



Submission to: Natural Resources Commission

Review into the *Water Sharing Plan for the
Gwydir Unregulated Water Sources 2012*

By:

Gwydir Valley Irrigators Association Inc

February 2022



making every drop count

Table of Contents

1	Summary and Purpose	2
2	Introduction	3
2.1	Recommendations	4
2.2	Our region	5
2.3	What we do	7
2.4	Contacts	8
3	General comments	8
4	NRC questions	11
4.1	To what extent do you feel the plan has contributed to environmental outcomes?	11
4.2	To what extent do you feel the plan has contributed to social and economic outcomes?	16
4.3	To what extent do you feel the plan has contributed to meeting its objectives?	18
4.4	What changes do you feel are needed to the water sharing plan to improve outcomes?	18
5	Specific areas of improvement	18
5.1	Part 2 – Vision, Objectives, Performance Indicators and Strategies	18
5.2	Part 3 - Bulk access regime	19
5.3	Part 4 – Planned Environmental Water	19
5.4	Part 5 – Requirements for Water	19
5.5	Part 6 – Limits to the Availability of Water	20
5.5.1	Limits and Compliance	20
5.5.2	Available Water Determinations and Account Management Rules	21
5.6	Part 10 – Access Dealing Rules	23
5.7	Part 11 – Mandatory Conditions	26
5.8	Amendment provisions	26
5.9	Appendices	27
6	Conclusion	27

I 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 Unregulated Water Sources 2012*, the “Plan”.

This document aims to represent the concerns, views and experiences of our members, which was gathered following inquiries from them but also through the collection of

responses from an online Questionnaire targeted at key review questions. 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 unregulated entitlement holders within the framework of the *Water Sharing Plan for the Gwydir Unregulated Water Sources 2012*, the “Plan”. Our unregulated members have largely, periodic opportunity to access water to grow food and fibre, with water being used for stock-feed production, wheat and cotton for instance.

The recent drought, which included consecutive years of no access and the unprecedented, valley-scale restrictions to water, coupled with ongoing policy debates and rule changes have fatigued our members. They seek certainty for their future in an ever-changing regulatory framework. They want clear and simple rules, which reflect that rivers and streams can stop flowing and certainty that when water is available, they know when and how much can be accessed. They also want transparency for themselves and the broader community, to demonstrate that when use occurs it is within the allowable limits at allowable times.

This was the clear message from members received through our consultation, which included a member survey. Our members also feel that this Plan fell short of their expectations and there is room for improvement.

This presents a conundrum for industry, who on one hand want to limit change, as a means to provide certainty into and rebuild industry confidence but also see areas, where improvement and change are necessary. We therefore have presented prioritised solutions, which mostly seek the information needed to inform future debate, to ensure change can be thoroughly evidenced but which also aims to balance social, cultural, economic and environmental outcomes whilst maintaining the integrity of water rights.

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 a number of recommendations for improvement which largely fall within Section 5 of this submission.

In preparing for this submission (as with other WSP reviews), we did find in challenging to evidence outcomes and to present a case to inform change, given the lack of measurement and monitoring data at the appropriate scales. This is one of our key recommendations from this submission, if we are to have an informed debate about what worked well and discussions around areas of improvement, we need rather basic but more accurate information on water usage, as well as accurate information about infrastructure details. This issue is not new, and we did raise this during the development of this Plan in 2011.

The provision of accurate data as well as updated licence information is essential to informing our other key recommendation, a trade review and amendments to access dealing rules. Not only are there outstanding commitments and opportunity for improved outcomes from updating trade rules, but we now also have more information about the hydrological

connectivity between water sources, which was one of the main constraints during the Plan's development. This review can no longer be delayed.

We also note through the term of the Plan there has already been a number of 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 15 recommendations.

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

2.1 Recommendations

The following 15 recommendations our found within our submission. We have grouped these to help categorise the issues and steps we recommend, rather than presenting them in order of appearance within the submission.

Data capture and reporting

1. Reporting should be provided by NSW Government on actual water use information is provide as required by the Water Management Act.
2. Caution the use of usage data without quality assurance by industry bodies given the gaps in current publicly available information.
3. A review of active work approvals, to separate non-active work approvals is to be undertaken and considered with historical water use information to establish clear understanding of risk to water sources, rather than using water licence information only.
4. Monitoring programs are aligned to the Plan's objectives and information is publicly available, prior to the next water sharing plan review.

Trade review and amendment to licence dealing rules

5. Clear criteria to establish interim improvements to trade arrangements until such time as a formal trade review is finalised, to enable case-by-case trade proposals to be assessed, where artificial barriers are identified.
6. A trade review is undertaken to remove artificial barriers to trade and reflect improved knowledge on hydrological connectivity of streams and the floodplains, to reflect that unregulated access licences can be used to access overland flow as well as water within a stream. This review is to suggest amendments to licence dealing rules and administration of unregulated trades. This maybe best represented by grouping the sub-catchments that are on the floodplain, separate to those outside the floodplain.

Assessment of accounting framework

7. Once usage data is made available, review account management rules in Section 39 (3) to compare the benefits and risk of three- and five-year accounting periods, noting

five years would match with the compliance requirements. This will also trigger a review of carryover rules in Section 39 (4).

