Murray Darling Basin Guide

submission for

North East Victorian Catchments

by the

Rural City of Wangaratta

representing the

City of Wodonga

Benalla Rural City

Alpine Shire

Indigo Shire

Mansfield Shire

Towong Shire

Overview

1. The Rural City of Wangaratta is representing seven councils that comprise the North East Victorian catchment of the Murray Darling Basin.

2. The North East Victorian catchment councils share concerns over the impacts proposed by the Murray Darling Basin Guide (the Guide) on:

    - Regional planning;
    - Efficiency of using water closest to the source;
    - Benefits of sustainable water use in a drying climate;
    - Agriculture and food production; and
    - Regional economies.

3. We challenge the science associated with the perverse outcomes for the Ovens and Kiewa catchments contained in the Guide. In doing so we argue that the relatively minute amount of water gained for the Murray River by these moves is completely outweighed by the adverse impacts it will have on these catchments. These include socio economic impacts on jobs, flow on effects on the wider economy, community health and wellbeing, value of land use and protection of agriculture.

4. We suggest that there may be alternative ways to achieve environmental outcomes for the Murray from North East Victorian catchments based on improving water management rather than increasing water volume.

5. We urge that there be no delay in finalising the plan as the uncertainty now associated with water security in the region is leading to a loss in investor confidence, investor drought and community anguish.

6. We seek a seat at the table when decisions are made about the future use of water in the region, particularly when the Murray Darling Basin is discussed.

Introduction

The Rural City of Wangaratta is representing the seven Councils that comprise the North East Victorian catchment to the Murray Darling Basin.

We share concerns over the impacts proposed by the Murray Darling Basin Guide for these catchments, where water can be used at its most efficient. We are taking this opportunity to bring these concerns to you and offer a way forward.

To illustrate our concerns a case study is presented on how the Guide affects the Ovens system.

Who are we?

The seven North East Victorian catchments councils of the Murray Darling Basin are:

Council	Catchment
City of Wodonga Shire of Indigo Shire of Towong	Upper Murray, Mitta, Kiewa
Rural City of Wangaratta Alpine Shire	Ovens, Kiewa
Benalla Rural City Mansfield Shire	Broken, Upper Goulburn

Collectively the councils make up the entire Upper and Central Hume regions of Victoria and serve a population of 120,000 people. By virtue of their location, these councils contain some of the richest agricultural land in the country, a highly secure source of water supply and population growth of 1.5% - 2% per annum. The North East Victorian catchments contribute 38% to the Murray Darling Basin's entire water source.

Background

The Guide is in response to the Water Act 2007 (Commonwealth) which requires the Murray Darling Basin Plan to include long term average sustainable diversion limits (SDLs). This means setting limits on the "environmentally sustainable level of take" for water used for consumptive purposes (drinking water, industry, irrigated agriculture and the like). The Murray Darling Basin Authority determined that in order to achieve this it would have to introduce SDLs that are 3,000 – 4,000 GL/y less than the current diversions. It proposes to do this by a percentage cut on water course diversions only (non consumptive) of between 27 – 37% on average.

Case Study

The Ovens system is identified as receiving a 40 – 45% cut. No explanation is given for this outcome nor is there any attempt to assess the socio-economic impacts associated with such. In its commentary on "implications for regions" the Guide says this about the Ovens system:

> *"The reductions in gross value of irrigated agriculture production in the Ovens region are low relative to the reductions in surface water use, because this region uses a high proportion of groundwater that is not proposed to be reduced by the long term average sustainable diversion limits (SDLs)".*

Transition to the new arrangements is indicated to be completed within the period 2019 to 2021 for Victoria.

Ovens system in snapshot:

	GL	%
Total Inflows	1,804	100
Total Outflows	1,708	95
Retained	96	5
Interceptors	58	3
Environmental Flows	13	0.7
Diversions	25	1.3
Township Supplies, etc.	11	0.6
Irrigation	14	0.7
Proposed MDBG Take (off irrigation)	10	
Retained for Irrigation	**4**	**0.2**

Issues

The figures presented in the Guide show that:

- Total inflows in the catchment (water produced from the system) are 1,804 GL;
- Total outflows from the catchment into the Murray system are 1,708 GL;
- When adjusted for removal of development outflows, 99% of all inflows produced from the Ovens system go straight into the Murray system, making it the best performed contributor in the land (table 5.2 of the Guide).

