

# **Gwydir Valley Irrigators Association Inc.**

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458 Frome St, PO Box 1451, Moree NSW 2400

**Submission to the Murray Darling Basin Authority on:**

*Draft Constraints Management Strategy*

**Gwydir Valley Irrigators Association Inc**

**October 2013**

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# 1 Purpose of this submission

This document has been developed by the Gwydir Valley Irrigators Association (GVIA) on behalf of its members as a formal submission for consideration by the Murray Darling Basin Authority.

This document represents the concerns and views of GVIA's members. However, each member reserves the right to express their own opinion and is entitled to make their own submission.

The GVIA as a member of both the National Irrigators Council and NSW Irrigators Council supports the submissions by both these organisations.

## 2 About the Association

### 2.1 *Where we are and what we do*

The Gwydir Valley Irrigators Association (GVIA) represents in excess of 250 water entitlement holders in the Gwydir Valley, centred around the town of Moree in North-West New South Wales. Our mission is to build a secure future for its members, the environment and the Gwydir Valley community through irrigated agriculture.

Our members hold entitlements within the Gwydir regulated and un-regulated surface water areas, in addition to groundwater resources. All of which are managed through water sharing plans with two of these plans under scrutiny as part of this submission.

The main broadacre irrigated crop is cotton with irrigated wheat, barley and Lucerne also occurring depending on commodity prices. Currently there are also pecans, walnuts, oranges and olives being grown within the region covering approximately 1,500 hectares. There is however, significant and potential for expansion into horticulture.

The Gwydir Valley Irrigators Association organisation is voluntary, funded by a cents/megalitre levy on regulated, unregulated and groundwater irrigation entitlement. In 2010/11 the levy was paid on in excess of 87% of the eligible entitlement (excludes entitlement held by the State and Federal Government).

The Association is managed by a committee of 11 irrigators and employs a full-time executive officer and a part-time administrative assistant, as well as hosting a Regional Landcare Co-ordinator.

Much of the activity the association revolves around negotiating with government at a Federal, State and Local level to ensure the rights of irrigators are maintained and respected.

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While the core activities of the Association are funded entirely through a voluntary levy, the Association does from time to time, undertakes special projects, which can be funded by government.

The GVIA and its members are members of both the National Irrigators Council and the NSW Irrigators Council.

We support the submissions made by NSW Irrigators Council on behalf of the irrigation industry of NSW.

## **2.2 Association Contacts**

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## **3 General Comments**

Prior to the release of the Murray Darling Basin Authorities (MDBA) Constraints Management Strategy (CMS) the GVIA was of the understanding that the main aim of the strategy was to develop methodologies to adjust the basin wide SDL. The CMS provided to stakeholders on 9 October 2013, does not conform to this understanding.

The CMS outlines high level, non-specific constraints for consideration and places far too much importance on rules and regulations rather than focusing on the physical constraints in the Murray-Darling basin. The lack of detail on the identified constraints and the poor communication and engagement, indicates that the CMS

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was rushed and not thoroughly considered prior to its release. The immediate response by governments, industry and communities supports this further.

The GVIA is extremely concerned that by releasing the CMS the MDBA is overtly casual about changing existing water management rules without much detail as to why. This suggests to the GVIA that the MDBA is disregarding water rights as defined by state based water sharing, the legitimacy of these existing plans and the experience of state-based water regulators. The GVIA is also concerned with the potential impacts to the water market if there are significant rule changes proposed.

Most concerning of all, was the perplexing discovery that the Gwydir valley was included as a priority area for the MDBA to further assess constraints. The GVIA disagrees with the Gwydir being considered a priority for the MDBA as the Gwydir doesn't meet the fundamental design of the CMS.

The CMS is predicated by two main drivers pertaining to the Sustainable Diversion Limit (SDL) adjustment process, including methodologies to calculate any adjustments. The two potential processes being to:

1. Increase the volume of water available for the environment (up to 450GL) provided social and economic outcomes can be maintained or improved; and
2. Reduce the volume recovered for the environment (by up to 650GL) provided that

#### 1. Additional 450GL above 2750GL:

The intention of the 450GL increase was to achieve broader MDB outcomes through better understanding and addressing where feasible constraints in the Southern connected system. Hence the Gwydir a closed system with limited reliability to contribute to the Barwon-Darling let alone contributing significant flows beyond Menindee Lakes, cannot be included as a priority under this process.

Whilst the GVIA acknowledge that extremely large, unregulated (unmanageable) natural flood events do provide opportunistic connectivity to the Barwon River, these flows cannot be recreated through environmental flows and will continue to occur naturally.

