



## **Goulburn-Murray Water's Response to the Murray-Darling Basin Authority's Guide to the Draft Basin Plan**

***December 2010***

Goulburn-Murray Water (G-MW) welcomes the opportunity to submit a response to the Murray-Darling Basin Authority's Guide to the Draft Basin Plan (the Guide).

We are pleased that both the Commonwealth Government and the Authority have met with regional communities to field their concerns. We welcome the announcement of the Parliamentary and Senate Inquiries into the socio-economic impacts of the Guide's proposals, and the Authority's commitment to undertake further comprehensive studies on these impacts.

We request that this and any further submission we make, be considered by the Authority when finalising the proposed Basin Plan.

Further to this, we ask the Authority to clarify its timeframe for the development of the Basin Plan in light of:

- the Authority's recent commitment to undertake further socio-economic analysis, due 15 March 2011;
- the Parliamentary Inquiry into the impact of the Murray-Darling Basin Plan in Regional Australia due end April 2011
- the Senate Inquiry into the management of the Murray-Darling Basin to report November 2011

## Table of contents

<b>SUMMARY</b>	<b>3</b>
<b>IMPACTS OF THE PROPOSED PLAN ON GOULBURN-MURRAY WATER</b>	<b>5</b>
1) Valley-by-Valley Impacts	5
2) Interceptions and Waterways Diversions	9
3) NVIRP Impacts	9
4) Implementation	10
5) River Operations	10
6) Federal Government Buyback	11
7) Implications of the 4% Rule	11
8) Storage Operations	11
9) Critical Human Water Needs	12
10) Water Trading Rules	13
11) Delivery of Environmental Water	13
12) Groundwater	13
13) Accreditation tests	15
<b>GMW WATER SERVICES COMMITTEE RESPONSES</b>	<b>16</b>
Central Murray Water Services Committee	16
Loddon Waterworks Water Services Committee	21
Murray Valley Water Services Committee (MV WSC)	23
Shepparton Water Services Committee	25

## Summary

As Australia's largest rural water corporation, Goulburn-Murray Water (G-MW) manages around 70% of Victoria's stored water resources, around 50% of Victoria's underground water supplies and Australia's largest irrigation delivery network servicing a region covering more than 68,000 square km.

The Murray-Darling Basin Authority's (MDBA) Guide to the proposed Basin Plan indicates the potential of large impacts for G-MW's business and the wider community. Implementation of the plan, as proposed, indicates the need for strategic refinement of G-MW's operations across the entire service region which includes the six Irrigation Areas that make up the Goulburn-Murray Irrigation District (GMID) in light of the scale of water recovery proposed.

To achieve the most effective investment in the Modernisation of infrastructure through NVIRP 2, the pattern, timing and strategic alignment of buyback will all be factors in minimising the risk of under-utilised or stranded assets within the GMID.

Over the next decade G-MW's asset base, workforce capabilities, technology requirements and customer services will be transformed in response to the Victorian and Federal Governments' \$2 billion investment in modernising G-MW's distribution network in the GMID. The rejuvenation of outdated irrigation technology will provide water savings and water efficiency gains for consumptive users and the environment.

As the ownership and responsibility for the operation of the water delivery infrastructure will remain with G-MW following the completion of the implementation of Stages 1 and 2 of NVIRP, and the Commonwealth's buyback scheme, this response highlights areas of impact and risk to G-MW's business and its customers.

The wider community, aware of the level of regional impact, are working to respond to the socio-economic impacts of this proposal.

G-MW's future business model and the potential to operate its business efficiently and viably post 2019 will be influenced by the outcomes of infrastructure investment and the volume and location of federal government buyback.

Policy and implementation implications of the proposed basin plan as they affect Victorian water policy fall within the jurisdiction of the Victorian Government, G-MW's role is the assessment of likely implications on its business operations and customers and to manage implementation in accordance with government policy.

Goulburn-Murray Water encourages the Murray Darling Basin Authority to consider the following;

- If the proposals in the Guide are implemented in their current form, irrigated agriculture within G-MW's service region including the GMID is likely to be significantly reduced. This could potentially compromise the cost effectiveness of irrigation water delivery by the widespread stranding of irrigation and community assets.
- The Guide refers responsibilities of implementation to the states. While there is a degree of ambiguity surrounding compliance and implementation of the Plan, it does assign liability to the states and therefore to G-MW in its implementation and the third party impacts of delivering environmental water as a river operator.
- The overall success of the NVIRP program is contingent on the need to adopt a strategic approach to all water recovery programs to achieve a result which best reflects the long-term needs of the irrigation and broader community and the environment.
- Fragmented, non-strategic water recovery programs conducted in isolation without due consideration of the impact of each to achieve the Basin Plan's objectives could see the costs of water delivery to those who remain as customers within the delivery system, increasing substantially over time.

## Impacts of the proposed Plan on Goulburn-Murray Water

Goulburn-Murray Water recognises 13 significant areas of impact. They are:

1. Valley-by-Valley Impacts
2. Interceptions and Waterways Diversions
3. NVIRP Impacts
4. Implementation
5. River Operations
6. Federal Government Buyback
7. Implications of the 4% Rule
8. Storage Operations
9. Critical Human Water Needs
10. Water Trading Rules
11. Delivery of Environmental Water
12. Groundwater
13. Accreditation tests

### 1) Valley-by-Valley Impacts

Valley	Current diversion	Proposed SDL	Gap as % Reg. irrigation. Diversion	Potential impact
Murray	1701.0	1259-1109	10-22	Significant water purchase required in excess of commitments to date. Will need to be strategically aligned with NVIRP 2
Kiewa	24.8	20-19.8	n/a	Potential purchase of all licence to achieve reduction
Ovens	83.0	73-72	107-117	Potential purchase of all licence to achieve reduction
Broken	57.0	51.4-50.7	51-58	Potential purchase of 70% of remaining licence
Goulburn	1702.0	1260-1109	11-24	Significant water purchase required in excess of commitments to date Will need to be strategically aligned with NVIRP 2
Campaspe	155.0	115-103	23-50	Potential purchase of remaining G-MW licence dependant on contribution from Coliban irrigators. NVIRP 14.9 GL may contribute to recovery target.
Loddon	185.0	147-142	39-45	Potential purchase of all licence to achieve reduction Reductions of Loddon supplement will impact on Boort irrigation area.

