



Submission to: Natural Resources Commission

Review into the *Water Sharing Plan for the
Gwydir Water Source 2016*

By:

Gwydir Valley Irrigators Association Inc

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making every drop count

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1 Summary and Purpose

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 Natural Resources Commission (NRC) into their review of the *Water Sharing Plan for the Gwydir Regulated Water Source 2016*, the “Plan”.

This document aims to represent the concerns, views and experiences of our members, which was gathered following inquiries from. This is a whole of industry response, reflecting individual experience and feedback. Each member reserves the right to express their own opinion and is entitled to make their own submission.

2 Introduction

The Gwydir Valley Irrigators Association (GVIA) is the representative body for irrigation entitlement holders in the Gwydir Valley including High Security, General Security, Supplementary and Floodplain Harvesting entitlement holders within the framework of the *Water Sharing Plan for the Gwydir Regulated Water Source 2016*, the “Plan”. Entitlement holders in the Gwydir Valley have low reliability, with General Security at 36%, Supplementary at 55% and Floodplain Harvesting which is episodic and potentially less reliable than other Gwydir water entitlements.

The licencing of floodplain harvesting has brought a long-term legitimate form of take into a managed metered volumetric form of take and ensured that the Gwydir remains within CAP. Licencing with a clear measurement and compliance, will allow greater transparency and accountability for all, ensuring balance and fairness across the basin. The licencing has however seen a 31% reduction in access, this will stall drought recovery in a region with low water reliability. The impact on community will be significant.

It is important to recognise the ephemeral nature of and limited connectivity, or closed nature of the Gwydir, where water flows naturally to the Gwydir Wetlands. The infrequency of large floods that provide floodplain connectivity and natural attenuation of flows must also be recognised, if flood water makes the river from the floodplain, the downstream outcomes are insignificant.

While elements of the Plan did work well and there were outcomes evidenced for social, economic and environmental objectives as presented in Section 4 of this submission. The Plan is constraining opportunity to further improve outcomes and realise the benefits of new participants. Hence, we have provided several recommendations for improvement which largely fall within Section 5 of this submission.

We note that through the term of the Plan there has already been changes and amendments. We ask that the NRC consider the cumulative impact of these changes, the rapid pace in which they have been implemented and the already foreshadowed reforms when considering further changes.

As part of this submission, we have as a result provided the following 10 recommendations.

We welcome further discussion with the NRC on any of the matters raised within this submission.

2.1 Recommendations

The following 10 recommendations our found within our submission. The are focused on our primary areas of concern including the priority use of Plan rules to provide balanced sharing of this water source rather than the use of crisis tools such as s324, and the removal of sub-catchment trade barriers for Floodplain Harvesting.

- I. **We recommend as part of Schedule 2, the following general principles are included:**
 - i. **ability for the inflows to meaningfully contribute to meeting critical water needs downstream.**
 - ii. **uncertainty in future rainfall and flow predictions.**
 - iii. **utilisation of flow forecasting.**
 - iv. **recognition of system operation capacities and efficient water delivery to maximise the social, economic and environmental benefit of water use.**
2. **The Note (2) under Clause 68 be included as a note under Clause 48 (4).**

“2. Operating channel capacity affects daily supply capability. The following operating channel capacities have Water Sharing Plan for the Gwydir Regulated River Water Source 2016 [NSW] been determined as at the commencement of this Plan—

 - (a) Carole Creek and Gil Gil Creek—2,200 ML/day,*
 - (b) Mehi River—5,800 ML/day,*
 - (c) Moomin Creek—2,200 ML/day,*
 - (d) Gwydir River downstream Tyreel—1,100 ML/day.”*
3. **That the water sharing rules in the Gwydir Regulated Water Sharing Plan be used as the primary mechanism to share and manage water within the Gwydir Regulated Water source. Section 324, temporary restriction orders in the NSW Water Management Act 2000 should not be used without firstly using the Plan sharing rules nor without the application of the following general principles.**
 - i. **ability for the inflows to meaningfully contribute to meeting critical water needs downstream.**
 - ii. **uncertainty in future rainfall and flow predictions.**
 - iii. **utilisation of flow forecasting.**
 - iv. **recognition of system operation capacities and efficient water delivery to maximise the social, economic and environmental benefit of water use.**
4. **Acknowledge there is limited information to measure and monitor flows to implement a fair and equitable active management approach for floodplain harvesting and that the impacts of this policy have not been assessed against long-term compliance and impacts to those water users. The GVIA do not support this as a policy at this point in time, but rather recommend it is included as a possible amendment provision pending further work.**
5. **Available water determinations should be enabled to be varied to ensure water take remains within limits, governments must take action to enable all opportunities for water users to have access to their legally defined volume of water entitlements.**

Available water determination rules need to include a mechanism to adjust access to achieve the allowable limit.

6. An open and transparent Floodplain Harvesting trading framework must be enabled to allow impacted water users and dependent communities the opportunity to mitigate the impact of reduced water availability due to the compliance and licencing reform as well as, provide new opportunities to maximise environmental outcomes by environmental water managers.
7. GVIA recognises that a process to ensure sensitive areas are protected from growth is required but contend that mandatory conditions on new works will achieve these outcomes. Therefore, trade should be enabled and be free between water users up to their current historical limit. Essentially establishing an individual trading limit that will require further assessments regarding downstream flows and environmental impacts if an individual wants to transfer entitlement above that limit.
8. Monitoring programs are aligned to the Plan's objectives and information is publicly available, prior to the next water sharing plan review.
9. Amendment provisions include detail on the possible scope and process including consultation of areas of amendment to balance the need for improvement with new information against certainty, throughout the term of the Plan's life. Amendments should be triggered by the availability of 'new information' to inform the change.
10. Appendix maps are provided in higher quality resolution but also in spatial formats that can be electronically viewed.