Of the remaining 96 GL that is retained in the Ovens System the following is the break up:

- Interceptors (forestry, farm dams) make up 58 GL;
- Environmental flows for the Ovens itself are 13GL;
- Diversions (either for town supplies like Wangaratta and Myrtleford and irrigation) make up 25 GL.

So of the massive amount of water generated from the Ovens Catchment, less than 1½% can be easily diverted to other uses. However, the implications for the Ovens system get worse.

Of the diversion amount, town supplies can take up to 11 GL meaning that 14 GL is available for irrigation. That means that in the catchment closest to the water source, where water is capable of being used at its most efficient, the quantity of water being used for irrigation purposes is only 14 GL out of 1804 GL. This is where the situation gets really bad for the Ovens catchment and raises questions about the lack of understanding, equity and fairness applied by the Murray Darling Basin Authority in this process.

The Murray Darling Basin Authority has applied a 40 – 45% increase in contribution (one of the highest assigned) to the total 25 GL diversions amount even though 11 GL of it is non irrigation (town supply). This means that the Ovens system is contributing at least another 10 GL but it comes from the irrigators remaining take of 14 GL. This then reduces their share to a total of 4 GL or effectively nothing, in the catchment where water can be used at its most efficient.

Implications

A number of questions arise from the figures presented in the Guide. These are:

1. Why is the Ovens Catchment being asked to contribute even more when it is already outperforming all other catchments?
2. Why render a cut to irrigators usage in the Ovens Catchment of effectively 71% (10 GL out of 14 GL) virtually ending irrigation in the ovens and King Valleys and making them useless for production purposes when it means so little to the overall contribution to the Murray system?
3. What value does 10 GL add to the Murray system over and above the 1708 GL the Ovens system already provides when the local cost to irrigation and the wider socio-economic costs are considered?
4. What does it say about promoting water efficiency when the catchment closest to the source is virtually denied irrigation to the benefit of other less efficient areas and at a time when food production is being actively expanded and supported in the area?
5. By removing a further 10 GL from the Ovens system what flexibility does it leave the catchment to respond to new or changing agricultural needs?
6. Given the above, how can the Guide be said to provide a fair, reasonable and equitable outcome?

As can be seen from the questions identified above, there are massive implications for the Ovens Catchment. Apart from undermining the use of water closest to the source and rendering irrigation in the catchment virtually redundant there are expected to be major socio-economic consequences. These relate to, but are not limited to, the loss of valuable productive land, loss of jobs and a loss of future agricultural flexibility.

An initiative known as the Alpine Valleys Agrifood aims to provide a productive use for former tobacco land and utilise water closest to its source. It is about farmers growing to contracts and co-operatively marketing product on a wholesale or similar basis. As this region has water security, land capacity since the demise in tobacco and a history of this type of growing structure with tobacco, it is ideally placed to do so. A prospectus to this effect has been released and already a major national food supply chain company has established contracts with growers.

The concept of the Alpine Valleys Agrifood and the potential it offers as a long term food bowl option for Australia (and a hedge against climate change), is put at risk. This development was planned within existing limits and doesn't need more water to achieve its aims.

On top of this is a potential loss of amenity and, ironically, associated adverse environmental impacts as valuable fertile valley land and river flats are potentially turned over to lifestyle.

A similar picture can be painted for other North East Victorian catchments.

North East Catchment Case

The North East Victorian catchment councils bring a different perspective to that of broader irrigation districts. While not questioning the value of these other areas, the North East Victorian catchments are about maximising the use of fertile river valleys and flood plains where water can be used closest to its source.

A diverse range of agricultural products are currently supported including viticulture, horticulture, dairying, beef, lamb and crop production. It is a nationally renowned food and wine centre for these reasons.

The value of agriculture in North East Victoria in 2008 / 2009 was estimated at $360 - 380 million.

Our circumstances are unique and our needs are different. The case common to all North East Victorian catchments can be summarised as follows:

1. Regional planning for the Hume Region, adopted by the Victorian State Government, provide for:

    - water being used at its most efficient;
    - a move toward more intensive and varied agriculture, underpinned by a secure water supply; and
    - a sustainable environment built around healthy rivers

2. Efficiency of using water closest to the source

3. Benefits of sustainable water use in a drying climate

4. Importance of agriculture to the regional economy and for food production

The Regional Plan for the Hume Region, known as the Hume Strategy, contains specific measures in support of the above:

- Continue to support the protected status of the Ovens River System, having regard to the unregulated nature of the system; its heritage status; and sustainable use of water closest to the source.
- Develop key opportunities for sustainable use of water at the source through Alpine Agribusiness projects.