#### 2. Reduction of 2750GL:

The GVIA appreciates there are constraints in delivering the 2,750 GL SDL for the whole of the MDB. However, Basin Plan outcomes as those outlined for the Gwydir, can still be achieved with these constraints in place. The GVIA do not share the MDBAs concern that the Gwydir should be a priority for investigation of these constraints. The reasons being:

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- The Gwydir is already over-recovered by 8GL and therefore, there is more water already available than required and with no commitment to re-evaluate the Commonwealth's portfolio, reducing the SDL would increase the volume of water over-recovered;
- The Gwydir as a closed system has a very limited capacity to reliably and effectively contribute any over-recovered water to out of valley outcomes, therefore there will not be any broader MDB benefit by addressing constraints within the Gwydir;
- Any constraints in the Gwydir stem from the fact that the SDL for the Gwydir is greater than what is actually required to maintain our environmental assets, due to the fact that the MDBA did not consistently apply the Ecological Sustainable Level of Take methodology in the Gwydir during basin plan modelling and the Gwydir water sharing plan is more than adequate in providing for the Gwydir wetlands;
- The Gwydir Water Sharing Plans are currently under review with a remake due before 2014, which may include some changes, negating any further constraints work;
- The Gwydir has the opportunity to participate in the Northern Basin Review including a science and review of SDLs. Any constraint management analyses should not occur until this review has had the opportunity to be completed.

The GVIA acknowledges that this adjustment process aims to achieve environmental outcomes with less water. We advocated for this opportunity throughout the Basin Planning process and support the concept. However, the GVIA do not agree that the constraints listed for the Gwydir (those being private landholders and communities living on the floodplains around and West of Moree), if addressed, would allow for outcomes to be achieved with less water but provide other opportunities to justify the utilisation of more water.

The GVIA is not disregarding the impact that environmental watering can have on third parties; we do not currently support the need to have multiple bureaucracies overlapping strategies and studies. The GVIA, like communities, are exhausted from water reform and demand there to commonsense approach to streamlining workloads. As such, we do not support work being undertaken in the Northern valleys for constraints management until the completion of the remake of water sharing plans and the Northern Basin Review, where projects and opportunities for improved environmental water delivery will be explored in further detail.

Nonetheless, the GVIA encourages the continual exploration of the opportunity to achieve environmental outcomes with less water. Although we do not consider this a function of constraints management rather a responsibility for the local Environmental Contingency Allowance Operational Advisory Committee (ECAOAC) tasked with

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managing environmental water in the Gwydir and environmental water managers; so that they make the best use of the water available to them. The ECAOAC, representing landholders, environmental groups and industry, is the best platform to begin to discuss and implement such activities, not the MDBA as part of a basin-wide constraints strategy.

The MDBA should focus on constraints where the best value return for the environment and communities, in terms of financial investment for environmental outcomes with minimal socio-economic cost. The Gwydir, a closed hydrological system that already has more environmental water than required (the valley is over-recovered for the Basin Plan SDL), does not meet this value proposition.

Furthermore, the GVIA disagrees that the MDBA have extensively engaged stakeholders in developing this strategy. Ministerial responses following the release of the strategy by both NSW and Victoria suggest that even Basin governments do not consider that they have been consulted adequately either.

The GVIA notes that as part of the CMS, Moree was one location of more than 70 meetings around the basin to discuss the CMS. This is an overstatement that the MDBA have consulted the community and industry regarding the strategy. The GVIA is aware to two general meetings with the MDBA in April and July 2013 and one meeting with the Regional Landcare Facilitator hosted by the GVIA to discuss future engagement opportunities. None of these meetings were particularly seeking feedback on the CMS or the constraints listed as a concern for the Gwydir. There was no opportunity to provide input into the development of this strategy.

The GVIA acknowledges the MDBA chairman's advice that the strategy is to start a conversation. We encourage the MDBA to continue this conversation with the GVIA and other local groups like the ECAOAC. However, we would recommend that the MDBA be more considerate to how they initiate such conversations in the future and be more sensitive to the communities and individuals that rely on water for their livelihood.

In preparing this submission the GVIA have also looked at the four areas identified by the MDBA for providing feedback.

## **4 Specific Feedback on Main Elements**

### ***4.1 The principles to guide the work***

As stated above, the GVIA rejects the inclusion of the Gwydir as a priority area and requests evidence of the Gwydir Valley being assessed against the overarching principles as outlined in the CMS. We believe the Gwydir does not meet the criteria;

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in particular that investment should be prioritised on the basis of basin wide environmental outcomes.

Whilst the GVIA agrees with the overarching principles, we request that the MDBA should be more explicit in indicating that entitlement for held environmental water will maintain the same characteristics of the entitlement pool that it was acquired from i.e. licences purchased for environmental purposes should not have their licence conditions changed following acquisition.