Administrative update to the Plan

8. Section 10(3)(f) should read restrict the take of water to protect Active Environmental Water in specified sub catchments. With a note referring to these catchments as well as the relevant Sections of the plan, where these rules exist.
9. The opening section of s.14 should be updated to include a reference to natural variability, for example “This Plan recognises the effects of climatic variability on river flow in these ‘ephemeral’ water sources by having provisions that...”
10. A note outlining what the long-term annual average extraction limit and the Basin Plan SDL are for these water sources and progress monitoring against this limit are included in the Plan. The NSW Government should concurrently establish a clear reporting process for transparent reporting of plan limit compliance for unregulated water sources as with other water sources.
11. Section 31(b)(1) is amended to consider reductions in AWD on entitlement categories where any growth has been identified and that any reductions in AWD should consider information relating to the continued risk of non-compliance including antecedent conditions and seasonal forecast of water availability and usage.
12. Section 42 (4) be amended to allow for a right of appeal.
13. Investment in further improvements in the procedures manual for implementing active management in specified sub-catchments in the Gwydir Valley.
14. 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.
15. 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 its 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

¹ Cotton Catchment Communities CRC Communities and People Series 2009

census. This is an estimated 7.83% of NSW's total agricultural production from a 1,040,021Ha principally used for agricultural crops².

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.

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. 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. 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.

As a result, only approximately 19% of the total river flows are available for diversion for productive use³. This equates irrigators holding 575,000ML from regulated entitlement (high security, general security and supplementary water) and 28,000ML available from groundwater aquifers.

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 reduced their 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 the ECA and enhancing its use and storage provision. Rules created for the WSP also reduced access, particularly to supplementary flow previously known as high flow.	20,000ML General Security

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

³ Based on IQQM long-term modelling and the volume of water purchased for the environment.

Year	Program	Volume of entitlement
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
TOTALS		5,757 High Security 156,617ML General Security (including ECA) 23,592 ML Supplementary

The main broad acre irrigated crop is cotton with irrigated wheat, barley and Lucerne also occurring depending on commodity prices. The total broad acre irrigated area is approximately 90,000 ha (although recent analysis indicate that maximum planting area is now 70,000ha) but is rarely cropped in one year. 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 regions⁴.

Currently there are also pecans, walnuts, oranges and olives being grown within the region covering approximately 1,500 hectares and generating an estimated \$31M with considerable benefits to the local community as a high intensity, permanent crop. 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 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

⁴ Social and Economic Analysis of the Moree Community, 2009. Cotton Catchment Communities CRC.

making every drop count in the river or the aquifer, on-farm, for the environment, or for our community⁵.

GVIA 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, 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. In 2016-17 the levy was 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 does also undertake programs to maintain and improve the sustainability of members on-farm activities and from time to time, undertakes 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

Gwydir Valley Irrigations Association
ABN: 49 075 380 648
100 Balo St (PO Box 1451)
Moree, 2400
Ph: 02 6752 1399
Fax: 02 6752 1499
Mobile: [REDACTED]
Email: gvia@gvia.org.au

[REDACTED] [REDACTED]
[REDACTED] [REDACTED]

3 General comments

Water dependent communities feel over consulted and under listened to, we are fatigued by water policy debates and rule changes⁶. In the Gwydir, discussions and feedback on

⁵ For more information, see our corporate video on <https://vimeo.com/177148006>

⁶ "Independent assessment of social and economic conditions in the Murray–Darling Basin", April 2020. [seftons-report-september-2020_0.pdf \(mdba.gov.au\)](#)

unregulated water sharing plans have been almost ongoing since the early 2000's with the development of the separate Water Sharing Plan for the Rocky Creek, Cobbadah, Upper Horton and Lower Horton Unregulated Water Sources 2003, then the development of this plan in 2011 and 2012 but also extensive discussion and engagement throughout multiple iterations of Water Resource Plan development. With the Gwydir Surface Water Plan remaining unaccredited, while this Plan has been updated, we have no certainty for how long it remains before being updated again.

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 and drought management is at odds with ongoing legacy issues like floodplain harvesting licencing, which are still not addressed. This means many water users are finding the system too complex to navigate and are making the choice to exit the industry, where they can successfully trade their entitlement or sell both their land and water assets, which has cumulative impacts on communities.

These issues are not unique to unregulated water sources as evidenced throughout the Independent Assessment of Social and Economic Conditions in the Murray Darling Basin⁴. It is relevant to this review and its current timing, as it again, presents further change to these water users and their communities. When in fact many feel that a core objective of a WSP should be to provide consistency and certainty for everyone alike.

Despite the constant consultation and reform discussions over the last 10-years. There remain priority issues in relation to this Plan, raised by the GVIA that have not been addressed. These were rejected throughout the other consultation processes due to lack of data, resources, or for being out of scope. Largely because unregulated plans or unregulated access was not the focus by the agencies at the time.

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 balance social, cultural, economic and environmental outcomes whilst maintaining the integrity of water rights.

It is important to note that presenting a case for change even a targeted one, has been undermined by the lack of preparation by the Government to collect information required to inform this review. As with previous WSP reviews or WRP development programs, the ability for industry, any community groups or individuals to effectively review the plan and provide solutions, remains hampered by two key barriers;

1. The poorly defined objectives and performance measures of the original plans prior to their update in 2020; and
2. The lack of publicly available data which could be interrogated to build a case for or against the success, of these measures.

The lack of investment in measurement and monitoring in unregulated systems compared with well-developed and managed regulated or groundwater water sources, effectively undermines this review. In many cases, no monitoring was undertaken at all.

