estimated 40,000 years) the 5<sup>th</sup> generation Australians, the emus, roos, goannas, millions of fish and birds. A living cultural history of over 40,000 years. For a few years of financial gain.

To begin on the specific issues raised in the terms of reference, I'll try to do my best for the outcomes for the Darling River, its people, and the flora and fauna. SACRED RIVER. Sacred site, all 2,750 kilometres of it.

There's 4 discussion points I would like to respond to:

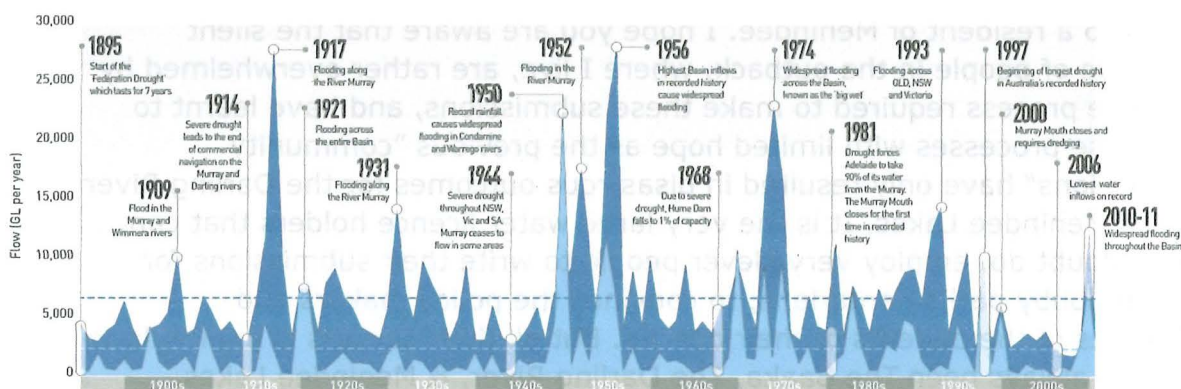
- 1) The use of average sustainable diversion limits in the catchment streams and rivers of the Barwon Darling River.
- 2) The decision making process for flow protection in times of extended cease to flow periods downstream, before critical ecological thresholds
- 3) Metering and monitoring in the northern basin
- 4) Environmental flows leading to the collapse of other environments, ie the Darling River and Menindee Lakes, with ramifications for wildlife in transit from climate change.

Firstly, it is my opinion that the sustainable extraction limits never should have been developed using average flows down the Barwon Darling River System, as it is one of the most variable Rivers in the world.

This model gives unrealistic and unworkable expectations of yearly flow down the Darling River. Real time weather events are the only way to estimate how much water can be safely and sustainably be diverted from the River, as flood events may be 14 years apart.

Please observe the figure I copied from the Wentworth Group of Concerned Scientists Review of Water Reform in The Murray-Darling Basin, Nov 2017, (which they copied from the MDBA)

Figure 2. Historical river flows in the Murray-Darling Basin from 1895 to 2011 with major events highlighted.



Annual flows are shown for the Southern Basin on the Murray River at Euston (dark blue) and for the Northern Basin on the Darling River at Burke (light blue), with averages shown as dotted lines. Source: MDBA, 2017.<sup>11</sup>

It is the light blue portion of this graph that represents the Darling River yearly flow at Bourke, (not sure if this is into Bourke, or that allowed to exit Bourke to the Darling River), 575km by road upstream from Menindee, which is 240 km by road upstream from Wentworth at the junction of the Murray and Darling rivers, (815 km by road of downstream Darling River flow not depicted in this graph). There is only 1 major catchment river that enters the Darling River below this point at Bourke, notably the Warrego, which historically is the most unreliable flow into the Barwon -Darling by far. Floods in the Paroo from very wet years may also reach into the Darling just above Wilcannia.



When we observe the time span from the flood in 1921 to the flood in 1950, a period of 29 years, it is obvious that the Darling River has only just reached its average yearly flow on one occasion only, in about 1931, when the graph depicts what looks like a high river, not a large flood.