The table above expresses water recovery targets as a percentage of regulated irrigation diversions after NVIRP and existing Commonwealth purchase programs and outlines the potential impacts. Water recovery is most likely to come from waterways' diversions as recovery from interception activities (dams and plantations) is more difficult.

- Goulburn

A decrease in use of between 442-593GL (28-37%) is proposed for the Goulburn. The recovery target in the NRSWS was 250GL.

NVIRP will deliver 94GL of savings, resulting in the need for a total of between 348-499GL having to be purchased.

Assuming NVIRP is complete and accounting for 210GL of Commonwealth purchase from the Goulburn system as part of the existing purchase targets of 460GL from Victoria, an additional 138-289GL of water would be needed to meet the proposed new SDL for this valley.

Consistent with the reasoning for other valleys, it would be assumed that the majority of the remaining 'gap' of water for the Goulburn would most likely be sourced from high-reliability water shares held by irrigators.

- Murray

A decrease in use of between 442-592GL (26-36%) is proposed for the Murray. There was no recovery target in the NRSWS, however, the majority of the 480GL proposed by Victoria through NVIRP and the NRSWS would contribute to River Murray flows.

NVIRP will deliver 81GL of savings and accounting for 238GL of Commonwealth purchase from the Murray system as part of the existing purchase targets of 460GL from Victoria, an additional 123-273GL of water would be needed to meet the proposed new SDL for this valley.

This reduction is shared between the GMID, private diverters and the Sunraysia region. Assuming proportional sharing this represents a 25% contraction in Sunraysia irrigation.

- Kiewa

Similar to the Ovens River, the proposed reduction in water use represents 45% of existing diversion and entitlements, equivalent to about twice the volume of the recommended reduction (4.5–5GL), which would need to be purchased.

It is questionable whether a reduction in the Kiewa is actually needed as current diversions represent only 3% of the total stream flow generated by this catchment.

- Ovens

The MDBA estimates that approximately 2/3 of total diversions in this valley are from farm dams (including D&S dams) and plantations (58GL). Diversions from waterways are estimated to be 25GL, of which 9.4GL is held on the regulated systems (below Lake William Hovell and Lake Buffalo), 9.4GL is unregulated licensed diversions and 6.2GL is for town use (which includes Wangaratta).

To meet the SDL for this valley, approximately 10-11GL of water would be needed. Recovering water from interceptions such as farm dams and plantations is difficult as there are no clear entitlements to recover. Therefore the target recovery of 10-11GL would have to come from the diversions from the waterways.

Given that the urban entitlements cannot be reduced, the reduction would be expected to be achieved through the purchase of some of the unregulated and regulated entitlements (which in total amount to 18.8GL of long-term average use).

However, as utilisation of these entitlements is relatively low, diversions would need to be halved to achieve a reduction of 10-11GL of use. Approximately 26GL of entitlement would need to be purchased to meet the new SDL. This represents a reduction of approximately 58% of all Ovens' current irrigation entitlements (water shares and licences supplied direct from the river) and exceeds the volume of entitlement in the regulated Ovens and King Systems.

It is questionable whether a reduction in the Ovens is actually needed as current diversions represent only 5% of the total stream flow generated by this catchment.

- Broken

Similarly to the Ovens, water use in this valley is weighted heavily towards interception, which accounts for approximately 43GL of use, compared to 13GL for irrigation on the valley's regulated systems, 14GL of unregulated licensed diversions and 0.7GL for town use.

To meet the proposed new SDL for the Broken, approximately 6 GL of water would be needed. However, as utilisation of entitlement is relatively low (i.e. 50-60%), approximately 12GL of actual entitlement would be required to meet the SDL.

As for other valleys in the Victorian MDB, the most easily recoverable water to meet this 12GL 'gap' would most likely be from either the 18GL of regulated irrigation entitlement, or the 14GL of unregulated licensed diversions. The basic implication of this is a 70% reduction in the volume of regulated irrigation entitlements if the reduction is sourced from this area.

- Campaspe

A decrease in use of between 40-52GL is proposed for the Campaspe. The recovery target in the NRSWS was 18GL.

Based on the Basin Plan targets, an additional 11–23 GL of entitlement would need to be recovered from this valley, on top of existing water recovery efforts (e.g. decommissioning of Campaspe Irrigation District and Commonwealth purchases), to meet the proposed SDL for Campaspe.

The most easily recoverable water for SDL is likely to be any remaining irrigation entitlements. These entitlements are largely held by G-MW's private diverters and irrigators supplied by Coliban Water, between 40% and 80% of the total is required. NVIRP is further purchasing in the order of 14GL of HRWS.

A reduction in the supplement to the Goulburn system, average diversion of about 12 GL, is one option to reduce the SDL, but this would have a significant implication for channel capacity in the GMID and the reliability of Goulburn water shares.

- Loddon

A decrease in use of between 38-43GL is proposed for the Loddon. The recovery target in the NRSWS was 12GL.