This is most simply evidenced by the state of the NSW Water Register for water usage in these systems over the last 10-years, which is rarely updated with water usage information. This is despite active users having meters and these being read at least once a year under

contract by WaterNSW. Where is the data, which has diligently been paid to be collected because it is not in the online register, which is required by the s.85 of the NSW Water Management Act (2000) to maintain a register of available water determinations and accounting for water.

The quality of usage data and location of water users used to determine water requirements estimates, was raised by the GVIA as a significant concern in the development of this Plan. We requested in 2011 that ground-truthing of their assumptions and the gathering of accurate background information prior to the release of the next version of this WSP was critical. Clearly this remains unresolved or at least if it is available, not yet to the public.

The inadequacies of the register are significant, when considering there is no actual information about the likely use of water throughout the Plan's life. This hampers any analysis to support outcomes or change. This meant we were required to request usage data directly from the active users themselves. Whilst partially complete, it is better than the Government owned information and provides a clearer picture of patterns of use and how the Plan and accounting rules work across seasonal conditions.

The lack of publicly available usage data is a failure of Government to implement their responsibilities to ensure transparency and accountability of managing our water. They will contend that the implementation of the non-urban metering reforms will address this issue. However, we know that our highly active, larger users were already metered, they were having their meters read prior to their metering deadlines in 2020 or 2021 but the information still isn't available now. Progressively there are more water users who have data being collected because of the reforms, which we agree will improve data confidence into the future, but again, this isn't yet evidenced in the register.

There appears to be a missing link within the Government systems that the metering reform is not designed to directly address. This raises a significant concern for us, which is outside the scope of this review, but that while industry will always strive to uphold their responsibilities and there are compliance actions put against us if we don't, but Government does not have the same level of accountability or scrutiny to their responsibilities.

As a result, we caution the NRC on using Government supplied usage data in the unregulated systems for any analysis, without the quality assurance of the industry bodies who represent water users in those regions. We insist that this data exists as opposed to what is currently available via the publicly available register.

Caution the use of usage data without quality assurance by industry bodies given the gaps in current publicly available information.

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. Whilst the administrative improvements in defining the objectives, strategies and indicators are welcomed changes, requested during the Plan's development, these changes are inconsequential without a suitably aligned monitoring and measurement program in place. We are not aware of specific programs other than what is in place for the broader assessments of river condition which is undermined by limited data points in the unregulated systems or the high-level State of the Environment reporting by the Environmental Protection Agency. There is monitoring undertaken in the regulated systems as well as by

environmental water holders who have long-term programs to assess outcomes of environmental water use, which can cross over into unregulated water sources.

Notwithstanding our above concerns, it is important that the NRC fully appreciate the benefits that a properly designed water sharing plan, which provides clear and simple rules that reflect that rivers and streams can stop flowing but outlines when water is available and how much how much water can be accessed, and that this use occurs within the allowable limits at allowable times. This was the clear message we received from our member survey as the most important elements of a WSP across both active and non-active users.

Interestingly, when asked what worked well in the plan the highest response 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. Given the recent experiences of drought and the uncertainty around floodplain harvesting licencing and the access of overland flow via an unregulated licence this feedback is unsurprising. We make further specific comment on this later.

A general concern is that most members do not feel that the plan has met their expectations. There are members, despite being water users and members of an industry group, who didn't know enough about it to make comment or were not aware that there was one and what its purposes was, let alone what it achieved. This reflects a lack of broad communication and engagement on the water sharing plan over its lifetime, which is reflective of the Government's focus outside the unregulated water sources.

4 NRC questions

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

We combined our response to the social and economic outcomes.

We respond to specific improvements in Section 5.

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

Response to our survey indicated that members more often than not, considered the plan provided for environmental outcomes than social or economic outcomes, through the establishment of the water sharing framework. This feedback is largely received from unregulated holders who have been directly impacted by:

- Implementation of active managed rules to protect held environmental water⁷;
- Broad-scale restrictions and limitations on access during the February 2020 Northern Basin First Flush, despite access conditions being triggered and in some instances, their property flooded; and

⁷ 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 Valley⁷ has already been implemented in priority sub-catchments.

- Proposed reductions and new rules for proposed floodplain harvesting licencing program and the uncertainty, that comes with the delays in this program.

For these reasons, they see a prioritisation for the environmental requirements over their own access. Despite experiencing the same challenges of managing the natural variability in inflows and the often short and sharp duration events which characterise flows in the Gwydir Valley.

The fact that the Plan defines the overall volume of water and incorporates individual limits and access conditions, has contributed to environmental outcomes in the valley by allowing water to be present in rivers when inflows occur. The key here being when inflows occur. Because it's an unregulated system, there is no infrastructure to capture and store water during times of plenty, to use when natural inflows subside as with regulated systems. This means that the rules and conditions, therefore, can only take effect when inflows occur, and any flows are shared accordingly. It can be evidenced recently, that even in these instances when access is triggered the volume of water used is small compared with the flows available at the time. However, it must be acknowledged that these creeks and streams will naturally stop flowing and can do for extended dry periods, like those experienced since 2017 and in these instances there are no rules, other than regulating the system, that can be established to reverse this occurring.