#### **4.2 The proposed phased timetable that allows for detailed analysis of each constraint and assessment of what may be possible to change**

The GVIA does not have any specific concerns with the proposed timetable. However, we do recommend that for any Northern Valley to be considered for inclusions in the CMS, the MDBA should wait until the completion of the remake of their water sharing plans and the Northern Basin review.

#### **4.3 Whether the river rules and practices that have been identified for further work are appropriate**

The GVIA has made the following comments pertaining to the priority areas for further work as outlined in Table 1 of the CMS and the applicability of the Gwydir for inclusion in this work.

<b>Operational Outcome sought</b>	<b>Broad description of constraint</b>	<b>Priority actions</b>	<b>Prioritisation</b>	<b>GVIA Comments</b>
Delivery of environmental water on top of other in-stream flows.	Currently a water order is for a volume. Orders are met by the most efficient source to conserve water for extractive use. This includes using water from unregulated flows to meet the order. This limits managers' ability to 'top up' events.	Develop formal (standing) operational and management practices to allow held environmental water to build on natural flow cues including in-stream, or where safe, unregulated flows.	High priority  (Southern connected system and regulated systems).	N/A for the Gwydir  The Gwydir ECAOAC determines an annual watering plan and actively implements as necessary throughout the water year.

Operational Outcome sought	Broad description of constraint	Priority actions	Prioritisation	GVIA Comments
Environmental water is protected on an event basis from consumptive extraction or re-regulation.	There is no recognition of an entitlement en route or beyond its order point and environmental water use is difficult to measure, particularly during an event.	Develop and implement policies to protect environmental water from consumptive extraction or re-regulation.  Develop a methodology to estimate environmental use which is transparent and equitable.	High priority  (Murray, Barwon–Darling and Murrumbidgee and tributary inflows).	N/A for the Gwydir  Gwydir in stream outcomes target the terminal wetlands, either the Mallowa or Gwydir wetlands, and water access licence conditions of all licence holders limit access to allow safe passage.  The GVIA holds significant concerns with the application of shepherding. Please refer to GVIA submission on NSW Office of Water’s proposed Shepherding Policy (attachment A).
Environmental water can be used throughout the length of a river.	Water orders associated with entitlements are met by placing a water order for volumetric extraction at one location on the river. Water	Develop operational and management practices to enable held environmental water to flow throughout the river (via a	High priority  (Murray and Murrumbidgee)	N/A for the Gwydir.  Water orders can be attached to works approvals throughout the

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Operational Outcome sought	Broad description of constraint	Priority actions	Prioritisation	GVIA Comments
	cannot be ordered in a way that can ensure it benefits multiple sites.	release from headwater storage to the end of the system).		<p>system. The Environmental Water manager already selects the most appropriate work approval location depending on the outcome sourced.</p> <p>Whilst multiple benefits can be achieved in practice, the difficulty is reporting of these outcomes.</p>
Transparent and equitable channel capacity sharing.	The capacity of a river channel to carry water can limit the volumes able to be delivered. Channel capacity competition arises at times of both high consumptive and environmental demand.	Develop formal supply sharing arrangements to provide a mechanism for managing the delivery of water when demands exceed channel sharing capacity.	Medium priority.	<p>There are already capacity constraint guidelines in place as per the Water Sharing Plan for the Regulated Gwydir River Water Source and State Water operational rules that share capacity according to total shares allocated on streams. The total shares of streams should be respected to avoid over allocation.</p> <p>The remake of the Water Sharing</p>

Operational Outcome sought	Broad description of constraint	Priority actions	Prioritisation	GVIA Comments
				<p>Plan will further expand on rules already in place for the Gwydir.</p> <p>All water access licences within the same category should be treated with equal merit.</p>
Held environmental water is available in time to respond to natural cues	The timing of the water year and reaching peak allocations do not align with natural seasonality. At times there may be insufficient environmental water to commence a water event.	Investigate options to improve the availability of environmental water to enable it to respond to natural cues.	Medium priority	<p>N/A for the Gwydir</p> <p>The Gwydir has carryover limits to allow for individuals (irrigators or the environmental water managers) manage their own risk.</p> <p>The Commonwealth Environmental Water Holder has a variety of licences to manage risk and opportunity – all classes are held in the Gwydir.</p>
Planned environmental water aligns to natural cues.	Some planned environmental water provisions/rules do not reflect natural cues and	Review the efficacy of planned environmental water provisions across the Basin	Medium priority	Planned rules for the Gwydir are natural, event based. However, the review of the Water Sharing