The Basin Plan estimates that the current river diversions for the Loddon are 95GL (including 3GL for town supply), and interception accounts for 90GL. After the completion of the Commonwealth water purchases in this valley, an additional 35-40GL will need to be recovered to meet the proposed new SDL. This volume far exceeds the volume of 22 GL of regulated HRWS held by G-MW customers.

Of the 95GL, 72 GL of diversions is attributed to the Loddon supplement to the GMID (Boort Irrigation Area).

To achieve the proposed SDL would require the Commonwealth to purchase a substantial proportion of entitlements in the Boort Irrigation Area irrespective of purchase from the Loddon River private diverters. This would reduce the requirement for the Loddon Supplement to assist in meeting the SDL target.

A large reduction in the Loddon supplement to the Goulburn system will remove the Goulburn system contribution to meeting the Loddon bulk water charges. The recovery of bulk water costs would then be largely from the remaining entitlement holders, two urban water corporations and the environment. It is not clear how much the environment is seeking to utilise the Loddon storages, however, it is expected that there will be little willingness to pay high bulk water charges.

It is currently unclear how the MDBA intends to use supplies from the Loddon to water key environmental assets. Supply to the Murray from the Loddon River would incur large river losses, and have significant salinity impacts in the Murray, as the Loddon has historically been a high salinity contributor to

the Murray. There will also be salinity implications for the Torrumbarry System.

- Bullarook

There are no specific recommendations for the Bullarook system and it is assumed that reductions in the Loddon Basin's SDL will include reductions here. The high reliability entitlements are about 0.7 GL for irrigators and 0.5 GL for Central Highlands Water (CHW). Removal of all of the irrigators' entitlements will make only a small contribution to the SDL target for the Loddon Basin. On this basis, Hepburn's Lagoon would be decommissioned and CHW the only beneficiary of Newlyn Reservoir.

## **2) Interceptions and Waterways Diversions**

The MDBA has divided diversions into intercepted water (i.e. dams and plantations), and waterway diversions. Reductions in use from farm dams and plantation and forestry activities are possible although difficult. Recovery from these activities is unlikely leaving waterways diversions to be the primary source of water recovery.

Expansion of farm dams and plantation activities will have additional impact on the SDL creating a further impost on waterways diversions. The implication of this is additional monitoring and compliance of interception activities will be required to ensure compliance of SDL within valleys.

## **3) NVIRP Impacts**

The volume of water available for irrigation will be one of the factors in determining the long-term size of the GMID.

Factors which will affect G-MW with respect to NVIRP are:

- Strategic alignment of Federal Government buyback with NVIRP 2
- Termination fee arrangements and impacts from further water purchases
- Risk of over investment in NVIRP Stage 1 and 2 in areas which may be better with service withdrawn

These impacts are being assessed as scenarios within the Whole of Life process.

#### **4) Implementation**

Water resource plans. The underlying philosophy detailed in the Guide to the Basin Plan is that the targets established by the MDBA will be implemented through states' Water Resource Plans (WRP).

In Victoria, it will be important to ensure that water resource plan requirements in the Basin Plan, align with Victoria's water planning and management framework.

Even so, it is expected that any WRPs will contain additional and stringent compliance measures. These will add to G-MW's costs, however, the extent of these increases cannot be estimated until the details are developed in the period leading up to the completion of the plans in 2019.

Development of the WRP represents a significant task for DSE and for G-MW. The magnitude of the task is of the same order as the development of the NRSWS and of the individual basin BE. There is a significant cost to G-MW associated with this process.

Implementation – the Basin Plan refers all implementation issues to the states. In doing so, the Plan is ambiguous about compliance measures and makes reference to the States (and therefore to G-MW) being liable for any losses associated with implementing the Plan. The scope of these issues could be enormous and obligations to meet flows to flood plains have significant implications for G-MW in its capacity as Storage Manager. G-MW has several years to determine the optimum approach to these matters.

#### **5) River Operations**

As a river operator, G-MW will assume risk of third party impacts associated with the delivery of environmental water. The requirements of environmental watering plans will see a change in flow regimes of river operations, with higher flows anticipated in winter and autumn to better reflect natural flows.

The Plan advocates, wherever possible, that initial actions should be consistent with the needs of the environment. It suggests a review of each state's Basin policies and procedures to ensure that water management can accommodate the delivery of environmental water.

The Guide suggests storage owners should plan for and prioritise the increase of release capacity from large storages, methods to reduce cold water pollution effects, the construction of fish ways at weirs and other in-stream structures, the screening of town and irrigation water supply pumps to prevent entrainment of larval and juvenile fish and reducing floodplain flow fragmentation by addressing barrier impacts.

Addressing these issues could be technically complex and expensive. Funding sources for investigation, design and implementation have not yet been considered and impacts on G-MW's bulk water business and associated costs could be very significant.

## **6) Federal Government Buyback**

Federal government buyback is a principle means of securing water for the environment. The impact of buyback may be minimised if there is a recognition and alignment of buyback with infrastructure projects. The loss of the 4% or an uncoordinated buyback program may create a patchwork of irrigation within systems and reduce the opportunity to rationalise infrastructure.

The Federal purchasing program will also have an influence on the effectiveness of achieving rationalisation of infrastructure. Early purchases will enable strategic rationalisation if the program continues to 2019. The effectiveness of G-MW to reduce infrastructure may be compromised.

The failure of the federal government buy-back to secure water would necessitate an adjustment of entitlement to achieve the required SDL. Although the federal government would bear the risk and be responsible for any compensations, it would act to thin the level of water holding throughout the entire system.

The Environmental Water holder tender system may not be suitable for large parcels of water, eg the NVIRP Campaspe volume. To achieve targeted rationalisation or irrigator led proposals, an alternate is required.

