

Tony McLeod,

Please find copy of submission for Water Cap.

Yours sincerely,



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15th June, 2000.

Dear Sir/Madam,

The following submission for your attention addresses environmental and economic concerns of the future of the Murray-Darling Basin.

The issues addressed are:

- Snowy River environmental flows;
- Murray-Darling Basin environmental water allocation;
- saline water interception and disposal;
- improved irrigation practices;
- dryland salinity;
- evaporation loss reduction;
- community involvement;
- native fish management;
- carp control/fish passage; and
- floodplain inundation/fish recruitment.

It is imperative that these issues are not considered in isolation. All aspects are intertwined, and should be looked at as such.

I believe that this submission contains proposals that not only have the potential to succeed, but can demonstrate achievable results to the Murray-Darling Basin Commission and the community living within the Murray-Darling Basin.

Widespread public recognition of the degraded MDB environment makes it politically opportune to implement necessary remedial measures. Now is an appropriate time to introduce an environmental levy on all taxable income, and thereby share the responsibility of recovering the Murray-Darling Basin and the rest of the Australian landscape among the entire community.

Thankyou for your consideration.

Yours sincerely,



Tom Loffler

Submission re: The Murray-Darling Basin
On Issues Including the Water Cap, an Environmental Water Allocation,
Salinity Management and Maintaining Ecological Biodiversity.
By T. G. Loffler

Background.

There will be a continuing economic decline, in the Murray-Darling Basin (MDB), due to increased salinity, poorer water quality, and inefficient use of the resources. This decline will dramatically increase unless remedial action is taken to rectify the causes of the problems.

Because of conflicting parochial State attitudes, the Murray-Darling Basin Commission (MDBC) management decisions are often difficult and time-delayed in achievement or implementation. This combined with limited available remedial finance makes it imperative that for proposals to succeed there must be shown to be achievable results, with benefits for all MDBC members. I believe that this submission has the potential to achieve this.

Widespread public recognition of the degraded MDB environment makes it politically opportune to implement necessary remedial measures. Perhaps it is an appropriate time to introduce an environmental levy on all taxable income, with such monies to be used as NHT funding.

Whilst recognising the need for engineering solutions, to achieve short term benefits and to "buy time", it is imperative that in the medium to longer term we are not still applying "bandaids on bandaids", at ever increasing cost (financially and environmentally) without having rectified the cause of the problem.

Establishment of an environmental water allocation would increase the value of water such that it would encourage more efficient usage, resulting in less environmental degradation. Recognising water as a valuable resource would encourage recycling of town stormwater runoff, treated sewerage water and intercepted saline groundwater, with it being more economic to utilise such resources.

As the generation currently utilising the MDB resources, it should be considered that we are borrowing it from our children and children's children, and as such we must use every endeavour to at least maintain and if possible improve the environment.

Snowy River Environmental Flows.

One proposed solution is to provide current Murray-Darling water allocation from anticipated savings within the supply distribution system.

There must be no transfer of water allocation until the remedial practices have been physically implemented and the savings actually proven. Then for any water allocated to the Snowy River, an equivalent environmental water allocation must be given to the

MDBC, for the Murray-Darling system, with such combined total not to exceed the actual proven water savings.

This would not only be a win situation for the Snowy and Murray-Darling systems, through an environmental flow, but also the Murray-Darling, in that removal of the previously wasted water, through drainage, is no longer contributing to salinity or the rising water table.

Murray-Darling Basin Environmental Water Allocation (EWA).

The economic viability of the Murray-Darling Basin is dependent on maintaining sustainable ecological biodiversity over the whole of the drainage basin. Maintaining biodiversity requires there being water of a quality and in a quantity to inundate the floodplain to sustain and enhance vegetation and to assist native fish recruitment, and to disburse salt to the sea.

There is no net environmental benefit of improved water use efficiency if the "saved" water is merely used to expand irrigated areas. Although improved water use would initially reduce irrigated saline water inflow to the river, expanded irrigated areas would result in medium to long-term saline water inflows similar to that which now occurs.