An example of this are the mosaic of unregulated water sources in the south-western portion of the Gwydir Valley Floodplain including, Gurley Creek, Millie Creek, Boggy Creek, Thalaba and the Barwon with some of this water flowing towards the Moomin before meeting with the Mehi, near Collarenebri or directly flowing into the Barwon via the Thalaba Creek, south of Collarenebri. These creeks have small natural stream capacities and flows can easily break outside of the creek bank and across the surrounding floodplain. Access conditions in this system have been triggered, in large events such as flooding in 2020 during the first flush and again in 2021 during catchment wide event. Licences in these sections usually have visible flow requirements due to limited or no gauging, which have meant that access has been available (when not temporarily restricted). Interestingly, during the recent conditions and despite irrigation use, this system was estimated by WaterNSW as contributing at least 630,000 ML of floodplain flows⁸ in addition to flows measured into the Mehi and on the Thalaba via the gauging network. This water has contributed to longitudinal and latitudinal connectivity across the valley and beyond.

⁸ <https://waterinsights.waternsw.com.au/api/water-source/v2/updates/689/attachment>

Figure 1: Thalaba Creek guage during February 2020



Figure 2: Galathera Creek, out of bank, March 2021.



Figure 3: Aerial image of Gwydir and Border Rivers Flooding March 2021



Importantly, there are parts of the Gwydir unregulated water sources that can be influenced through regulated water deliveries. In these systems, the access rules including the recently introduced active management provisions, protect base flow and held environmental water flows to environmental assets such as the Gwydir Wetlands. Thus the plan has contributed to the environmental outcomes achieved in these systems.

For 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 Holder and speak with their monitoring team. The Gwydir is one of seven long-term monitoring sites in the Murray Darling Basin⁹.

Example outcomes from long-term environmental water monitoring programs, provided on the Commonwealth Environmental Water Holder website⁹ includes:

⁹ <https://www.awe.gov.au/water/cewo/catchment/gwydir/monitoring>

- 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 of the hydrological nature of the Gwydir Valley should be acknowledged when considering the Plan's influence on environmental outcomes (or any outcomes for that matter) during its term. Meaning that there is a limited range of flows that Plan rules or environmental water managers can influence in the unregulated system other than allowing for the sharing of water when it becomes available. This means that despite aspirational desires to achieve specified flow targets outlined within the Long-term Environmental Water Plan for the Gwydir Valley¹⁰, the ability for these outcomes to be influenced other than natural events is very limited.

For example, in the Mallowa many flow targets (presented in Figure 4) require large natural events to meet the desired flow targets magnitude or duration due to natural and infrastructure constraints (being delivery and channel constraints less than 300ML/day). Water access which is understood to be below licence limits, is also limited in this section by on-farm infrastructure capacity and opportunity; natural due to inflow variability and access rules, that include commence and cease to pump conditions requiring protection of base flows. Which means that water usage is immaterial to whether these flow indicators are met or not.

¹⁰ <https://www.environment.nsw.gov.au/topics/water/water-for-the-environment/planning-and-reporting/long-term-water-plans/gwydir>

Figure 4: Mallowa Stream Flow Indicators included in the LTEWP

Flow category ⁶⁷	Gauge ⁶⁷	Flow rate / volume ⁶⁷	Timing ⁶⁷	Minimum duration ⁶⁷	Frequency (LTA frequency) ⁶⁷	Maximum inter-event period ⁶⁷	Additional requirements and comments ⁶⁷	
Cease-to-flow	CF1	Mallowa @ Regulator (418049)	0 ML/day	In line with historical low flow season, typically April to June	Events should not persist longer than 24 months	CF event durations of 24 months should only occur once in 10 years	N/A	When restarting flows, ensure a slow rate of rise and fall (in line with natural) to reduce the risks of harmful water-quality impacts, such as de-oxygenated refuge pools.
Small wetland inundation	WL1	Mallowa @ Regulator (418049)	>3,000 ML event	Any time	2–3 months	9–10 years in 10 (95%)	18 months	These EWRs may not be able to be met by HEW alone with the current volumes that are available and under current constraints. Flows >300 ML/day are dependent on the remaining natural events. Constraints need to be relaxed and remaining natural flows must be protected to meet these flows
	WL2	Mallowa @ Regulator (418049)	>8,000 ML event	September to March (can occur any time)	2–4 months (2–8 months of asset inundation)	7–9 years in 10 (80%)	2 years	
Large wetland inundation	WL3	Mallowa @ Regulator (418049)	>15,000 ML event	October to April	2–4 months (2–6 months of asset inundation)	5–7 years in 10 (60%)	3 years	
	WL4	Mallowa @ Regulator (418049)	>22,000 ML event	August to February (can occur any time)	2–6 months (2–3 months of asset inundation)	3–5 years in 10 (40%)	5 years	
Large overbank	OB5	Mehi @ Moree (418002)	>20,000–30,000 ML/day	Any time	1–2 days (1–6 months of asset inundation)	1 year in 10 (10%)	10-15 years	These EWRs cannot be met by HEW with the current volumes that are available and under current constraints. Flows >3,000 ML/day are dependent on the remaining natural events. Constraints need to be relaxed and remaining natural flows must be protected to meet these EWRs.

⁶⁷ See Glossary for definitions and explanatory text on how to interpret the EWR table.

With that in mind, we would argue that other plans such as the *Floodplain Management Plan for the Gwydir Valley (2016)* and the *Water Sharing Plan for the Gwydir Regulated River Water Source (2016)*, in addition to how environmental water manages use their held and direct their planned environmental water, has a much greater influence on environmental objectives in the valley than the rules within this water sharing plan.