2.2 Our region

The Gwydir Valley Irrigators Association (GVIA) represents more than 450 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 members, the environment and the Gwydir Valley community through irrigated agriculture.

The Moree Plains Shire region alone is highly dependent on agriculture and irrigated agriculture for economic activity contributing over 72% of the value of gross domestic product (cotton is around 60%), employing 20-30% of the population and accounting for almost 90% of exports from the Shire¹.

The 2011 agricultural census estimates that the total value of agricultural commodities for the Moree Plains Shire region was \$911,951,079 up from \$527,744,851 in the 2005-06 census. This is an estimated 7.83% of NSW's total agricultural production from a 1,040,021Ha principally used for agricultural crops².

¹ Cotton Catchment Communities CRC Communities and People Series 2009

² 2010 2011 Agricultural Census Report – agdata cubes, 71210D0005-201011 Agricultural Commodities, Australia

The Gwydir is characterised as having low water reliability with most water held as general security water with a reliability of 36% (that means irrigators could expect in the long-term just over a third of their entitlement can be accessed). Supplementary water entitlement is somewhat more reliable with 55% but accounts for less than a quarter of the total volume. Groundwater reliability is considered 100% but there is less than 30,000ML available. Floodplain Harvesting entitlements account for approximately 30% of water for the Gwydir but are irregular providing access two in ten years.

The total volume of water available to be accessed by irrigators has been reduced significantly over time due to reforms as outlined below in Table 1: Summary of Water Reform.

The Gwydir has met the legislative requirements of the Murray Darling Plan of 42,000ML of long-term diversion limit equivalence (LTDLE) entitlement for local instream environmental outcomes and a further 7,600ML for shared contribution to the northern basin. The NSW and Australian Government's hold 54,600ML LTDLE. This means the Gwydir Valley has 5,000ML of LTDLE entitlements in excess of that required by law.

Entitlements owned for environmental purposes totals more than 186,000ML, which includes an Environmental Contingency Allowance (ECA) of 45,000ML. The NSW and Commonwealth environmental water managers are now responsible for 28.5% of high security entitlement, 29% of general security entitlement and 13% of supplementary entitlement for environmental use.

As a result, only approximately 19% of the total river flows are available for diversion for productive use. This equates to irrigators holding 575,000ML from regulated entitlement (high security, general security, and supplementary water) and 28,000ML available from groundwater aquifers. Floodplain harvesting is an historical source of water making up 30% of the valleys total water usage.

Despite environmental water being held in the Gwydir prior to the first Water Sharing Plan. Environmental water is primarily used to contribute waterbird and fish breeding events and to maintain the condition and extent of the internationally recognised Gwydir Wetlands but as the portfolio has grown, so has the application and use of environmental water.

Table 1: Summary of Water Reform

Year	Program	Volume of entitlement
1970	Creation of replenishment flow	5,000ML
1995	Murray-Darling Basin 1993/94 Interim Cap established to limit future growth in access	
1996	Voluntarily reduction of general security reliability by 5%, by establishing the original Gwydir Valley Environmental Contingency Allowance (ECA) of general security equivalent water.	25,000ML General Security
2004	Gwydir Regulated River Water Sharing Plan further reduced reliability by 4%, primarily through increasing and enhancing ECA use and storage provision. Rules created for the WSP also	20,000ML General Security

Year	Program	Volume of entitlement
	reduced access, particularly to supplementary flow previously known as high flow.	
2006	Lower Gwydir Groundwater Source Water Sharing Plan reduced groundwater entitlements from 68,000 megalitres to 28,700 megalitres.	39,300ML Groundwater
2008 +	NSW State Government has purchased general security entitlement as well as supplementary for wetlands recovery programme.	17,092ML General Security 3,141ML Supplementary
	NSW Government infrastructure works	1,249ML High Security
	Commonwealth buy-back program.	88,133ML General Security 20,451ML Supplementary
2016	Commonwealth infrastructure programs.	4,508ML High Security 1,392ML General Security
2022	Implementation of Floodplain Harvesting licences	43,100ML FPH
TOTALS		5,757 High Security 156,617ML General Security (including ECA) 23,592 ML Supplementary 43,100ML Floodplain Harvesting

The main broad acre irrigated crop is cotton with irrigated wheat, barley and Lucerne also occurring depending on commodity prices. The total developed broad acre irrigated area is approximately 90,000 ha, production records since 2007 indicate that maximum planting area following recovery has been reduced to 72,000ha. In 2010-11 census data indicated the total production value of irrigated cotton was \$623M and is estimated to be worth three times that to the local community using the Cotton Catchment Communities Research Corporation economic multiplier for cotton regions³.

Currently the region is also home to the largest pecan plantation in Australia and the largest Valencia (juice) orange orchard in Australia covering approximately 2,000 hectares and generating an estimated \$31M with considerable benefits to the local community as a high intensity, permanent crop. Both these crops are actively pursuing improvements in water use efficiency. There is significant potential for expansion into horticulture and improvement in water utilisation but the area of expansion is limited by the availability of high security water.

