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# Submission to:

# Senate Committee on Rural Affairs and Transport

# Inquiry into the Management of the Murray-Darling Basin

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**Executive Summary**

Murray Irrigation is committed to its stewardship of this important part of the Murray-Darling Basin and participates in State and Commonwealth Government environmental initiatives such as The Living Murray and the Water for Rivers program. We also work closely with the NSW Department of Environment, Climate Change and Water (DECCW) to facilitate the delivery of the NSW Murray Environmental Water Allocation of up to 32GL per year (depending on NSW allocations) through the Wetland Watering Project to wetlands in both the landscape and the riparian zone.

We continue to implement proactive irrigation efficiency programs across the area of operations as well as assisting the MDBA subsidiary, River Murray Water by using our infrastructure to divert water around the Barmah/Millewa choke, to help reduce the incidence of unseasonal flooding and to provide regulated water to both the River Murray and Billabong Creek for NSW State Water Corporation.

Murray Irrigation, like our farm business shareholders, has had to be adaptable and flexible in order to survive the last 10 years of drought. The biggest impediment to innovation and adaptation has been the constantly changing legislation and regulation that covers water policy at both a State and Federal Level.

Murray Irrigation is concerned that the *Water Act 2007* (Cth) (the Act) limits the ability of the MDBA to address social and economic impacts. We believe the current conflicting legal opinions surrounding the Act should be cause enough to amend it appropriately. As is stands, the MDBA interpretation of the Act has seen them focus entirely on flows when water resource management needs to incorporate much more than a reliance on volume.

We strongly believe that all aspects of natural resource management must be considered in order to develop a Basin Plan that will improve the overall health of the Basin. These important issues should not be relegated to issues beyond the scope of the Basin Plan.

Murray Irrigation believes that the best outcomes are achieved by innovation, not prescription. Innovation and creativity is fostered by allowing industry the freedom to explore opportunities without extreme regulatory burdens or constant policy changes that create uncertainty.

Similarly, industry diversification cannot occur without some level of certainty over water security and availability, something which the Basin Plan does not provide.

Murray Irrigation is concerned that the terms of reference for this inquiry are set out as though the Sustainable Diversion Limits (SDLs) as contained in the Guide to the Proposed Murray Darling Basin Plan are a *fait accompli* and all that is needed is a review of how to achieve these figures. Murray Irrigation does not support this stance.

It is the view of Murray Irrigation that the approach taken by the Murray Darling Basin Authority (MDBA), to concentrate on end of system flows and to ignore current and/or possible infrastructure or engineering measures to save and efficiently deliver water has led to the proposed cuts to SDLs being unnecessarily high.

Murray Irrigation rejects the “just add water” approach taken by the MDBA and contests that there are a number of factors other than flows that threaten river and floodplain ecosystem health. We are also concerned that the Guide to the proposed Basin Plan has been prepared at a time of record low inflows and record investment in the environment through programs such as The Living Murray

and Water for Rivers. It is our view that these environmental programs should be fully implemented and evaluated before removing more water from industry at the expense of local communities.

We want to see a healthy environment with - not at the expense of - strong regional communities and food production. To do this will entail a range of environmental works and measures projects to deliver more efficient environmental outcomes, as well as a more holistic approach to the environmental issues facing the Basin. This will mean there will be some trade-offs.

One such trade-off could be the need to water 100 percent of an hydrological site when, with environmental works, 80 percent of the same site could be watered using a fraction of the water, an example of which being the Lindsay Island site identified by the Victorian Government as a priority work to deliver efficient environmental water[1].

By the same token, we feel it is inappropriate and misleading to target 100 per cent of a given species, such as the Barmah-Millewa Forest Redgums, to be in good condition when even under natural situations a percentage of trees would be less healthy given distance from the river channel or proximity on the flood plain, disease and pest attack. This is an unachievable aspirational target, irrespective of level of human intervention.

As it stands, the Guide to the proposed Basin Plan offers no trade-offs and focuses purely on a flow-related regime with no regard for social and economic implications. Such an omission would devastate regions such as ours where 90 percent of businesses are reliant on irrigated agriculture for their survival[2].

If the Murray Darling Basin Plan does not give the same weight to social and economic impacts as it does to that of the environment, there is a genuine risk that the very basis of whole communities will be undermined. If this proposed Plan proceeds in its current form the future of entire communities is at risk.

Murray Irrigation is of the view that the failure of the MDBA to properly consult with communities and industry within the Basin in the preparation of the Guide to the proposed Basin Plan has resulted in a Guide that fails to maximise environmental benefits and minimise third party impacts. For any Basin Plan to work communities and industry must be involved and consideration must be given to non-flow related environmental problems and possible solutions.