- Develop the Alpine Valleys Agrifood Project as a means of supporting sustainable agriculture.

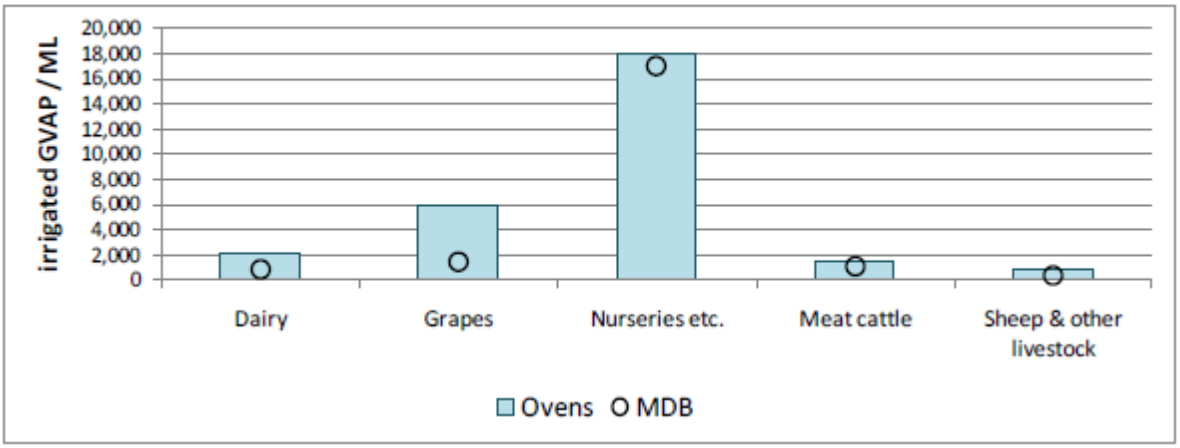
- Working in partnership to support agribusiness development, transition, diversification and change including value adding of primary products, food processing, knish markets, uptake of farm technology, business skill development and alternative crops.

The North East Victorian catchments have natural environmental advantages that ensure irrigation will be more effective than most catchments:

- High elevation with cooler temperatures reduces evaporation
- Higher natural rainfall.

A background paper prepared for The Basin Plan demonstrates this advantage. Marsden Jacob Associates in “Ovens community profile” drew on ABS data (2005-06) to compare the agricultural performance of the Ovens region with the Murray Darling Basin overall. Figure 5 from the MJA profile shows an outstanding performance for grape production in the Ovens region. The Ovens grow value of agricultural production (GVAP) for grapes is approximately three times more per ML of applied irrigation water. Irrigation for dairy in the Ovens region also is clearly more effective than the MDB generally. The Ovens region can deliver sustainable use of irrigation water.

Figure 5. GVAP per megalitre of water (2006)[xii]