Measures should be implemented to eventually establish the EWA at 25% of extracted water, permitted under the MDB Cap. The MDBC should coordinate and supervise EWA use to simulate conditions which mimic natural conditions most favourable to the environment. For example, in one year the lower Darling River floodplains, the Anabranche, the Chowilla floodplains and Riverland wetlands could be inundated in succession with an environmental water allocation. The upper and mid-Darling floodplains could be inundated at another time determined by the MDBC. Similar could be done with other areas in the MDB. Environmental water allocations could also be used to disburse salt and algal blooms, or maintain water flow at the River Murray mouth.

Suggestion to establish an EWA.

- All water allocation holders to provide 5% of the allocation to the MDBC EWA. The Commonwealth of Australia to permit 100% of the market value of the EWA, of the preceding 5% of allocation, to be tax deductible in the year of transfer.
- Where a permanent water transfer occurs, the seller and the buyer shall each provide a water allocation entitlement to the MDBC EWA, equivalent to 5% of the transferred allocation. This applies whenever a water allocation is transferred, whether this is on its own or in conjunction with a land transfer.
- Where a permanent water transfer occurs, other than by sale, e.g. by inheritance from one person to another, then the MDBC EWA shall be given 5% of the water allocation.
- Where water transfer occurs on a lease basis then both the seller and buyer shall each provide the MDBC EWA with an amount equivalent to 5% of the leased water allocation for the duration of the lease period.

- Where existing water allocation is to be used, by the licence holder, to water additional acreage, an amount equivalent to 10% of water used, in the additional acreage, is to be given to the MDBC EWA.
- The market value of all water allocation transfers, to the MDBC EWA is to be 100% tax deductible in the year of transfer.
- The establishing of an EWA will increase the value of water and assist in better water utilisation including recycling storm water, drainage water and saline groundwater.
- There should be no fees payable to State Governments, or their authorities, for the reuse of recycled water, where such water has been recycled by another person/organisation etc. (e.g. SA EPA fees on using recycled sewerage water make it more expensive for local councils to use recycled water than water extracted from the River).

Saline Water Interception/Disposal.

Saline groundwater interception may be of questionable value. For example, while the interception of saline groundwater has immediate benefits of reducing river salt content, the practice of placing the saline water in disposal basins, such as Stockyard Plain, has the potential to be an environmental disaster in the medium and longer terms. The Stockyard Plain Disposal Basin relies on up to 70% of input saline groundwater infiltrating into the ground - this saline water then moves into the Murray Group Aquifer and thus eventually finds its way back into the River Murray. Approximately 200,000 tonnes of salt are pumped into Stockyard Plain each year. Re-storage of these volumes of salt is a potential environmental time bomb, with it being a matter of not if, but when. SA Water has acknowledged that a perched groundwater mound has been created under Stockyard Plain Disposal Basin, extending to the Murray Group Aquifer and laterally adjacent to an irrigation induced perched water mound. There is no reason that the hydraulic capacity will not accelerate saline groundwater flows into the Murray similar to that as has occurred with irrigation induced perched water mounds.

The Stockyard Plain Disposal basin is being used as a model for establishing up to 40 more saline water disposal basins throughout the MDB. All disposal basins should be totally reliant on evaporation, with no saline water infiltrating the ground.

The disposal basin operating authority, their directors or managers, shall be responsible for all costs incurred to rectify any damage to the environment; for economic income loss caused by disposal basin saline water discharged into the ground; and for the interception of the saline water discharged from the disposal basin if the basin is designed to discharge water into the ground, or if the disposal basin operation continues after it is known that ground leakage is occurring. A mechanism for ensuring that there is funding available for remediation made necessary by the actions of the disposal basin operating authority, should remediation be required, is posting of a bond by the authority prior to undertaking any program involving ground water discharge or interception of salt water. In this way the authority would have funds on hand to address environmental or other damage which would come from the budget of the authority.

Improved Irrigation Practices.