Changes in water availability either through climate or government policy has a direct impact on the productivity of the region as well as on the local economy. Analysis by the Murray Darling Basin Authority highlighted this relationship during the northern review and revealed that for both Moree and Collarenebri social and economic indicators declined through 2001

³ Social and Economic Analysis of the Moree Community, 2009. Cotton Catchment Communities CRC.

to 2011 including education, economic resources and disadvantage, resulting in an estimated 200 jobs lost due to the implementation of the Basin Plan in the region.

2.3 What we do

The GVIA's mission is to build a secure future for our members, the environment and the broader Gwydir Valley community through irrigated agriculture, we can do this together by making every drop count in the river or the aquifer, on-farm, for the environment, or for our community⁴.

GVIA members' entitlements are within the Gwydir regulated and un-regulated surface water areas, in addition to groundwater resources. All of which are managed through water sharing plans, which have been progressively developed since early 2000.

The GVIA organisation is voluntary, funded by a nominal levy, cents/megalitre on regulated, unregulated and groundwater irrigation entitlement. The levy is consistently paid and supported by more than 84% of the eligible entitlement (excludes entitlement held by the NSW and Commonwealth governments).

Much of the activity of 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 the voluntary levy, the Association also undertakes programs to maintain and improve the sustainability of members on-farm activities and from time to time, manages special projects, which can be funded by government or research corporations.

The Association is managed by a committee of a minimum 11 irrigators and employs a full-time executive officer and a part-time administrative assistant, as well as hosting a Project Officer funded through the Cotton Research and Development Corporation, the Gwydir Valley Cotton Growers Association and the GVIA.

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

2.4 Contacts

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Chairman: Ian James Cush

Acting Executive Officer: Louise Gall

⁴ For more information, see our corporate video on <https://vimeo.com/177148006>

3 General comments

Water dependent communities are fatigued by water policy debates and rule changes⁵ and feel over consulted and under listened to. The constant discussions, engagements and risk of change are undermining industry and community confidence. This uncertainty, coupled with rapid change required in aspects like metering, active management, drought management and floodplain harvesting measurement. This means many water users are finding the system too complex to navigate in contradiction to a core objective of a WSP, which is to provide consistency and certainty for everyone alike.

Industry now finds themselves in a difficult position, noting a desire to limit change to provide certainty but clearly identifying areas where improvement is needed. As a result, we narrowed our focus to provide solutions that support the equitable sharing of the Gwydir water resource, and balance social, cultural, economic and environmental outcomes whilst maintaining the integrity of water rights.

As we raised earlier, there have been changes made to this plan over its lifetime. Most significantly, changes in response to the development of WRPs for compliance with the *Murray Darling Basin Plan 2012 (Cth)* and commitments to protect held environmental water. The administrative improvements in defining the objectives, strategies and indicators are welcomed changes, requested during the Plan's development.

It is important that the NRC fully appreciate the benefits of a properly designed water sharing plan, which provides clear and simple rules reflecting the ephemeral nature of the Gwydir, an inland terminal delta with limited connectivity. Given these natural limitations it is important that the Plan clearly outlines that when water is available, how much can be accessed, and by which entitlements and that this use occurs within the allowable limits at allowable times.

The most important aspect of the Plan for members was for rules that provided clear instructions on water access arrangements for all users but that they needed improvement to better reflect the variable flow conditions and balance for all users within the Gwydir and downstream. Use of crisis tools such as the S324 temporary restrictions orders without due consideration of Plan rules caused members frustration and has led to unbalanced apportionment of the water source as the region comes out of drought..

4 NRC questions

The following section provides evidence to address the key questions from the NRC.

4.1 To what extent do you feel the plan has contributed to environmental outcomes?

The Gwydir Wetlands have been monitored by the CEWH since 2014⁶. This assessment has provided information on the degree of inundation over the wet and dry years. Annual assessments have provided information on the impact of inundation on a range of habitats including Riverine, Marsh and woodland communities. Water and migratory bird populations

⁵ "Independent assessment of social and economic conditions in the Murray–Darling Basin", April 2020. [seftons-report-september-2020_0.pdf \(mdba.gov.au\)](https://www.mdba.gov.au/seftons-report-september-2020_0.pdf)

⁶ [mer-plan-gwydir-2019.docx \(live.com\)](https://www.mdba.gov.au/mer-plan-gwydir-2019.docx)

have been monitored during the assessments as have fish, reptiles, and invertebrate populations along with testing for changes in water quality.

For detailed information on environmental outcomes in the Gwydir Valley, we encourage the NRC to review the long-term monitoring data prepared by the Commonwealth Environmental Water Holder⁷ and speak with their monitoring team. The Gwydir is one of seven long-term monitoring sites in the Murray Darling Basin⁸.

Some recent examples from the website of learnings include:

- Delivering water for the environment based on natural flow cues and ecological needs is effective in maintaining ecological communities in the lower Gwydir catchment.
- Water for the environment delivered in winter and spring helps to improve water quality and stimulate native fish movement through the system.
- Water for the environment delivered to wetlands in the Gwydir catchment is helping to support healthy vegetation communities and waterbird populations.

The natural constraints and the hydrological nature of the Gwydir Valley should be acknowledged when considering the Plan's influence on environmental, social, cultural or economic outcomes. This means that despite aspirational desires to achieve specified flow targets outlined as detailed in Schedule 2 or within the Long-term Environmental Water Plan for the Gwydir Valley⁹, the ability for these outcomes to be influenced other than natural events are very limited.

The NRC should be clear in understanding that the Long-term Environmental Water Plan for the Gwydir Valley (as with other valleys) provide a full suite of environmental aspirations and are not a set of objectives that must be achieved.

