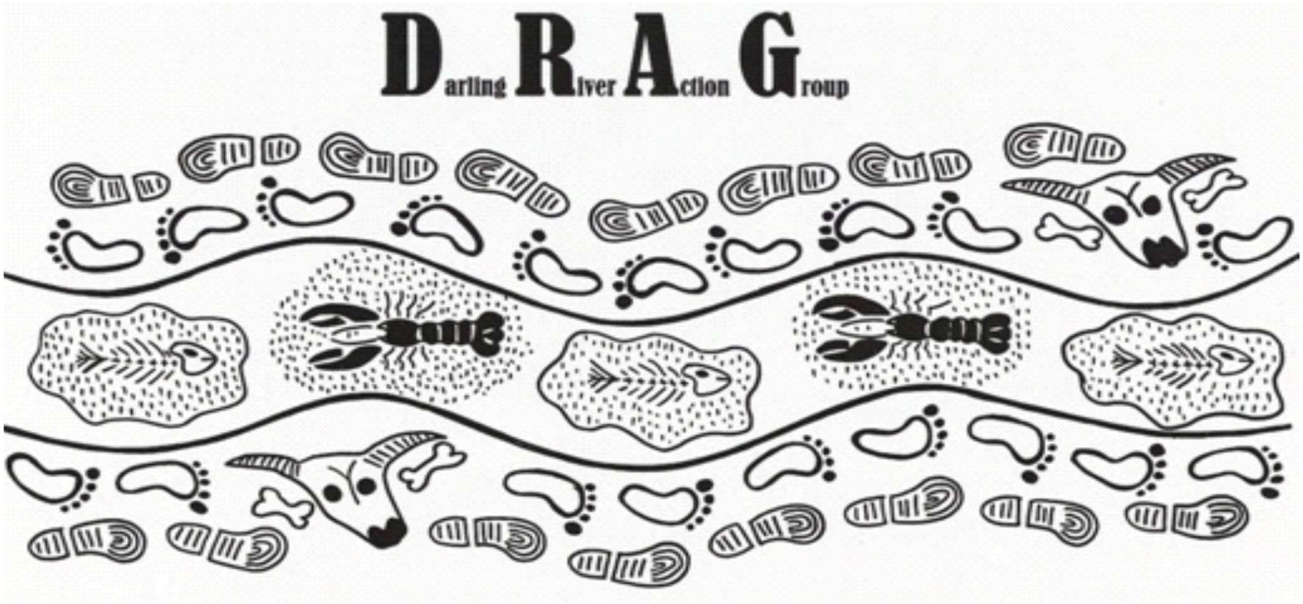

TO THE SOUTH AUSTRALIAN MURRAY DARLING BASIN ROYAL COMMISSION

SUBMISSION BY:

The Broken Hill and Darling River Action Group Inc and the Broken Hill Menindee Lakes We Want Action Facebook Group.

With the permission of the Executive and Members of these Groups.

Prepared by: Mark Hutton on behalf of the Broken Hill and Darling River Action Group Inc and the Broken Hill Menindee Lakes We Want Action Facebook Group.
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Mark Hutton

NSW

Date: 20/04/2018

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(Fig 1) **The Darling River**

How the Darling River and Menindee Lakes affect the Plan and South Australia

The Effect

The flows along the Darling River and into the Menindee Lakes has a marked effect on the amount of water that flows into the Lower Murray and South Australia annually. Alought the percentage may seem small as an average (Approx. 17% per annum) large flows have at times contributed markedly in times when the Lower Murray River had periods of low or no flow. This was especially evident during the Millennium Drought when a large flow was shepherded through to the Lower Lakes and Coorong thereby averting what would have been a natural disaster and the possibility of Adelaide running out of water. Whilst the Commission looks into the Basin Plan its SDL, s and compliance problems it would be prudent to study the effects and causes of the problems that affect the Darling Basin.

The Cause

Low flows, Water Theft, Flood Plain Harvesting and continued mismanagement are the main causes. The MDBA, Water NSW and the Department of Primary Industries have three times in the last fifteen years (2003/2004 & 2012/2013 & 2017/2018) drained the Menindee Lakes without any thought to the environmental and social disaster that it would cause. The over extraction of water for flood irrigation on inappropriate crops such as cotton and rice have left this once pristine waterway devastated. Its once mighty stands of river red gums, its fish and wildlife are being destroyed so swiftly and to such an extent that we may not be able to save them for future generations. An example of this is the Great Anabranch of the Darling which will now only see water in times of extreme flood, as normal floodwater no longer reaches the lower Darling due to the extractions for irrigation.

Much has been said about the Menindee lakes, including a concerted campaign by the irrigation lobby to depict the lakes as water wasters and just evaporation pans. But the real reason for this is to deflect criticism from the real problem, and that is the huge extractions for cotton irrigation on the Darling and its tributaries. Commercial greed and political gullibility have over taken common sense and responsibility.