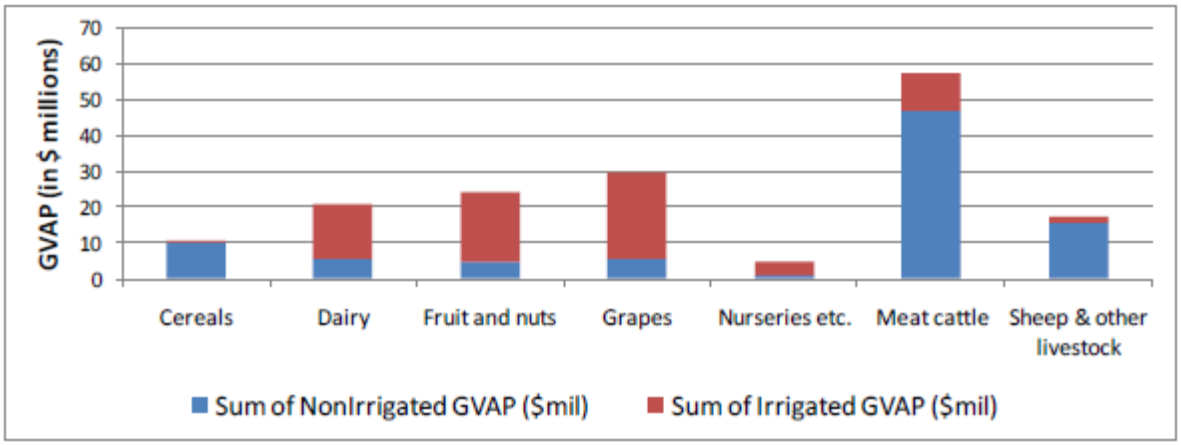


The sustainability advantages for water use in the North East Victorian Catchments will offer an opportunity for adaptation as the climate becomes drier. Agricultural businesses are already seeking to relocate to the region to take advantage of this, particularly in the dairy and horticulture industries. This geographic movement is an adaptation option that will buffer the Victorian agricultural economy as the climate dries. If water supply in the North East Victorian Catchments is decreased, effective and efficient adaptation options will be compromised.

The importance of agriculture to the regional economies of the North East Victorian Catchment Councils cannot be overstated. Based on current ABS data, 3,877 people or 8.31% of the population are employed in agriculture. It is also noted that manufacturing is a major employer and economic driver of the region and the majority of manufacturers are strategically located so as to add value to primary production. Drawing again on ABS data, manufacturing within the nominated region employs 7,441 people or 15.95% of the workforce.

Irrigated agriculture in the Ovens region, for instance, has developed in the areas that take advantage of sustainable irrigated water use – dairy, fruit and nuts and grapes as shown in figure 4 from the Ovens community profile.

Figure 4. Gross value of agricultural production (GVAP) (2006)[xi]



The strength of the agricultural industry in the Ovens region is shown by the comment by Marsden Jacob "the Agriculture, Forestry and Fishing industry was the fourth largest employer, but, unusually for the Basin, grew between 2001 and 2006 (by 2.9% to 2091 persons employed)."

These irrigated agriculture sectors in the Ovens region make a key contribution to the local economy. The following figures from the Marsden Jacob's economic and social analysis ("Economic and social profiles and impacts for MDB Plan", 2010) show that the perennial horticulture – fruit and nuts and grapes – and dairy have intensive expenditure in the local area. A local study shows that the dairy industry in the region generates $2.5 in the local economy for every $1 at the farm gate. Perennial horticulture is an intensive employer.