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<b>Operational Outcome sought</b>	<b>Broad description of constraint</b>	<b>Priority actions</b>	<b>Prioritisation</b>	<b>GVIA Comments</b>
	seasonal variability.	to optimise environmental outcomes.		Plan for the Regulated Gwydir River Water Source includes a review planned environmental water rules.  Volumes of environmental water available are such that held water can be utilised to ensure outcomes.
Ensure environmental water is not substituted for other water.	Releasing of held environmental water from storage and flow throughout the river can result in substitution of held water for planned water, pre-releases or spills.	Undertake analysis to identify the extent to which substitution is an issue.  Develop transparent policies to ensure treatment of held environmental water with planned environmental water or other releases from storage	Medium priority.	N/A in the Gwydir.  Water licence conditions do not allow for substitution as per the Water Sharing Plan for the Regulated Gwydir River Water Source.
Environmental water is coordinated with all water and between valleys for maximum environmental	Existing governance arrangements are generally developed around individual environmental	Development of governance and policy arrangements for the coordinated planning of environmental	Medium priority.	N/A for the Gwydir  The Gwydir is a closed system

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Operational Outcome sought	Broad description of constraint	Priority actions	Prioritisation	GVIA Comments
benefit.	water holder objectives.  There are limited formal arrangements for the coordinated planning of all environmental water and inter-valley watering events.	water, both annually and longer-term, for the Southern-connected system.  Assess the feasibility of coordinating environmental flows in the Northern Basin.		and should only contribute to in stream requirements.
Environmental planning is included in river operations.	Current river management practices were developed primarily for security of water supply and not environmental outcomes.	Support the integration of environmental water planning into river operations.	Medium priority  (Regulated systems).	N/A in the Gwydir.  The Gwydir valley has had environmental water provisions since irrigation development. The Water Sharing Plan for the Regulated Gwydir River Water Source expanded on initial provisions and has been in place since 2004.

Furthermore, in response the Priority Actions for 2014 in the Gwydir, we encourage the MDBA to review the current draft Gwydir Wetlands Environmental Water Management Strategy 2012-2017, which outlines the local strategy for managing the issue of third party impacts of floodplain landholders.

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#### ***4.4 Whether the key focus areas that have been identified for further work are in the right locations***

As stated in previous sections, the GVIA does not agree with the Gwydir being an area for further work.

The MDBA are encouraged to meet with the Gwydir ECAOAC as the local group tasked with environmental water management in our valley to discuss the current five-year strategy for management of water.

## **5 Conclusion**

The Gwydir Valley Irrigators Association (GVIA) was disconcerted following the release of the draft CMS. The strategy did not meet our expectations and our understanding of what it was to deliver. Not to mention, our disbelief that our valley was included as a priority for further work.

The GVIA do not agree with the inclusion of the Gwydir in the CMS for a myriad of reasons, at least until current state-based and other the Northern Basin review are complete. Only until these processes are finalised will there be a complete understanding of the environmental watering requirements and hence the constraints and opportunities for best meeting environmental outcomes.

The GVIA acknowledge that the CMS is an initial step to gather feedback for further work. We ask that the MDBA thoroughly consider our submission and we welcome the opportunity to provide further feedback as part of this ongoing conversation with you.

**Submission ends....**

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### **Submission to the NSW Office of Water**

#### *Proposed Environmental Water Shepherding Arrangements in NSW*

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## 1. Purpose of this Submission

This document has been developed by the Gwydir Valley Irrigators Association (GVIA) on behalf of its members as a formal submission for consideration by the NSW Office of Water (NOW) when finalising the NSW Government policy for water shepherding arrangements.

This document represents the concerns and views of the GVIA members. However, each member reserves the right to express their own opinion and is entitled to make their own submission.

## 2. Executive Summary

The Gwydir Valley Irrigators Association (GVIA) as the representative body for irrigation entitlement holders in the Gwydir Valley, supports in principle the concept of shepherding environmental water only as a means to achieve multiple, measurable environmental outcomes essentially with the one parcel of water.

However, the GVIA has objections with the principle application of a shepherding *per se*. Foremost being that the GVIA does not support the fundamental issue that environmental entitlement holders are proposed to be granted additional licence conditions than other entitlement holders. This directly contravenes the agreement made by the Australian and NSW Governments not to mention the proposed Basin Plan.

Nor does the GVIA support the application of shepherding environmental water as a means to rationalise the environmental water portfolio of the CEWH. There are alternative, market-based mechanisms available to the Commonwealth Environmental Water Office for this purpose, namely trading.

The GVIA also does not support the application of shepherding of environmental water from the Gwydir Valley. Not only would this activity contravene environmental outcomes sort under the Murray Darling Basin Plan but it is in conflict with our historical flow regime as a closed hydrological system.

These considerations aside, the GVIA still cannot support the implementation of the current proposed shepherding policy as outlined by the NSW Office of Water.