The New Wentworth to Broken Hill Water Supply Pipeline

Broken Hill currently receives water from a pipeline from Menindee, covering a distance of about 110 kms. This pipeline has been in use for around 60 years and has unfailingly supplied the City of Broken Hill with domestic and industry water from the Darling River and Menindee Lakes Storage System.

The NSW Government has decided to construct a pipeline from Wentworth to Broken Hill, a distance of about 270 kms with water being drawn from the Murray River at Wentworth. This new pipeline will remove Broken Hills dependence on the Menindee lakes System for its water supply. We believe that there is a hidden agenda for the construction of this unwanted and unnecessary Pipeline. The agenda we believe is to change operating rules of the Menindee Lakes System which is a component of the 605 Gigalitre Amendment the MDBA has proposed for the Southern Basin thereby opening the door in the future to store less water in the Lakes System and reserve more water upstream for irrigation.

There is a lot of opposition to the new pipeline both locally and within the Darling River region, above and below the Menindee Lakes. The cost to local ratepayers is yet to be determined but we believe that the obvious increases will not be able to be met by a large portion of residents.

The NSW Governments quoted cost for this Pipeline is 500 million dollars plus ongoing maintenance

costs of 120 million dollars. This is a huge cost to the taxpayers of NSW and we believe is not warranted. The simple replacement of our existing pipeline would have sufficed.

To date the Government has not released a full Business Case to provide information to prove to the community of Broken Hill and the NSW Taxpayer that the pipeline meets the Governments Triple Bottom Line of Social, Economic and Environmental factors.

Environmental Health *(Sourced From the draft basin Plan Pg. 31)*
(A 2011 review by the Murray–Darling Freshwater Research Centre outlines the long-term declines in the health of the Barwon–Darling, including bank instability, reduced water quality, algal blooms and decreased river vegetation. Much of this decline has been linked to water use in the catchment, **as a result of both extraction of water from rivers and regulation by weirs**. The 2008 Sustainable Rivers Audit found the Barwon–Darling to have fish and aquatic insect, crustacean and snail populations in poor health. **It found there were fewer high flows and reduced annual volumes and variability**. CSIRO reported in 2008 that water use has nearly doubled the average and maximum periods between ecologically important flows to the Talyawalka Anabranch. Individual events are now larger on average but the total volume is lower because there are **far fewer events**. This is likely to have reduced water bird breeding opportunities and the condition and extent of native vegetation within the Talyawalka system.)

Floodplain Harvesting of Water
A huge amount of water is being harvested off floodplains, depriving rivers of water.
Floodplain harvesting occurs when landholders capture water that is on the floodplain and use it to irrigate crops or pasture. It includes the taking of water that has overflowed from the main river channel as well as taking local runoff that has not yet reached the river channel. It can involve the digging of channels and banks to divert water to dams. Until 2008 floodplain harvesting was not regulated and remained a major loophole within NSW water management, as it is almost always un-metered. In 2008 the NSW Government passed legislation making it illegal to build new diversion structures on floodplains without permission. The legislation did not correct the already excessive floodplain harvesting, and it is doubtful whether there are or will be sufficient compliance officers to police the law. Floodplain harvesting is making a mockery of the Basin Plan. Water stolen from the floodplains is neither regulated, nor paid for, but it is a loss to the rivers. Cutting out floodplain harvesting is a major opportunity to return water to the rivers.

The Current State of the Darling River
The Darling River Basin covers 650,000 square kilometers of NSW and Queensland. As can be seen from the map below, almost all of the water in the Darling and its major tributary – the Barwon – comes from tributaries that feed into this system above Bourke. These tributaries contributed the following percentages into the Barwon Darling, prior to widespread irrigation diversions:

- Culgoa River: 15.1%
- Border Rivers: 20.9%
- Gwydir River: 12%
- Namoi River: 23.1%
- Macquarie/Bogan Rivers: 21.6%
- Rare contributions come from the Warrego River and very occasionally from the Paroo River.

(Data from the 'State of the Darling' report by Webb, McKeown & Associates Pty Ltd, 2007,*)*

Following are a few statistics from the Murray Darling Basin Commission:

- Of the water that would have reached the sea from the Murray-Darling Basin, over two-thirds is now diverted from its rivers each year. Throughout the basin, rivers are now in a state of drought for more than 61 years in every 100, compared with 5 years per 100 (Murray Darling Basin Ministerial Council 1995).

- Mean natural flows in the Darling system were 3,042 Gigalitres. Under 1993/94 conditions, this reduced to 2,272 Gigalitres – 75% of natural flows. But mean flow calculations are influenced too much by single large flows. The median flow is more informative.