**Request to Address the Committee**

Murray Irrigation appreciates the opportunity to provide the Senate Committee on Rural Affairs and Transport with this submission and requests the opportunity to address the Committee during the rounds of public hearings.

[1] "Priority works to increase the effectiveness and efficiency of environmental water delivery in northern Victoria, July 2010", Unpublished report, Victorian Department of Sustainability and Environment
[2] *NSW Central Murray Community Profile: Irrigation Region, Delivering the Basin Plan*, Marsden Jacob Associates, EBC Consultants, RMCG, DBM and advisors, May 2010, p.6.

**Introduction**

Murray Irrigation Limited is an unlisted public company that provides irrigation water and associated services to 2,389 landholdings over an area of 748,000 hectares in the NSW southern Riverina. Murray Irrigation's source of water is the regulated River Murray and the company's water supply is almost exclusively NSW Murray General Security Water.

Murray Irrigation's shareholders are farmers with food and livestock being the focus of regional production for both domestic and international markets. With a regional population of 33,000, irrigated agriculture is the foundation of the social and economic wellbeing of our towns and businesses.

Murray Irrigation is a member of National Irrigators' Council and New South Wales Irrigators' Council. We endorse both organisations' submissions to the Committee's Inquiry into the Management of the Murray Darling Basin.

**The Guide to the proposed Murray Darling Basin Plan**

Murray Irrigation is of the belief that if the Murray Darling Basin Plan does not give the same weight to social and economic impacts as it does to that of the environment, there is a genuine risk that the very basis of whole communities will be undermined.

If the Plan is implemented as per the Guide's recommendations, without consideration of environmental works and measures, strategic buy backs and working with irrigators to achieve the best outcome for all, it would drastically affect the ability of our community to remain viable[3].

It is the view of Murray Irrigation that the approach taken by the Murray Darling Basin Authority (MDBA), to concentrate on end of system flows and to ignore current and/or future infrastructure or engineering measures to save and efficiently deliver water has led to the proposed cuts to SDLs being unneccessarily high.

Murray Irrigation rejects the "just add water" approach taken by the MDBA and contests that there are a number of factors other than flows that threaten river and floodplain ecosystem health as described by the Murray Darling Basin Commission Scientific Panel in their Report on River Health in 2000[4].

The proposed Basin Plan has been prepared by the MDBA at a time of record low inflows. In May 2009 the MDBA reported that Murray System inflows had been below average in nine out of the last 10 years.[5] The investment in the environment during this time, particularly through the Living Murray program, Water for Rivers, and the NSW Water Sharing Plan (WSP) have not had an opportunity to be fully implemented or evaluated. There are questions that remain unanswered:

- What is the expected outcome from the Living Murray investment in both water recovery and works and measures?
- *Water for Rivers* is on track to meet its target of returning 70 GL of water for the River Murray environment. To what extent has this achieved the targeted environmental improvements?

[3] The Potential Effects of Changes to Water Allocation Policy on Financing the Agricultural Sector, October 2010, Adrian Rizza, Commissioned by MDBA

[4] *Report on River Health*, Murray Darling Basin Commission Scientific Panel, MDBC, 2000

[5] *River Murray System Drought update*, June 2009, MDBA

- The NSW WSP for the NSW Murray commenced in 2004 but was suspended in 2006 due to a "severe water shortage"[6]. The WSPs were designed to achieve a balance between the environment and water users. There has not yet been the opportunity to judge whether these will achieve their objectives.
- Has the potential benefit of this investment been modelled by the MDBA?
- Where are the results of this analysis?

It is our view that these environmental programs, in particular the investment in The Living Murray, Water for Rivers and Restoring the Balance to date should be fully evaluated before removing more water from industry at the expense of local communities.

**The Commonwealth Water Act 2007**

We understand that reviewing the *Water Act 2007* (Cth) (the Act) is not part of the Committee's terms of reference, however, Murray Irrigation believes that the Act does not deliver a triple bottom line outcome as promised by the National Water Initiative and should be amended. Failure to amend the Act could result in legal challenges against any final plan which would create further delays and uncertainty for regional communities.

We appreciate that the Minister, Tony Burke, has publicly stated his interpretation of the Act allows equal balance of the three considerations. Minister Burke appears to have a different interpretation to both the MDBA and that of the former Water Minister, Penny Wong. We assert that this in itself is the problem. Where the intent of the Act is open to interpretation, it is to legal challenge. It is our view that the Water Act must be thoroughly investigated and amended to ensure that it is clear in its intent to deliver a Basin Plan that meets social, economic and environmental objectives.