The GVIA believes that the current policy requires additional work to better determine the outcomes desired from the policy and assess potential third party impacts of shepherding water. It is essential that NSW Office of Water demonstrates effective mechanisms to eliminate third party impacts and maintain all entitlement holders with comparable licence conditions. The current policy does not meet this requirement.

It is our opinion that the policy is premature and that this policy should not be implemented until:

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- Further modelling work and valley based trials on the process of shepherding environmental water are completed and reported to stakeholders;
- Environmental water plans for water sources proposed to shepherd water from or to are prepared;
- The Commonwealth Environmental Water Holder can demonstrate their capability to manage environmental water to achieve measureable outcomes as measured against to environmental plans; and
- The Murray Darling Basin Agreement is amended as required to recognise shepherded environmental water and maintenance of this allocation for environmental purposes.

The GVIA requests that there is greater consultation on the concept of shepherding and rules around its possible implementation. We look forward to working with the NSW Office of Water in pursuing the issues raised within this submission.

### 3. About the Association

#### ○ ***Where we are and what we do***

The Gwydir Valley Irrigators Association (GVIA) represents in excess of 250 water entitlement holders in the Gwydir Valley, centred around the town of Moree in North-West New South Wales. Our mission is to build a secure future for its members, the environment and the Gwydir Valley community through irrigated agriculture.

Our members hold entitlements within the Gwydir regulated and un-regulated surface water areas, in addition to groundwater resources. All of which are managed through water sharing plans although the Water Sharing Plan for the Gwydir Unregulated and Lower Gwydir Alluvial Water Sources remains in draft at the time of preparing this submission.

The main broadacre irrigated crop is cotton with irrigated wheat, barley and Lucerne also occurring depending on commodity prices. Currently there are also pecans, walnuts, oranges and olives being grown within the region covering approximately 1,500 hectares. There is however, significant and potential for expansion into horticulture.

The Gwydir Valley Irrigators Association organisation is voluntary, funded by a cents/megalitre levy on regulated, unregulated and groundwater irrigation entitlement. In 2010/11 the levy was paid on in excess of 87% of the eligible entitlement (excludes entitlement held by the State and Federal Government).

The Association is managed by a committee of 11 irrigators and employs a full-time executive officer and a part-time administrative assistant, as well as hosting a Regional Landcare Co-ordinator.

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Much of the activity the association revolves around negotiating with government at a Federal, State and Local level to ensure the rights of irrigators are maintained and respected.

While the core activities of the Association are funded entirely through a voluntary levy, the Association does from time to time, undertakes special projects, which can be funded by government.

The GVIA and its members are members of both the National Irrigators Council and the NSW Irrigators Council. The GVIA also supports the submissions provided by these organisations.

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## **4. General Comments**

The Gwydir Valley Irrigators Association (GVIA) supports in principle the concept of shepherding environmental water only as a means to achieve multiple, measurable environmental outcomes essentially with the one parcel of water. However, the GVIA does not support the implementation of the current proposed shepherding policy as outlined by the NSW Office of Water.

The GVIA has consistently requested all Governments to be accountable and efficient in environmental water delivery and achieve more outcomes with less water. To achieve this, all potential valleys must have clearly defined and measurable environmental outcomes, outlined in environmental watering plans before environmental shepherding should occur. Without a whole of system vision for environmental outcomes, shepherding is premature and will be considered an academic interchange of water to rationalise environmental water requirements between the northern and southern basin.

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If the Australian Government has purchased more water for the Commonwealth Environmental Water Holder (CEWH) than is required for environmental outcomes in a valley, than that water should be permanently or temporarily sold rather than shepherded. Shepherding should not be used as a mechanism to allow the CEWH to re-balance their environmental water portfolio. Shepherding must only be utilised to better provide multiple, measurable environmental outcomes as required in environmental watering plans.

Without the development and implementation of environmental watering plans the GVIA believes that implementation of water shepherding, as proposed by stage two of the MoU<sup>1</sup> between the NSW and Australian Government is premature. The GVIA also believe that there is limited capacity within both the NSW and Australian Government sectors to effectively implement such a policy at this point in time.

Furthermore, the Commonwealth Environmental Water Office is continuing to build and learn how to best utilise their growing environmental water portfolio, to provide the additional opportunity to shepherd water, without the appropriate knowledge base and resources can potentially have disastrous third party and environmental outcomes. Until the Office of Commonwealth Environmental Water can demonstrate their ability to achieve real environmental outcomes in individual valleys, then shepherding should not be implemented.

Hence the GVIA submits that the shepherding policy implementation should be delayed to allow for continued development of the policy assisted through an increased scope for modelling and additional trials. This delay would also allow for the NSW Government in conjunction with the Office of Commonwealth Environmental Water and stakeholders, to develop, implement and monitor environmental water plans.

