

Committee Secretary
Senate Standing Committee on Environment and Communications
PO Box 6100
Parliament House
CANBERRA, ACT, 2600

26 July 2019

**Murray-Darling Basin Commission of Inquiry Bill
2019**

**Submission to the Inquiry by the Lower Darling Horticulture Group
July 2019**

Thank you for the invitation to provide a submission to the Murray-Darling Commission of Inquiry Bill, 2019.

The submission provided by the Lower Darling Horticulture Group (LDHG) specifically addresses the impact of the implementation of the Murray-Darling Basin Plan on the Lower Darling River, downstream of the Menindee Lakes.

The security of water supply in the Lower Darling River has been significantly reduced in recent decades by increased irrigation development and the management of the Barwon-Darling River and its tributaries in NSW and Queensland, and most recently, the release of high volumes from the Menindee Lakes to meet environmental objectives.

Extensive irrigation development, particularly cotton, floodplain harvesting of water, the construction of on-farm storages and the diversion of surface water particularly during periods of low flows or immediately following drought is having a devastating impact on the health and productivity of the Barwon-Darling River downstream to the Murray River.

Further, and most importantly, the release of high volumes of water from the Menindee Lakes to meet downstream environmental objectives in 2016-17 reduced water availability

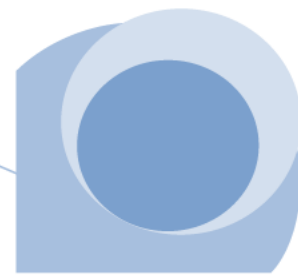


for the environment and for high priority domestic and stock needs of this important part of the Murray-Darling Basin River system, resulting in massive fish kills in January 2019.

The future release of high volumes of water from the Menindee Lakes for downstream environmental purposes is a fundamental component of the Murray-Darling Basin Plan. The 'Pre-requisite policy measures' required by the Commonwealth Government as part of the Basin Plan, provides for the Commonwealth Environmental Water Holder to call for the release of environmental entitlements from any storage, irrespective if that volume exceeds the volume of environmental water entitlements recovered in the river valley.

In practice, this will result in the release of far greater volumes from the Menindee Lakes, as flows from this storage to the downstream reaches of the River Murray is less impacted by flow constraints than other rivers in the southern Murray-Darling Basin.

The submission made by the LDHG compliments the submission it made to the Review of the Barwon-Darling Water Sharing Plan recently undertaken by the NSW Natural Resources Commission. The submission addresses the same issues impacting on the Lower Darling River and recommends options for management that seek to optimise environmental, economic, social and cultural outcomes in the Barwon-Darling and Lower Darling Rivers.



Submission to the Inquiry by the Lower Darling Horticulture Group

The Lower Darling Horticulture Group (LDHG) consists of 10 families that operate 6 family farms between Weir 32 at Menindee and the upstream influence of the Murray River at Ashvale station, approximately 35 kilometres north of Wentworth. The LDHG includes all high value commercial irrigated permanent plantings, stone fruit, citrus, wine grapes and table grapes, on the Lower Darling River downstream of Menindee. These family farms have been established for generations.

The environmental health of the Menindee Lakes and the Lower Darling River is entirely dependent on inflows from the Barwon-Darling River. Similarly, the water supply for our irrigated permanent plantings is dependent on water supply from the Menindee Lakes.

Over the past decades, particularly since the development of the cotton industry upstream of Menindee, inflows to the Menindee Lakes have been reducing. The recent 'Independent Assessment of the 2018-19 Fish Deaths in the Lower Darling – Interim Report' noted that Pre-development inflow volumes into the Menindee Lakes Scheme were two to three times greater than current. Importantly, the interim report also noted that the relative effects of diversions of flows in the Barwon-Darling are greater in dry years and that extraction of flows from the tributaries of the Barwon-Darling has a significant impact on inflows to the Menindee Lakes.

This is evidenced by the fact that since 2004 there have been four extended periods where the Menindee Lakes have dried to the extent that releases to the Lower Darling have ceased and the river downstream of the Menindee main weir has ceased to flow.