We fear the assessment of MDBA Chair, Mike Taylor, is correct that under the Act the MDBA "cannot compromise the minimum level of water required to restore the system's environment on social or economic grounds."[7]

We believe that Section 21 of the Act, which forms the basis of the Basin Plan, alters the original intent of the National Water Initiative's prescription that management of surface and groundwater resources should "optimise economic, social and environmental outcomes".[8]

It is our view that, if the MDBA does not believe it can address social and economic issues equitably under the Act as it is currently written, then the Act must be amended.

Further to this, as the Act currently stands, Murray Irrigation is concerned that the MDBA interpretation of the Act that underpins the Guide to the proposed Murray Darling Basin Plan is singularly focussed on increased flows when water resource management needs to incorporate more than a reliance on volume. It is our belief that adaptive management approaches that include natural resource management necessary to address all aspects of river health is a requirement of the Act. Specifically, Section 3 (f) of the Act states:

> *"to ensure that the management of the Basin water resources takes into account the broader management of natural resources in the Murray-Darling Basin."*

[6] http://www.gazette.nsw.gov.au/pdfs/2006/17th_%20November.pdf#page=5
[7] *Plan for the Murray Darling Basin – Role of the Authority Chair*, Statement by MDBA Chair Mike Taylor announcing his resignation, released 7 December 2010
[8] National Water Initiative, para 23

The Sustainable Rivers Audit (SRA), which the MDBA relied on as an indicator of river health, shows that two-thirds of rivers were in "moderate to good" hydrologic health, indicating that non-flow related issues are a problem, yet the only solution offered by the Guide is more water.

Further, the Scientific Panel reporting to the Murray Darling Basin Commission in 2000 found that there are a large number of factors other than flows that threaten river and floodplain ecosystem health[9]., This supports our belief that holistic natural resource management, rather than merely increased flows, must be considered in order to develop a Basin Plan that will improve the overall health of the Basin. These important issues should not be relegated to issues beyond the scope of the Basin Plan.

**Terms of Reference**

**(a) the implications for agriculture and food production and the environment;**

Prior to the extreme drought of 2006 and 2007, the Murray Irrigation area of operations produces 50 percent of Australia's rice crop and, in terms of State production, 20 percent of milk, 75 percent of processing tomatoes and 40 percent of potatoes.

Drought saw sustained reductions in crop production across Australia with the Australian Bureau of Statistics (ABS) Agricultural Commodities reports highlighting the falls in production throughout the drought years. Rice production is directly related to water availability evidenced in the Commodity reports below:

1. "Lack of water saw area planted to rice fall sharply in 2006-07, down 81 percent to 19,700 hectares. Rice production was similarly affected, down by 84 percent to 163,000 tonnes. New South Wales was the main growing state, reporting 99% of total area sown and total production."[10]
2. "Lack of water saw the area planted to rice fall sharply in 2007-08, down 90 percent on historical lows of 2006-07 to 2 thousand hectares. Rice production was similarly affected, down by 89 percent to 18 thousand tonnes. New South Wales was the only state in which rice was grown."[11]
3. "In 2008-09 the area sown to rice more than trebled to seven thousand hectares compared with the previous year due to increased availability of water for irrigation. Production similarly increased to 61 thousand tonnes. However, these figures are still markedly below the levels recorded ten years ago."[12]

The implications of the proposed SDLs on agriculture and food production cannot be under-estimated. The SDLs will mean less water available for agriculture. It does not matter how environmental water is achieved – through voluntary buy backs or some form of compulsory acquisition (which we understand is not an option) – it will not be available for agriculture. Therefore, if you look at yield per megalitre for irrigated agriculture, you see a pro-rata decline in agricultural production to water availability.

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[9] *Report of the River Murray Scientific Panel on Environmental Flows*, Thoms et al, June 2000, MDBC

[10] <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/7121.0Main%20Features32006-07?opendocument&tabname=Summary&prodno=7121.0&issue=2006-07&num=&view= > accessed 6 December 2010, 2.49pm

[11] <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/7121.0Main%20Features32007-08?opendocument&tabname=Summary&prodno=7121.0&issue=2007-08&num=&view= > accessed 6 December 2010, 2.51pm

[12] < http://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/7121.0Main%20Features32008-09?opendocument&tabname=Summary&prodno=7121.0&issue=2008-09&num=&view= > accessed 6 December 2010, 2.51pm

Industry continues to undertake research into water efficient farm management practices as well as developing water efficient varieties of grains, however such research is long term and with demand for food expected to increase, it will be a necessity to produce more food for the water available, not more food for less water. However, industry funding for such research is tied to levy's on production. Therefore, if production declines, funding for research and consequently research projects also decline. In addition the Productivity Commission has recommended to cut Government contributions to industry specific Research and Development Corporation (RDC) funding, which is currently tied to the levy amount and so would also show a decline in line with production.