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

Member feedback does not indicate that the Plan contributed to social, cultural and economic outcomes. We believe this to be driven largely by the change encountered during the Plan life and the ongoing uncertainty about access which seems to be changed ‘in the public interest’¹¹ with little consultation but also delays in floodplain harvesting and the foreshadowed reductions.

When asked what worked well about the water sharing, a key responses were rules that define water access, by describing when a water user can access water and how much, and rules that ensure towns have water as well as farmers for stock and domestic purposes. These are clear social and economic outcomes of the plan.

¹¹ Referring to the option for restrictions on water use in S.324 of the NSW Water Management Act 2000

This feedback is also supported by compliance work by the Natural Resources Access Regulator (NRAR) public register of compliance actions for this plan¹². A review of the register outlined no cases of water users accessing water outside their conditions. However the majority of the 49 compliance actions were in response to the installation and use of infrastructure without appropriate approvals. This suggests that while the Plan provides clarity around times when water can be accessed, further work likely by WaterNSW, is needed to communicate to farmers (not only water users) about the types of approvals required.

Interestingly, member feedback suggested while these rules worked well, they were the greatest areas where improvement in the plan were needed. Of concern was how access rules reflect the variable nature of unregulated flows, which are often short duration events as well as, clarity around access in floods and droughts and trade.

The lack of development in the unregulated water market is the greatest shortcomings of the plan and must be addressed to realise the full potential of social and economic benefits possible. This is discussed in detail in the following section.

Unregulated water take throughout the region has contributed to the economic value of irrigated products 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, noting that the Gwydir Shire, parts of the Inverell Shire, Uralla Shire and Tamworth Shire are also within the Valley and represent unregulated water take. During that year, unregulated water access was available and would have contributed to the growing of cotton, wheat and lucerne and other stock-feeds. 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. We note that unregulated water can contribute to a range of food and fibre crops, often in conjunction with other sources of water. Unregulated water does not contribute to permanent horticulture in the region.

It must be acknowledged that the social and economic benefits of unregulated water use are constrained to shorter periods of contribution, more closely aligned to water availability than compared to regulated water use. That's because of access rules limit flows in times of low to no flow periods and accounting limits, which can easily be reached during successive seasons of access. Being unregulated water, also means there is no opportunity other than on-farm infrastructure, to capture and store water when it is abundantly available for later use. On-farm water storage provides an individual a short-term option to smooth production, but not all unregulated users have on-farm storage.

This pattern is observed when reviewing actual water usage data, which demonstrates that in droughts unregulated water is not available, but account limits restrict access in flood

¹² <https://www.nrar.nsw.gov.au/progress-and-outcomes/public-register>

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

years. Meaning that unregulated water users are more opportunistic irrigators, with regular periods where they cannot irrigate. This is important when considering how the Plan can be improved to reflect these patterns of use.

4.3 To what extent do you feel the plan has contributed to meeting its objectives?

The plan has made progress towards each of the newly defined objectives being:

- To protect, and contribute to the enhancement of, the ecological condition of these water sources and their water-dependent ecosystems over the term of the Plan
- To maintain, and where possible improve, access to water to optimise economic benefits for agriculture, surface water-dependent industries and local economies.
- To maintain, and where possible improve, the spiritual, social, customary and economic values and uses of water by Aboriginal people.
- To provide access to surface water to support surface water-dependent social and cultural values

But given the lack of monitoring and measurement data available at the appropriate scale, we cannot comment on the extent to which the Plan itself has contributed other than what was provided in the above sections.

There is always room for improvement and this is explored in the following section.

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

The following section 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 Unregulated River Sources (2012)*. We outlined areas where we recommend improvement can be made.

We note that this review comes prior to the incorporation of unregulated floodplain harvesting licences in the Gwydir Valley. As such, we anticipate that future versions will be updated in a number of Parts to reflect the issuing of unregulated floodplain harvesting licences once the NSW Government finalises their implementation of the Healthy Floodplains Project in our region.

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 and that our feedback was considered as part of that process.

We recommend that S.10(3)(f) is amended to outlined that active management rules apply in specified sub-catchments. As it currently reads one would assume all sub-catchments but there are limited unregulated sections that can have held environmental water delivered to them from the regulated water sources and hence, it is not all of the unregulated plan areas.

Section 10(3)(f) should read restrict the take of water to protect Active Environmental Water in specified sub catchments. With a note referring to these catchments as well as the relevant Sections of the plan, where these rules exist.

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.

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 S.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.

Given this plan represents unregulated water sources, that are classified as unpredictable intermittent (Class 7) flow regime and indicated that this flow pattern was generalised that the eastern upper headwaters of the Murray-Darling drainage system¹⁴. This eco-hydrological classification based on multiple hydrologic metrics describing the key ecologically relevant flow regime suggest streams are highly variable with low constancy of flows, intermediate base flow contributions and intermediate runoff magnitudes and a very low predictability. These characteristics are often referred to simply as ephemeral streams.

For this reason, we recommend that this section of the Plan should also refer to the known hydrological condition in these systems being highly variable, intermittent flow regime of northern ephemeral systems.

The opening section of s.14 should be updated to include a reference to natural variability, for example "This Plan recognises the effects of climatic variability on river flow in these 'ephemeral' water sources by having provisions that..."

5.3 Part 4 – Planned Environmental Water

The Plan is required by the *NSW Water Management Act 2000* to outline the commitment, identification, establishment, and maintenance of planned environmental water in these water sources.

