



Submission into Proposed Water Sharing Plan rules for the Gwydir Regulated and Unregulated Water Sources

By: Gwydir Valley Irrigators Association

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Introduction:

The Gwydir Valley Irrigators Association (GVIA) welcomes the opportunity to provide input into the proposed floodplain harvesting licence rules for the Water Sharing Plan for the Gwydir Regulated Water Source and the Gwydir Unregulated Water Sources.

The GVIA continues to support the implementation of the Healthy Floodplains Project and the finalisation of floodplain and overland flow licencing within our valley. We welcome the draft rules as a sign of the NSW Government's commitment to this program. However, we note that as of the date of this submission, there is no regulatory framework in-place to establish these licences or future metering and measurement requirements. The consultation and discussion about valley-specific rules is rather academic until there is commitment to support this framework and achieve the well supported outcome of licencing, metering and reporting of floodplain harvesting and overland flows in NSW.

The finalisation of licencing of floodplain harvesting cannot be delayed any longer, 20-years is enough. The results of the Gwydir region should be reason enough to reaffirm this commitment with 30% of the long-term water take outside of the current, contemporary licencing framework.

The establishment of volumetric licences within the Water Management Act 2000 for floodplain harvesting does not create new water but rather, is recognising this existing historical form of access in the current regulatory framework. Key regulations consulted on at the end of 2020, must be put to government to enable this transition to occur. These include:

1. Water Management (General) Amendment (Floodplain Harvesting) Regulation 2020.
2. Water Management (General) Amendment (Floodplain Harvesting Measurement) Regulation 2020.
3. Water Management (General) Amendment (Exemption for Rainfall Run-off Collection) Regulation 2020).

Without enabling the licencing framework and then implementing valley-based compliance through water sharing plan rules, this form of take remains unmanaged, unmetered and unaccounted for which is not in the interests of any stakeholder. An analysis of stakeholder views presented in Attachment A, highlights there is strong commitment to licencing across a broad spectrum of interests but that other water management issues are being conflated as part of the debate. We must remain focused on moving forward with improving the regulation of floodplain harvesting and overland flows and take every step required to finalise this historic reform as committed to nearly 20-years ago.

The licencing of floodplain harvesting, which occurs in a flood, must be separated from the debate about preparing for and managing flows in drought. Drought management is an important and current issue given that many regions remain on the brink of drought. But this is a much broader discussion than the long-standing commitment to licence floodplain harvesting and must be part of a larger policy discussion about water sharing options into the future. This discussion can only benefit from having floodplain harvesting licenced, managed and metered which isn't currently the case.

Licensing any historical form of take is not without its challenges, as water users, will be subjected to further regulation, reduced water and increased costs. We estimate that licensing floodplain harvesting and overland flows will have on average a \$93M economic impact to our community. But as water users, we recognise the importance of remaining compliant to legal limits and compliance is one of the many reasons we have long supported this process. Implementation also has the following benefits:

- Licensing will protect the environment and users from further growth, providing certainty to communities who rely on floodplain flows by restricting take to legal limits by through:
 - issuing shares consistent with the fully compliant long-term average take rather than the maximum take or current take – proposed unit shares are 108,000ML are 21.5% lower than the current long-term current take volumes^[1];
 - limiting the maximum volume that can be taken in any sequence, effectively reducing the maximum volume that can be taken in a flood – the current proposal suggests a 28% reduction from current conditions^[2].
- Restricting future growth will maintain and improve floodplain flows within our own valley and downstream, including many environmental assets as demonstrated within the environmental outcomes for in-valley improvements in key ecological outcomes.
- Compliance will be via a new three-fold compliance approach rather than the two options available today, which includes maximum usage limits, metering and reporting.
- Communities will have confidence that not only water volumes but floodplain works will be monitored and audited, with all farms on the floodplain (not only irrigation farms) comply with consistent floodplain management planning rules and works approvals to utilise those works to capture water (for eligible floodplain harvesters).

It has however, become evident following the results of consultation in the Border Rivers and discussions around valley-specific rules in the Gwydir Valley that our communities, who are equally reliant on floodplain flows as others, have been forgotten as part of this process. Not only did we find there was not sufficient information to make a fully informed decision on same elements of the proposed rules, but there was also no socio-economic impact assessment of the approaches provided.

We agree that legal limits must be recognised, but decisions on how to achieve these limits must consider the socio-economic impacts on those communities, to ensure our transition to new rules does not inflict sudden, irreversible economic hardship. Of concern, is the recommendation to limit starting account balances to 100% or less in the first year of

^[1] Current long-term average take of floodplain harvesting and exempt rainfall runoff is 137,700ML/year the compliance scenario, seeks to issue 108,000 unit shares to achieve a new compliant long-term average take of 93,200ML/year.