## **7) Implications of the 4% Rule**

The 4% Rule is a net limit on the volume of water shares that can be transferred out of an Irrigation Area each year. Transfers above this amount may be approved.

The 4% limit is more particularly about managing the rate of structural adjustment in communities. G-MW's application of the 4% limit means that the adjustment pain is spread more evenly across all six irrigation areas.

With the MDBA Plan, substantial and significant structural adjustment may be required, which will accelerate the need for contraction and consolidation of G-MW's asset base.

The objective in the National Water Initiative was for the 4% limit to be removed by 2014. Subsequently, Victoria has further agreed with the Commonwealth for the 4% limit to begin to be phased out from 2011.

## **8) Storage Operations**

G-MW is the appointed storage operator in seven regulated basins: Broken, Goulburn, Campaspe, Loddon, Bullarook, Ovens and Murray, utilising 13 storages. Greater than 90% of the storage capacity and regulated

entitlements exist in the Goulburn and Murray basins, supported by four main storages.

The final SDL in each basin and how these are achieved will have a bearing on who continues to use water in each basin. Under some scenarios, irrigation using regulated entitlements could effectively end in the smaller Broken, Campaspe, Loddon, Bullarook and Ovens basins. The storages in these basins would support urban, domestic and stock, and environmental entitlements. Commercial irrigation would be concentrated in the Goulburn and Murray basins.

Client needs - Section 6 (a) describes the potentially significant reduction in the volumes of water shares held by irrigators. In the smaller valleys, Ovens/King, Broken, Loddon and Campaspe, irrigators will move to a minority interest and there may well be no regulated system water users. Bulk water charges have been met in large part by irrigators up until now, due to the system pricing policies of G-MW and the fact that irrigators had held the majority of entitlement and hence paid for by irrigators. In future, the larger entitlements will be held by the Commonwealth Environment Water Holder (CEWH) and by the regional urban water corporations.

## **9) Critical Human Water Needs**

The MDBA Basin Plan sets minimum volumes for Critical Human Water Needs (CHWN). It also sets a conveyance reserve to enable delivery of CHWN.

A three-tier schedule sets out water sharing arrangements with Tier 1 as most years and Tier 3 as unprecedented conditions.

Priority of allocation of inflow

- 1 Conveyance loss (current year – 750 GL to South Australian Border);
- 2 CHWN that has been set aside by states for that purpose;
- 3 Conveyance dilution (SA 696 GL);
- 4 Top up any CHWN; then
- 5 Conveyance reserve next year – 225 GL; then
- 6 Repay advances (mainly SA to Vic & NSW);
- 7 Allocations to states (private carryover and new allocations).

Issues

- G-MW notes that this may in some circumstances, cause a slight delay to first allocation
- G-MW also seeks to understand whether, in the event that private carryover is borrowed under Tier 3 conditions, it will be expected that financial compensation is to be sought from SA.

## 10) Water Trading Rules

The MDBA Plan will include water trading rules, which will establish principles used to develop detailed trading rules managed by the states. The rules are expected to allow trade to be permitted if the water can be physically delivered, impacts on the environment are avoided, and the reliability of others' entitlements is not eroded (except where caused solely by utilisation). These rules suggest liberalising the Ovens and Broken basin regulated trading rules will be required.

MDBA is likely to support the principle of tagged trades, rather than exchange rating. This may have implications for trades between regulated and unregulated systems, which currently occur by exchange rate, unless alternative tagging arrangements can be developed. Without such arrangements, the opportunity to achieve SDL by purchase from other than the regulated part of each basin may be quite limited.

## 11) Delivery of Environmental Water

The environment may require water delivered to sites within the riverine system and to wetlands remote from the river using the G-MW distribution system (which itself might incorporate natural carriers such as Gunbower and Broken Creeks.)

In either case, there may be times when consumptive and environmental demands are in competition for the same delivery capacity. In distribution systems, delivery shares provide a mechanism to manage this issue, though further refinement may be required, along with the implementation of the principles contained in the NRSWS.

In the rivers, the environment may have two distinct demand types:

- base flow requirement, i.e. delivery to Murray mouth
- peak flow requirement, i.e. flooding of Barmah forest.

Watering plans for use of environmental entitlements have not yet been developed, and irrigation demand patterns are in a period of rapid change so that extent of potential conflict for river delivery capacity is speculative. As a generalisation, base flow environmental requirements are more likely to compete with summer and autumn demand, e.g. particularly for a share of Barmah choke capacity, while peak flow requirement is most likely to compete with spring demand. River sharing capacity instruments are in place (extraction shares), but are much less well-developed than delivery shares.

## 12) Groundwater

At first glance, an assessment of the Guide to the Proposed Basin Plan suggests there are no obvious impacts for Victoria based on a reduction in current levels of groundwater take. However a more detailed examination has revealed a number of aspects of concern to Goulburn-Murray Water.

Goulburn-Murray Water has concerns that SDLs volumes proposed for Victoria are based on metered usage recorded in a single year (2007/08). It is not clear how groundwater SDLs based on usage history, which seems to ignore sound science, can be considered sufficient to be able to determine a sustainable level of take.

There is no recognition of Victoria's groundwater management framework; one which is based on a high level of technical, social and economic study. There is an opportunity for the MDBA to capitalise on this framework and utilise this in the setting of both SDL areas and volumes. This robust state framework allows G-MW to pursue the development of formal arrangements, such as management plans and rules, to ensure adverse impacts (e.g. on waterways, groundwater dependent ecosystems and other users) are prevented. It will be difficult to convince groundwater users that further measures to restrict use are warranted if current arrangements are achieving success in providing sustainable resource management.