Because the flood times adds an incredible amount of water to the yearly average, it appears some have lost their way in adapting their figures (conveniently for a few), to include these massively over exaggerated figures into the expectations of yearly sustainable extraction limits for the Basin Plans. Hence the carry-over volumes of water allocations can be utilised to use the entire extra flow in a year of high northern basin rain events. This can easily eliminate most "over the bank" natural floodplain watering events downstream from massive public and private water pumps and storages. And that is not including the recently exposed allegations of water theft or the changes to the B and C class licences the NSW govt allowed in the Barwon River, allowing very large pump sizes to extract water from lower flows that previously were allocated for smaller pumps only. (Rumour has it that this may have been designed specifically for the benefit to certain 'in - laws' of one of the members of parliament, in the lower Barwon River)

From the high flow in 2000 to that in 2010, the average yearly flow at Bourke was not reached, by a long shot. This graph does not depict the current decade.

For those who have forgotten, or don't 'get' basic math, an example of how to find an average from a set figures, (each figure to represent a year's flow), is calculated as follows:

$$4 + 5 + 6 + 5 + 4 + 6 + 3 + 4 + 7 = 44.$$

44 divided by 9 = 4.89. The average for this 9 years rounded off is **5 per year**

When we add in an exceptional year, say 598, the average becomes (598 + 44) divided by 10, rounded off = **64**

The average for this 10 years is **64 per year: obviously not in line with the previous 9 years of 5 per year.**

I'll say it again.

**Real time weather events are the only way to estimate how much water can be safely and sustainably be diverted from the River.**

Carry over should never be added year by year to any water diversion entitlement, as this depletes the river and floodplains. When a large rain event falls in a particular valley, when the rest of the northern basin catchment is dry and in drought, if the river is experiencing no flow events downstream, a very large proportion of that large rain event flow should be protected for those that are hundreds of kilometres downstream.

Likewise, if large flow events are expected and occurring along much of the northern basin, computerised estimates of sustainable extraction should be made rapidly available to the irrigators and the public to enable rapid diversions for low security cropping, and allow transparency for the public.

## Second point relates to the decision process for flow protection.

The consequences of the Water Management Plan in the Northern Basin have resulted in the poorest management of the Darling River in its 40,000 years

The failure of this Plan to work has caused insufficient flows coming down the River. This has caused, to the Barkandji People, the First Nations People, adverse effects on their spiritual health, resulting in an increase in Mental Health Problems, (often leading to Suicide) reduced life Expectancy, as well as a rise in crime rates especially in Wilcannia.

**“Insanity: doing the same thing over and over again and expecting different results” ..Albert Einstein.**

Consider...Ministers come from a foreign world, have no connection to this outback river, only connection to trade deficits, spread sheets, popularity meters, and their families. As they are just people, bought up in the foreign country of Sydney, East coast, Canberra, they have an inbuilt bias of their attitude of what a river system is by their earlier life experiences on rivers that flow to their end point in a week or 2. This has proved to be inappropriate for the issuing of water embargos for the catchment rivers of the Barwon-Darling River. In recent years these ministers have waited too long.

It's time in our history to humbly request the assistance of the Traditional owners of the Darling River, the Baakandji people. If they accept, there is a strong case for their place in the proposed amendments to the water legislation. It would be desirable for them to have priority as major advisers to the minister for managing the orders described in the Exposure Bill, section 324. It would be a quantum shift in political decision making, and just might result in what is needed. Perhaps in the enduring solutions they could acquire full authorisation rights for these decisions to be made, with the assistance of the water management authority. We need a better way to protect small and medium flows, so critical ecological thresholds are not reached every year of no flood event.

## The third point : Metering and Monitoring in the Northern Basin.

A different format will be used here, as these following questions were arranged by the NSW Water Reform Action Plan, with my response in May, 2018.

## Submission to NSW Water Reform Action Plan

### **Part 1: Water take measurement and metering**

*Q) What, if any, additional objectives should be considered?*

Appropriate fines, loss of water licences, and gaol time for the crimes. For example: A local magistrate recently informed the court that stealing a phone, even as a first offence, is a very serious crime. He explained that the consequences involved the victim losing contact numbers, email addresses, photo album, diary etc. If we were to apply this reasoning to theft of water in a river resulting in a dry river, it would be appropriate to consider downstream ramifications. Poor health of this river is directly related to higher crime rates, poorer physical and mental health outcomes, as reported by health services years ago, millions of wildlife killed (I'm fined if I kill a roo, or take more fish



than the bag limit allows me, or keep an endangered fish); and those that suicide...from the depression that enters the communities with a dry, or sickly river. Yes....a fine that fits the crime, not the wealthy that get off with a \$10 millior harvest, adequate to pay lobbyists to get in your ear (yes, **your** ears), to water down these rerorms that are desperately needed out west.

