

SUBMISSION TO THE PRODUCTIVITY COMMISSION

INTRODUCTION

I thank the Productivity Commission for allowing me to present this submission.

My name is Bill Bagley representing Angas Partners and along with my fore-bears have been farming for over 140 years on the Northern shores of Lake Alexandrina and environs. As a farmer experiencing the disastrous 1956 Murray flood and the Millennium drought, the importance of good governance of water management is paramount for the 21st century. The Murray Darling Basin (MDB) regarded as the food bowl of Australia, requires management strategies for the survival of the environment, economic and social issues for all communities. These particular management strategies requires much more investigation for the survival of the Murray Darling Basin Plan(MDBP).

It may be prudent to suggest that the Murray Darling Basin Authority (MDBA) in formulating the Plan largely ignored the out of date infrastructure and management issues of the Lake(s) Alexandrina, Albert and Coorong, whilst introducing strategies and protocols for MDB environmental watering to the sea.

ISSUES

There are issues, conducting a farming enterprise at the lower end of the Murray system and is continually being eroded by antiquated mechanical systems, hydrological management that is causing land erosion, rising water tables, increasing soil salinity. Further; Federal and State overarching management bodies /systems that do not respond to legitimate claims of poor hydrological management. of Lake(s) Alexandrina, Albert and Coorong.

The antiquated mechanical system of 5 barrages built in the 1935/40s that artificially raised Lakes and river levels over a distance of 246 Kilometres from the sea to Lock 1 at Blanchetown. That alone, combined with the Lake (s) area of approximately 648 square kilometres creates untold damage, raising water tables, causing land salinization, denigration of pastures, lakeshore erosion and bank slumping which the general public often never see- out of sight out of mind, that ultimately conflicts with Ramsar protocols.

One of the major constraints at the lower end of the River Murray is the antiquated barrage system. The importance to automation of the barrages that enable remote operation is derived by the need for rapid responses to changes in the flow regimes by minimising time lost in deliberation and manual operation. Automation of the barrages will address two primary concerns. First, to provide rapid closure of the barrages during high salt water tidal events to prevent contamination of the fresh water Lakes and lower reaches. Second, it allows fresh water to be released into the Coorong during high flow events to contribute to environmental watering and 'freshening' of the Coorong. In addition to allowing a freshwater flush of the Coorong, automation of the barrages will also allow salts, saline water, accumulated nutrients and sediments to be flushed from the barrages upon opening, removing high concentrations from the fresh water lakes.

The mobilisation of 2million tonnes of salt currently flows down from the MDB per year through Lake Alexandrina, to lesser extent, Lake Albert, pending on wind direction to the Murray Mouth to sea. From within the MDB, it is estimated that “3.3 million tonnes will reach the rivers by 2050 “ Hodson, Alin. (2002)*Water and Salt in the Murray Darling Basin: A national environmental problem*. Hyde Park Press, p 24.

Environmental watering of flood plains increases mobilisation of salt in the River Murray to the Lake(s) whilst the current salt interception program (s) in the upper Murray only delays salt mobilisation.

Embodied with the salt /salinity issue is hydrological management, within the two Lakes, both have competing agendas whilst trying to remove salt /salinity from Lake Albert, both Lakes are surcharged (lake cycling) from pool level at 0.75 Australian Height Datum (AHD) < > 0.85AHD. These Lakes are simultaneously lowered to remove salt / salinity from Lake Albert returning through Lake Alexandrina to the sea which creates wet and dry soil, lake shore erosion, slumping river banks, raising water tables, that increase soil salinity and saline pastures that ultimately affects the environment and biodiversity. The ongoing raising and lowering of the Lakes to achieve a minimal dilution of salt and saline water from Lake Albert is causing environmental damage throughout the Lakes and environs.

Procedure for Lake cycling at 0.75AHD pool level with a theoretical 100 mm drop in both lake levels requires approximately 220 Gigalitres (GI) over the barrages. This would remove approximately 35(GI) from Lake Albert and return both Lakes to pool level involves > 220 GI from the River Murray. The **wastage of water** to remove salt /salinity from Lake Albert that affects environmental watering protocols is unsustainable especially during summer months and low river levels and the advent of impending climate variability and climate change.

For many years to minimise the wastage of water and environmental damage of Lake cycling, a channel or connector pipe from Southern end of Lake Albert to the Coorong has been on agenda items for State Government (s) and various Committees.

The Honourable PB Arnold, (Chaffey) suggests,” fluctuating the levels in Lake Alexandrina and Lake Albert is only a half measure for two reasons. One is that it will not do the job as well as the channel from the bottom of Lake Albert into the Coorong and secondly, it means that vast quantities of water will have to be taken out of the lakes to remove a portion of the salt.” South Australian, House of Assembly, Hansard,(Working Party) 17th August 1983.

A Scoping Committee study had been initiated in 2012, released a report in 2014 investigating various procedures to reduce salinity in Lake Albert. The study undertaken is not conclusive in its findings, other than to continue raising and lowering water levels (Lake cycling) in both Lakes. This particular operational procedure increases the ingress of salt and salinity returning to the Lakes owing to unstable water levels which is attributed to hydrological management.

SUMMARY

Introduce a new paradigm of management protocols from the barrages to Lock 1 at Blanchetown for sustainable pool levels set at 0.55AHD- 0.60AHD to maintain environmental and ecological sustainability for the 21st century.

Environmental flows that are guaranteed, to be managed at Lakes Alexandrina and Albert with modern infrastructure and hydrological expertise, as the Lakes are described as the heart and lungs of the entire Murray Darling Basin.

Climate change for the foreseeable future must be factored in for the Lakes and Coorong's future management systems

A constant pool level set to 0.55 AHD to 0.60 AHD would reduce rising water tables, land salinization, lakeshore erosion/ bank slumping and reduce salinity whilst maintaining the appropriate environmental water as required by the MDBA P.

Yours sincerely

Bill Bagley

16th April 2018