The basis for volumes of unassigned water set in Table 4.16 (see p195 of Vol 2) is not clear and is likely to unnecessarily constrain management of groundwater based on catchment or land protection objectives (e.g. Shepparton Irrigation Region Water Supply Protection Area and Salt Interception Schemes). Also, the concept of unassigned water being in addition to an initial SDL volume seems illogical and somewhat in conflict with the definition of an SDL.

Further, there are other mechanisms recommended for consideration other than ascribing a volume to define an SDL, such as the use of groundwater level triggers and climatic modelling. Equally there is no recognition of the need for adaptive management approaches which consider impacts of climate variability on groundwater resources. For example, in some instances resource condition driven mechanisms will be far more important than volume, particularly in the SIRWSPA and in the management of groundwater within salt interception schemes, where pumping groundwater is not governed by water resource management objectives (rather, it is driven by the need to protect productive farming land and ameliorate adverse environmental effects).

Whilst the concept of capping at current groundwater use with a surface water trade offset is understood (e.g. in the Goulburn-Broken Highlands GS9 SDL area) more clarity and detail is sought on how connections between surface water and groundwater SDLs areas might work in practice.

Finally, due to the potential for overlapping or poorly aligned administrative boundaries, implementation of the currently proposed groundwater SDL volumes and areas would lead to a significant increase in reporting complexity and associated costs."

### **13) Accreditation tests**

GMW is concerned the major mechanism proposed for managing the impacts of climate change as written in the Guide are contained within five rules of the WRP accreditation tests in Volume 2 Appendix E. The accreditation tests as written, appear to allow for the transfer of water from consumptive users to the environment in a run of drier than normal years.

This transfer is also effectively a transfer of reliability of consumptive entitlement to the environment without compensation.

Application of these draft WRP accreditation tests will undermine the reliability of surface water entitlements across the Basin. This downgrading of entitlement reliability is not assessed, or even acknowledged in the Guide, and so GMW cannot support draft water resource plan accreditation tests.

The Federal government propose to secure water for the environment through purchase and investment, this will provide the environmental water holder the capacity to manage risk through a combination of carryover, investment in water efficient environmental water delivery infrastructure and the via water market.

These mechanisms provide the opportunity for all water holders to manage their individual risk equitably, whereas the draft accreditation rules favour the environment at the expense of other consumptive users.

The accreditation tests, as written, impose detailed lengthy requirements that should be met and impose a requirement for far greater rigour to define the environmental water requirements than was adopted by the MDBA in setting the proposed SDL's. Clarification is sought on how the MDBA would reconcile differences in environmental water requirements determined in a way to satisfy the accreditation tests with SDLs which have been determined by more approximate methods.

## **GMW Water services committee responses**

Our network of customer committees is a key link in ensuring we understand the needs and views of customers across the region. Through regular meetings G-MW is kept informed on a wide range of issues relevant to our operations in the region. The responses attached are customer committee thoughts on the proposed basin plan implications for their specific regions.

### **Central Murray Water Services Committee**

The purpose of this document is to provide feedback from the Central Murray Water Services Committee (formerly the Torrumbarry Water Services Committee) to the Murray Darling Basin Authority with regard to the recently released Guide to the Proposed Basin Plan.

#### Context

The Central Murray Water Services Committee is a 9 member customer representative group who provide operational and strategic advice to the Board of Goulburn-Murray Water. The vision of this committee is, 'Torrumbarry, a region where irrigators can invest with confidence'. The committee represents a diverse irrigator base in excess of 4,000 customers in Northern Victoria, holding approximately 350,000 ML in High Reliability Water Shares.

The Central Murray Operations area (containing the Torrumbarry Irrigation Area, the Nyah, Tresco and Woorinen pumped Districts as well as River Diverters between Torrumbarry and Nyah) contains and compliments a complex mix of natural waterways (including the Gunbower Creek and Little Murray River), the Kerang lakes (including Ramsar listed sites), several lagoons, irrigation channels, drainage and pipelines. The predominant enterprise types within the area include Dairy, Horticulture, Cropping and Grazing. All of these industries support the local community in what could be described as irrigation dependent economies.

For the last 11 years the WSC has taken a leadership role with the local community in planning and consultation for a future with less water available for irrigation in this region. This work includes the 'Kerang/Swan Hill Future Land Use Pilot project' and the 'Torrumbarry Reconfiguration and Asset Modernisation Strategy (TRAMS)', to ensure there is clear direction and a common vision for the area. This vision recognises that there will be a reduction of the irrigation footprint (land and water), however the area overall would be more productive and prosperous as a result of careful and strategic planning.

These studies have involved positive and productive interaction with various agencies including;

- Department Education, Water, Heritage and the Arts (DEWHA)
- Department Sustainability and the Environment (DSE)
- Catchment Management Authorities (CMA's)

The committee recognise that the area relies on maintaining well managed environmental assets and a productive irrigation sector. The committee actively pursue the optimisation of a balance between the two and recognise our important Environmental stewardship responsibilities.

We are pleased to supply this submission for your review and would welcome the opportunity to have direct dialogue with a suitable representative/s from the Murray Darling Basin Authority at a future WSC meeting.

#### Guide to the Proposed Basin Plan – Comment

The Central Murray Water Services Committee provides the following feedback and comment for your consideration with regards to the content of the Guide to the Basin Plan.