Gwydir Valley entitlement holders experience the same challenges of managing the natural variability of inflows and the often short and sharp duration events which characterise flows in the ephemeral Gwydir River. In general members, consider the plan provides well for environmental outcomes but are less enthusiastic about social, cultural, or economic outcomes, through the establishment of the water sharing framework. This feedback is largely received from entitlement holders who have been directly impacted by:

- Implementation of Northwest Flow Plan triggers which put additional restrictions on supplementary flows to meet flow requirements in the Barwon Darling system.
- Lack of protection to share flows for communities in the Gwydir and broad-scale restrictions on access during the February 2020 Northern Basin First Flush, despite limited connectivity (closed nature) of the Gwydir River and access conditions being triggered and, in some instances, property flooding.

⁷ <https://www.dcceew.gov.au/water/cewo/catchment/gwydir/monitoring>

⁸ <https://www.awe.gov.au/water/cewo/catchment/gwydir/monitoring>

⁹ <https://www.environment.nsw.gov.au/topics/water/water-for-the-environment/planning-and-reporting/long-term-water-plans/gwydir>

- Implementation of active managed rules to protect held environmental water¹⁰;
- Inundation of property from environmental water targeted for the Gwydir Ramsar sites.
- Implementation of floodplain harvesting licences.

The Plan defines the overall volume of water and incorporates individual limits and access conditions, this has contributed to environmental outcomes in the valley by allowing water to be present in rivers when inflows occur. However, the Northwest flow targets in the plan restrict in valley access to supplementary water events limiting local stability, as demonstrated in 2018 where these flow embargos did not have the capacity to achieve the targets for 1) Basic Landholder Rights (BLR) along the Barwon Darling River, 2) fish passage across the major weirs in the Barwon Darling River, or to 3) protect flow needed to suppress algal bloom as detailed in schedule 2.

The Schedule 2 Flow targets were triggered from July to December 2018. They however did not achieve the intended outcomes as detailed in the Gwydir Regulated WSP. The GVIA support the need for water sharing to support Basic Landholder rights and environmental outcomes but caution the use of these flow targets without proper assessment of the likely achievement of outcomes.

Clause 48(4) specifies that *“in the Minister’s opinion, this is required to ensure outflows from the water source contribute to meeting the requirements of the Barwon-Darling Flow Targets specified in Schedule 2.”*

We continue to hold reservations around the applicability of such flow targets previously known as the interim North West Flow Plan, in a water management framework and management of residual water during a supplementary event. We support further investigation of these and review of impacts to water users, as part of the next Environmental Water Plan review or other inquiries but require engagement and consultation as well as the assessment of impact.

Critically the Minister’s decision regarding supplementary water events must rigorously assess the potential for small supplementary flows in the Gwydir to contribute to the Barwon-Darling requirements. We recommend that to provide greater certainty to stakeholders around these limits and decisions to implement any limits or restrictions to supplementary access, to achieve Schedule 2 outcomes, a framework should be established as part of the long-term planning arrangements. This framework should aim to address a range of scenarios about how a decision is made, to ensure the plan remains as robust as possible and avoids the continued use of Section 324, temporary restriction orders in the NSW Water Management Act 2000. We agree that this framework may not be able to be established immediately however there is no reason to not consider a set of principles in Clause 28 with regard the flow targets in Schedule 2, which can be expanded later.

¹⁰ The protection of held environmental water was a key recommendation of the Better Management of Environmental Water group as part of the NSW Water Reform Action Plan and contained within recommendations of the Long-term Environmental Water Plan for the Gwydir Valley¹⁰ has already been implemented in priority sub-catchments.

The framework, flow targets and sharing options must recognise the limited connectivity of the Gwydir system, the limited channel capacity, or known constraints of many effluent streams and hence limitations to maintain river flows within bank and provide balanced sharing of the water for all water users, rather than disproportionate benefits and impacts.

Given that the core outcomes of Schedule 2 flow targets are to deliver flow outcomes downstream, the most efficient and effective approach to achieve this should be through recognising the river's capacity to deliver water reliably downstream. The current plan falls short in providing clarity and direction in this area.

With regard to environmental outcomes, it must be acknowledged that supplementary embargos impact the held environmental water of the CEWH and the NSW OEH which may impact the needs of the Ramsar listed Gwydir wetlands.

Critically, it must be acknowledged, that in highly variable, ephemeral and distributary systems like the Gwydir Valley, at times – as we experienced in the 2019 extreme drought, there may not be water available to share, regardless of the rules in place at the time.

An assessment of The Northern Basin 2020 First Flush event determined that the water sharing arrangements in the Gwydir WSP were ignored, as a result the cost to the Gwydir community is estimated to be \$174M of lost economic potential. A fundamental flaw of the management of the 2020 Northern Basin First Flush was a lack of understanding by decision makers and the broader community on the existing rules within water sharing plans to provide sharing of flows. This coupled with a lack of understanding of risk, in terms of daily access arrangements across the various forms of water access including floodplain harvesting meant that the conservative, broad ranging assumption was made that northern basin water sharing plans would fail to provide connectivity or water downstream.

We support water sharing plan rules that provide certainty for all stakeholders and that can provide for a range of scenarios and sequences, rather than using 'crisis' tools such as s.324 temporary restrictions, to manage water availability in times of drought. Sharing water when flows occur using a rules-based approach, does work, and allows everyone an opportunity to benefit in the flows rather than selectively transferring benefits during these events between communities, as evidenced by the 2020 First Flush management approach.

