



Following your visit to Menindee, Lower Darling and Broken Hill region I wish to place the following submission before you and the Committee for consideration prior to and before making any recommendation to the appropriate Minister or Parliament on the MDBA Draft Murray-Darling Basin Plan.

Having served as a Board Member of the Broken Hill Water Board and Australian Inland from 1984 – 2001, Lower Murray Darling C.M.A. 1993 – 2010 and been either a Committee Member or associated with;

Menindee Lakes Advisory Committee

Menindee Lakes Ecological Sustainable Development Project

Menindee Lakes Structural Works E.I.S.

State of Darling Plan.

Darling River Water Saving Plan (Maunsell & S.K.M.), I believe that I have reasonable knowledge to be able to comment on proposed changes necessary to achieve water savings within the Menindee Lakes water storages.

It is the wish of the Government and for that matter the community that more water be returned to the Murray – Darling Riverine environment.

To achieve this goal I make the following suggestions that could result in savings of around <125,000 ML per annum and at a cost that I estimate to be in the vicinity of <\$125M.

Both these figures will change depending on variation to options, structural standard requirements, legislative requirements etc that may result in items such as fish passages etc.

Kind regards,

Thomas Stanley (Stan) DINEEN.

Background.

Broken Hill residents have a long lasting relationship with the Menindee Storages. They are very sensitive when talking about water supply or told that changes may take place at Menindee. To understand the philosophy for this passion one needs to read “WATER CARTS to PIPELINES” the History of the Broken Hill Water Supply, which explains the deprivation and hardship that the community suffered prior to the building of the Menindee to Broken Hill pipeline, and the Menindee Storages.

Taken from the forward of this book “ In the vast arid and semi-arid areas of Australia perhaps no greater challenge has existed than that of providing an adequate and unpolluted water supply to serve the inhabitants and industry of the City of Broken Hill in the far west of New South Wales, Australia.”

Further evidence of the conditions that existed at that time can be found in “Menindee. The First Town on the Darling”, by Sandra Maiden and more may be obtained in the archives section of Broken Hill City Library.

In recent years Broken Hill residents have adopted water saving programs that have resulted in a significant reduction in average household consumption that may be hard to maintain in future years. Prior to a permanent water supply the city was a dry harsh desert type city with very limited gardens and nature strips were a rarity. In an attempt to improve the quality of living Broken Hill mining companies and City Council carried out vigorous campaigns to encourage the establishment of gardens, sporting grounds, nature strips, tree planting etc to improve the aesthetics and facilities for the community and reduce contaminated dust.

Many households are built on ¼ acre blocks resulting in large garden areas. Because of the evaporation band that Broken Hill is situated in these gardens require approximately 25% more water to maintain when compared to other cities. (1).

Health agencies encourage the hosing of paths and driveways to reduce lead dust. In recent times Local Government has encouraged the planting of trees in a Greening the City campaign.

A two-year-old report into the future of Broken Hill compiled for Far West Region Growth & Investment Strategy (2) indicated there was a projected demand that by year 2010 up to 1,400 new dwellings and a projected increase in employment of possibly 1,900 full time positions. Unfortunately many of the expansion projects have been deferred because of the Global Financial Crisis. (G.F.C.). It should be noticed however that in recent weeks Carpenteria Exploration Ltd (ASX listing CAP) have announced that they have proved up a 1,000,000,000. (Yes billion) tonne iron resource 65 Km south of the city, which without further exploration equates to a 100-year mine life. They also have good prospects of finding a viable tin load to the north of Broken Hill.

Havilah Resources (ASX. HAV) in South Australia hope to start work within months to open Gold and Copper mines to the south west of the city

If development targets are to be met and employment created in this region then Broken Hill as the service centre will need to be seen as an attractive city in which to live. Without an affordable and secure water supply growth targets etc will not be possible to achieve and adequate allowance must be made for growth in this region.

Broken Hill sits in the 2000 – 2400 mm evaporation band and on occasions evaporation at one of the cities main water storages has exceeded 3,000mm in a 12-month period. (3)

(1) When Should I Water & BHWB report.

(2) Available www.brokenhill.nsw.gov.au

(3) The Richest Load (R.J. Solomon)

BACKGROUND.

Menindee Lakes.

In 1945 the Broken Hill Water Board (BHWB) reached a decision to obtain a permanent water supply from the Darling River. An agreement was reached with the State government that the government would build an unfailing water storage on the Darling River near Menindee from which to pump and BHWB would build their own pumping stations and pipeline.

The Department for Public Works said that a 28ft weir would be built below Menindee to facilitate the BHWBs requirements. W.C & I.C objected because of interference to river navigation and a suitable off river storage was then located.

About this time the Snowy Mountains Scheme was proposed. The then Premier of South Australia, Thomas Playford bitterly objected on the grounds that S.A could be deprived of water that should flow down the Murray. A compromise was reached whereby the small Menindee storage proposed for Broken Hill would be enlarged to what we see today and Premier Playford dropped his threat to go to the Privy Council.