Paramount to this extended timeframe would be the opportunity for NOW to undertake additional sensitivity analysis of modelling trials of the proposed policy within the Namoi and including valleys. This would include analysis of how CEWH water behaviour may change water use and water delivery patterns locally and in downstream catchments with an expanded assessment of potential third party impacts. The GVIA would also like to see additional modelling to test the assumptions based within the policy with an expanded trial of shepherding to measure outcomes and water losses in real time.

The GVIA does not support the policy that only entitlements purchased by the Commonwealth Government are provide the opportunity to move between water sources via shepherding, when other entitlement holders do not have this same opportunity. The GVIA submits that this shepherding policy directly contradicts the Commonwealth agreement that

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<sup>1</sup> Memorandum of Understanding in relation to shepherding of water for the environment (2010) Australian Government and NSW Government

holdings retain the same characteristics as existed before acquisition<sup>23</sup>. All entitlement holders should be provided with the same licence conditions.

Further to these issues and due to the hydrological characteristics in the Gwydir the GVIA cannot support even in principle, the concept of shepherding water from the Gwydir Valley to downstream water sources. The Gwydir River is an inland terminal river network that is also classified as “distributary” network<sup>4</sup>. This indicates that the rivers become a series of branching channels that distribute their flows across large areas especially during flood times<sup>5</sup>. This distribution of water represents wetland areas of which the Gwydir has internationally recognised Gwydir Wetlands.

However, it also means that the Gwydir River under natural conditions would have a very low ability to contribute to surrounding catchment inflows<sup>6</sup>. In the 2009/2010 year, the Gwydir River was reported to contribute approximately 3% of total flow in the Darling or a share of 10% with three other rivers<sup>7</sup>. The State of The Darling Interim Hydrology report puts the average percentage flow of the Darling River from the Gwydir River to be 12%<sup>6</sup>, which is consistent with other terminal valleys within the Northern Murray-Darling Basin. The low outflow or end-of-system flow is a result of the majority of the water within the system flowing towards the terminal wetlands.

As outlined the GVIA does not agree with shepherding water out of the Gwydir as it would contradict the environmental outcomes and historical flow regimes of the valley. Not to mention that this activity does not align with the environmental watering hypotheses proposed by the Murray Darling Basin Authority (MDBA) in the current proposed Basin Plan<sup>8</sup>. A review of supporting documentation to the Murray Darling Basin Plan clearly outlines that the environmental water requirements in the Gwydir are to support in-stream environments in the Gwydir and Mallowa wetlands<sup>9</sup>. Environmental water should therefore be used for these reasons and not purposely released to increase flows in downstream valleys.

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<sup>2</sup> Commonwealth Environmental Water Office website  
[www.environment.gov.au/ewater/management/index.html](http://www.environment.gov.au/ewater/management/index.html)

<sup>4</sup> The Geomorphology of the Barwon-Darling Basin (2004), Murray-Darling Basin Commission.

<sup>5</sup> The Impacts of Water Regulation and Storage on the Basin's Rivers (2007), Murray Darling Basin Commission.

<sup>6</sup> State of Hydrology Report (2007), Murray-Darling Basin Commission

<sup>7</sup> Critical water planning for the Murray Valley and Lower Darling (2010), NSW Office of Water.

<sup>8</sup> Proposed Murray Darling Basin Plan (2011), Murray Darling Basin Authority

<sup>9</sup> The proposed Environmentally Sustainable Level of Take for surface water of the Murray Darling Basin (2011), Murray Darling Basin Authority

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## 5. Specific Policy Questions

The GVIA have provided the following responses to specific questions outlined by NSW Office of Water for the purposes of this submission. The answers to these questions should also be read in the context of larger submission including the general comments above. Comments directly on the policy as detailed below do not represent a tacit support for the concept or application of shepherding.

### ***Do you think that using a trading framework to implement the shepherding is appropriate?***

The GVIA do not consider the current proposed arrangements for water shepherding a “trading framework”. The GVIA would require more information from NOW at how this proposal does in their opinion represent a trading framework.

The GVIA does encourage the NSW Government to consider such a framework as proposed by NSW Irrigators Council.

### ***It is proposed to apply a shepherding loss reduction factor to volumes of water shepherded for Barwon-Darling tributaries and the Barwon-Darling. Do you think it is appropriate that the loss reduction factor be based on long-term average losses? In the Barwon-Darling, do you think it is appropriate that the factor relate to river sections?***

The GVIA does not consider that the long-term average loss reduction factors are an appropriate mechanism to ‘reduce’ entitlement by as part of the account dealing rules. The blanket approach is not suited to a highly variable system with many unknowns, like the Barwon-Darling with losses exuberant in low and high flow periods.

