



015 Aquifer/Upper Murray Alluvium restructuring

This paper provides a briefing summarising the concerns of groundwater irrigators in the NSW 015 aquifer, which is situated adjacent to the Murray, between Albury and Corowa.

Background

(a) Entitlements, recharge, and usage

- The aquifer is managed by the NSW Office of Water, and the figures which follow are theirs. NSW water regulators have allocated entitlements to irrigators totalling 41,125 ML per year. They considered this a sustainable level because their initial estimates of annual recharge were around 43,000 ML per year. Entitlements were allocated at the request of landholders, based on the area they owned and wished to irrigate. Within the last 5 years NSW hydrologists have revised their estimates of recharge and now believe that the recharge is 15,300 ML per year (on average). This is a 65 % reduction on their initial estimate.
- When the aquifer was first used for irrigation annual usage was low, being below 2600 ML per year until 2000/01. Since then usage has increased. The average irrigation use over the last 10 years is 11,498 ML per year, and the average for the last 5 years is 12,599 ML per year. However in 2006-07, one of the worst of the recent drought years, annual usage was almost 16,000 ML per year.
- While there are a total of 93 entitlement holders, 40 of these, with a combined entitlement of 9279 ML per year have not developed their irrigation systems and have not used any of their water – they are known as sleepers. There are a further 9 entitlement holders who have never used more than 10% of their water. At the other end of the scale, there are 14 users who have used more than 90% of their entitlement in at least one year.

(b) NSW assurances to 015 irrigators

- Active irrigators have met the costs of developing their irrigations systems themselves, and have incurred these costs only after they received assurances from NSW officials that their water rights were secure. These assurances have been given as recently as 2005, despite the revised recharge estimates being developed at around that time. The first indication that there had been any change in the estimated recharge was 2 years ago. The value of the irrigation investments range from hundreds of thousands to millions of dollars, and all of this is private capital, with no public funds.
- Because of the size of their investments the active irrigators in this aquifer are committed business people, and are demonstrably among the most efficient operators in the Murray Darling Basin – they are not going to waste water because of the high energy costs involved in pumping it out of the ground.

(c) NSW Water Sharing Plan

- As a result of the development of the MDBA Basin Plan, the NSW Office of Water is rushing to complete a Water Sharing Plan for this (and many other) aquifers before the Basin Plan becomes operational. Their target date is to have it in their Parliament by July 2011.
- The NSW Government has taken a policy decision that future ground water usage will be capped at the average level used in the past, regardless of the estimates of aquifer recharge. We have argued it should be the 5 year average, as water intensity has increased in the last 5 years as irrigators installed water monitoring devices, and sought to maximise the use of their irrigation assets – the 5 year average is 12,599 ML per year. However NSW may use the 10 year average which is 11,498 ML per year. In either case, after allowing for some estimated uses, principally stock and domestic water, the difference between the target level of use and the estimated recharge will be allowed to sit in the bottom of the aquifer, and is described as environment water in the NSW plan. How this water will benefit the environment is unclear.
- Annual usage across the aquifer will be calculated as a 5 year rolling average. When this average exceeds the target level (either 11,498 ML per year or 12,599 ML per year) by more than 10%, NSW will make across the board cuts to the amount of water that all entitlement holders can utilise, in order to bring annual use back to the targeted level. The timing of when cutbacks will commence will be largely influenced by whether we return to drought quickly or whether we have wet years – however it is certain that cutbacks will come, and it will probably be soon.
- Under the plan trading will be permitted in the aquifer, and there will be no distinction between active entitlement holders and sleepers. In response to cutbacks most active users will buy additional entitlement from inactive users in order to keep their investment operating at efficient capacity, so initially the effect of the cutbacks will be to activate currently inactive entitlements without reducing water use. The Office of Water is likely to respond to this by making successively deeper cuts in subsequent years – with the likely endpoint being that all entitlement holders will be able to access only about 30% of their current entitlement.
- There will be supplementary licences for active users based on their past usage. These licences are intended to assist active users adjust to reduced water allocations and will phase out over 10 years. The advantage that the supplementary licences confer to active users will be matched by corresponding disadvantages to sleepers, again phasing out over 10 years. These supplementary licences do not remove the fundamental problem confronting all entitlement holders in this aquifer.
- NSW is not putting any compensation on the table – their approach is to let the market sort it out.