We contend that the northern basin water sharing plans already provide significant opportunity to promote and provide for sharing and connectivity, in the event it rains. These rules are largely misunderstood (even by government it seems), as they are sharing rules rather than connectivity rules or specified end of system flows. The reasons for this that the water sharing plans were developed with a clear understanding of the intermittent nature of our northern systems, most especially, in the Gwydir and Macquarie whereby the systems largely flowed toward terminal wetlands, rather than into another river system.

Recommendation 1: We recommend as part of Schedule 2, the following general principles are included:

- **ability for the inflows to meaningfully contribute to meeting critical water needs downstream.**
- **uncertainty in future rainfall and flow predictions.**
- **utilisation of flow forecasting.**

- **recognition of system operation capacities and efficient water delivery to maximise the social, economic and environmental benefit of water use.**

Recommendation 2: The Note (2) under Clause 68 be included as a note under Clause 48 (4).

“2. Operating channel capacity affects daily supply capability. The following operating channel capacities have Water Sharing Plan for the Gwydir Regulated River Water Source 2016 [NSW] been determined as at the commencement of this Plan—

(a) Carole Creek and Gil Gil Creek—2,200 ML/day,

(b) Mehi River—5,800 ML/day,

(c) Moomin Creek—2,200 ML/day,

(d) Gwydir River downstream Tyreel—1,100 ML/day.”

One clear objective of the Active Management policy is to provide certainty to all water users: irrigators and the environment, around protecting their historical access to water. With that in mind, the GVIA supports clear rules that provide this clarity around usage and delivery of held environmental water, when it can be clearly demonstrated that this water is additional to the system, are required. Members have no intention to access environmental water and it is the Departments or environmental water managers role to clearly identify this portion of the flow when it occurs. We appreciate the importance of this Policy to provide a consistent approach.

We continue to have concerns around active management and new untested floodplain measurement in the Mallowa creek management zone. Localised rainfall events could create sudden flushes and localised flooding and that must be recognised in any decision to limit this form of access using this mechanism. The capability of existing water management and monitoring systems to manage for this scenario has not been addressed and presents significant risks to this being appropriately implemented in a fair and reasonable manner. The GVIA note that the “Active Management Procedures Manual” is yet to be published.

The impact of this rule to those individuals in the Mallowa creek management zone being restricted and on the valley compliance limit, has not be determined or considered. As this is a new rule, beyond just licencing the historical floodplain harvesting take within CAP limits, no more or no less, we request that a socio-economic impact assessment be undertaken.

We therefore cannot support Clause 52 until safeguards are established that protect water users in times of sudden flood situation and the Active Management Procedures Manual is completed to provide clear transparent realistic rules.

Recommendation 4: Acknowledge there is limited information to measure and monitor flows to implement a fair and equitable active management approach for floodplain harvesting and that the impacts of this policy have not been assessed against long-term compliance and impacts to those water users. The GVIA do not support this as a policy at this point in time, but rather recommend it is included as a possible amendment provision pending further work.

4.2 To what extent do you feel the plan has contributed to economic social and cultural outcomes?

Economic

1. *The broad economic objective of this Plan is to maintain, and where possible improve, access to water to optimise economic benefits for agriculture, surface water-dependent industries and local economies.*
2. *The targeted economic objectives of this Plan are as follows—*
 - a. *to provide water trading opportunities for surface water-dependent businesses,*
 - b. *to maintain, and where possible improve access to water for agriculture, surface water-dependent businesses and landholders, up to the long-term average annual extraction limit and the long-term average sustainable diversion limit,*
3. *The strategies for achieving the targeted economic objectives of this Plan are as follows—*
 - b. *provide a stable and predictable framework for sharing water among water users,*

Social and cultural

1. *The broad social and cultural objective of this Plan is to provide access to surface water to support surface water-dependent social and cultural values¹¹.*

Water dependent communities are fatigued by water policy debates and rule changes, feeling over consulted and under listened to¹². The constant discussions, broad consultation and risk of change ‘in the public interest’ are undermining industry and community confidence. This uncertainty, coupled with rapid change required in aspects like metering, drought management and floodplain harvesting measurement is leaving users tired, confused and ignored. Many water users are finding the system too complex to navigate in contradiction to a core objective of a Water Sharing Plan, which is to provide consistency and certainty for everyone alike.

Water users are looking for rules that define water access, by describing when a water user can access water and how much, and rules that ensure towns have water and farmers have water for stock and domestic purposes. These are clear social and economic outcomes of the plan which provide certainty for all stakeholders. However, the use of ‘crisis’ tools such as s.324 temporary restrictions, to manage water availability in times of drought undermines this certainty. As seen with The Northern Basin 2020 First Flush event cost the Gwydir community is estimated to be \$174M of lost economic potential. Small retail business owners in towns like Moree are carrying the cost of events such as the 2020 Northern Basin First Flush.

¹¹ Water Sharing Plan for the Gwydir Regulated River Water Source 2016. (2015-629)

¹² “Independent assessment of social and economic conditions in the Murray–Darling Basin”, April 2020. [seftons-report-september-2020_0.pdf \(mdba.gov.au\)](https://www.mdba.gov.au/seftons-report-september-2020_0.pdf)

Sharing water when flows occur using a rules-based approach, is a sensible strategic approach which removes the emotional triggers that skew outcomes and selectively transfer benefits. Water sharing plan rules provide balance, allowing everyone an opportunity to benefit in the flows.