- Median natural flows in the Darling system used to be 1,746 gigalitres. Under 1993/94 conditions the median flow was 1053 – only 60% of natural flows.

- Percentage increase in diversion from 1988-1994 (i.e. the increase in the amount of water being taken out of the rivers):
  - NSW Border Rivers 38.2%
  - Upper Darling 32.0%
  - QLD Border Rivers 187.2%
  - Condamine/Balonne 63.5%

Percentage change from natural flows at Wilcannia

- Change from mean flow - 29%
- Change from median flow - 73%
-

- Increased storages, weirs and dams, have had only limited effect on very big floods, but have virtually eliminated small to medium sized floods on most rivers in the Murray-Darling Basin. Floodplain plants, animals, and floodplain graziers, are suffering as a result.

- In the whole Murray-Darling Basin, over the 4 years between 1996/7 and 2000/2001, areas of irrigated cotton expanded by 108,000 hectares (36%), and the water requirements for cotton increased by 729 Gigalitres to 2,856 Gigalitres.

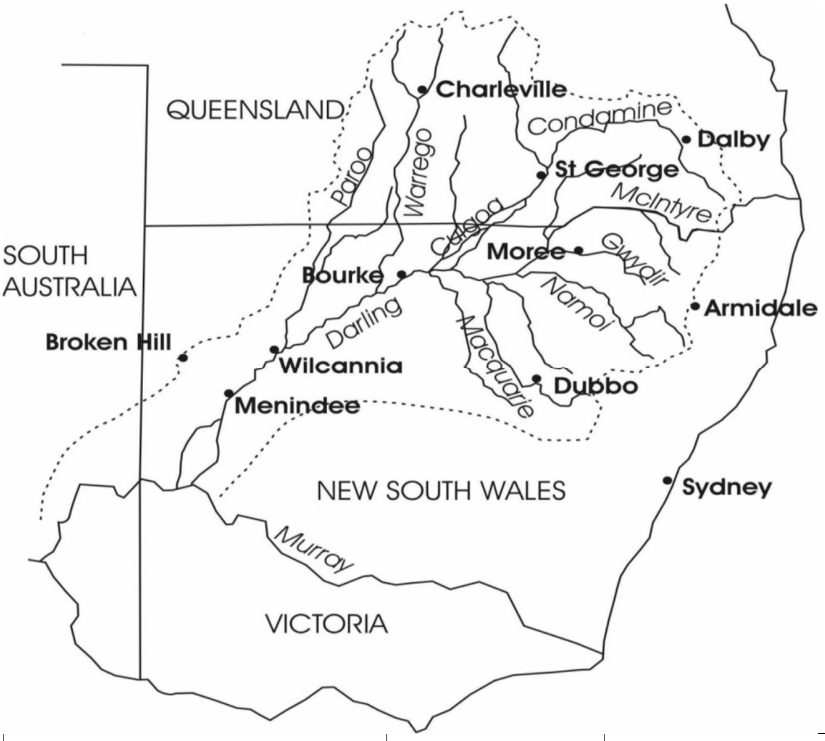
6. The 2007 State of the Darling report provides some statistics:

- Average annual runoff into rivers of the Darling Basin is about 7,000 Gigalitres
- The major government dams on the tributaries of the Darling can hold 5,129 Gigalitres, but they normally do not. A lot of the rainfall water enters the river below these dams.
- Total on-farm storage in the upper Darling basin is now equivalent to 60% of the total volume of the government dams.

Volumes of Storages, Total Darling Basin (Gigalitres)

Major dams (incl Menindee Lakes)	7,179
Town water supply dams	138
Weirs	171
Ring tanks (mostly cotton farms)	3,150
Hillside dams	1,347

Since the late 1970s the contributions that the tributaries have made to the Darling River have greatly reduced. The Murray Darling Basin website states that in the 1960s diversions from the Barwon-Darling and its tributaries were 50 Gigalitres and by 1991 they were 1,400 Gigalitres. This increase in diversion and extraction has continued over the last 25 years. Webb, McKeown & Associates Pty Ltd (State of the Darling report 2007) estimate that average annual runoff is about 7,000 Gigalitres, while total average annual surface water use in the Darling Basin is 3,200 Gigalitres.



Darling Tributary	Average Natural Inflow into Darling (Gigs per year)	Percentage of total natural inflows from Darling Tributaries	Current average inflow (Gigs per year)	Percent reduction in inflow into the Darling
Border Rivers	862	20.9 %	574	33 %
Gwydir River	493	12 %	196	60 %
Namoi River	949	23.1 %	779	18 %
Condamine/Balonne/Culgoa	621	15.1 %	293	53 %
Macquarie/Bogan Rivers	888	21.6 %	634	29 %

The Murray Darling Basin Commission website (2007) further states that the diversions have been **"primarily due to the expansion of the cotton industry and the use by growers of large on-farm water storage."**
Communities and graziers that live along the Darling River have witnessed a severe ecological decline of the river system over the last 20-30 years. The river no longer receives the intermittent flooding that the river, associated wetlands and the floodplains depend on. Flooding that does occur is greatly reduced in duration. Some of the environmental impacts are:

- Large numbers of river red gums (some hundreds of years old) and other perennial shrubs are dying. There have been large areas of perennial shrubs dying and on both the floodplain and the river banks there are large numbers of trees dying as well. The saddest part of this is that over the past 20 years, there has been enough water in the river system to maintain environmental health but it never got here because it disappeared upstream for irrigation.