If we turn our attention to environmental implications, farmers are some of the best environmental custodians in the country. They control noxious weeds and feral animals, undertake soil conservation and monitoring programs on their land, participate in local Catchment Management Authorities and Landcare group activities and invest considerable time, effort and money into natural resource management. Removing their capacity to operate profitably clearly reduces their capacity to provide environmental services.

The Murray regional Land and Water Management Plans (LWMP) are an example of a successful program that saw State and Federal Government funding provided to local community groups who designed and co-funded local projects to improve social, economic and environmental sustainability.

This program allowed Murray Irrigation to construct an effective drainage system to reduce the impact on groundwater rise and salinity. This system was carefully engineered to ensure there were minimal impacts downstream, water quality is closely monitored and outflow controlled.

The LWMP program also saw on farm works projects devised to develop farm management plans to improve land-forming, native vegetation protection and irrigation reticulation. From the programs commencement in 1995 to January 2010, the Murray Land and Water Management Plans saw an investment of $106million Government funds with the Community contributing $544million.

Unlike the "just add water" approach taken by the MDBA, the LWMP took an holistic approach to environment and water management and, by targeting local issues, ensured community support for the projects.

Further, Murray Irrigation contends there is little evidence that the "just add water" approach will work. Murray Irrigation has already participated in Government initiatives designed to address river health by returning water to the environment through the Water for Rivers program, The Living Murray, and Restoring the Balance. As at October 2010, 208,722 NSW General Security Water Entitlements had been returned to the environment through these programs. This equates to 17.5 percent of our original General Security licence volume.

Murray Irrigation believes these water initiatives which rely on increasing environmental flows as well as water management, have not yet been evaluated to see if they actually achieve the desired result, in the case of the Living Murray initiative to maintain the river health at six icon sites[13]. By allowing these projects time to be fully implemented and studied, we may find that increased flows alone will not improve river health and other, more adaptive management practices, such as the Stevens Weir fishway, will need to be incorporated into the Basin Plan. **Murray Irrigation would like to see all environmental water initiatives, including infrastructure works and buybacks, current and proposed, included in the calculations for reducing SDLs.**

[13] The Living Murray Fact Sheet, http://www.mdba.gov.au/system/files/The-Living-Murray-fact-sheet.pdf, accessed 12.53pm 13 December 2010.

**(b) the social and economic impacts of changes proposed in the Basin;and**
**(c) the impact on sustainable productivity and on the viability of the Basin;**

Deniliquin is one of eight towns identified by an MDBA commissioned report, that will struggle to remain viable in the absence of sufficient irrigation[14] and it is estimated that 90 percent of industry in Deniliquin is directly reliant on irrigated agriculture[15]. Changes to water availability will have massive consequences in our community including the satellite towns of Finely, Berrigan and Wakool.

Australian National University Economist Quentin Grafton asserts that the drought had minimal impact on gross income in the Murray Darling Basin[16]; however it is the opinion of Murray Irrigation that he has over-simplified the Australia Bureau of Statistics (ABS) Gross Value of Irrigated Agricultural Production (GVIAP) report by looking at the whole-of-Basin bottom line rather than giving consideration to commodity, regional and farm type vagaries and the limitations of the information.

The GVIAP report shows that irrigation dependent commodities that rely on general security water entitlements, such as rice and to a lesser degree cotton, showed a dramatic decrease in the value of irrigated production. The value of rice production decreased from $55 million to $7 million from 2006-07 to 2007-08 at the height of the drought. Irrigated Cotton followed this trend with a 57 percent decrease in irrigated production. As the NSW Murray is the centre for the majority of Australia's rice production it stands to follow that The Murray NRM region in NSW had the largest decrease in GVIAP over the same period ($439 million to $205 million).

Further, the GVIAP data has not been adjusted for inflation and represents output price only therefore ignoring farm input costs. Our estimates conclude that, after accounting for inflation, real GVIAP fell by 20 percent between 2000-01 and 2006-07. The ABARE Farm Survey Reports from 2004 to 2010 show the difference in real farm performance, income versus profit, during the drought period. This means that while GVIAP for horticulture shows high earnings from horticulture in 2006/07, many farms were running at a loss.