^[2] Maximum modelled take in the Gwydir Valley is 759,000ML in 2000 the maximum proposed, if accounts were carried over to their maximum limit is 540,000ML, which is 28% lower than what was taken in 2000.

implementation in the Border Rivers as presented in the 'What We Heard Report'¹. This recommendation demonstrates a lack of consideration of community impacts focusing on the environment's drought as priority and forgetting about our communities. This decision also ignores the changing antecedent conditions in our region and the fact local environmental needs and recent connectivity has been achieved through normal water sharing planning arrangements. If this rule was applied in the Gwydir, we conservatively estimate that decision will remove \$1.1B from our economy in the first two-years of licencing if it floods as it did in 2011 or 2012, while having no environmental or downstream benefit, because of recent localised flows and because when it floods like it did then the scale means entire north-west and western NSW would be in flood anyway.

How this policy is implemented must be balanced and we must not see communities traded off each other. Agriculture in many regional towns, such as Moree, is the major employer and rules must consider ways which the industry and community can transition. Just as were provided under previous reforms 20-years earlier. This way we can mitigate the impact of these new rules and avoid the community impact being greater than required by the policy. Transitioning into the contemporary framework must also balance the highly variable nature of overland flows in northern ephemeral systems and therefore should have a long-term approach to adjust to the infrequency of floods.

For these reasons, we support an accounting framework that uses long-term entitlements and carryover provisions that balance variability of this form of access. The entire Gwydir Floodplain has not had overland flow opportunity since 2012, when devastating flooding impacted the entire north-west and Menindee Lakes filled and spilled. While some individuals may have had isolated access in 2016 and in 2020, the variable nature must be reflected in any future licencing and accounting framework.

It is also important to remember that this process a licencing and compliance reform and not an environmental reform. Rules and processes must ensure existing and future growth is limited and that take remains within legal long-term limits as set out in water sharing plans and the Basin Plan, no more or no less.

We acknowledge that the implementation of licencing will require individuals and the valley to have less water made available, than what they have recently accessed over the long-term. We recognise that growth must be addressed and that there will subsequently be an economic impact because of delays in implementation. It is therefore imperative that a trading framework is established, allowing available water to move to where it is valued most. This will allow individuals to return to their historical access levels or new opportunities in ensure efficient use of our limited water resources.

We thank the Peer Reviewers for their ongoing input into the finalisation of technical components of this program. It can be overwhelming for many to read through the plethora of technical information, so we strongly supported the establishment of a third-party Peer Review to provide independent oversight and opinion. The fact the peer reviewers have tracked the progress of their recommendations provides the GVIA and their members, additional confidence in the processes and approaches used as part of this historic reform.

¹ https://www.industry.nsw.gov.au/__data/assets/pdf_file/0020/350237/what-we-heard-report.pdf

We thank you for the opportunity to provide input into these rules and look forward to further consultation on key steps of the program as it progresses. We welcome the opportunity to review the newly drafted water sharing plan in its entirety.

We have made 18 recommendations as summarised below for your reference.

Recommendations

1. Recommendation: NSW avoid the use of temporary water restrictions in favour of establishing water sharing plan rules that transparently manage sharing of flows, and provide certainty and transparency to all water users.
2. Recommendation: The use of s.324 temporary restriction orders are last emergency response for governments in times of extreme drought and for critical purposes.
3. Recommendation: Support accounting rules that ensure future access of floodplain and overland flows, remains within long-term legal limits but balances the highly variable nature of overland flows in northern ephemeral systems, which only occur when our rivers are full and spilling and water is most abundant. We support five-year accounting program to allow for the variability in flows to provide a long-term limit on take and manage future growth.
4. Recommendation: Transitional account management rules are enabled that pre-determine via modelling what water could available in accounts if the floodplain harvesting licencing and compliance approach was initiated in either 2011 or 2012, the last time accounts would have been fully utilised. This approach aligns the long-term objectives of the policy and ensure that the overall impact of the reform is not greater than that required to achieve compliant legal limits without detracting from environmental or floodplain flows.
5. Recommendation: Available water determinations should be enabled to be varied to ensure 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. This rule provides a consistent approach, allowing for this to occur. We support raising accounting limits to allow for the carryover of this additional water, consistent with long-term accounting approach.
6. Recommendation: An open and transparent trading framework must be enabled immediately upon licencing 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. Recommendation: GVIA recognises that a process to ensure sensitive areas are protected from growth but contend that mandatory conditions proposed will achieve these outcomes. Therefore, trade should 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. Recommendation: 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.
9. Recommendation: The process of enabling an amendment is outlined to ensure consultation and engagement with affected communities. Amendment provisions for

access rules must acknowledge the limitations in monitoring, measuring and forecasting floodplain flows.