- Migratory and non-migratory birds are losing breeding grounds vital to their continued existence. Two examples of this are the drying and destruction of the Macquarie Marshes and Gwydir Wetlands. (Professor Richard Kingsford University of New South Wales has estimated that we have lost 70% of our native birdlife in the Darling Basin)
-
- Murray Cod, Golden Perch, Catfish, Silver perch and other aquatic species are under threat not only from lack of water, but also due to blue green algae in the remaining pools. Toxic flows of water have killed large numbers of fish since the turn of the century. The Menindee Lakes System is believed to be the largest breeding ground for our native fish. Fish bred in this system are found all over the Murray Darling Basin.

- Bank slumping has occurred; this happens when the riverbanks are saturated by a high flow, and the water levels drop rapidly due to pumping for irrigation. Sections of the soggy banks slide into the river. This changes the profile of channels, leads to siltation and can cause diversion of channels.

- A pipeline has replaced the Great Darling Anabranch, with enormous impacts on the riverine environment in that area.

- Irrigation businesses that are downstream from the big users are finding that their investments are no longer viable. Permanent crops are dead or dying

Figures from the report: State of the Darling, interim hydrology report, by Webb, McKeown & Associates Pty Ltd, released by the Murray Darling Basin Commission in 2007.

. Water Account Australia 2008–09 Murray-Darling Basin

- Water consumption in the Murray-Darling Basin in 2008–09, amounted to 6,152 GL or 44% of total water consumption in Australia. This compared to 9,668 GL in 2004–05 or a decrease of 36%.
- The Agriculture industry in the Murray-Darling Basin consumed 3,843 GL or 55%, of the total volume consumed by agriculture for Australia.
- This gross value of irrigated agricultural production in the Murray-Darling Basin declined by 21% from $5,522 million in 2005-06 to $4,349 million in 2008–09. The 2008–09 value represents 36% of the total gross value of irrigated agricultural production in Australia.
- Household consumption of water was 190 GL in 2008–09, or 3% of total water consumption. Household water consumption in the Murray-Darling Basin is virtually unchanged since 2004–05 (189 GL).
- Household water use per capita was 89 kL, a decrease from 94 kL per capita in 2004–05.
- Water losses in the distribution process amounted to 1,630 GL or 17% of distributed water supply for the Murray-Darling Basin.
- The Electricity and Gas Supply industry consumed only 847 ML of water in the Murray-

Darling Basin in 2008–09. In-stream use of water, mostly for hydro-electricity in the Electricity and Gas Supply industry was 9,169 GL, representing 21% of the Australian total in-stream water use in this industry.

(Fig:2) The Darling River

8. The Effect Our Communities

The health of our communities has deteriorated and One in five children or even lower aged under five in Broken Hill have blood lead levels above the current national goal of five micrograms per deciliter (μg/dL). Adult lead levels are also high.When water restrictions are introduced we can only water our lawns and gardens twice a week for a couple of hours with no washing of paths or driveways. This is also the case for local parks and sporting ovals. Large amounts of lead contaminated dust accumulate on and around private housing and public amenities. Skin rashes on our children due to the filthy quality of water that is left in our weir pools. Farmers in Menindee and the Lower Darling have lost not only income but most of their permanent plantings. Millions of dollars in tourism have been lost in Broken Hill and Menindee because campers won't come to an area where they can't swim or even eat the fish they catch. In our harsh outback environment clean fresh water is essential for our wildlife, towns, cities and industries. The Darling River, Menindee Lakes, Great Darling Anabranch and its catchments are the lifeblood of the Far West and below and our communities depend on them for our very survival.

(Fig 3) Camping on the Darling River

The Effect on our Environment

The Menindee lakes, Darling River and Great Darling Anabranch provide habitat for large populations birds, fish and animals that rely on their waters for survival. ***Quote from DPI Water Resources and Management Overview / Lower Darling River Catchment*** (There are 46 threatened animal species and 14 threatened plant species within the region that are protected under the ***NSW Threatened Species Conservation Act 1995***. Ten of the threatened plant species are listed as endangered, and include species of saltbush, bluebush, native daisy and acacia.