The removal of water from irrigated agriculture through the proposed basin plan will see a similar reduction in production which will have a major impact on both the economic and productive sustainability of this region. The fabric of this community will change.

One example of the effects of a loss of productivity is the Deniliquin Rice Mill which, in 2008 at the height of the drought, closed its gates leading to around 200 job losses. Fortunately the Mill, the largest in the southern hemisphere, will be reopening in April 2011; however, most of the skilled workforce previously employed at the Mill left the area following the closure. This highlights the fact that when a tradesperson or skilled labourer loses their job, they do not stay in the area, they take their families and their skills elsewhere. This is supported by unemployment data, where the region's unemployment rate is lower than the surrounding areas and the rest of Australia, due to working age people leaving to find work elsewhere rather than being indicative of a vibrant economy.[17].

[14] The Potential Effects of Changes to Water Allocation Policy on Financing the Agricultural Sector, October 2010, Adrian Rizza, Commissioned by MDBA
[15] Delivering the Basin Plan, May 2010, Marsden Jacob Associates, commissioned by MDBA
[16] Several interviews including http://www.abc.net.au/rural/news/content/201010/s3037983.htm accessed > 6 December 2010, 1.46pm
[17] *DRAFT Central Murray Cluster Group of Councils Strengthening Irrigation Communities draft Synthesis Report – Stage 1: Where are we now.* Hyder Consulting Ptd Ltd, 25 October 2010, p. 8.

During the past drought the NSW Rural Assistance Authority recognised the impact a loss of farm income can have on small businesses within the community and extended its Exceptional Circumstances (EC) Interest Rate Subsidy to small businesses that are either in a town of less than 10,000 or derive 70 percent of income from farm based trade and are located in an EC declared area.

Marsden Jacob Associates estimate that during the drought, in the NSW Central Murray region around 30 percent of farm businesses accessed Rural Counselling services with over 600 applications annually to the Rural Assistance Authority for Farm Interest Subsidies[18]. Small business applications are not included in this figure. In the event of the implementation of the Basin Plan, similar losses in revenue would occur without the safety net of exceptional circumstances payments.

Financial stress and uncertainty about the future through constantly changing water policy and drought have led to an increase in the demand for local counselling services. Anecdotal evidence suggests mental health issues, relationship breakdowns and suicide are all on the rise in rural areas.

Communities across the depth and breadth of the Basin rely on irrigated agriculture without which, they will decline leading to social decay. The population density within our region that is within ten kilometres of an irrigation area is 1.6 persons per square kilometre, compared to only 0.22 beyond 10 kilometres from an irrigation area.[19]

**(d) the opportunities for a national reconfiguration of rural and regional Australia and its agricultural resources against the background of the Basin Plan and the science of the future;**

Murray Irrigation is of the view that "science" needs to be more than a hypothesis and must be thoroughly reviewed and proven before it is acted upon at the expense of local communities.

For example, the MDBA admits in the Guide that the science and data it has used comes with only a "medium" level of confidence and that it has little evidence to be sure of successful outcomes from environmental watering[20]. The unknown factor should be enough to warrant caution before devastating regional areas.

There are opportunities for agricultural development across the nation, but it should not necessarily be driven by government. Ultimately farmers will make choices about where or how they run their businesses based on what is practical, affordable and profitable. While government can assist with encouraging research and development in new industries and technologies, it will be the market that decides whether or not this is to be successful in the long run.

Murray Irrigation has looked at development and diversification in the past with a view to provide our customer shareholders with investment options for their businesses; however, in the face of declining water availability during the drought and ongoing uncertainty surrounding water policy, corporate activities in this area have been suspended. Farmers in the region have also shown a reluctance to invest in diversification until their water futures are more certain.

Murray irrigation is instead committed to further improving system efficiencies and accurately accounting for water savings resulting from any modernisation projects.

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[18] *NSW Central Murray Community Profile: Irrigation Region*, *Delivering the Basin Plan*, Marsden Jacob Associates, EBC Consultants, RMCG, DBM and advisors, May 2010, p.12.

[19] *Central Murray Cluster Group of Councils Strengthening Irrigation Communities draft Synthesis Report – Stage 1: Where are we now.* Hyder Consulting Ptd Ltd, 25 October 2010.

[20] *Guide to the proposed Murray Darling Basin Plan*, *Vol 2*, *Part 1*, MDBA, October 2010, p. 87.