Long-term average loss factors do not provide the CEWH with an appropriate snap-shot of the likely losses to incur when shepherding water and therefore, could skew decision making and establish unachievable expected outcomes.

As such, the GVIA proposes that NOW continue to develop improved modelling and understanding of the Barwon-Darling system to established risk bandwidths of typical seasonal periods that match to environmental planning scenarios like high, moderate and low flow periods. These bandwidths will more easily align environmental requirements with potential losses to help inform CEWH decision making.

During consultation representatives from the CEWH<sup>10</sup> were clear to announce that losses were to be accounted for as positive environmental outcomes. For instance, the intention of the CEWH may not be to deliver water to Menindee Lakes but rather provide broader

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<sup>10</sup> Meeting discussions with Bruce Campbell and Steve Costello from the Office of Commonwealth Environmental Water respectively in Narrabri on 23.05.2012 and Sydney on 01.06.2012, NSW.

environmental benefits along the Barwon-Darling with no water reaching Menindee Lakes at all. The GVIA welcomes this understanding of the CEWH that shepherding water does not automatically assume that water will reach its destination or end-of-system measurement point.

However, the GVIA requests that there is formal agreement between the CEWH and NOW regarding the debiting and accounting of losses as environmental outcomes. This is essential in the context of a Basin Plan that aims to provide water for environmental outcomes but also provides greater protection of other entitlement holders and their right to access water, when and if environmental water does not meet its intended location.

***It is proposed to implement water shepherding rules that limit the allocation that can be shepherding from the parent licence. Is this appropriate?***

The GVIA supports that third party impacts should be eliminated as part of the development and implementation of this policy and hence, there must be a mechanism to ensure that take is limited to meet valley long-term average extraction limits.

***It is proposed to implement an end-of-system commence to pump access conditions for water shepherding of A, B and C class licences, to enable the movement of shepherded water beyond on the Barwon-Darling. Is this appropriate?***

The GVIA agree in principle with the concept of end-of-system accounting mechanism for water shepherding provided that third party impacts are eliminated. Furthermore, the GVIA believe that there is little understanding regarding risks to third parties and as indicated above in general comments, we encourage improved modelling to assess how changes in water use behaviour with the CEWH involvement might alter the current flow regimes of the valleys implicated in the policy.

Until there is greater analysis of the likely impacts, the GVIA cannot support the current proposal beyond conceptual agreement.

***It is proposed to establish maximum daily extraction limit for water shepherding access licences at the end-of-the-system. This would be implemented through an account rule in the water sharing plan that limits take, to the sum of the maximum individual daily extraction limits of the CEWH in specific classes in the Barwon-Darling minus any extraction by those licences. Is this appropriate?***

As explained previously, the GVIA does not agree with the blanket allocation of losses that would be used to determine maximum daily extraction limits and reiterates that further modelling work is required to determine the applicability of an end-of-system limit.

***It is proposed to establish dealing rules to enable water shepherding to the end of the NSW tributary including shepherding from a Queensland tributary. Are the proposed dealing rules appropriate?***

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As explained previously, the GVIA reiterates that further modelling work is required to determine the applicability of establishing such rules especially when there are implications for valley specific delivery loss accounts.

***It is proposed to establish shepherding loss reduction factors for Queensland shepherded water through NSW unregulated tributaries and for NSW unregulated tributaries. Are these factors appropriate?***

The GVIA maintains reservations regarding the use of long-term average loss factors and this is applicable to both Queensland and NSW shepherded water.

***It is proposed to establish a fixed period for access for shepherded flows at the end of a tributary, including the end of the NSW unregulated tributary, from the Queensland border River into the Barwon Darling, and at the end of the Barwon-Darling for shepherding of tributary water downstream. Are these fixed periods of access appropriate?***

The establishment of a fixed period of access appears a logical way to provide an additional mechanism to manage water access. Historical delivery times in typical seasonal periods (as proposed above for loss reduction factors) should be determined and applied.

***It is proposed to establish access rules for shepherded allocation based on a parent licence maximum daily extraction limit and commence to pump thresholds.***

- i. Is commence to pump thresholds based on the parent licences reliability of access appropriate at the end of a NSW unregulated tributary?***
- ii. Is the use of 'A' class commenced to pump access conditions appropriate to enable the shepherding of tributary water downstream of the Barwon-Darling?***

The GVIA agrees that commence to pump and cease to pump rules are required to (as above) provide a mechanism to manage water access of shepherded water. However, there are two important considerations that must be taken into account before establishing these rules and these include limiting third party impacts and the need to maintain the integrity of surrounding licences within the water source whilst not altering the capability of the initial parent licence.

In consideration of this, the GVIA submit that the shepherded water should not be given a greater priority access of water at a specified delivery point than other licences that could exist in that water source at that location. Therefore, the most conservative of the possible access conditions should be established for shepherded water and this could be either;

- a) The parent licence access rules; or
- b) The off-take point access rules.