Of the 27 threatened bird species that use the area the majority inhabit the woodland and sand plain habitats along and beyond the river. Species listed as endangered include the bush stone-curlew, malleefowl, Australian bustard, plains wanderer and regent parrot. Blue-billed duck and freckled duck are regular visitors to the Darling Anabranch lakes.

The region provides habitat for 13 threatened mammals including critically endangered species such as Gould's mouse, Mitchell's hopping mouse, numbat, pig-footed bandicoot and burrowing bettong. Five species of threatened lizards and one frog species (painted burrowing frog) are also found in the Lower Darling.

There are at least six native fish species known to live in the Lower Darling River, these being western carp gudgeon, golden perch, bony bream, Murray cod, crimson-spotted rainbow fish and Australian smelt (Green *et al.* 1998). Six other species that were previously common along the Lower Murray-Darling Rivers are now listed as threatened under the *NSW Fisheries Management Act 1994*. (Table 2).

The aquatic community of the Lower Darling River is part of the endangered ecological community known as the *Aquatic ecological community in the natural drainage system of the lowland catchment of the Darling River.* This includes 21 native fish species and hundreds of native invertebrate species that are found within the Darling River and its associated streams, wetlands and anabranches within New South Wales, including the Lower Darling and Great Darling Anabranch.)

Table 2: Threatened aquatic species of the Lower Darling River Scientific name	**Common name**	**Status in NSW**
Craterocephalus fluviatilis	Murray hardyhead	Critically endangered
Maccullochella macquariensis	Trout cod	Endangered
Notopala sublineata	River snail	Endangered

Bidyanus bidyanus	Silver perch	Vulnerable
Nannoperca australis	Southern pygmy perch	Endangered
Mogurnda adspersa	Purple spotted gudgeon	Endangered
Aquatic ecological community in the natural drainage system of the lowland catchment of the Darling River	Darling River EEC	Endangered Ecological Community

The Effect on Indigenous Tribes of the Darling River

Significant numbers of Aboriginal people reside in the river towns of Brewarrina, Bourke Wilcannia, Menindee and Wentworth. Broken Hill is home to the largest single population of Aboriginal people. There are 45,000 Aboriginal people in the Western Division or 24.4 per cent ofr the population. The Barwon-Darling Rivers (BDR) and the Menindee Lakes System (MLS), have been central to the life, livelihood, culture, mythology and Dreaming of we Aboriginal people of the far-west and north-west of NSW since time immemorial. We are freshwater people. As a people who relied on limited food resources (particularly during drought and summer months) the BDR and MLS were and are an essential lifeblood.

It saddens us to see the BDR and MLS in such a state. We hurt not only for the riverine species that have died and continue to die, but we also lament the impact the lack of water has on the surrounding vegetation and animal species.

In our culture, surrounding the central-Darling, our totem animals are freshwater species (e.g. Golden Perch and Bony-Bream fish), but also others such as Wood-Duck and Teal Duck that more indirectly rely on the water, to name but a few.

In traditional Aboriginal culture, we had individual and collective responsibilities, to ensure the survival of totemic animals, by limiting the number of animals that we hunted. We did not hunt these animals during their breeding cycles, to ensure the continuation of their species, and we performed increase ceremonies to make more of them available to nature and to us for our subsistence.

In fact, the very essence of our culture, is based on the division of society between those who are Eagle and those who are Crow. One who is of the Eagle moiety can only marry someone from the opposite Crow moiety, and vice versa, this system is also described as being East wind and West wind.

This communique is not intended to be a lesson in Aboriginal culture, rather, it is intended to describe and explain the absolute essence of the survival, of many native species to our culture. We have lost almost all of our ceremonies, but our language and cultural knowledge has not disappeared.

Many of our communities have appalling levels of unemployment with many eking out an existence on the bottom rung of the socio-economic ladder. Those in receipt of Social Security benefits are ashamedly high (shame on you, the NSW and Australian Governments). The importance of these freshwater bodies, to supplement our diets with freshwater fish, mussels, yabbies' and turtles (etc.), is essential to maintaining physical health, and more importantly to vary a diet which is too often laden with cheaper take-away foods and not enough fresh food.

The clear majority of our communities have a clear lack of social infrastructure, so the ability to wile away the hours fishing and yabbying is an important social pastime. It is a time for family to get together in a healthy environment. It is a time to get away from the myriad of television, computer and game screens which dominate our lives and soak up some Vitamin D. It is a time for children to swim, run and play. It is a time to reconnect with extended family members and other community members in general. It is also a time to talk to children and young family members about the importance of conservation, and only taking from nature that which is needed. When the rivers and lakes are healthy we are happy and healthier.