Figure 20. Employment intensity by sector

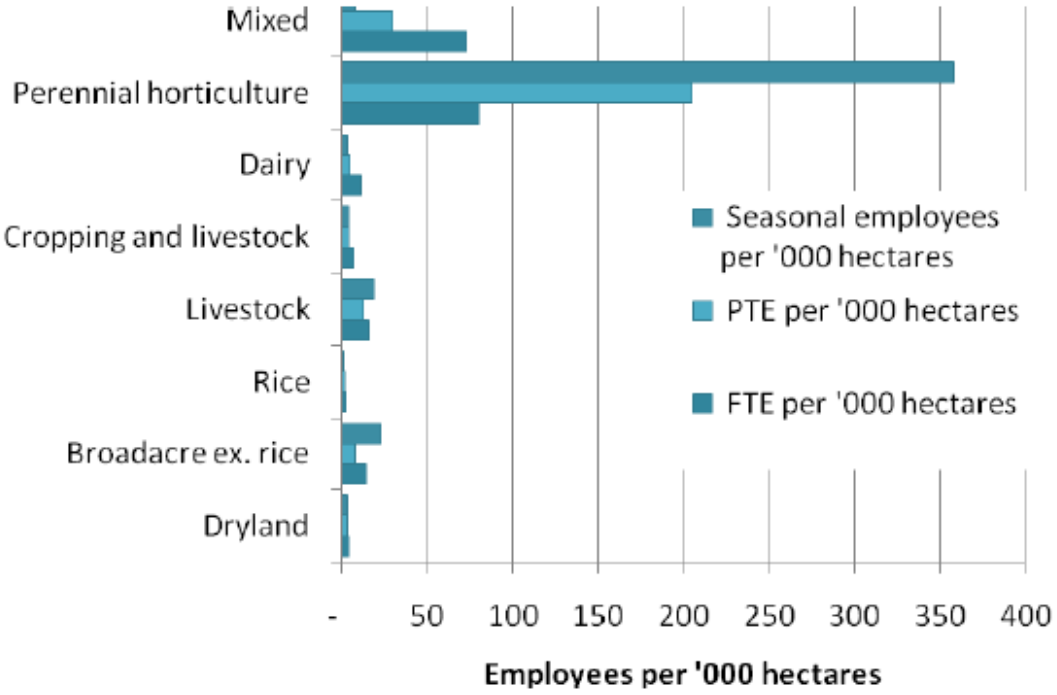
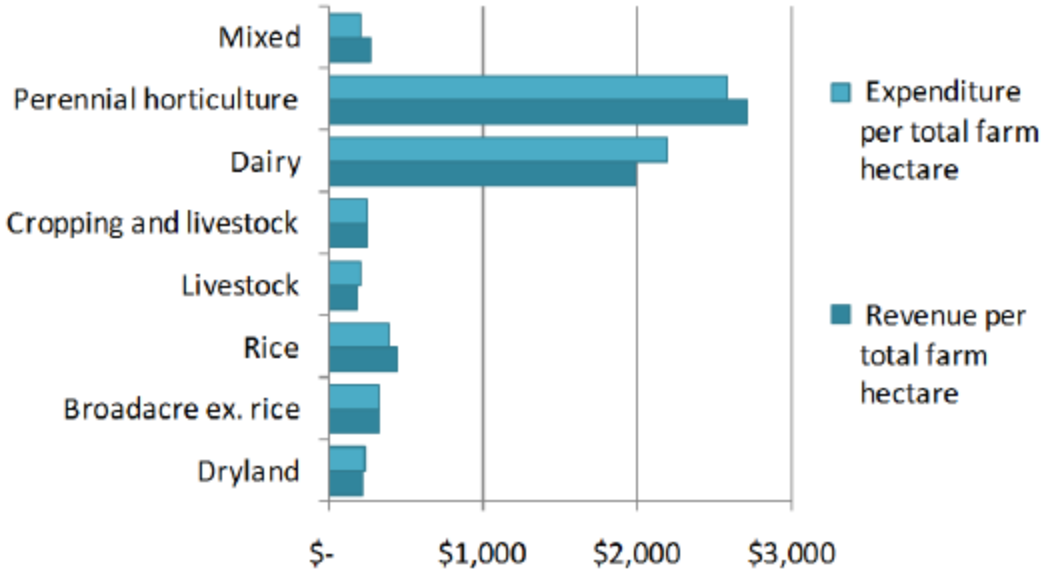


Figure 22. Farm revenue and expenditure per hectare, by sector



The intensive contribution means the local economy will be severely impacted by reduced diversion volumes. As these sectors are already highly efficient water users, efficiency measures to adapt to reduced water are not an option.

In its narrative, the Hume Strategy states that:

"Agriculture is one of the main economic contributors in the Hume Region. Agricultural land is a limited resource that should be protected against inappropriate development."

Already, there is a significant demand for rural lifestyle land in the rich valleys of the North East. If irrigation is lost the pressure to turn high yield, agricultural land over to this type of development will be overwhelming and completely at odds with the Strategy.

Interception Issues

The inclusion of significant interception activities as required by the Water Act 2007 (Cwlth) in current diversion limits (CDLs) and hence in SDLs has several big implications. There are issues around the estimate of interception volumes, the limitations of practical management options, and for policy to control growth in interception activities to avoid third party impacts.

Errors in SDLs related to estimates of Interception Volumes

There is great uncertainty in the estimates of interception in the Guide. The report from which most of the interception data was drawn itself acknowledges this:
"A key challenge of this project was to source relevant, quantifiable data relating to the interception activities. By definition, these activities fall outside of regulation, and so there is a lack of data relating to their development and hence their impact on water resources. Therefore, broad assumptions were required to extrapolate the existing data across all regions".

The consequences of this are magnified in valleys where interception is a high proportion of diversions, e.g. Kiewa, Ovens and Broken. In these valleys there is potential for large errors in estimates of current diversions and SDLs.

Errors in SDLs related to a method used to estimate without-development flows and environmental water requirements

When estimating total without-development flows:

- Modelled flows have been increased by the volume of water intercepted by domestic and stock dams, farm dams and plantations,
- Have NOT been decreased by the volume of water flowing into rivers because of clearing of native forests etc (see Guide page 45 and 209)

In high rainfall valleys that were naturally heavily forested (eg. Mitta Mitta, Kiewa, Ovens and Broken) estimated without-development flows are likely to be greater than they were naturally. It follows that since environmental water requirement estimates were based on meeting a proportion of without-development flows at the end of each valley, environmental requirements may be too high and SDLs too low.