There does not appear to be any amendments to this section other than updates to subsequent rules to provide an overarching commitment of water present because of access rules or the application of the long-term annual extraction limit and the exemptions and exclusions of other uses. Therefore, there are the same Planned Environmental Water provisions for the term of this Plan.

5.4 Part 5 – Requirements for Water

¹⁴ M.J. Kennard¹, B.J. Pusey¹, J.D. Olden², S. Mackay¹, J. Stein³ and N. Marsh⁴. Appendix 5: Ecohydrological classification of Australia's flow regimes, in Ecohydrological regionalisation of Australia a tool for management and science by Brad Pusey, Fran Sheldon, Mark Kennard, Mike Hutchinson for Land and Water Australia.

Domestic and Stock rights as provided as part of this Plan have not changed but they remain estimated. This that are not currently well understood or managed. We welcome the development of reasonable use guidelines for basic landholder rights as indicated by Government.

5.5 Part 6 – Limits to the Availability of Water.

5.5.1 Limits and Compliance

This Section has been amended to include plan limit and sustainable diversion limit compliance responsibilities and as a result, is very confusing for water users and individuals to understand. The lack of referenced modelled information also means that a reader cannot provide context to what these steps mean, for example there is not an actual plan limit volume, yet we are aware that is accepted by the Murray Darling Basin Authority and NSW Government that a long-term limit of 11,000 megalitres per year is estimated for the unregulated water sources¹⁵.

We recommended as part of the WRP development that clarity around what these limits should be provided as part of the Plan, rather than referring to secondary documentation. However, this was not accepted in the current version of the Plan.

Since then, the floodplain harvesting debate revealed a significant and polarising, lack of knowledge from supposed experts around limits (particular the Gwydir Cap) and how these and the SDL are model outcomes and are subject to change with updated information¹⁶. For this, we accept there are interpretation concerns with providing a current estimate of Plan Limit which represents its portion of the Gwydir Sustainable Diversion Limit within the Plan itself. Notwithstanding, we do see value in clarity around how they are being monitored and progress, which is more clearly available in regulated and groundwater systems. For this we recommend a note is still added to this Part outlining where to find these estimates and progress reports for both the plan limit and SDL reporting.

A note outlining what the long-term annual average extraction limit and the Basin Plan SDL are for these water sources and progress monitoring against this limit are included in the Plan. The NSW Government should concurrently establish a clear reporting process for transparent reporting of plan limit compliance for unregulated water sources as with other water sources.

Our internal analysis of partially available water use information directly obtained from members, indicates that usage is well below plan limit given the natural variability in flows, resulting in consecutive years of no or very low access during the recent drought. This analysis adjusted the plan limit down to account for water requirement estimated for higher priority uses of local water utilities and stock and domestics rights and access licences.

The current Plan in s.31B(1) allows for action from non-compliance to reduced Available Water Determinations (AWD) below 1ML per unit share of unregulated access licences as the lowest priority licences. We expect that following the inclusion of unregulated floodplain harvesting licences, that an additional compliance action to reduce those licences are

¹⁵ Breakdown on Baseline Diversion Limit estimates for the Murray Darling Basin Plan 2012.

¹⁶ See our webpage Addressing Mistruths for more information <https://www.gvia.org.au/water-policy/water-management-framework/floodplain-flow-and-licensing/addressing-mistruths/>

included. Without the addition of unregulated floodplain harvesting licences, the impact of any growth in extractions by either unregulated water users or unregulated floodplain harvesting water users is socialised. This is unacceptable given that not all unregulated entitlement holders are floodplain harvesters and hold unregulated floodplain harvesting access licences. Without amendment there is a significant inequity for unregulated users across the valley.

Section 31B (1) is amended to consider reductions in AWD on entitlement categories where any growth has been identified and that any reductions in AWD should consider information relating to the continued risk of non-compliance including antecedent conditions and seasonal forecast of water availability and usage.

5.5.2 Available Water Determinations and Account Management Rules

Available water determinations for unregulated river access licences are currently limited to 1ML per unit share, although water users are able to carryover allocation to a maximum of 3ML per unit share. Our analysis of water usage information highlighted that there are three key constraints to water access being water availability, the timing and duration of those flows compared with infrastructure, and water account limits. We contend water use could be well below long-term allowable limits and constrained and the Plan is contributing to this outcome.

We believe with more accurate usage and water infrastructure and accounting information; further discussion should be had on how the Plan can be improved to ensure the efficient use of available water without undermining other objectives. That afterall, is the overarching objective of the National Water Initiative. This may mean the exploration of greater than 1ML unit share allocations or a change in accounting limits and carryover but also improved trade opportunities.

For this investment in data collection and ground-truthing of work approvals as suggested in 2011, must be completed and the results presented to initiate further discussion. We do not consider it appropriate to continue to assume water licence information data is firstly accurate or that full usage and full activation is occurring. On-farm inspections by NRAR as part of the roll-out of water metering reforms reveals significant discrepancies in information with over 50% of the first tranche of water users either having sites out of scope or inactive, and not requiring a meter as previously ¹⁷thought. To inform good planning and policy discussion, we need good information.

Reporting should be provided by NSW Government on actual water use information is provide as required by the Water Management Act.

A review of active work approvals, to separate non-active work approvals is undertaken to be considered with historical water use information to establish clear understanding of risk to water sources, rather than using water licence information only.