Mark Sutton Barkinjii

(Fig 4) The Darling River

(Fig 5 Lake Menindee)

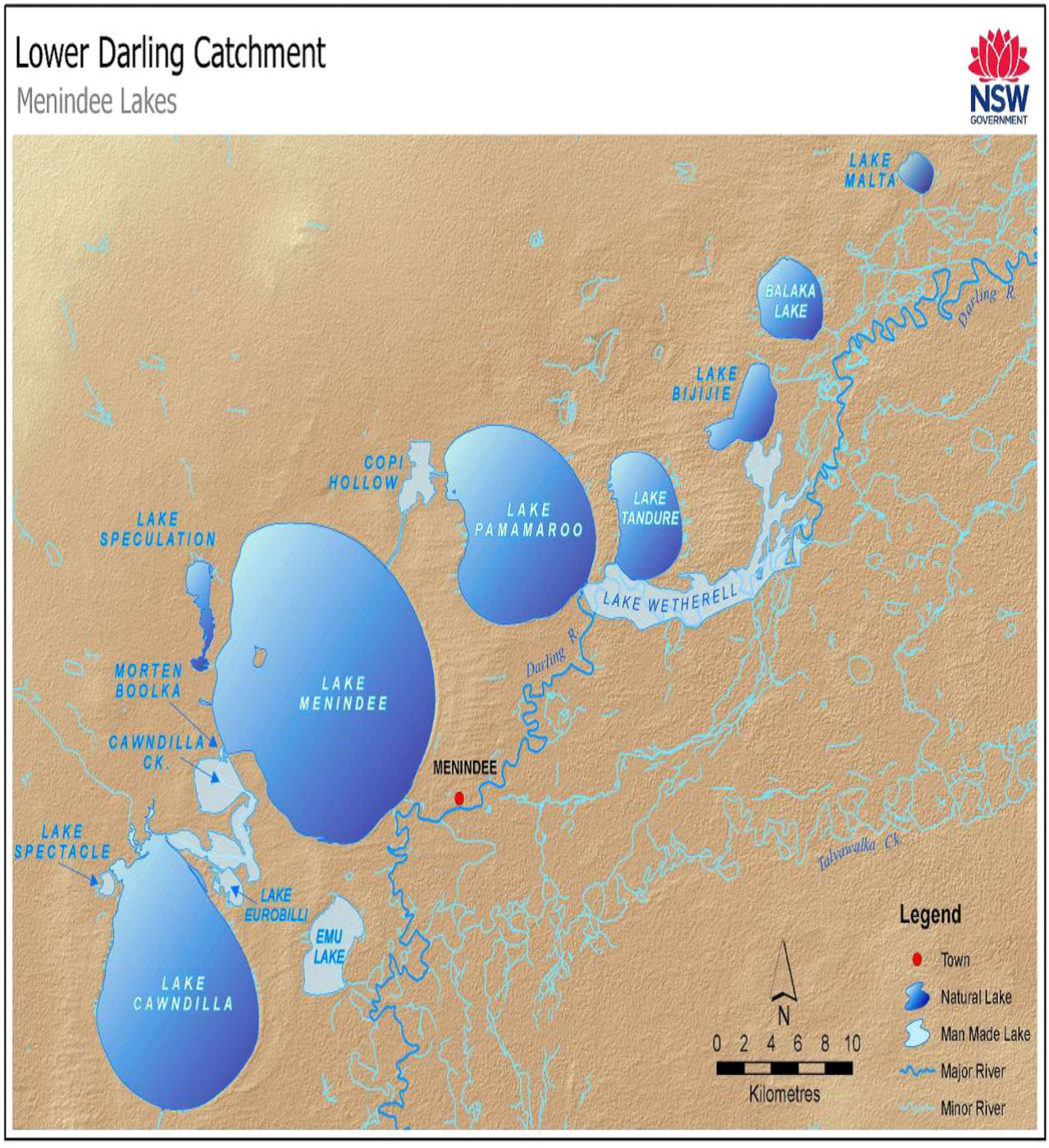
Background

Under current rules the lakes are in NSW control until the stored water exceeds 680 GL. Then the MDBA takes over, and the water belongs 50:50 to NSW and Victoria. If South Australian asks for water, it would be released from Menindee Lakes rather than from the dams on the Murray.
When the volume of water stored in the lakes drops below 480 GL, control reverts to NSW.
When the MDBA makes a release, they will release 9 or 10 GL per day, to minimize losses as the water flows to South Australia. Presently Lake Menindee can only release 4 GL per day and Lake Cawndilla can only release 2 GL per day. That means water has to be released from the upper lakes.
By the time the total volume reduces to 480 GL, most of that is left in residual pools in Lakes Menindee, Cawndilla, and Pamamaroo.The MDBA also wish to change operating rules governing the operation of the Menindee Lakes. This we believe will lead to much less water being stored in the system.