10. Recommendation: An amendment provision to allow for the recalibration of the model with metering data collected from licencing within the first five years or after a flood is recommended.
11. Recommendation: Consistency between entitlements in the regulated and unregulated water sharing plans is supported.
12. Recommendation: Transitional account management rules are enabled that pre-determine what could be available in accounts if the floodplain harvesting licencing and compliance approach was initiated earlier. This approach aligns the long-term objectives of the policy and ensure that the overall impact of the reform is not greater than that required to achieve compliant legal limits without detracting from environmental or floodplain flows.
13. Recommendation: Available water determinations should be enabled to be varied to ensure 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. This rule provides a consistent approach, allowing for this to occur. We support raising accounting limits to allow for the carryover of this additional water, consistent with long-term accounting approach.
14. Recommendation: 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.
15. Recommendation: The trade zones within the unregulated water sharing plans are not adopted for the purposes of floodplain harvesting rather that the limitations of changes works within floodplain management zones A and D within the mandatory conditions provide the protection needed for sensitive areas.
16. Recommendation: We recommended the unregulated water sharing plan zones are reviewed as priority as part of the upcoming water sharing plan review scheduled.
17. Recommendation: The process of enabling an amendment is outlined to ensure consultation and engagement with affected communities. Amendment provisions for access rules must acknowledge the limitations in monitoring, measuring and forecasting floodplain flows.
18. Recommendation: The Department establish a clear process to inform and communicate outcomes of the building of the Gwydir Source Model to replace the Gwydir IQQM.

About us:

Our Region and Community

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

Our mission is to build a secure future for our members, the environment and the 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, and for our community².

The GVIA organisation is voluntary, funded by a nominal levy cents/megalitre on regulated, unregulated and groundwater irrigation entitlement. In 2018-2019 the levy was paid and supported by more than 91% 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, 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.

The Moree Plains Shire region 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 Shire³.

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 crops⁴.

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.

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² For more information, see our corporate video on <https://vimeo.com/177148006>

³ Cotton Catchment Communities CRC Communities and People Series 2009

⁴ 2010 2011 Agricultural Census Report – agdata cubes, 71210D0005-201011 Agricultural Commodities, Australia

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Comments Gwydir Regulated Water Sharing Plan

General Comments

The discussion and consultation around local, valley-based water sharing rules is academic now, as the parliament has not agreed to support the framework to enable licencing to occur as outlined in the three key regulations below:

1. Water Management (General) Amendment (Floodplain Harvesting) Regulation 2020.
2. Water Management (General) Amendment (Floodplain Harvesting Measurement) Regulation 2020.
3. Water Management (General) Amendment (Exemption for Rainfall Run-off Collection) Regulation 2020).

These must be agreed to before valley-based rules can be properly drafted, the benefits and impacts modelled, and consulted with impacted water users and communities. However, both the Border Rivers and Gwydir are being asked to provide feedback on proposed rules when there is no clear pathway in mind, unknown positions around rainfall runoff management which can impact the accounting framework outcomes. Broader water management and valley-based issues are being conflated into this argument when indeed they should be separate.

We encourage a strong message to government to continue with the important task of finalising this licencing and compliance reform.

As a result of these external factors, we at times as part of this submission, provide only in-principle based feedback.

Also, the GVIA strongly encourages progress on broader water sharing plan issues to be progressed by government through a separate process to licencing. 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 First Flush management approach. However, it must be acknowledged, that in highly variable, ephemeral and distributary systems like the Gwydir Valley, at times – as we experienced in the last three years of extreme drought, there may not be water available to share, regardless of the rules in place at the time.

Sharing rules can also be used to mitigate the risk of creating overbank flows by recognising channel constraints in effluent systems.

We wrote to the Department, on this issue as part of the recent water sharing planning and Water Resource Planning indicating:

“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 1 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.”⁵

This was later followed up with our formal submission on the draft Independent Assessment of the Northern Basin First Flush where the GVIA stated in its introduction:

“Given the public persecution of our industry and community, fuelled by the absence of this essential framework, poor communication and the lack of facts regarding extractive potential and take, we have no interest in continuing to support a system under the guise of the undefined ‘public interest’ that can provide for a repeat of events of the Northern Basin 2020 First Flush.

The Northern Basin 2020 First Flush event was unprecedented in uniting stakeholders around the Northern Basin in demanding the NSW Government do better at managing competing critical needs in times of drought. It became obvious that during the event, in the absence of a clear and transparent set of rules that set a strong framework to address competing critical needs in the well-defined scope of the public interest, the event would be seen as unduly influenced by one or another set of stakeholders.

We therefore see no other solution than to pursue changes to our existing water sharing plans that provide a clearer framework for sharing flows in times of drought that better protect our communities share to possible flows. Whilst not perfect, our plans already provide a robust sharing arrangement but this was ignored, fuelled by an undefined government focus around drought and community perception of a select few on low flows, that failed to consider what would happen when it rained.