The result of increased extraction of water for irrigation upstream of Menindee, particularly during periods of low flow and following extended drought is clearly having a serious impact on the health and productivity of the Barwon-Darling and Lower Darling Rivers downstream, where the river has been reduced to a series of stagnant pools dominated by blue-green algae blooms and most recently subject to extensive fish kills.

It is the belief of the LDHG that Water Sharing Plans for the Barwon-Darling and for its tributaries in NSW and Queensland must consider the environmental needs of the river downstream and of the higher priority needs for consumptive use including town water and domestic and stock supply. It is submitted by the LDHG that extractions for annual crops



upstream of the Menindee Lakes should only be allowed after the needs of the river and priority uses downstream have been met.

The LDHG submits that the downstream needs of the river cannot be ignored within upstream Water Sharing Plans simply because these rivers are managed under separate administrative arrangements, either as separate water sources or within other jurisdictions. All water sharing plans must consider the river as a whole and the need for connectivity of flows and these plans should not be accredited as 'Resource Management Plans' by the MDBA unless they do so.

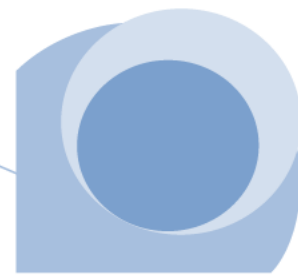
Up until recently (2014), diversions of flows for irrigation from low flows or flows of short duration occurring during dry periods were typically embargoed until the security of water supply for Broken Hill was guaranteed for 18 months. By imposing these embargoes, the health of the river downstream was also protected. It is well documented that these small flows are critical in providing drought refuge for native fish and other wildlife, and for priming the river bed so that when higher flows occur these generate flows rather than seep into the bed.

The LDHG recognises that the water supply for Broken Hill has recently been secured by a pipeline from the River Murray. While this reduces the need to provide 18 months guaranteed supply for Broken Hill from the Menindee Lakes, a similar target is necessary to secure water supply for other towns, the environmental needs of the river and for stock and domestic supply.

The LDHG submits that there is a need for flow, and flow duration targets to be set at Wilcannia to protect the health and productivity of the river and to meet high priority town water supply and domestic and stock needs, before access to water for irrigation is granted.

Similarly, the LDHG submits that a target of water storage in the two upstream lakes of the Menindee Lakes Scheme (Wetherill and Pamamaroo) be established, either as a prescribed volume or for a period equivalent to 18 months of supply for the environment, town water and domestic and stock supply in the Lower Darling River before access to flows for irrigation is granted.

These targets should be included as objectives for river management by NSW and the MDBA.



The LDHG appreciates that the long term health and productivity of the Barwon-Darling and Lower Darling River is under serious threat, not only by upstream extraction but also by increased releases for the environment downstream of the Lower Darling. Simply ensuring low flows or flows of short duration during dry sequences is only one factor that will contribute to improving the health of the river and for providing water to the communities downstream.

In consideration of this, the LDHG has been working with regional communities, Aboriginal groups, licensed irrigation users, stock and domestic users, Councils, the Australian Floodplain Association, and the Pastoralist Association of the Western Darling in the development of a comprehensive proposal for the management of the Barwon-Darling and tributaries, the Menindee Lakes and the Lower Darling River.

I have attached a copy of the Proposal for the consideration of the Commission of Inquiry.

In summary, the Proposal calls for the following;

- protection of low flows or flows of short duration from extraction in the Barwon-Darling and tributaries until the environmental needs of the river and high priority uses downstream are met. This would include the establishment of flow, and flow duration targets at Wilcannia.
- demand downstream of the Menindee Lakes be reduced by removal of permanent plantings on the Lower Darling River that would enable the reduction in releases from the Menindee Lakes for irrigation, and extending water supply for the environment, town water and domestic and stock needs.
- maintenance of a volume of water in Lake Wetherill and Pamamaroo to meet environmental needs and 18 months water supply and a 60,000 megalitre environmental contingency allowance (this had previously been included in the NSW Water Sharing Plan for the regulated Murray and Lower Darling Rivers)

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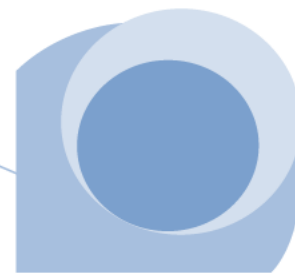


- consideration of the potential to increase the storage capacity of Menindee Lakes by the protection of foreshores and sites of cultural significance, as has been undertaken at Lake Victoria, and in so doing extending water supply and providing significant economic, social and cultural outcomes.