***Do you agree with the recognition of shepherded water in Menindee Lakes?***

The GVIA strongly believes that shepherding of water into Menindee Lakes should not occur until the required changes to the current Menindee operating conditions under the Murray-Darling Basin Agreement.

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Changes must ensure that the integrity of the shepherding licences is maintained and that water entering the lakes must be recognised as environmental water and not available for productive use. This core requirement must be agreed, legislated and implemented by all States.

Furthermore, as with stream transmission losses being accounted as loss reduction factors, the GVIA submit that storage loss factors should also be applied to any shepherded water in Menindee.

***Do you think that water should be able to be shepherded from the Barwon-Darling water source to the Lower Darling Water source when there is no airspace available in Menindee?***

As with previous comments, the GVIA believe that water shepherding should only occur as a mechanism to meet multiple, measureable environmental outcomes. As such, as an initial consideration, shepherding from the Barwon-Darling water source into the Lower Darling water source should only occur if there are clear multiple environmental benefits to be achieved. Secondly, to meet this requirement there must also be an environmental water plan in both of the water sources in question.

***Do you believe that shepherding water into Menindee Lakes should be suspended at specific times to ensure that there are no adverse third party impacts?***

The elimination of third party impacts is an essential requirement of this shepherding policy.

***Which option do you prefer for identifying the suspension/limitation triggers for shepherding? Why? Alternative are there other options?***

In the absence of additional modelling information regarding third party impacts associated with altering the management of Menindee lakes, the GVIA supports the current status quo.

As with previous comments, the GVIA also believes that shepherded water should not be given a greater priority or exceptional circumstances different to the conditions of other licenced water at a particular location. This concept also applies to restrictions or triggers on licences as part of the management of Menindee Lakes.

***Do you think it appropriate to provide access to the suspended Menindee shepherding account during a period of suspension to enable shepherded water to be made available for critical environmental needs to avert or alleviate an environmental emergency?***

As with above, shepherded water should not be provided priority or exceptional operating conditions beyond that of the conditions of surrounding water licences.

***Is it appropriate that shepherded water be recognised downstream of the Lower Darling Regulated River when period of special account apply?***

As with above, shepherded water should not be provided priority or exceptional operating conditions beyond that of the conditions of surrounding water licences.

***Do you think that using a trading framework to shepherd water downstream of the Menindee Lakes is appropriate?***

In short the GVIA believes that a shepherding policy should be consistent between all water sources. However, as outlined within this submission there are a number of core issues with the current proposed policy that need addressing before adopting.

***Do you believe that water should be permitted to be shepherded to water sources in downstream jurisdictions?***

As above, the GVIA believes that a shepherding policy should be consistent between all water sources. However, as outlined within this submission there are a number of core issues with the current proposed policy that need addressing before adopting.

***It is proposed to apply losses associated with holding the shepherded water in an account in Menindee and in delivery (sic) this water downstream of the Menindee Lakes. When should they be applied and what should be considered?***

***Do you agree with the proposed auditing, reporting and review framework?***

The GVIA believes that it is essential that an auditing, reporting and review framework is implemented as part of this policy development and implementation process. Core to this concept is the development of a Monitoring, Evaluation, Reporting and Improvement plan in conjunction with an implementation plan. Both plans should be developed in consultation with stakeholders.

***What else should be considered to ensure that any adverse third party impacts that may occur as a result of the implementation of water shepherding are identified and addressed?***

If questions remain regarding third party impacts, the NSW Office of Water should undertake a stakeholder involved risk assessment process to further capture third party impacts.

The policy must consider but is not limited to maintaining:

- Water licence rights;
- Water reliability;
- Water access;
- Integrity of water sharing plans; and
- Whole of valley compliance to cap and long-term annual average extraction limits.

## 6. Conclusion

The Gwydir Valley Irrigators Association (GVIA) welcomes the opportunity to provide this submission to the NSW Office of Water regarding the proposed arrangement for shepherding environmental water in NSW.

The GVIA supports in principle the concept of shepherding environmental water only as a means to achieve multiple, measurable environmental outcomes with the one parcel of water. However, it is the principle application of a shepherding *per se* that the GVIA has a number of core objections, not to mention a number of issues with the proposed policy.

The GVIA does not support the implementation of the current proposed shepherding policy as outlined by the NSW Office of Water. This submission clearly outlines these issues and has done so with general comments and answers to the specific questions raised by the NSW Office of Water.

The GVIA requests that there is greater consultation on the concept of shepherding and rules around its possible implementation. We look forward to working with the NSW Office of Water in pursuing the issues raised within this submission.

**Submission ends...**

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