Until this information is provided, we support the maintenance of the existing access arrangements including cease to pump and commence to pump conditions, accounting limits and carryover rules. Although we do consider there is scope to consider the alignment of the compliance regime of average take over 5-years in s.29(1) with the account management rules in s.39(3). The GVIA notes that Section 39 outline the carryover and average water

¹⁷ <https://www.dpie.nsw.gov.au/nrar/how-to-comply/metering/compliance-state-of-play>

usage allowances for all licences. During the WSP development, the GVIA clearly identified that the Gwydir region as unpredictable intermittent largely ephemeral flow regime¹⁸. Such streams are highly variable with a very low predictability, characteristics which accurately describe many of the unregulated streams within the Gwydir valley. Hence, the three-year timeframe for account management rules should be aligned with the compliance methodology to allow for this variability, extensions to carryover should also be considered. This is particularly relevant when we consider the changing inflow patterns experienced throughout the Plan's life.

Once usage data is made available, review account management rules in Section 39 (3) to compare the benefits and risk of three- and five-year accounting periods, noting five years would match with the compliance requirements. This would also trigger a review of carryover rules in Section 39 (4).

We note that Section 42 establishes flow classes for water sources and management zones. However, Section 42 (4) indicates that the Minister may change these and publish this information on the website. We recommend that if the Minister is to materially change flow class conditions that licence holders should be afforded the standard procedures to provide written notice, reasonable opportunity to appeal and consideration of any submissions as per the Water Management Act 2000 (NSW)¹⁹ for the amendment of any mandatory conditions.

The GVIA is aware of amendments to licence conditions whereby individuals were not duly aware, could have inadvertently been in breach of their conditions and has resulted in inconsistent rules between licences, works approvals and the water sharing plan. A process to circumvent changes being made without licence holders' knowledge, would be to ensure that the Department have a record of contact with the licence holder regarding the change and that a right of appeal is granted.

Section 42 (4) be amended to allow for a right of appeal.

We also note that during the preparation of the initial Plan, there were negotiations with the establishment of flow classes as presented in s.42. We note during this process, the GVIA supported the efficient and effective implementation of plan rules but could not support the undermining of water users' rights to access licence entitlement.

We therefore do not support any arguments to alter the cease to pump or commence to pump arrangements in the Gwydir Valley given the issues around the quality of the water accounting system and data veracity raised earlier. Change in this area should only occur unless individuals or Government clearly raise concerns directly to one-another, around the flow classes or conditions noting that some conditions are confusing for individuals and Governments. For example, issues around the interpretation of flow classes for the Gingham Water Source should be undertaken directly with those water users.

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

¹⁸ M.J. Kennard¹, B.J. Pusey¹, J.D. Olden², S. Mackay¹, J. Stein³ and N. Marsh⁴. Appendix 5: Ecohydrological classification of Australia's flow regimes, in Ecohydrological regionalisation of Australia a tool for management and science by Brad Pusey, Fran Sheldon, Mark Kennard, Mike Hutchinson for Land and Water Australia.

¹⁹ For example, in *Section 102* Imposition or change of conditions after approval has been granted.

and are measurable. For this reason, we see Section 44 and 45, Total Daily Extraction and Individual Daily Extraction limits as overly complex rules that are not required in the region. However, these may be required in the future, as a way to minimise potential local impacts if trade rules are improved and, or, if different users, such as environmental water holders or cultural water users become active in unregulated water sources.

Active Management rules were updated within the Plan during its lifetime, these rules and the development of the procedure's manual were undertaken to manage a very low risk presented by two active water users. The risk is that if the measurement and communication tools are not effective then the policy fails with water users missing opportunity that they have legitimate rights to and have had historically and/or the environmental water managers, do not receive the protection on the held allocations they are also entitled. 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.

However, our members impacted by these measures, while in support of the rules in principle, see the implementation of these rules disadvantaging them because of a lack of planning within the procedures manual to manage sudden changes in conditions and flows. Timing during an unregulated event for water users is critical, they do not know when their next opportunity may present. The proposal means that if it rains during the 24hr set-announcement period and take is restricted, those users may forfeit their only legitimate opportunity during the mixed event. The selection of measurement points for determining and forecasting flows (and losses) and their accuracy have also not been thoroughly explained.

Whilst not specific to the Plan, we believe further work on the procedures manual with industry and the environmental water managers is required.

Investment in further improvements in the procedures manual for implementing active management in specified sub-catchments in the Gwydir Valley.

5.6 Part 10 – Access Dealing Rules

The access 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 inter-catchment trade are limiting opportunities to improve social, economic and environmental outcomes.

Establishing an open trading framework are agreed objectives of the National Water Initiative²⁰. 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.

²⁰National Water Initiative, COAG, 1994. <https://www.agriculture.gov.au/sites/default/files/sitecollectiondocuments/water/Intergovernmental-Agreement-on-a-national-water-initiative.pdf>

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”*²¹. 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.”*²²

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”*²³. Water market improvements maybe increasingly required for unregulated water sources, who are already managing highly variable water availability but also due to the lack of market depth and development. The initial Plan rules, which have not been amended are overly restrictive and as a result there has been little market development in unregulated systems. Our experience is that unregulated entitlements, continue to be largely sold with land.

The state of the unregulated market is despite the existence of multiple instruments and agreements which are established to improve market development. 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 report indicated there are 1500 surface water trade restrictions²⁴ that may need to be reviewed to ensure they meet Basin Plan requirements and support the equitable and robust operation of the water market. Whilst we do not have the details of these 1500 restrictions, we would believe that the Gwydir unregulated water source rules, would be represented in this list.