- All irrigators to have an operating Irrigation and Drainage Management Plan (IDMP) by January 2004.
- The MDBC to conduct ongoing evaluations to assess the achievement of a designated water use efficiency and of a minimum drainage discharge, for all IDMPs.
- Where designated efficiency standards are not met, after January 2006, then the water allocation holder shall give the MDBC an additional levy of 1 cent/kilolitre of water used.
- NHT and State funding shall continue so as to provide all irrigators to attend Irrigation Management Courses, as occurs in SA.
- The cost of establishing IDMPs shall be 100% tax deductible.

Dryland Salinity.

Revegetation should be encouraged by providing 100% tax deductibility for establishing and maintaining suitable trees and other deep rooted species for up to 10 years after establishment.

Evaporation Loss Reduction.

NHT funding should be made available to assist SA in moving the barrages/weirs to a location above Lakes Albert and Alexandrina, thus significantly reducing evaporation losses. Funding would include provision for reticulating water to all existing users below Wellington.

Community Involvement.

- Local Action Planning (LAP) Group projects directly involve significant community input.
- NHT funding to be made available to enable completion of commenced LAP Group projects.
- The Governments to make provision to establish a fund so that groups with sustainability plans can apply to the fund for the support they need to receive appropriate State Government review and advice.
- Government agency collected knowledge should be freely available to assist with determining environmental restoration projects.

Native Fish Management.

Native fish stocks are an integral part of the Murray Darling Basin resource. Management of fish stocks should be based on the condition of the whole of the Basin, just as is water quality and quantity usage. A cooperative and coordinated management approach needs to be taken.

The need for such management has been noted in the recent MDBC Native Fish Management Strategy for the Murray-Darling Basin.

In SA, commercial fishers are able to take unlimited quantities of legal native fish. There must be an immediate ban on the use of gill nets.

Gill nets are non-discriminatory in catch, trapping fish (including non-target juveniles and protected species) and other fauna (such as musk ducks, diving birds and water rats) by encmeshing them. Fish and other fauna caught in the gill nets drown. B. Pierce, SARDI research officer, has stated that fish deaths occur in gill nets unattended for 4 hours, with significant numbers of deaths occurring in nets unattended for 12 hours. Undoubtedly deaths occur of released fish due to removal of the mucous layer when becoming entrapped and then removed from the gill net. Gill nets are set in configurations such that they effectively prevent fish passage. Gill nets are set in deeper water in the river (from cliffs and clay banks) targeting Murray Cod and gallop. (Reportedly some commercial fishers, using up to 30 gill nets per reach, were taking 1,000 kg of Murray Cod per reach, per week in July and August 1999. This is despite a February 1999 stock assessment (based on the 1997/98 commercial catch of 4,400 kg) that the Sustainable Harvest Status was Fully Exploited. Provisional 1998/99 commercial Murray Cod catch figures were 8,334kg.)

SA should implement a policy of no commercial native fin fishing similar to NSW.

Carp Control/Fish Passage.

Fish traps should be utilised in conjunction with fish ladders at locks, weirs and other fish passage-way obstructions (including at locations designed to prevent the entry of carp into wetlands) in order to remove European Carp from the river system. Such fish traps would assist with native fish stock assessment and with fish recruitment, enabling native fish to be released into controlled backwaters at appropriate breeding times.

To assist avoiding possible illegal commercial take of native fish from such fish traps, carp only commercial licenses must be issued. Fish ladders must be installed at all locks/weirs. Recreational licence fees would assist with building costs of such infrastructure (as occurs in NSW).

Floodplain Inundation/Fish Recruitment.

Water flows must be manipulated to achieve floodplain inundation at an appropriate level for a time duration at the required time of year, so as to ensure maximum benefit in regards to maintaining environmental biodiversity and to assist native fish recruitment.

Water levels may be manipulated by utilising natural flood flows combined with environmental water allocation, the use of lock/weir levels, and regulatory devices associated with managed wetting/drying wetlands. Managed wetlands with carp exclusion barriers and associated fish traps would be able to be used as a "natural"

fish breeding area. Dried wetland areas being inundated with water at temperatures and times of year appropriate for fish breeding could be used to relocate native fish entering fish traps, to allow them to breed.