#### The Imperative for Change

The Central Murray Water Services Committee agrees that there is a need to ensure a healthy river system within the Murray Darling Basin. The volume of water required to return and sustain a healthy river system is not well understood, yet has major impacts on the irrigation industry and associated communities. The committee believe that it would be appropriate to release DRAFT Environmental Watering Plans (EWP) which clearly specifies the water requirements and the manner in which the water would be utilised for the various sites identified across the basin. The authority in the Guide to the basin plan document state, 'it is not possible to set an exact figure for the amount of additional water needed for the environment as there are significant variables and uncertainties' (Executive Summary Pg xix). Given the lack of practical information and the authorities own admission of uncertainty the Central Murray Water Services Committee question the validity of the analysis which indicates the amount of additional water required for the environment is between 3,000 GL and 7,600 GL. The committee support the notion that the upper range of 7,600GL is dismissed from consideration and encourage the MDBA to evaluate the benefits and pursue a volume less than the proposed 3,000GL.

#### Recovery of Water for the Environment

The Guide (Section 11.1 Bridging the Gap) indicates, in relation to the current Government Water Buy Back program that, 'The authority consider that the purchasing of water in this way to be the most effective way in ensuring environmental flows are increased.'

The committee believe that the practice of random water purchase (buyback) and the planned 'willing sellers' approach shows no leadership or learned wisdom in defining the best locations for future irrigation success. It is likely to result in a '**Swiss cheese**' effect in the irrigation area which leads to stranded and/or under utilised assets.

It would be preferable if the following hierarchy was employed in achieving water savings for the environment;

- a) Recognition of existing Environmental contributions;
  - The Torrumbarry area contains several key environmental sites (including Ramsar listed wetlands and key icon sites) which have historically been managed in conjunction with irrigation. It has been identified that approximately 93GL of the irrigation system losses occur within the Natural

Carriers (Creeks and Rivers) and the Lakes system. This is currently all implied to be use for irrigation whereas it should be more accurately defined as sustaining Environmental Assets.

b) Infrastructure Improvements;

- On-Farm – The success of the recent on-farm efficiency program is evidence that irrigators are enthused about upgrading infrastructure in the interest of improving efficiency. The committee encourage the continuation of on-farm efficiency grants to encourage the industry to continually improve private irrigation systems. This has the potential to provide significant synergies with the current modernisation program. These programs also stimulate the local economy which strengthens existing enterprise and encourages further development in the area.
- Irrigation Infrastructure – The current investment in the upgrade of irrigation infrastructure in Northern Victoria is expected to provide significant water savings whilst upgrading an ageing system. Even though this program will upgrade and modernise many of the structures there is still potential with further investment to upgrade the remaining channels to achieve additional savings.

c) Engineering Improvements to deliver Environmental Water more efficiently;

- The committee encourages the MDBA to explore the various options available to deliver environmental water to icon sites in the most efficient manner. This may include pumping water to key sites instead of raising river levels.

d) Land Retirement (Targeted Buyback)

- There is a need to identify and achieve synergies between the \$2 billion Modernisation Program and a plan to recover water for the environment which will effectively, should the proposed willing sellers approach be adopted, retire random parcels of (often productive) land from irrigation in the immediate future. The Central Murray WSC, Kerang/Swan Hill Future Land Use committee and the TRAMS committee have actively developed a plan for the future of irrigation in the Torrumbarry region over the last 11 years. This plan gives consideration to the current investment by irrigators and the Federal and State Governments in modernising the Goulburn-Murray Irrigation District (GMID) as well as improving environmental outcomes within the Torrumbarry region. The committee believe that preference, over random water purchase, should be given to the retirement of land from irrigation where soil qualities, drainage and biodiversity are not conducive to the continuation of irrigation. In identifying this approach it is necessary to ensure that irrigators wishing to remain in the industry be afforded appropriate assistance to relocate their enterprise to an area which provides increased benefits relating to system efficiency, environmental benefits, and aligns with the current Modernisation 'backbone' principles. Likewise individuals who are impacted by this targeted land retirement approach, but do not wish to continue in the industry should be afforded an adjustment package in recognition of the change to their circumstances. Randomly sourcing water from within the district is setting up future irrigation areas to fail and ignores the opportunity to consolidate the irrigation area to achieve a return on the modernised assets currently being installed. The committee would to bring to the attention of the MDBA the CSIRO 'Traffic Light' report which is entitled '**Reconfiguring an irrigation landscape to improve provision of ecosystem services**' which identifies

opportunities for targeted land retirement.

## **1. Recognition of Water Savings**

The Central Murray Water Services Committee would like to recognise the recent contribution and investment in irrigation infrastructure upgrades (NVIRP Stage 1 & 2), generating considerable water savings. These savings need to be factored into the calculation of the required savings identified in the Guide. This is a more preferable method of achieving water savings than the proposed method of random water entitlement purchase (buyback).

In the submission provided by this committee in December 2009, with regard to the Sustainable Diversion Limits discussion paper we would like to reaffirm our position in relation to the following;

- Need to ensure that existing diversion 'caps' are enforced with the Basin.
- Victoria has been proactive in participating in various Water Savings projects which have provided considerable environmental benefits, these include;
  - Living Murray 214 GL
  - Snowy for Murray 35 GL
  - Snowy 212 GL (share with NSW)
  - Wimmera Mallee Pipeline 83 GL
  - Northern Mallee Pipeline 35 GL

Prior actions to comply with Federal Caps should be acknowledged and there should not be further penalties imposed on areas which have been proactive leaders in the sustainable management of water resources in the Murray Darling Basin.

## **2. Community Adjustment**

Although the Socio-Economic impacts that would result from the proposals outlined in the 'Guide' are best conveyed to the MDBA by suitably qualified or informed authorities/individuals, the committee feel compelled to advise the MDBA that the Socio-Economic impacts identified within the 'Guide' are grossly understated and that the committee support the Federal Parliamentary Inquiry into the impact of water-cuts on communities within the Murray Darling Basin.