Climate Change and Irrigation Extractions – Reduced Flow

A lot of the talk about Menindee Lakes is based on the past, when the lakes were filled most of the time. Irrigators talk about evaporation losses of 400 GL per year at Menindee. All of this is out of date. The extractions have increased enormously upstream, and the climate is changing... Any changes that are made to Lakes Menindee and Cawndilla will only have benefits when there is water in the lakes. And how often will that be? Our guess is that both lakes will fill about once in 10 years.

(Fig 6)



(Fig 7) Sunset strip At Menindee Lake

(Fig: 8)

Menindee Lakes Storage Details Storage	Full Supply Level (m)	Full Supply Capacity (ML)
Lake Wetherell *(Including* lakes *Tandure, Bijijie, Balaka and Malta)*	**61.67**	**192,621**
Lake Pamamaroo *(Including Copi Hollow)*	**60.45**	**277,725**
Lake Menindee *(including Lake Speculation)*	**59.84**	**629,488**
Lake Cawndilla (*including Lake Spectacle, Morten Boolka, Cawndilla Creek & Lake Eurobilli)*	**59.84**	**631,052**
Combined Menindee		**1,730,886**

(Fig 9) Lake Pamamaroo

Suggestions for Improvements

Millions of dollars of taxpayer's money have been spent on Consultants reports, Governmental studies, CSIRO studies, Senate inquiries and the list goes on and on. Each one trying to find out what is causing the problem and how to address that problem.

We believe all to date have failed the Lower Darling River and Menindee Lakes. From Bourke to Wentworth the River and Lake System remains in extremely poor ecological health. While the Lower Darling dies large scale flood irrigation continues unabated in the upper Barwon Darling and its tributaries. Which brings us to the problem and it is quite simple. Far too much water is being extracted from all the Tributaries. This is causing much longer periods between flows which in turn is causing irreparable damage to the Darling Catchment and its rivers and lakes.

IN ORDER TO IMPROVE THE ECOLOGICAL, SOCIOLOGICAL AND CULTURAL HEALTH OF THE BARWON DARLING RIVER AND MENINDEE LAKES, SMALL AND MEDIUM FLOWS MUST BE RETURNED TO THE SYSTEM. THIS IS THE ONE AND ONLY WAY.

Below are some suggestions on how to do this.

1. Immediately introduce digital tamper proof flow meters on all pumps in the system with real-time data sent to and processed at a central location. This will give authorities immediate up to date information on water extractions.

2. Increase the number of compliance officers and provide them with powers to suspend pumping if Irrigators are found in breach of pumping rules. The amount of compliance officers at the moment is ridiculously inadequate.

3. Introduce legislation to increase the penalties for extracting more water than you are licensed to do. At the moment the penalties are far too lenient and there is no incentive to abide by the rules. Water theft makes a mockery of the Caps on the Tributaries of the Barwon Darling and the MDB Plan.

A. A fine of $3000.00 per megaliter over the pumping limit for a first offence. Which is approximately double the market rate for water.

B. Double that amount for second offence

C. Surrender of Water license to Federal Environmental Water Holder for third offence.

4. Satellite tracking and telemetry to be introduced to track water levels in on farm dams and tanks. These systems have been used before but we believe were found to be to effective and through political pressure from certain areas they were restricted. This can also be used to track future environmental flows to make sure they get where they are supposed to.

5. Repeal legislation that was introduced to retrospectively legalize dams and levees that were constructed illegally after the introduction of the Murray Darling Water Sharing Plan 2012. These structures are restricting millions of liters of water from entering the system. Remember that water that falls on your property does not all belong to you it belongs to the Commonwealth. Ten percent is the

amount legislated that you may keep but we believe this figure is mostly ignored. This water must be allowed to run into the system.

6. Flood Plain Harvesting is in our view the second biggest threat to the entire MDB after over extraction. It is the least understood and least examined problem. Billions of liters of water are diverted from the MDB System every year through legal and illegal high and low-level levies, laser leveled paddocks, roadways acting as levies and the damming of natural watercourses. Legislation and policies regarding Floodplain Harvesting are being ignored by a large number of Irrigators.

7. Implementation of an Independent panel made up of people with scientific and engineering backgrounds to study the problem of floodplain harvesting and recommend to the Government solutions to this problem. We need to know exactly how much water is being extracted if we will have any hope of improving flows.

8. Upgrading of Floodplain Harvesting policies.

INFRASTRUCTURE UPGRADES MENINDEE LAKES

Infrastructure upgrades at the Menindee Lakes System have been talked about since the turn of the century. Several Expensive consultancy reports have been completed and 400 million dollars set aside for upgrades but to date nothing has been done. Long periods of the system being dry have given ample opportunity for works to commence.
The only reason we can assume for not doing the upgrades is that operating rules the Menindee Lakes will be changed and much less water will be stored in them. This would be an ecological disaster.

The most important upgrades are below in order of importance.

1. The construction of a low-level weir or lock in between Menindee Lake and Cawndilla Lake. This would be the most important project as it would allow the filling of each lake independently.