Irrigation is a significant contributor to the economic value of production in the region, which in 2010/11 census data indicated the total production agricultural products was \$911M, up from \$526M in 2004/05 in the Moree Plains alone. The flow through economic value of irrigated crops was further assessed as part of work commissioned by a collective group of NSW northern valley industry organisations, including the GVIA. This report found that “*The northern basin study area produces more than half of Australia’s cotton lint (irrigated and non-irrigated) and sorghum for grain. It also produces 40% of Australia’s eggs. In summary, the irrigation industry includes many sectors, and should not be considered as being limited to cotton...*”¹³.

Critical to the assessment of the plan on socio-economic outcomes is the observation that access to irrigation water can help smooth the effects of limited rainfall. For example, 2023 has seen many producers with less than 200mm of rainfall year to date, compared to the 390mm year to date 28 year mean. The cash flow from the irrigated cropping from the 2022-23 and 2023-24 seasons will help smooth the negative economic outcomes from dryland cropping, helping to support local business.

Recommendation 3: That the water sharing rules in the Gwydir Regulated Water Sharing Plan be used as the primary mechanism to share and manage water within the Gwydir Regulated Water source. S324 should not be used without firstly using the plan sharing rules nor without the application of the following general principles.

- **ability for the inflows to meaningfully contribute to meeting critical water needs downstream.**
- **uncertainty in future rainfall and flow predictions.**
- **utilisation of flow forecasting.**
- **recognition of system operation capacities and efficient water delivery to maximise the social, economic and environmental benefit of water use.**

The GVIA are please to finally see the inclusion of floodplain entitlements in the Gwydir Water Sharing Plan. We however raise concerns around Available Water Determinations and Access Licence Dealing rules as detailed in Part 9.

Available Water Determinations: The GVIA support allowing available water determinations to be varied to ensure water take remains within limits, but if measurement and monitoring data reveals that the rules are too restrictive and that future take is below available limits, adjustments can be made. This is critically important for the new floodplain harvesting entitlements now included in the plan. If updated model scenarios prove the rules are too restrictive then the plan needs to include a mechanism to adjust access to achieve the limit.

It is critical that government can enable all opportunities for water users to have access to their legally defined volume of water. Where water should be made available to water users,

¹³ <https://www.gvia.org.au/news/irrigation-underpins-northern-basin-food-and-fibre-production-worth-6-billion-a-year/>

then government have responsibility to “improve, access to water to optimise economic benefits for agriculture, surface water-dependent industries and local economies¹⁴.”

Recommendation 5: Available water determinations should be enabled to be varied to ensure water take remains within limits, governments must take action to enable all opportunities for water users to have access to their legally defined volume of water entitlements. Available water determination rules need to include a mechanism to adjust access to achieve the allowable limit.

Access Licence Dealing Rules (Trade): Establishing entitlements for floodplain harvesting and developing a trading framework, to allow the exchange of these entitlements are both agreed objectives of the National Water Initiative¹⁵.

In the circumstance of floodplain harvesting which has not been transitioned from land and where the licencing conditions have restricted long term practice, trade is essential to allow a mechanism for water users and the community to adapt to these new rules and requirements, rules which have reduced water availability in our valley from this source of water entitlement by an average of 31%.

Trade allows a clearly defined market-based mechanism for individuals to manage their businesses into the future. The benefits of a trading framework are broad ranging providing opportunities for a range of new water users, particularly the expansion of environmental water holders into this form of take in NSW as part of a trading framework. The benefit of this can be demonstrated with the real-life example from the Commonwealth Environmental Water Holder who already own overland flow entitlements in the Lower Balonne in QLD, as explained in their factsheet ‘Commonwealth Overland Flow Licences in the Lower Balonne’.

“In February 2020, rain pushed the flow rate at St George to almost 200,000 megalitres per day. This meant all the Commonwealth overland flow licences were triggered and contributed to flows across the Lower Balonne.”¹⁶

Communication throughout this event via updates on their website tracked the benefits and outcomes of this approach, which also included a trial on in system trading of temporary water during the event. The effective use of the market allowed for “90 GL of water into the internationally significant Narran Lakes. 9 GL of the flow that reached Narran Lakes was from the pilot project where an upstream licence holder was reimbursed for not pumping.”¹⁸

The event had many significant environmental benefits as the “flow filled the three lakes within the Narran Lake Nature Reserve inundating an area of 4,550 ha, with all key waterbird

¹⁴ Water Sharing Plan for the Gwydir Regulated River Water Source 2016. (2015-629)

¹⁵ Objective i) clear and nationally-compatible characteristics for secure water access entitlements and v) progressive removal of barriers to trade in water and meeting other requirements to facilitate the broadening and deepening of the water market, with an open trading market to be in place. National Water Initiative, COAG, 1994.
<https://www.agriculture.gov.au/sites/default/files/sitecollectiondocuments/water/Intergovernmental-Agreement-on-a-national-water-initiative.pdf>

¹⁶ <https://www.environment.gov.au/system/files/pages/fa9ca650-4c28-4c01-94ce-97cf9df01d13/files/commonwealth-overland-flow-licences-lower-balonne.pdf>

breeding habitat inundated. The inundated area was over three times the area inundated in the last small inflow to the lakes in 2016.”¹⁸

Without a trading framework, these opportunities to maximise natural events would not be available to environmental water managers. Additionally, the impact to water users and the dependent communities is exacerbated beyond the reported limits.