This brought into play the Murray Rivers Water Sharing Agreement and the present agreement whereby all water above 480,000MI is owned jointly by NSW and VIC and used to secure S.A water entitlement and in times of high demand below the Barmah Choke or when Hume Reservoir is at low level or under stress. It is also written that if this failed the deficit to come from the Murrumbidgee. (4)

HARMONY AGREEMENT.

Murray River management consists of the Dartmouth – Hume – Murray River – Menindee Lakes and Lake Victoria.

Briefly, the system is managed in the most efficient way, inefficient storage water drained off first, when Dartmouth and Hume at low levels and demand below Barmah Choke is high, Menindee water is used to meet S.A entitlement as in 2001/2 when the Murray River ran backwards between Wentworth and Mildura. On this occasion Menindee water was used at Broken Hills expense to save the system from failure.

(Suggest for river management the Committee talk to David Harriss who has great expertise on Murray management.)

(4 WC&IC in archives & W.C to PL)

PROPOSED STRUCTURAL CHANGES AT MENINDEE STORAGES.

SECURE BROKEN HILL WATER SUPPLY.

LAKE TANDURE.

Lake Tandure is the largest of four smaller lakes situated within Lake Wetherell and sits just above the Main Weir Structure with a storage capacity of approximately 88,000ML.

Past experience has shown that Tandure is possibly one of the most efficient in the storage and if it were isolated by way of a regulator it could be supply the City of Broken Hill for some 18 months and possibly longer.

Supply time could be further increased by pumping water from Lake Pamamaroo into Tandure allowing it to be maintained at near capacity.

- A. When the Lake Wetherell falls to a predetermined level (modelled for quantity and quality) commence pumping enabling Tandure to be surcharged from Pamamaroo giving Broken Hill and possibly some high security users 21 months security.
- B. As Wetherell falls to approximately river trunk level water from Tandure would be transferred into Wetherell, as it becomes the most efficient storage.

Advantages.

This would free up a huge amount of water. To secure 21 months water supply for Broken Hill and high security licensees, using the present system requires some 250,000ML of water to be stored in the upper lakes. If Tandure was isolated for Broken

Hill's secure water supply then the reserve storage would only require some 75,000 – 80,000ML.

LAKE PAMAMAROO.

Drainage channel straightened and cleaned out.

LAKE MENINDEE.

- * Drainage channels cleaned to original levels.
- * Regulator built between Menindee and Cawndilla.

Advantages.

Creation of extra cell within the system

Access to residual water. 75 /100,000 GL

Possibly “no” need to enlarge present outlet from 5,000MI to 10,000ML if Cawndilla drainage channel built. This could reduce conflict with sections of the community and cost savings transferred to a Cawndilla Outlet regulator.

Ability to rapidly draw down water from the most inefficient lake first thereby creating significant savings.

Significant evaporation savings.

LAKE CAWDILLA.

New regulator between Menindee and Cawndilla (Possibly included in Menindee costs.)

Drainage channel and regulator from the bottom of the lake to the Darling River to access residual water (150 / 200,000ML) and offer greater flexibility of entire system.

Advantages.

- * Reduce need to enlarge Lake Menindee Outlet.
 - Ability to access 150 / 200,000 MI of residual water.
 - Flood mitigation.
 - More management flexibility by creation of extra storage cell.
 - Discharging below the weir pool improving discharge rate
- * Gravity flow through the entire system allowing stale or saline water to be moved.
 - Water stored in more efficient lake.
 - Ability to drawdown Lake Menindee first.
 - Government obligations to Anabranh addressed and community faith restored in Government.
 - Allow Tandou to access water
 - Ability to drive the system harder
- * Evaporation savings.
- * Valuable Eurobilli wetland protected.
- * No need to change the water sharing agreement as NSW drought reserve could be stored in top lakes where all is accessible.
 - Allow the storages to be managed more efficiently.
 - Gravity flow through the entire system

- Reduce possible conflict with indigenous community as new Lake Menindee outlet may pass through ancient burial ground.
- Ability to better manage changing conditions created by climate change.
- Give the nation the Rolls Royce Darling River storage scheme that should have been built some 60 years ago.

(Accurate residual figures hard to obtain)

When considering construction costs and issues associated with a new outlet from the bottom of Lake Cowandilla they should not be viewed in isolation but valued taking into account flow on benefits gained through enhancing other management options.

I believe the “key” to efficient operations at Menindee is the ability to be able to fill from the top of the system and discharge from the bottom. This in turn benefits the local environment; tourism, economy and social benefits, which I hope, will be acceptable to the local community

Lower Darling Water License area finishes at the top of the Murray Weir Pool; this is some 40Km upstream from the confluence of the two rivers.

The Draft Plan appears to include NSW Murray irrigators up stream along the Murray to Euston whereas the two areas should correlate.

This may disadvantage Lower Darling irrigators and should be investigated.

T.S. (STAN) DINEEN.

Proposed changes to Menindee Storages.