Recent low allocations are potentially an indication as to the impact of withdrawing large volumes of water from the irrigation sector. The committee believe that the Socio-Economic impacts can be minimised by pursuing effective investment in infrastructure which supports the environment and irrigation communities. Investment in infrastructure protects the viability and prosperity of the community

The committee feel that the Commonwealth need to provide rural communities impacted by a reduction in water availability (and potentially reduced Delivery Share) with some form of compensation to ensure that residual irrigators are not required to fund the resultant price implications that will result. Where the Commonwealth Environmental Water Holder is utilising the irrigation delivery network to achieve targeted outcomes they must hold

the appropriate Delivery Share and thus contribute to the operations and maintenance of the assets being utilised.

By utilising random water purchase as the mechanism to recover water for the environment it will effectively accelerate the need for community adjustment and the government would need to be prepared to provide suitable adjustment packages and resources to manage the impacts that would result.

### **3. Further Issues**

The committee would like to make the following statements to the Murray Darling Basin Authority and again extend an invitation to discuss these personally;

1. The Environmental Water Holder (EWH) must make available on the market excess annual water allocation to enable irrigators access to this water to utilise in maintaining current production levels. Furthermore the EWH should be required to develop clear protocols with regard to when and in what circumstances excess allocation would be sold.
2. With reduced water availability the importance of Water trade will be paramount in the future; the Water Broker industry needs to be regulated and all states required to develop a Water Register similar to Victoria.
3. Has the information pertaining to the assessment of water required for the environment been independently scrutinised?
4. The committee understands that Environmental Water will retain the characteristics of allocation from the catchment from whence it was sourced and support this practice.
5. What are the consequences of not complying by the designated time period?
6. Why have no significant engineering solutions been considered to make savings?
7. What is the plan to manage the dilution flows that will be required to control the increased salinity in the river as a consequence of substantially less water being delivered for irrigation?



Charlie Gillingham  
Chairman

Central Murray Water Services Committee

## Loddon Waterworks Water Services Committee

The Loddon Waterworks Water Services Committee wishes to take this opportunity to present our thoughts and opinions to the Murray-Darling Basin authority with regard to the Draft Basin Plan Guide.

The WSC chair has attended a community meeting presented by the M-DBA in Echuca, Victoria on November 8 2010 and subsequently reported back to the WSC.

The Loddon Waterworks District is a domestic and stock supply system, first initiated in 1891, administered by Goulburn-Murray Water, and now supplies essential water needs to farms across the Loddon Valley district in Northern Victoria. Our critical water needs are delivered by the infrastructure used to supply water, both irrigation water and domestic and stock water, across the Goulburn-Waranga system.

For the past 100 years or so, our water has been delivered to farm, by open channel and farm dams were filled once per annum, to meet essential domestic and stock water requirements on farm. Historically, this system has met our needs and allowed much closer settlement and agricultural development to take place in the northern districts of Victoria. It was a robust and economic system, but we have known for quite some time that change was needed. Since 1995 planning and consultation to change to a piped water supply system has been undertaken.

We quickly realized the only way to raise the required capital to implement our new schemes, was to sell the water saved back to the state government. Planning and community consultation over time led to trust being built and capital, raised through water savings to build a piped Domestic and Stock Water supply system.

Our state government of the day, our water authority, and our communities are deserving of great praise and recognition for the trust and goodwill built up to implement a new way to deliver, more efficiently, water to our communities, which will ensure the generations to come have the means to manage their future development.

We have long recognized that water is a finite resource.

In December 2003 the first piped supply system, the Normanville district, was opened and 3600ML of water savings were delivered to government.

Subsequently, we have completed the West Loddon system and in March 2011 the construction of the East Loddon system will commence. A further system, the Mitiamo system is at a critical stage of planning. We would like to point out that this system will be a privatised system; such is the faith and trust of the farmers of this district. Such trust is a precious commodity.

This then is a brief snapshot of what and who we are. This brings us to the Guide to the Draft Basin Plan.

As we have seen, trust and confidence are commodities which engender ownership. We discern no ownership of the Basin Plan. The root of this we believe to be a flawed Water Act [2007]. Indeed, Mr Taylor, through his resignation today clearly affirms this to be so.

Without trust and ownership we fear mightily for our future. We know we are only one spoke in a large wheel.

We are alarmed and hurt by the repeated pejorative use of words and terms like "irrigation", "irrigator", "irrigated agriculture" "intensive animal farming", which occur on a regular basis in the daily press and media reports, and are

uttered by all manner of people, be they stakeholders or not. Such behaviour destroys trust, and is both repugnant and hurtful to people who act and adapt on a daily basis to all manner of events which change the world around us. Consequently we have no confidence in our parliamentarians and our government.  
It is as though we have no history.

Christopher Watson

Chair- Loddon Waterworks Water Services Committee.

**Response to the Murray –Darling Basin Authority’s Guide to the Draft Basin Plan**

This response should be read in conjunction with that submitted by Goulburn-Murray Water (G-MW). It puts a response from an irrigation customer perspective in the Murray Valley Irrigation Area.

G-MW has a broad customer profile, including irrigation urban and environmental customers and has been aware for some time that “the environment” will become (or is already) their biggest customer. Irrigators are concerned; there may be times when consumptive and environmental demands are in competition for the same delivery capacity. In distribution systems, delivery shares provide a mechanism to manage this issue, however water purchased by the environment through buy back does not carry with it delivery share. There is concern that the environment may not be paying its fair share of delivery infrastructure costs.