Difficult to reduce consumptive use to comply with SDLs

Valleys where interception is a high proportion of diversions will also be restricted in how they can reduce diversions. Even the guide notes that it will be difficult to reduce the interception component of diversions (page 158) :
"Because of the practical difficulties of implementing reductions in the interception component of current diversion limits, Basin states are likely to consider first reducing watercourse diversions only."

Recovering water from interception, such as farm dams and plantations, is difficult because there are no clear entitlements to purchase, estimations of interception volumes are poor and recovering intercepted water is complicated. This means watercourse diversions will be the focus of the purchase program. The available pool that can actually be purchased is likely to be a proportion of the water course diversions because, for example, towns are unlikely to sell and it is not possible to purchase delivery system losses.

A further issue with recovering the water required to meet the SDLs relates to the low utilisation of entitlements in some systems. In these systems, the Commonwealth will need to buy a lot more entitlement than the desired decrease in diversions. There are also potential impacts on the reliability of third party entitlements, or for trading rules that apply to third party entitlement holders, if the purchased entitlement is to be fully utilised for the environment, as can be expected.

These two issues are highlighted in the Ovens system where to meet the proposed SDL approximately 10-11GL of water would need to be recovered. Factoring in underutilisation. This could actually draw more capacity out of the system to reach that target.

Perverse Outcomes

The Chief Executive Officer of the Murray Darling Basin Authority, Rob Freeman has stated in Hansard that an outcome for the Ovens as identified is “perverse”. This has since been reiterated by the Chair of the Murray Darling Basin Authority, Mr Mike Taylor.

We accept that this outcome was unintended.

It is clear that the unique nature of the North East Victorian Catchments, with relatively high interception, but relatively low diversions for non-consumptive irrigation, gives them limited capacity to meet the target set by the guide. To do so places a disproportionate burden on these catchments and effectively destroys irrigation at its most efficient – closest to the water source.

At a Senate Standing Committee on Economics in October, the CSIRO responded to a question on this matter as follows:

Q. “What value does 10GL add to the Murray system over and above the 1708GL the Ovens system already provides when the local cost to irrigation is considered?

A. The 10GL is, proportionally, a small contribution to the environmental water requirements of the Murray. From a bio physical view this 10GL could be provided from elsewhere across the connected river system. CSIRO has not done the necessary analysis to comment on the social and economic perspective”.

We argue that the relatively minute amount of water gained for the Murray River by these moves is completely outweighed by the adverse impacts it will have on these catchments. These will include socio-economic impacts on jobs, flow-on effects on the wider economy, community health and wellbeing, value of land, land use and protection of agriculture.

Alternative: Management over Volume

We suggest that there may be alternative ways to achieve environmental flows for the Murray from the North East Victorian Catchments based on water management rather than water volume.

Overbank flooding is currently a significant contributor to the reductions needed to meet sustainable diversion limits. In regulated systems there are significant opportunities to design and use a series of works and measures to obtain environmental outcomes on

flood plains whilst mitigating third party flooding impacts. Reducing downstream environmental water requirements will reduce the amount of water needed to be recovered in upstream areas.

In other words, timing and delivery methods could provide more environmental impact for the Murray than just sheer volume. This alternative should be explored before considering volume targets for North East Victorian Catchments.

Next Steps

We suggest that there may be alternative ways to achieve environmental flows for the Murray from the North East.

1. The anomalies associated with interceptors and how they affect the North East Victorian Catchments must be recognised.

   It is accepted that the outcome for the Ovens system is perverse. It must be corrected as soon as possible to allay fears about the viability of future investment and agricultural production in the region. The same can be said of the other North East Victorian Catchments.

2. Investigate improvements to the way water is delivered to the Murray for environmental purposes. Management rather than the current preoccupation with volume may provide a better and more effective outcome.

3. Don't delay finalising the Plan. Delay is death for investment. The uncertainty now associated with water security in the region is leading to a loss in investor confidence, investor drought and community anguish.

4. To ensure our interests are recognised, we seek a seat at the table when decisions are made about the future use of water in the region, to ensure that the North East Victorian Catchments can continue to be a long term sustainable productive region.

We appreciate your consideration of our position.

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