**(e) the extent to which options for more efficient water use can be found and the implications of more efficient water use, mining and gas extraction on the aquifer and its contribution to run off and water flow;**

Murray Irrigation has worked extensively with the NSW Department of Environment, Climate Change and Water, the NSW Office of Water and River Murray Water to achieve gains in water use efficiency and continues to do so.

While we are of the opinion that not all of these projects have been evaluated to ensure the goal of improving environmental health is being met, we approve of the approaches being taken and the community consultation that occurred designing and implementing these initiatives.

It is our belief that in the highly regulated River Murray, any effective solution needs to be inclusive of works and measures. It is essential that evaluation of the effectiveness of infrastructure investment to deliver environmental outcomes such as the planned works in the Koondrok-Perricoota Forest, be part of the Plan to offset the impacts of SDLs on basin communities.

The Living Murray initiative (TLM) is an example of how, with proper community consultation and an open mind, significant water recovery can be achieved through a variety of measures including water infrastructure upgrades and engineering works[21]. It also shows that environmental objectives do not rely purely on flows but other initiatives, such as fishways, channels and levee banks to address concerns about the health of icon sites.

Water for Rivers is another project that has met its target of returning 282 GL of water to the environment (212 GL for the Snowy, 70 GL for the Murray) through a strong emphasis of infrastructure investment and environmental works and measures and community and stakeholder engagement.

Murray Irrigation is of the view the Government process to date has ignored this type of approach, focussing more on water buybacks significantly affecting the ability of infrastructure operators to maintain and upgrade their systems to become more efficient. By investing in more efficient environmental watering outcomes, the Government can deliver on its environmental objectives while limiting the damage to regional communities.

To assume the answer to poor environmental health can only be delivered by increased flows without also considering how environmental works and measures, or the considered use of existing infrastructure, is to completely ignore what the river is today – regulated and managed.

Murray Irrigation currently works with the NSW Department of Environment, Climate Change and Water to deliver environmental water to identified wetlands through our irrigation system. In 2009/10 1.4 Gigalitres had been delivered to 19 private wetlands in the Murray Irrigation District. These projects achieve environmental outcomes including improved wetland understorey plant diversity and tree health, a reduction in weeds and an increase in landholder awareness and participation. The project uses irrigation infrastructure channels to effectively deliver water to target wetlands with no impact on surrounding productive farmland.

In regards to the effects of Mining on aquifers, there are currently no mining operations within our area of operations. From a Basin perspective, however, there are concerns in respect of the impact of mining on productive water. We believe that anything short of absolute certainty that an aquifer

[21] < http://www.mdba.gov.au/system/files/The-Living-Murray-fact-sheet.pdf > accessed 7 December 2010, 11.57am.

will not be damaged or negatively impacted is necessary prior to approval of mining activity in proximity to it. Murray Irrigation is also of the view that mining enterprises must purchase water entitlements in the same manner that farmers are required to do so for production purposes.

Murray Irrigation is extremely concerned at the implication in the Guide that, while interception and watercourse diversions are both considered forms of "take", only watercourse diversions can actually be cut to meet new SDLs. This stand is extremely unreasonable when the estimated volume of unaccounted for water through interceptions is almost a quarter of entitled water on issue[22]. The interception of water by plantation forestry and farm dams has increased considerably in recent decades and has had a marked impact on available water in the system. The need to adequately regulate unaccounted water use through interceptions has been recommended by the National Water Commission[23] and must be enforced to prevent full load of any cuts from the Basin Plan to be borne by surface water users.

In our view, the Committee should advise governments of the need to ensure that all forms of take are fully accounted for and included in the licensing system. That is, if interception activities are considered to have an impact on the available resource, then those responsible for the activities must be made to purchase entitlements in the market place like any other economic user. The creation of new entitlements to meet the needs of these activities in a capped system would have detrimental third party effects.

**(f) the opportunities for producing more food by using less water with smarter farming and plant technology;**

Murray Irrigation is currently working with the Federal Government and individual landholders to administer 141 on farm irrigation efficiency projects under the Water for the Future Program. Previous to this, Murray Irrigation worked with landholders implementing the Murray Land and Water Management Plans designed to improve farm management, water management and natural resource management and take a holistic approach to sustainably improving environmental outcomes.

Murray Irrigation continuously conducts maintenance and upgrades to our system of channels to improve water efficiencies and environmental outcomes.

Murray irrigation in principal supports further research and development of farming best management practices and technology, ie; developments that will improve efficient use of water to produce higher yields per megalitre while maintaining profitability commensurate with risk.