The GVIA support a trading framework for floodplain harvesting we however have concerns with the zones. We agree that we must prevent growth in sensitive areas but feel this is well catered for through mandatory restrictions on new works in the Floodplain Management Zones A and D. The establishment of sub-catchment trade zones represent an artificial barrier to the market. The sub-catchment zones are impractical to implement given these artificial barriers frequently do not reflect farm boundaries or operations. When asked, the Department was unable to explain how a water user who crosses multiple trade zones could operate, given one licence volume. These trade zones will result in inequitable outcomes between designated zones and should be removed.

The GVIA recommend that willing water users should be able to utilise the market to secure, back up to this historical level of long-term take and a trading market in this manner provides a defined mechanism with equitable, market base outcomes.

Instead of sub-catchment limits to entitlements, we propose individual limits which equal the current long-term take as defined as maximum number of shares. Individuals are able to trade up to these limits freely anywhere within the floodplain. This allows some water users to manage their take back to historical limits, whilst reducing access elsewhere. This will allow for greater market flexibility and remove the unnecessary barriers created by sub-catchment zones, especially when those zones are across farm units.

Removal of the trade zones would ensure greater consistency with the Basin Plan Trade Rules. The perceived risks associated with trade are mitigated by mandatory restrictions on new works and the measurement and compliance program, which is currently being implemented.

Recommendation 6: An open and transparent Floodplain Harvesting trading framework must be enabled to allow impacted water users and dependent communities the opportunity to mitigate the impact of reduced water availability due to the compliance and licencing reform as well as, provide new opportunities to maximise environmental outcomes by environmental water managers.

Recommendation 7: GVIA recognises that a process to ensure sensitive areas are protected from growth but contend that mandatory conditions on new works will achieve these outcomes. Therefore, trade should enable and be free between water users up to their current historical limit. Essentially establishing an individual trading limit that will require further assessments regarding downstream flows and environmental impacts if an individual wants to transfer entitlement above that limit.

4.3 What changes do you feel are needed to the water sharing plan to improve outcomes?

The following section (5) refers to the areas where we recommend the plan is improved.

5 Specific areas of improvement

The following section steps through specific Part's of the Plan, as identified in the current version of the legislative instrument being the *Water Sharing Plan for the Gwydir Regulated River Sources 2016 (2015-629)*. We outlined areas where we recommend improvement can be made.

5.1 Part 2 – Vision, Objectives, Performance Indicators and Strategies

We note that this section of the plan was overhauled as part of the Water Resource Plan development process and support the improvements made following those discussions.

We recommend that monitoring programs are aligned to assess the performance of the plan against these objectives and reported on throughout the plan life, in 5-year intervals perhaps.

Recommendation 8: Monitoring programs are aligned to the Plan's objectives and information is publicly available, prior to the next water sharing plan review.

5.2 Part 3 - Bulk access regime

We note Clause 14 refers to climatic variability and the existing measures within the plan and the Water Management Act to allow a method for adjustment of water available due to climate. The Note refers to "*Other statutory tools are available to manage for climatic variability within a water source, for example, temporary water restrictions under section 324 of the Act.*"¹⁷

As discussed earlier the Gwydir water sharing plan rules provide certainty for all stakeholders. The use of 'crisis' tools such as s.324 temporary restrictions, to manage water availability in times of drought causes frustration and inequities. Sharing water when flows occur using a rules-based approach, must be the primary tool as it allows everyone an opportunity to benefit in the flows rather than selectively transferring benefits during these events between communities, as evidenced by the 2020 First Flush management approach. Please refer to **Recommendation 3**.

5.3 Part 6 and Part 8 – Limits to the Availability of Water.

We support the broad maintenance of existing rules to support the sharing of water when it becomes available. We support access rules that are as simple and as clear as possible and are measurable. We acknowledge and support that all users have equal rights and need to ensure that this policy and the subsequent procedures, allow for effective implementation and recognition of these rights.

We raise concerns around Clause 48 (4) and reference to Barwon-Darling Flow targets specified in Schedule 2. Our members impacted by these measures, while in support of the principle, see the implementation of these rules as disadvantaging them, often without any potential to achieve the stated objectives.

¹⁷ Water Sharing Plan for the Gwydir Regulated River Water Source 2016. (2015-629)

As we realised earlier, we recommend that to provide greater certainty to stakeholders around these limits and decisions to implement any limits or restrictions to supplementary access, to achieve Schedule 2 outcomes, a framework should be established as part of the long-term planning arrangements. This framework should aim to address a range of scenarios about how a decision is made, to ensure the plan remains as robust as possible and avoid the continued use of Section 324, temporary restriction orders in the NSW Water Management Act 2000.

Please refer to **Recommendation 1** and **Recommendation 2**.

5.4 Part 9 – Access Licence Dealing Rules

The access licence dealing rules within the Plan have been identified as a clear constraint to the performance of the Plan in meeting its objectives. The complexity of the dealing rules, together with the restrictions on sub-catchment trade are limiting opportunities to improve social, economic and environmental outcomes.

Establishing entitlements for floodplain harvesting and developing a trading framework, to allow the exchange of these entitlements are both agreed objectives of the National Water Initiative¹⁸. These were to establish a clear and nationally compatible characteristics for secure water access entitlements (which are achieved) and including the progressive removal of barriers to trade in water and meeting other requirements to facilitate the broadening and deepening of the water market, with an open trading market to be in place.