The following chart copied from Wentworth Group of concerned scientists review of water reform in the MDB, they copied from MDBA

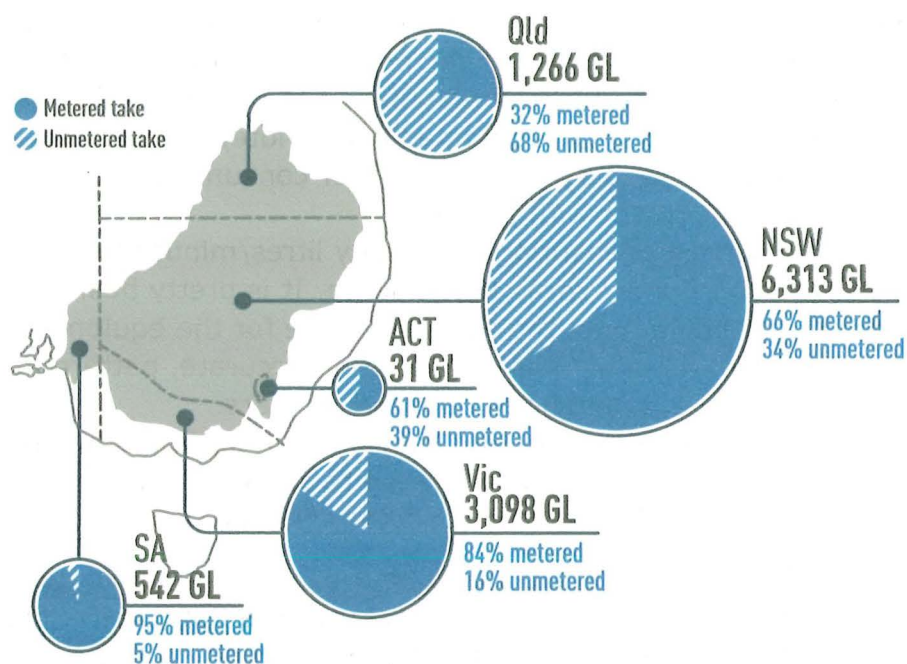


Figure 30. Average annual take (all forms) in the Northern and Southern Basins from 2012-13 to 2015-16. Source: MDBA 2017.<sup>152</sup>

Q) Do you agree inland unregulated water sources should be prioritised?

YES

Q) When should a meter be required?

No meter no pump. This saves complications.

The highest risk region, identified as the Barwon Darling, should be addressed initially. I am concerned that all the catchments of this river system will escape this classification. It is of paramount importance that the Bogan, the Macquarie, the Castlereigh, Namoi, Peel, Gwydir, Severn, Dumaresque, Macintyre, Moonie, Bokhara, Culgoa, Warrego, The Paroo, the QLD rivers **and their catchments** are caught in this classification of High Risk, as all of them should be adding water to the Darling's source, from any flow events. Note some also, as the Namoi, also add ground water to the Barwon Darling via springs, so any type of earth works or water extractions to affect this must be monitored as well as the changes in water pressure surrounding these activities. If changes occur, monitoring alone is insufficient, ie the extractions or earth works must cease, and not moved just down the road. This includes any CSG activities, or other mining operations that may change subterranean flow or pressure such as that in the Pillega forest,

NSW. (see "Great Artesian Basin Recharge Systems and extent of Petroleum & Gas Leases. 2<sup>nd</sup> Ed, with response to Ministerial review, prepared by the Artesian Borewater Users Association 3/2015)

The larger pump or bore sizes should be targeted as the first to be metered, within 6 months of today is adequate time. It should have already happened. Their data must be available to the public, at ease of access, on the same site and place as the licence requirements, at no cost, so us who care can relate what cropping we see, what pumping we witness, to legal activities. Or be able to report illegal activities. Neighbourhood Watch.