Murray Irrigation believes that the best outcomes are achieved by innovation, not prescription. Innovation and creativity is fostered by allowing industry the freedom to explore opportunities without extreme regulatory burdens or constant policy changes that create uncertainty.

Such uncertainty has a direct impact on farmers' investment decisions. Farmers are unlikely to invest time or money in water saving projects while they do not know what their water access looks like to the future.

[22] *Waterlines; Surface and/or Groundwater Interception Activities*, National Water Commission, June 2010 p. IX

[23] *Waterlines; Surface and/or Groundwater Interception Activities*, National Water Commission, June 2010 p. IX AND *Australian Water Reform 2009*, National Water Commission, 2009

An example of a proposed On-Farm Irrigation Efficiency Project being funded through the Commonwealth Government's Water for the Future Program will be completed at a cost of $84,000 to the Government, over $13,000 of in kind contributions from the farmer and will result in 180 hectares of irrigated land being upgraded, saving him 58ML per year and allowing a transfer of 40 NSW General Security Water Entitlements to be transferred to the Commonwealth Water Holder.

Such projects will only be taken on where there is stability of policy and water reliability to allow effective farm planning. The current volatile and uncertain regulatory environment undermines investment.

It is also important for farmers to ensure they do not lose by investing in the Environment. In 2009 Murray Irrigation commissioned Marsden Jacob Associates (MJA) to analyse the benefits and costs of investments in water saving technologies and strategies on farms within our area of operation. The study also analysed the public benefit created through the reallocation of water to the river redgum forests.

The ensuing report found that, while there was a net public benefit under most scenarios, the cost to the individual farmer of converting to water saving technologies or dryland farming was not met by the market value of water. This means, without support, farmers do not have an economic incentive to invest in farm level water conservation[24]. The conclusion is that economic value of water for environmental flow augmentation requires a price premium that exceeds the open market price, which primarily signals the economic value of water for irrigation, for the farmer to break even.

**(g) the national implications of foreign ownership, including:**
**(i) corporate and sovereign takeover of agriculture land and water, and**
**(ii) water speculators;**

Murray Irrigation will work with the landholder to ensure the water needs of the landholder are met regardless of whether they are a family farm business or a corporate or foreign entity. Foreign investment has been a part of Australian agriculture throughout its history; however, it is important that ownership of key assets and resources is identifiable and we note there is no method for quantifying this at the present time. For this reason we could support the establishment of a register of foreign ownership of land and water but would expect to be consulted further in the event of more detailed proposals being considered by Government.

Murray Irrigation has no formal policy in relation to "water speculators", although we have always supported the development of a strong and clearly defined property right for water entitlements.

**(h) means to achieve sustainable diversion limits in a way that recognises production efficiency;**

The easiest way to achieve SDLs without impacting on production efficiency is to include previous, current and proposed works and measures programs in the calculations. For example the NSW Koondrook-Perricoota Forest project, which is designed to water 17,000 hectares of River Redgum forest with as little as 6,000ML per day as opposed to the 18-35,000ML per day natural flows required to inundate the Forest. Such environmental works have not been taken into consideration in the Guide to the proposed Basin Plan.

[24] *Benefit cost analysis of farm level investment in water saving*, Marsden Jacob Associates, a report prepared for Murray Irrigation Limited, February 2009.

Further NSW projects have been put forward to the Federal Government and are yet to be announced, however, these will also mitigate the need for irrigators to bear the brunt of water savings required to meet the proposed SDLs.

We say again, environmental works and measures must be considered in any Basin Plan to, not only restore some end of system flows, but also efficiently deliver environmental water without the risk of third party impacts.

**(i) options for all water savings including use of alternative basins; and**

Murray Irrigation believes in improving river management and catchment management systems and infrastructure as a means of creating water savings or increasing storage capabilities. We recognise there are potential opportunities for inter-basin transfers of water and governments should investigate such options.

**(j) any other related matters.**

Murray Irrigation believes the 'just add water' approach taken by the MDBA is dangerous in that it will devastate local communities and, without broader natural resource management initiatives, is **not guaranteed to improve the health of the river**. It is widely accepted that there are other factors that significantly influence river health, yet the MDBA has failed to consider any of these in the Guide.

The reliance of the MDBA on the Sustainable Rivers Audit (SRA) as a key indicator of river health is, in our view, a misguided use of this report for two reasons. Firstly, the report was undertaken during the worst drought in history which stressed the river system; secondly the SRA considers three measures of river health of which hydrology is only one.