These objectives remain relevant today but as the Productivity Commission determined, likely more important *“particularly for irrigators, in enabling them to manage through drought and adapt to a changing climate”*¹⁹. The MDBA essentially agree saying that *“a fair, open and effective water market, informed by accurate information is crucial for water users, particularly in periods of water scarcity, as it provides a mechanism to manage variable seasonal conditions and allows water to move to its most productive use.”*²⁰

The Productivity Commission also recommended incremental reform saying *“the relevant 2004 NWI commitments have been achieved or largely achieved — but there is scope for further gains from incremental reform”*²¹.

Most recently the Murray Darling Basin Plan has also come into effect with its own Trading Rules, which should also be recognised and further focus on barriers removed. A MDBA

¹⁸ National Water Initiative, COAG, 1994.

<https://www.agriculture.gov.au/sites/default/files/sitecollectiondocuments/water/Intergovernmental-Agreement-on-a-national-water-initiative.pdf>

¹⁹ <https://www.pc.gov.au/inquiries/completed/water-reform-2020/report/water-reform-2020-supportingb.pdf>

²⁰ [https://www.mdba.gov.au/sites/default/files/pubs/MDBA Compliance Priorities 2020-2021.PDF](https://www.mdba.gov.au/sites/default/files/pubs/MDBA%20Compliance%20Priorities%202020-2021.PDF)

²¹ <https://www.pc.gov.au/inquiries/completed/water-reform-2020/report/water-reform-2020-supportingb.pdf>

report indicated there are 1500 surface water trade restrictions²² that may need to be reviewed to ensure they meet Basin Plan requirements and support the equitable and robust operation of the water market.

In the circumstance of floodplain harvesting which has not been transitioned from land and where the licencing conditions have restricted long term practice, trade is essential to allow a mechanism for water users and the community to adapt to these new rules and requirements, rules which have reduced water availability in our valley from this source of water entitlement by an average of 31%.

Trade allows a clearly defined market-based mechanism for individuals to manage their businesses into the future as indicated by the Productivity Commission¹⁹. The benefits of an effective trading framework are broad ranging, providing social, economic and environmental benefits for regions. There are opportunities for a range of new water users, including environmental water holders and cultural water users.

As raised earlier, the GVIA support a trading framework for floodplain harvesting we however have concerns with the zones and recommend there are hydrological and practical reasons why these zones are not required. We refer to our earlier **Recommendations 6 and Recommendation 7**.

We agree that we must prevent growth in sensitive areas but feel this is well catered for through mandatory restrictions on new works in the Floodplain Management Zones A and D.

The floodplain connectivity is not uncommon in inland terminal river networks like the Gwydir that become a series of branching channels that distribute their flows across large areas especially during flood times. As such, trade should not be restricted by arbitrary barriers, when hydrological connectivity can be identified. The establishment of sub-catchment trade zones represent an artificial barrier to the market. The sub-catchment zones are impractical to implement given they provide artificial barriers which do not reflect farm boundaries or operations. When asked, the Department was unable to explain how a water user who crosses multiple trade zones could operate, given one licence volume. These trade zones will result in inequitable outcomes between designated zones and should be removed.

Instead of sub-catchment limits to entitlements, we propose individual limits which equal the current long-term take as defined as maximum number of shares. Individuals are able to trade up to these limits freely anywhere within the floodplain. This allows some water users to manage their take back to historical limits, whilst reducing access elsewhere. This will allow for greater market flexibility and remove the unnecessary barriers created by sub-catchment zones, especially when those zones are across farm units.

5.5 Amendment provisions

We understand why amendment provisions are presented in WSPs, to provide a pathway to improving the plan before its due for review and replacement at the end of its life. But relying on amendments also act to undermine the certainty provided by establishing a clear set of rules by making them “subject to further changes”. They undermine confidence in the

²²<https://www.mdba.gov.au/sites/default/files/pubs/MDBA%20Statement%20of%20Performance%20a%20gainst%202019-2020%20Compliance%20Priorities.PDF>

process and in our region, particularly when they do not provide a clear process for how or why these amendments are implemented.

We recommend that the amendments need to more clearly articulate the process involved in implementing them, to ensure that it includes consultation and engagement of our community in any future decisions. Key to any amendment, is why the amendment is being instigated and we consider that 'new information' is a reasonable trigger for Government to initiate consultation on amendments.

Recommendation 9: Amendment provisions include detail on the possible scope and process including consultation of areas of amendment to balance the need for improvement with new information against certainty, throughout the term of the Plan's life. Amendments should be triggered by the availability of 'new information' to inform the change.

5.6 Appendices

We note there are a number of maps and detail attached to the Plan as appendices, including the Plan map and trading zone map. These appendices should be high resolution maps and clear, as well as being available in other spatial formats. That way individuals can locate exactly where they are in relation to a boundary or important lagoon or wetland for example.

Recommendation 10: Appendix maps are provided in higher quality resolution but also in spatial formats that can be electronically viewed.

6 Conclusion

The Gwydir Valley Irrigators Association thanks the Natural Resources Commission for the opportunity to provide feedback into the review the *Water Sharing Plan for the Gwydir Regulated Water Sources 2016* that cover regulated entitlements in our region.

This submission provides background information to our region and our organisation and addresses the key questions posed by the NRC, particularly around social, economic and environmental outcomes evidenced and suggested areas for improvement.

This submission resulted in 9 recommendations, which we believe provide for improved balance of environmental, social, cultural and economic outcomes. We also believe our recommendations improve the transparency of the rules and will remove the frustration caused by the use of crisis tools such as Section 324, temporary restriction orders in the NSW Water Management Act 2000.

Submission Ends.