For the interim, such as real time now, the large water users should already know how much water their pumps move in a high river,(so should the DPI), and be directed to supply the type and size of the pumps they are using, so the maximum flow rates as described by the manufactures can be used in basic mathematics to estimate how much is pumped per minute, and estimates of volume pumped can be assessed by timing of power consumption, backed up by satellite maps real time / doppler with a drone.

Other measurements such as measuring how many litres/minute to known holding tank, or average dripper/ spray flow/minute. It is pretty basic math. It could happen today. It should be of the maximum rate for the equipment, so get the businesses off their butts and comply with fitting accurate, pattern approved, validated installation, sealed, maintained regularly, meters.

These meters must have data capture and transmission of data. They must be transparent by the public. Yes, I want to be able to see when and how much they are pumping. This is essential. The time of secrecy is over.

110mm pumps or 270mm bores is too big to be the lowest denominator for pump sizes requiring meters on the tributary rivers of the Barwon Darling. Drop it to 50 mm., and if there's greater than 1 pump on a property, there must be multiple meters, added together in the access data and extraction rules. In the high risk region, the large B and old C class pump sizes should be metered and operational by now: they have already had 6 months to get their act together. It appears obvious to me and multitudes of others that they are awaiting for this issue to go away as it always has done so many times before.

*Q) Are there any other complementary measures that , if implemented would encourage compliance with the metering requirements?*

Due to there being a high probability of some unscrupulous companies/ individuals, (why we are in this predicament now), It is evident we should try to pre-empt their strategy to continue their business as usual. In a large business there will be multiple pumps, there is the capability to pump through portable flexible pumps, directly to crops, not into holding tanks, using fuel or solar pumping, and link these to a standard pipeline with pump to avoid detection.

Their strategies to date belie belief. Hence there should be in place the ability for the govt body to use alternative technologies for catching cheats. Eg satellite real time inspection of dams and cropping sites linked with known rates of irrigation required, doppler used by helicopters or drones for suspected illegal tank /cell/ dam filling.

*Q) Self reporting, What is a reasonable time frame?*



Self reporting should be phased out. Fast. The large irrigators initially, first 6 months from today.

Basic landholder rights should not require a meter, when only a few ML.

*Q) Are the proposed requirements around faulty meters practical?*

I do believe they are too lenient. I am very suspicious that meters could suddenly become faulty when a flow comes down the river, giving the irrigator free time with unmetered pumping for the full rise. They have been unscrupulous in the past, and those who have no concern for the law should not be given 2<sup>nd</sup> chances. For these irrigators, No meter no pump.

*Q) Will staging implementation be sufficient to address the supply of meters and certified installers?*

Too long. There is only a small number of large irrigators in the selected high risk region. It is appropriate that inland water sources are implemented initially, with all the catchment streams and rivers that end flow into the Darling River. 2019 to 2020 is too long. 6 months is adequate.

*Q) What are large users?: proposed to be those falling within the top 20% of any metering threshold. Is this appropriate?*

NO. Clear indications that 20% are very large users, but also are the next 10%, When we assume that some of these businesses are actually stealing large quantities of water, the graph is most likely somewhat inaccurate in the large irrigators favour. There must be an assumption that some of the smaller irrigators are actually larger. They must be included in the earliest stage of metering requirements. A more realistic figure would be the top 30%, with the next 16% in the next stage of metered roll outs, in 12 months from now, totalling the 46%. There will undoubtedly be a very strong lobby by large companies such as irrigator groups against this. The goal of this action plan should be to capture 95 to 100% of water take of the Barwon- Darling River tributaries by using meters. And it shouldn't take another 3 years. (As a postscript to this answer, it is now obvious that the irrigators lobbies have succeeded in elevating the SDL's in the northern and southern basins, even in the current drought.)

#### **Part 4.: Implementing the NSW Floodplain Harvesting Policy**

Diversions in waterways in this country is nothing new (see "Dark Emu, Black Seed", by Bruce Pascoe). What is new, is that just over 200 years ago, some of the migrant paler inhabitants of the country took over control of the water storages and rivers and didn't want to share. Not much has changed.