Irrigators express extreme concern that the SDL figures published in the Plan leave the clawback of water to come only from the pool used for irrigation. Forestry water use, small dams on hobby farms and urban supplies do not appear to contribute to the increased pool available for the environment. Consequently irrigators will contribute a far greater percentage of irrigation water than the quoted percentage cut to the SDL.

Irrigators are very aware of the need to reduce irrigation assets as a means of keeping a lid on prices. However the process of targeted buyback needs far more development. Currently buyback is largely driven by the political expediency of the day. A long term view needs to be developed to ensure our nation has irrigation in the best places. This will need to include considerations such as the most appropriate combinations of soil types, evapo-transpiration, humidity, solar radiation, water conveyance losses and the use of water to supplement rainfall.

In the presentation of the plan, little acknowledgement has been given to the Northern Region Sustainable Water Strategy (NRSWS) which was developed in Victoria to give some certainty over long term (50 years out) water use policy. The strategy was developed collaboratively with regional stakeholders involved in the process and all walking away with some level of ownership of the outcome.

The MDBA Draft Plan appears to have been compiled in isolation from user groups, and has not only been roundly criticised because of this lack of consultation, but may compromise the links established during the NRSWS process.

Whilst not a primary consideration the additional costs of compliance with the ACCC could well place an intolerable burden on irrigators.

The WSC members struggle with the concept of using public funds to reduce irrigation as it seems only a few generations ago that Governments were

injecting large amounts of money into the expansion of irrigation. When public funds are being used to reduce a system originally funded for the public good, extreme care must be taken to ensure the investment will generate a better irrigated agriculture for our food chain. Indiscriminate use of public funds to make publicly funded irrigation schemes less effective will not serve our future.

The Draft Plan lacks any commitment to the long term production of food in the Basin, and also lacks any mention of farm dams and the method by which they will be accounted for.

The WSC urges the MDBA to make every effort to secure water through improved delivery efficiency and improved on farm efficiency before seeking out “willing sellers.”

In closing, the MV WSC believes that the very survival of the irrigation industry is under threat, not only because of the water buybacks from “willing sellers”, but also because the cost of irrigation for those remaining will make them unviable.

## Shepparton Water Services Committee

The Shepparton Water Services Committee (WSC) is disappointed as the Murray Darling Basin Authority's Basin Plan appears to be a complete departure from the widely accepted view within industry for the need for sustainable integrated water resource management. At a recent meeting the WSC discussed a number of issues that they see as concerning under the current proposal. These include:

The impacts to this Region – the MDBA Plan doesn't appear to take into account the various uses of water, the range of people's water needs and the value to the local economy. There appears to be an apparent lack of regard for the consumptive users within the basin, from an economic perspective and from a long term social perspective is somewhat alarming as is the disregard for the capital value of the water rights they own. In order to 'restore the balance' a sustainable approach is needed to ensure that the environment and the economic and social implications are weighted equitably.

Background Information – The Plan appears to lack the background information for the amount of water required for the environment. The Shepparton WSC would like more information on the science behind the amount of water required for the environment and the impact this will have on our local communities. The committee was concerned that the MDBA Plan prioritised water for the environment above water for the other users within the basin. The MDBA Plan needs to be cautious when sourcing additional water for the environment; it shouldn't be proportioned to current diversion limits as this will disadvantage the areas that have been managed more efficiently already.

The Buyback - The Shepparton WSC is concerned about the costs borne by the customers who decide to stay in the water industry long term if the Government buyback continues in its present form. There has been a large investment in infrastructure and if approx 25% of water is bought from the Irrigation Areas this will cause a large financial burden on the remaining customers. We are also concerned that the buyback will not be targeted, if buybacks continue to be scattered across the irrigation areas the transmission losses remain constant but a reduced amount of water is delivered, making the whole system less efficient and less productive. This will produce a poor outcome for all stakeholders.

Water Savings – The Plan doesn't appear to be clear on the baseline figures used for the water savings needed. Are the existing water savings already made from the current modernisation projects included? Victorian irrigators have long prided themselves in the responsible manner in which the water they hold has been managed and distributed. Victorian water users have led the way in managing a diminishing resource without compromising the environment during the current drought.

Lower Lakes - There appears to be no discussion on remedial works to remove unnecessary water losses such as the lower lakes. It is extremely frustrating from a Victorian perspective to see that the lower lakes appear to be under no scrutiny in terms of efficiency improvements. One possible option is the removal of the barrages at Goolwa to return it to a tidal estuarine fishery

it was until as recently as 1940. It seems obvious to users that so much water has and seemingly will continue to be wasted to perpetuate the man made interruption of the mouth of the Murray River. The permanent removal of the barrages would provide cost savings in terms of the continual dredging of the Mouth apart from the more than 600 GL of evaporation which takes place annually. We strongly believe that this should be considered as part of the Plan

Efficient use of Environmental Water – The WSC is concerned about how and when the water will be used for the environment. We need to be mindful that water being used on the environment is used as efficiently as possible especially when we are asking all other users to be efficient and “save water”. The use of this water needs to be planned as it is very inefficient to release water solely for the environment. It would be more efficient to release water in conjunction with an already high river (e.g. after a high rainfall event or when there is a high demand for irrigation).

The Shepparton WSC are prepared to look at all options but feel that all water planning and strategies should be incorporated into broader social, economic, and environmental goals. Water should be treated as an economic, social and environmental good. We feel there needs to be a continuation of the current On-farm efficiency program to maximise water savings and to assist with the current investment in infrastructure. The WSC request that the MDBA continue to consult with the users, listen to their concerns and keep them informed of the discussion by the MDBA on the issues that have been raised prior to any decision being made.

John Horder

Acting CHAIRMAN  
SHEPPARTON WATER SERVICES COMMITTEE

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