2. The preparation of Penelco Channel at the rear of Cawndilla Lake to allow water to be discharged into the Darling River or down the Great Darling Anabranch.

3. A permanent weir or lock on the interconnecting channel between Pamamaroo Lake and Copi Hollow Lake. This would allow water to be stored in Copi Hollow as a secure water supply for Menindee and Sunset Strip. This would also be a haven for the wildlife and fish life of the region in times of low water.

CULTURAL FLOWS

Natural Cultural flows for the traditional owners of the land and rivers (The Barkinjii people). Flows are desperately needed to allow these people to continue their traditional way of life.

SEPARATION OF THE DARLING AND MURRAY SYSTEMS

The MBDA treat the Darling and Murray systems as one. They believe that as they join and end up as one River and flow out to sea as one that they are one system. This could not be further from the truth.

They are different Climatically, Geographically and Environmentally. Flow rates and flow times are different. The Murray is partially snow fed and the Darling completely rain fed. The list goes on. With all these differences the NSW Government and the MDBA still allow inter valley water transfers. For example, Irrigators could buy a thousand megaliters from the Muroidea River and extract it from the Darling River. This only increases pressure on an already depleted system. These two rivers must be treated as separate systems in their own right.

The Lower Darling from the start of Lake Wetheral is deemed to be part of the Southern Basin by the MDBA. This is sheer stupidity as the Menindee Lakes and Lower Darling are filled by upstream flows from the Tributaries. Water does not flow uphill. By leaving the Menindee Lakes and Lower Darling out of the Northern Basin the figures that the MDBA base their SDL's on are distorted. This of course may be on purpose.

NATIVE FISH BREEDING

The Menindee Lakes System is one of our the most important native fish breeding wetlands in the Murray Darling Basin. With the loss of 80% of our natural wetlands in the Basin the Menindee Lakes have become vital in the breeding of our native fish. Fish hatched in the Lakes have been found as far as Mungindi at the top of the Barwon and as low as the Corong in SA.

The continuing degradation of their breeding grounds by the reduction of the size and frequency of flows into this system is contributing to the catastrophic drop in native fish numbers (approximately 90%). In any other country on earth these numbers would be seen as extinction levels.

CARP ERADICATION

Much has been discussed lately about the Carp Herpes Virus and whether to release it or not. While we are sure that there has been plenty of scientific study done on the subject. Our primary concern is the obvious disastrous consequences of millions of dead carp polluting and deoxygenating our River and lake systems once the virus is released. This would not only destroy the carp but would also kill what is left of our Native fish species. The flow on of this would be the death in the millions our native wildlife and birdlife that need the rivers to survive.

We believe a staged approach to this problem would work much better and safer. Firstly, start a State funded program of native fish breeding. Use these fish to replace the 90% of Native fish species that have been destroyed since European settlement. Our native fish are predatory species and will if given the opportunity eat the small and juvenile carp but at this time they are not in sufficient enough numbers to fight back.

The breeding of native fish, crustations and aquatic animals could be undertaken by indigenous people native to their areas. This would provide much needed employment in areas such as Wilcannia and Menindee.

Secondly seek out local and overseas markets for carp products. Carp is an excellent source of protein. Harvesting of this resource could be undertaken by indigenous communities.

Once carp levels are down to manageable levels then the virus could be used.

WEIRS, LOCKS AND RESNAGING

During the early part of the 20th century paddle steamers and their crews had a profound effect on the Darling River. During those years almost, all of the snags and rock bars were removed from the river to allow for safer navigation.

This unfortunately destroyed habitat for native fish and allowed the River to flow faster.

Before European settlement the Darling River would have had hundreds of natural weirs along its

length from fallen trees and rock bars. These would have provided habitat for fish, birds, animals and indigenous tribes during times of drought. This was nature's way of providing safe havens for our wildlife.

As Environmentalists we would like to see a more natural system but we also have to be realists and face the fact that we cannot go back to pre-settlement times.

This means that we have to either have a policy of resnaging and or constructing a system of locks or weirs along the length of the Darling Barwon similar to the Murray. Fish passages would obviously have to be a part of the construction. This would hold permanent pools of water along the length of the river and would improve the rivers environment. Locks would allow water to be moved in stages along the river. RESNAGING would be our preferred option.

Conclusion

The Darling Basin is at its tipping point. It cannot survive the continual degradation it has be subjected too over the last 100 years. Political parties whether in power or not by their very nature rarely look at situations like this any further than their 4-year tenure and this is a major part of the problem. Governments must start looking at the damage their decisions will cause our environment 50 or 100 years in the future. The future environment that we leave or children and grandchildren must take precedence over any short term political or commercial gains. Without a healthy Darling River and Lakes there can be no healthy Murray River and Lakes.

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