*Q) Should rainfall runoff be included (option 1) or excluded (option 2) in the floodplain harvesting licencing framework?*

*And Q) If rainfall runoff were included in the floodplain harvesting licencing framework, would you support the development of an approach that would allow agriculturally contaminated water to be retained on farm to prevent pollution of waterways?*

It seems to me that if the irrigators are using such chemicals that even the government is concerned with runoff entering the river system that they never should have been allowed to use in these industries in the first place. This is as relevant to any projects planned for mining also. Many a time have I heard locals blaming agriculturally contaminated water for bad events in the Darling river. This suggests that the irrigators should manage it on site. The problem with this is that because broad scale irrigation practices go for as far as the eye can see, when the rainfall runoff is barricaded from the normal flow to the river, there's obviously much less catchment available in that area. If that is the area that rain falls on for a good flow event, when the rest is dry.....bad luck downstream.

Clean irrigators acts up.

Then ensure rainfall runoff is safe to enter the river systems once more. This very issue may be a main reason why we feel we have experienced less flow from the upper NE reaches over the last few decades.

I recall some rules for rainfall collection many decades ago in a region by Diamond Creek, Vic. A percentage of flow (10%?) was allowed to be collected by the land owner, however the other 90% or so must be released to flow to the creeks and rivers. This seemed reasonable for that region. All new industry expansions could include this as a guideline, and those already polluted could work towards this with a realistic time frame, with checks and balances in play to ensure they are not rewarded for allowing their farms to become polluted, or claiming such. Clean and green is what Australian farming is renowned for internationally.

I support option 1.

*Q) Do you support the proposed staged approach to floodplain monitoring?*

Floodplain Harvesting does need checked measuring. Not necessarily a meter as such. Various strategies used to trap water from the river system requires various measurement systems.

These should be monitored by the authorities in a transparent way similar to the pumping proposed earlier in this submission. The satellite/helicopter/ drone can take relief 3-D mapping of known, and suspected water storages, of billabongs, lakes, dams/tanks/cells when dry, to allow for estimates of volumes to be stored in NSW govt data banks, **accessible by public**. It would be of benefit to include reliefs from the rivers/creeks to these sites to identify bank diversions or creeks that have been altered to run backwards into storages. This data collection needs to occur now. When a high river or flooding eventuates, this data can be used to assess volumes stored or captured. The software to estimate this should be easily acquired. Basic math. It seems this technology is already used to some extent. Can be specific to each license, and accessed, site specific, by the public. It must be noted when water is added to dry water storages, much water is lost to the earth, just like in a dry lake or river bed, so software for estimates must take this into account to avoid under reported volumes taken by irrigators. Checks for silt deposits and earth works deepening storages should be routinely done for updating data and catching cheats.



Q) Do you support the proposal to provide flexibility through the development of different floodplain harvesting account management rules on a valley by valley basis?

This raises the issue as to why, in the Gwydir valley, the total eligible level of development is greater than that allowed for in their River Sharing Plan. Although all valleys can have very different sustainable levels for take allocations, it is extremely risky to have stakeholders in the valley to be calling the shots. I can tell you right now they are taking too much. 500% of allocations is just ridiculous. No carry over should be in the plans. If they have to steal the floods, then do real time calculations, and allocate each license holder their share of 10% (for example) from that rain event in their valley. No trading away. Since the floodplain approvals are issued for only 10 years, there is no reason to expect that these must continue as the Lower Darling and Menindee Lakes, and Upper Darling suffer directly from their prosperity. Flood plains need floods. Flood plain harvesting needs reducing.

We out this way, Broken Hill, have been watching consecutive parliamentarians and governments from both major parties for decades, pretending to care for the magnificent Darling River and Menindee Lakes. It is blatantly obvious that promises of \$ always gets in their ears. Big cotton lobby. More water theft, less in the river, and no, it is not climate change, but climate change should be added into the equation for the future management of this outback jewel. The floodplain harvesting should never be assessed on a long or shorter-term average overland flow. Real time data is the only way to manage one of the most variable rivers in the world.

Downstream environmental requirements, (such as drought conditions in the Darling River with no water flow in other catchments), should have priority during a flood event, used as a trigger to embargo floodplain harvesting, just as pumping for river flows is proposed to be. Note here that often floodplain water in its natural state finds its way back into the receding rivers either by the surface, or through the ground.

Decommissioning of some of the diversions must ensue. Perhaps the army might like a job.

Forth and Final Point, Environmental flows leading to the collapse of other environments, ie the Darling River and Menindee Lakes, with ramifications for wildlife in transit from climate change.