Issues and suggested alternative policies

Misleading MDBA 'Guide to Basin Plan' figures need to be corrected

NSW are developing their Water Sharing Plan because the MDBA Basin Plan is being developed. The NSW plan is going to cause considerable pain to the active irrigators in this aquifer. However the figures in the MDBA 'Guide to the proposed Basin Plan' that relate to the Upper Murray Alluvium (our 015 aquifer) do not reflect this reality (p 141). They are likely to be read as indicating that for groundwater users in this aquifer it is "business as usual". The MDBA need to find a way of showing the restructuring challenge facing this aquifer.

Restructuring driven by aquifer recharge, not past usage

Aquifer recharge ought to be the driving force when considering future extraction limits. As long as average annual use does not exceed the recharge, the aquifer is being managed on a sustainable basis. To argue that an amount of groundwater needs to be reserved for the environment would require this water to find its way to the surface via springs etc, for unless this happens the water will sit 100m down in the ground. The reality is the "environment water" is just the residual between the average annual use which NSW has decided will be determined by historical use, and the recharge estimate. NSW Office of Water need to change the water sharing plan to make recharge the determining factor for usage.

Test the accuracy of the new recharge estimate

The restructuring is being driven by the new recharge estimate (15,300 ML per year), which is a 65% reduction on the earlier estimate. It is a critical figure and needs to be independently tested. If our irrigation income is to be reduced by around 70% it is only fair that the key underlying figures are subjected to scrutiny. The recharge model needs to be peer reviewed, and the underlying assumptions thoroughly tested. The results need to be presented to the farmers whose future viability is going to be determined by the restructuring of this aquifer.

Provide willing sellers with an opportunity to exit

All entitlement holders will end up with much less accessible (or tradable) water as a result of the introduction of the Water Sharing Plan. Our estimate is that we will end up with around 30% of what we started with. To this point sleeper entitlement holders have invested much less than active users, and if they were offered the opportunity to have their existing entitlement bought back some might well take it. Similarly active users who have a large unused part of their entitlement might be willing to sell some. Any entitlement that can be taken out of the system this way will make the overall adjustment process easier. A fair policy would be one which offers to buy back the entitlements of willing sellers.

Absence of compensation despite previous assurances of security

Holders of surface water entitlements will have the opportunity of selling their water to the Federal Government in order to increase environmental flows. This is a structural adjustment process in that part of the irrigation industry. However holders of groundwater licences in this aquifer are being expected to wear all the structural adjustment costs themselves. We are told, and we accept, that there is some connectivity between surface water and groundwater systems, but it is unclear whether we are eligible for any of the Federal Government's MDB adjustment assistance funding.

Careful reading of the MDBA 'Guide to the proposed Basin Plan' suggests that we may not be eligible for adjustment assistance, because it says: "*the National water Initiative (2004) requires that Basin states are to address existing over allocation and overuse before the risk assignment framework agreed under the Initiative applies.*" (p 155) Under the risk assignment framework the Federal Government would accept responsibility for reductions in current diversion limits set out in the Basin Plan.

The case for NSW Government compensation seems very strong for it is their over allocation of entitlement, and their assurances of water security in this aquifer which have created this problem. However to date discussions with the NSW Office of Water indicate that the NSW Government have rejected the idea of compensation.

Regardless of which government created the problem in the first place, it is inequitable to expect irrigators in this aquifer to accept a 70% cut in their water without any form of adjustment assistance, when other irrigators are given the chance to sell their entitlements to the Federal Government.. A fair solution to this problem would be for NSW and the Commonwealth to get together and put some money on the table to buy entitlements from willing sellers.