I look forward to the outcomes of the Inquiry and hope that its outcomes will contribute to restoring the health and productivity of the Barwon-Darling and Lower Darling Rivers, and the Great Anabranh of the Darling River and the Menindee Lakes that are listed in the Directory of Important Wetlands in Australia.

Yours sincerely,

Rachel Strachan
Lower Darling Horticulture Group



PROPOSED FUTURE MANAGEMENT OF THE BARWON-DARLING, MENINDEE LAKES AND LOWER DARLING RIVER.

Draft for consultation

Prepared by the Lower Darling Horticulture Group - February 2019

Background

The Menindee Lakes water storage scheme in far-west NSW is owned and operated by the NSW government in accordance with the Murray-Darling Basin Agreement (the Agreement).

Under the Agreement, the Murray-Darling Basin Authority (MDBA) authorises releases from the Menindee Lakes to meet downstream demands including South Australia entitlement flow and consumptive needs in the Lower Darling River. Releases are made in consideration of releases from Hume Dam and Lake Victoria, and tributary inflow and seasonal conditions.

Releases are also made from the Menindee Lakes to transfer water to Lake Victoria during the year to enable water to be supplied to South Australia in the summer months which reduces demand on supply from Lake Hume.

When the collective volume stored in the Menindee Lakes reduces below 480,000 megalitres management of the remaining water resides with NSW. This is NSW drought reserve for the Lower Darling valley. The volume was originally determined to be the volume required to meet the water needs of far-west NSW for 2 years, although in recent years when this trigger has been reached and water is spread across Lake Menindee and Cawndilla, it has been shown that the volume will provide between 12 and 18 months' supply to the Lower Darling only.

Management responsibility of the water in the Menindee Lakes reverts to the MDBA when storage volume next exceeds 640,000 megalitres.

Until recently, the water supply in the Lower Darling was considered amongst the most secure of regulated rivers in the Murray-Darling Basin. However, changed management and operations of the Menindee Lakes has reduced this security of supply. Since 2004, there have been four extended periods where the lakes have dried to the extent that releases to the Lower Darling have ceased and the river downstream of the Menindee main weir has ceased to flow. During these periods the Lower Darling River has been reduced to a series of residual pools with extensive toxic blue-green algae blooms.



Most recently flows from the Menindee Lakes to the Lower Darling River ceased in November 2018. Subsequently, in December 2018 and January 2019, the Menindee weir pool and parts of the Lower Darling experienced massive fish kills.

The reduced water availability in the Menindee Lakes, while being a consequence of drought and low inflows, it has also been exacerbated by changed policy and management. In particular;

- i. Increased diversions for irrigation upstream of the Menindee Lakes, particularly from low flows or flows of short duration that may occur during extended dry periods
- ii. Increased releases of environmental flows from the Menindee Lakes to meet downstream environmental outcomes

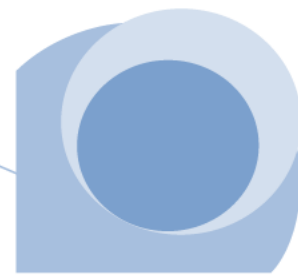
Further, during the 1990's, full supply levels in Lake Menindee and Cawndilla and Lake Pamamaroo were lowered to reduce foreshore erosion and damage, including damage to sites of cultural significance. This has reduced the original storage volume at full supply level from 2,500,000 ML to 1,730,000 ML.

The Menindee Lakes Water Savings Project

As part of the recovery of water for the environment under the Basin Plan, infrastructure works are proposed at the Menindee Lakes, which together with a reduction of the 480,000 ML trigger for NSW drought reserve to 80,000 ML would recover up to 106,000 ML in Sustainable Diversion Limit offsets.