Again some points from our submission to the NSW Water Reform Action Plan:

YES: to whole of river connectivity, from north west and over the range from Brisbane, to Wentworth in south west NSW, all the rivers and creeks that by maps link up with catchment rivers to the Barwon Darling. As some of these are reported to not flow downstream any more:- a query for transparency

- a) Breaking extended cease to flow periods should occur well before the critical ecological thresholds exist. Downstream of Menindee Lakes should be included in these critical ecological thresholds lists
- b) Flushing flows are good, required, and need plenty of back up water/ pulse to shift high salt, low oxygen, high toxic algae through the system when left too long.
- c) Protection of held and planned environment water is good, and necessary, but not to the extent that this causes a suffering environment due to

holding it back from downstream, or pushing it through the system too rapidly to "save evaporation" as has been happening regularly to the water that should otherwise be held in the Menindee Lakes for release to the lower Darling for years to come without further inflows.

This "water that would otherwise evaporate" that is sent down too rapidly, with the rest of the Menindee lake storage, can be counted as Victoria and NSW obligation to SA, including the environmental water. This seems to release more water to be traded upstream in the Murray and the Darling Catchments, for irrigation. By travelling along the NSW southern basin in recent years, it is quite apparent that massive cotton farming is occurring in areas that have never grown it previously. This process stinks. It seems to end up reducing the flows available in both river systems.

In the meantime the environmental water stored downstream evaporates about the same rate as in the Menindee Lake system, and the massive storage cells that are used for the big irrigators lose their water to the ground and evaporation. (Cooler weather usually has winds and breezes, hence copies evaporation rates from warmer, calmer days. (Fowlers Gap Research station)).

And the huge Murray cod, and perch, that should be breeding in the Menindee lakes, die.

Environmental flows from Menindee to SA in the summer of 2014 managed to give the lower Murray a high river and in a few places went over the banks. Sounds good on paper, but flying over from Gold Coast to Adelaide showed a drought stricken country NSW, the whole way down, no water in catchment rivers. A really dumb time to empty the large water storage in the outback. We cant afford this type of management in our Menindee Lake system.

- d) The Menindee Lakes should be included in the environmentally protected sites, culturally significant, (yes, they did exist before the regulators and connecting channels were built), important fish and bird habitat and breeding sites.

The Darling River has been experiencing progressive reductions in flow presumably partially from diversions of water in the catchments and upstream Barwon river. The results are simulating drought conditions. It is uncommon that the Darling River has so many and prolonged no flow events. It is usually the refuge for wildlife during droughts, as often a portion of the catchment will have a flow event to maintain the river. More of the low to medium flows require protection.

Please seriously consider pushing for a Federal Royal Commission. Our Murray Darling Basin Plan can be one of Integrity, Transparency, and one where we all work together to preserve our River System, environment, and, most importantly, sustainable agriculture, for future generations.

Thanking you for your time,

Yours faithfully,

Barbara Webster





Joanie Sanderson

To  
SA Royal commission

## To the Members of the SA MDB Royal Commission

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To Whom it may concern,

I am writing to this letter as a counsellor, on behalf of all those people along the Lower Murray Darling Basin, who are suffering emotional, financially and Spiritually from what has been happening to the Sacred River.

I am a family Counsellor in Broken Hill and the outlying area and what I have witness in the people in this area has been horrific. A few weeks ago I attended a Rally in Wilcannia and the grief I witnessed in the Baakandji people was something that will affect me forever about what is happening to their beloved Baaka. From the smallest child up to the oldest Elder I witnessed a grief as we stood on the empty bed of their Beloved River that grief was something I hadn't experienced before on such mass.

They are growing tired of the fighting to save the River that should be always flowing just because of their birthright. How sad it is that we have let the first Nations people down on such a deep level.

In Wilcannia when the water is not flowing the depression rises, the suicide rates go up and it affects the whole town.

The same in Menindee and the grief is affecting the whole town as well. Families all down along the lower Murray Darling Basin are being affected who live on properties with financial stress through the loss of water in the River and Lakes.

\My friend Barb Webster has outlines all the point about the River and Lakes and myself and June Adlam support everything that she has put forward on behalf of us all

Thank you for the opportunity to be able to attend the meeting today.

Kind Regards

Joanie Sanderson