Trade is an essential mechanism to allow water users and the community to adapt to changing water availability. Trade allows a clearly defined market-based mechanism for individuals to manage their businesses into the future, as indicated by the Productivity Commission²¹.

The benefits of an effective trading framework are also broad ranging, they can provide social, economic and environmental benefits for regions. There are opportunities for a range of new water users, particularly the expansion of environmental water holders as well as cultural water users into this form of take. The success of the Commonwealth Environmental Water Holder actions in other unregulated water sources²⁵, signals the opportunity that exists.

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

²² [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)

²³<https://www.pc.gov.au/inquiries/completed/water-reform-2020/report/water-reform-2020-supportingb.pdf>

²⁴[https://www.mdba.gov.au/sites/default/files/pubs/MDBA Statement of Performance a gainst 2019-2020 Compliance Priorities.PDF](https://www.mdba.gov.au/sites/default/files/pubs/MDBA%20Statement%20of%20Performance%20a%20gainst%202019-2020%20Compliance%20Priorities.PDF)

²⁵ See information on water use by the CEWO in Northern Unregulated Catchments <https://www.awe.gov.au/water/cewo/catchment/northern-unregulated-rivers>

For example, the CEWO has already used new, unregulated water trade opportunities as well as existing entitlements to enhance environmental outcomes in Narran Lakes²⁶. Communication throughout this Narran Lake event via updates on their website²⁶ 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.”²⁶ The event has 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 breeding habitat inundated. The inundated area was over three times the area inundated in the last small inflow to the lakes in 2016.”²⁶

Without an open, clear and simple trading framework, these opportunities to maximise natural events would not be available to environmental water managers in unregulated water sources of our valley.

Not only are there outstanding commitments and opportunity for improved outcomes from updating access dealing rules, but we also have more information about the hydrological connectivity between water sources, which was one of the main constraints during Plan development. There is now detailed satellite information across the Gwydir unregulated systems following flooding in 2012 when the Plan was made and again in 2020 and 2021.

The floodplain connectivity evident (as presented earlier in Figure 3) 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 where hydrological connectivity can be identified and should be expanded to include floodplain connectivity, given the NSW Government’s clarification that unregulated access licences are to include access to overland flows²⁷. Where hydrological barriers exist, these can be represented as natural restrictions on trade but restrictions should not be purely administrative constraints due to poorly defined catchment boundaries.

The blanket no-trade out of water sources ignores the hydrological connectivity of many unregulated water sources, particularly on the floodplain. In certain circumstances this restriction is putting environmental assets at risk, rather than protecting them. For example the Mallowa trading zone within the Mehi sub-catchment restricts the trade of water in and out of the zone, whereby a simple administrative improvement could allow for the movement of entitlement out of this zone into the greater Mehi sub-catchment of which it is located, hydrologically connected via streams and the floodplain but maintain the restriction, to not allow trade into it thus protecting environmental outcomes in the Mallowa watercourse. However, we would argue that further review could establish great hydrological connectivity with other unregulated water sources.

Trade review is undertaken to remove artificial barriers to trade and reflect improved knowledge on hydrological connectivity of streams and the floodplains, to reflect that

²⁶ <https://www.awe.gov.au/water/cewo/catchment/rebuilding-waterbird-habitat-narran-lakes>

²⁷ Taking of overland flow in https://www.industry.nsw.gov.au/data/assets/pdf_file/0007/272338/guideline-for-implementation.pdf

unregulated access licences can be used to access overland flow as well as water within a stream. This review is to suggest amendments to licence dealing rules and administration of unregulated trades. This maybe best represented by grouping the sub-catchments that are on the floodplain, separate to those outside the floodplain.

There are lessons from the development of water markets in the regulated and groundwater systems that can inform how we progress and manage the risk of accumulation and extraction on water sources. Nonetheless there is better information available now, that together with actual usage data, supports a reassessment of risk and opportunity in terms of unregulated water trade rules.

A trade review, which we have repeatedly requested in other forums prior to this submission, if agreed, will take time to implement. Our recommendation regarding data and licence information is critical to inform this review also. While a precautionary approach should be considered, the last 10-yers of precaution has meant unregulated users have been disadvantaged. We should balance this precaution with acknowledging that there are artificial restrictions that should not be allowed to continue.

We recommend that interim arrangements are established to allow case-by-case review of trade proposals, where hydrological connectivity can be established, and environmental and cultural assessments can be undertaken if the volume traded presents a risk to the water source. Clear criteria should be established to enable the case-by-case review of possible permanent trades pending a formal trade review.

Clear criteria to establish interim arrangements until such time as a formal trade review is finalised, to enable case-by-case trade proposals to be assessed, where artificial barriers are identified.

5.7 Part II – Mandatory Conditions

This Part should be updated to reflect current mandatory conditions as opposed by regulation for clarity. This includes metering and reporting requirements.

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

We recommend that the amendments need to more clearly articulate that 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.

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.

5.9 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.

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 Unregulated Water Sources 2012* that cover unregulated 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 15 recommendations, which we have grouped for the benefit of the NRC into the following categories being:

1. Data and reporting.
2. Trade review and amendments to licence dealing rules.
3. Assessment of account management rules.
4. Administration improvements to the Plan.

Submission Ends.