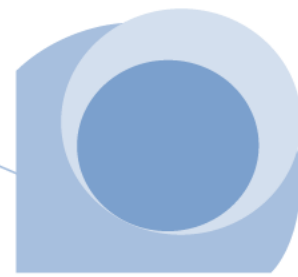
The Menindee Lakes Water Savings Project will generate more savings and SDL offsets than any other of the SDL offset projects agreed by the MDB Ministerial Council. The volume is significant, and would otherwise be recovered from existing entitlements.

The Menindee Lakes Business Case recognises that there is no future for irrigation of existing high value irrigated horticulture, citrus, wine grapes and table grapes on the Lower Darling River should the Menindee Lakes Water Savings Project goes ahead. Currently, even without the project, the security of water supply in the Lower Darling has been reduced by releases of environmental flows from the Menindee Lakes, well in excess of water recovered for the environment from the Lower Darling. This has reduced security of supply to the extent that the security of water supply for will make irrigation of these high value crops unviable.



Objectives of the proposal

- To provide for the immediate health of the Barwon-Darling River upstream of the Menindee Lakes by protecting small flows that might occur during dry sequences from diversion for irrigation in the Barwon-Darling and tributaries that contribute to flow in the Barwon-Darling River.
- To ensure town water supply and stock and domestic needs in the Barwon-Darling and Lower Darling River are prioritised.
- To reduce demand of water from the Menindee Lakes when the volume in the storage scheme is low.
- To maximise water storage in the Menindee Lakes by increasing the full supply level of Lake Menindee and Lake Pamamaroo, to extend water supply for consumptive and downstream environmental outcomes. (This could also apply to Lake Cawndilla in major floods that would pass into the lake naturally and under the Menindee Lakes Water Savings Project).
- Prioritise the maintenance of the fish resources and environment of the Menindee Lakes and Lower Darling River during extended drought.
- To actively engage local and regional communities, including the Aboriginal community, in the management of the Menindee Lakes and Lower Darling River.
- To enable the implementation of the Menindee Lakes Water Savings Proposal, albeit the water savings and SDL offsets will be reduced.



Key elements of the Proposal

1. Flows in the Barwon-Darling River and its tributaries upstream of the Menindee Lakes be protected from extraction for irrigation (or storage for irrigation) until sufficient water flows through the river and is stored in the upstream lakes (Pamamaroo and Wetherill) to provide for environment of the Lower Darling, and downstream town water supply and stock and domestic needs. A (notional) trigger of 100,000 ML of available water in Lake Wetherill and Pamamaroo, or a volume equivalent to 18 months of water supply for town water and stock and domestic supply plus a 60,000 ML contingency allowance to address emerging issues such as the potential for extensive fish kills should be considered. However, if permanent plantings remain on the Lower Darling, a trigger of 400,000 ML should be considered. Until 2014, it was Departmental convention to embargo extractions of water for irrigation upstream of the Menindee Lakes until such time as Broken Hill's water supply was secured for a minimum of 18 months.
2. Undertake erosion control works and protection of Aboriginal burials at the Menindee Lakes, similar to works undertaken at Lake Victoria. This would enable the full supply level of the lakes to be increased during high inflows and after high priority downstream environmental needs have been met. This would increase security of supply for consumptive users, provide additional water for subsequent release for environmental purposes and provide beneficial social, cultural and economic outcomes. Protection works could be undertaken by local Aboriginal people, as has been undertaken at Lake Victoria.
3. Reduce demand for water downstream by removing irrigation of high value permanent plantings on the Lower Darling. Demand has already been reduced by the construction of an alternative water supply pipeline for Broken Hill that will divert water from the Murray River and the capital adjustment package and water purchase at Tandou farm by the Australian Government. This would provide for significantly reduced flows, sufficient to provide for environmental health and to meet stock and domestic consumptive needs only.
4. Ensure that environmental water stored in the Menindee Lakes is reserved for the benefit of the Menindee Lakes and Lower Darling River, when storage levels fall below the trigger for water storage in Lake Pamamaroo and Lake Wetherill.