The SRA finds that only three of the 23 river valleys were assessed as being in "good" or "moderate" ecosystem health and the remaining 20 were rated "poor" or "very poor". However, on the hydrology measure, the result is reversed: only five valleys were in the "poor to moderate category", while the remaining 18 are rated "moderate to good". This would indicate that lack of water flows is not the problem – but it is the only solution being offered by the MDBA in the Guide.

The MDBA are aware of the effectiveness of engineering works such as regulators, channels, fishways and levee banks as well as man-made drought refuges and have incorporated them into The Living Murray. It is not clear why they have ignored options that can also address river health in the Guide to the proposed Basin Plan.

Another major concern of Murray Irrigation is how the water identified for key assets will be delivered without risking increased flood incidents and third party impacts. Murray Irrigation has identified several points on the river system where delivery of the desired water flows to key assets will exceed the maximum regulated flow capacity upstream of the asset.

The Guide does not give proper consideration of the practicalities of increased flows – such as the ability of the river channel to deliver said flows without adverse impacts on riverside communities AND/OR the river channel itself. A recent example is the September 2010 floods in Shepparton which occurred when flows at McCoy's Bridge peaked at just over 59,000ML per day for just four days resulting in over $2million worth of damage. The Guide to the proposed Basin Plan recommends sending flows of 60,000ML per day for seven days at least once every 15 to 20 years[25].

[25] http://www.weeklytimesnow.com.au/article/2010/12/01/267071_latest-news.html, accessed 13 December 2010, 2.41pm.

**Conclusion**

Murray Irrigation is of the view that the proposed cuts to SDLs contained in the Guide to the Proposed Basin Plan are unnecessarily high and through the consideration of environmental works and measures and effective utilisation of existing infrastructure, water savings can be made that will ease the burden on irrigators and, more broadly, basin communities.

The MDBA needs to reconsider the 'just add water' approach and adjust the recommendations contained in the Guide accordingly. Consideration must be given to the other factors that influence river health.

To assume the answer to poor environmental health can only be delivered by increased flows is simplistic to the extreme.

The River Murray is highly regulated system providing multiple benefits in addition to the supply of irrigation water such as tourism, recreation, urban water and navigation for boating. Solutions to the issues facing the River Murray lie in a collaborative approach between Governments (State and Commonwealth) and regional communities. Development of solutions will take time and demands solutions that are developed at a regional scale.

We assert that the approach taken by the MDBA is flawed. The Guide to the Proposed Basin Plan recommends 3-4,000 GL of water be returned to the Basin. The 3000 GL scenario effectively takes out the equivalent of a full Hume Dam every year while 4,000GL would take out Dartmouth Dam every year. Both scenarios effectively take out the entire contribution of the Snowy Mountains Scheme to River Murray flows - Australia's most ambitious civil engineering project.

Murray Irrigation supports the Government's current position to meet the final Basin Plan's SDLs by purchasing the difference or investing in infrastructure; however, we suggest that through consultation with local communities, Catchment Management Authorities, State Departments and Infrastructure operators, efficient water savings and targeted environmental watering projects can be achieved without the need for such drastic impacts on irrigation communities.

Since privatisation, Murray Irrigation has returned 17.5 percent of its General Security Licence Volume, or over 208,000 General Security Water Entitlements to the Environment. This water forms part of our commitment to The Living Murray program, Water for Rivers, Restoring the Balance and through our work with the NSW Department of Environment, Climate Change and Water. The benefit of all of these projects, each of which was meant to address the health of the river and wetlands, is that they involved the local community to identify methods to achieve water savings as well as means to deliver environmental water. Such a strategy was not taken by the MDBA in drafting the Guide to the proposed Basin Plan.

We suggest that such consultation must occur to achieve a Basin Plan that can be delivered with maximum environmental benefit and minimal third party impacts, either through reduced water access or increased flood events due to the inability of river channels to actually deliver the proposed environmental flows.

Murray Irrigation sees it as imperative that a sustainable Basin Plan is developed and implemented as the current uncertainty is damaging to communities in itself. However, this reinforces our opinion that the Basin Plan must be balanced. That is the only way we can prevent constant tinkering at the edges that will inevitably occur if the Plan is unbalanced or, worse, is open to legal challenge due to the open interpretation of the water Act.

Irrigation communities need stability and certainty so they can continue to provide food and fibre for the nation and the world.

The Guide to the proposed Basin Plan is a top down, single response approach which in Murray Irrigation's opinion needs to be dramatically revised in a collaborative manner between Governments and the community.

Signed

**Anthony Couroupis**
**General Manager**