With this in mind, we largely support the recommendations proposed by the panel. However, we do offer a number of suggestions to be considered in the process of refining the final report included opportunities to improve data gaps and improve the information base for future discussions.”⁶

Considering overland flow access occurs when our rivers and creeks and floodplains, are full and spilling, we do not see floodplain harvesting as the appropriate form of take to consider drought management options in the Gwydir Valley. The effluent and regulated rivers provide the most efficient way to deliver flows for critical needs. Recognising channel capacity constraints in systems is also important to ensure that the delivery is the most efficient it can be.

⁵ GVIA Final submission on Gwydir Water Resource Plans – 30 April, 2020

⁶ GVIA Submission into the Draft Independent Assessment of the Northern Basin First Flush, August 2020

There is also limited knowledge about how rivers and creeks can contribute to other systems. This is also crucial and was also identified as a significant gap in data as part of the Independent Assessment of the Northern Basin First Flush released in September 2020. The limited information regarding the connectivity of floodplains to certain flow outcomes depending on the location and timing of the flood event must be recognised in any decision to limit this form of access using this mechanism.

Ignoring the existing sharing framework and focusing on downstream flow targets alone, has been demonstrated to have significant ramifications for industry and the upstream communities. As we stated in our submission into the Independent Assessment of the First Flush on page 9:

“...the proportion of losses which were greater for this event almost equalled the remaining share of flow. This means that given the NSW Environmental water manager has discretion on where to send the unallocated portion of supplementary water, this water could have still been directed downstream within channel capacity and industry could have had almost their full share without impacting the downstream flow outcomes.

....meaning, in all [inflow events during the first flush], normal water sharing plan rules both existing and proposed, would have seen a similar outflow outcome from these events given the location of the events, their intensity and the channel constraints in the Gwydir Valley.

The opportunity foregone of 100,000ML⁷ as reported by DPIEW would therefore, not have resulted in a 1:1 reduction in inflows into Menindee Lakes. Providing limited access to ensure flows remained within channel capacity would have provided an additional 10,000-17,000ML of supplementary access (depending on the timing of announcements), which is the residual volume as reported by DPIEW within the assessment of take report^{Error! Bookmark not defined.}

Nonetheless, these flows would have provided a much-needed boost to our community's drought recovery. The economic impact of this foregone flows, that would not have substantially contributed to further flows downstream are estimated at \$17.4M to \$29.6M of post farm gate economic activity for our region alone⁸.”

A rules-based sharing arrangement that is agreed by all stakeholders, provides the greatest transparency and certainty rather than relying on temporary mechanisms such as s.324 orders in the “public interest”.

The outcome of this First Flush event, which resulted in the final target of 200,000 ML being exceeded by more than double. The issuing of general security allocation to Lower Darling water users of 30%, while northern regions which had forfeited water rightly for critical needs, remained on nearly no allocation, the Gwydir was on 1.9%. Is neither fair, equitable or good management of scarce and highly variable resource.

For these reasons, the GVIA contends that the NSW Government should recognise the limitations in data and resources in managing overland flow at this time and focus on

⁷ Assessment of take and protection during first flush flows via https://www.industry.nsw.gov.au/__data/assets/pdf_file/0014/316310/assessment-of-take-and-protection-during-first-flush-flows-in-the-northern-basin.pdf

⁸ Calculation of 10,000-17,000ML foregone access equating to \$800/ML opportunity cost with a 2.178 community value as per the Australian Bureau of Statistics calculation method, noting for cotton the community multiplier is reported as 3.

developing a program to improve data and work towards developing well informed and agreed, long-term solutions.

Whilst applying s.324 temporary restriction is consistent with legislation, the GVIA has a preference to work in developing a rules based approach that provide long-term certainty to all stakeholders. We do not support the ongoing, ad hoc decisions in times of crisis as evidenced by the management of the Northern Basin First Flush Assessment, presented above.

Recommendation: NSW avoid the use of temporary water restrictions in favour of establishing water sharing plan rules that transparently manage sharing of flows, and provide certainty and transparency to all water users.

Recommendation: The use of s.324 temporary restriction orders are last emergency response for governments in times of extreme drought and for critical purposes.

Proposed Accounting Framework

Accounting Period (Questions 8-9).

It is important that the linkage between account management rules, modelling entitlement size, and that each of these components are understood and respected as part of the establishment of any accounting framework. These components are also very valley-specific, it is why we have different combinations of entitlements, rules and licences across NSW. Floodplain and overland flow has unique access arrangements and therefore, the accounting rules will be inherently unique to reflect the characteristics of take.

It is important however to be aware that changes to one component of the accounting framework, must be reflected in the other. Failure to understand and respect this linkage would lead to adverse impacts to water users, further reducing floodwater access beyond the requirement to be compliant with legal limits. Our concern is that recommendations to date and some proposals, are not respecting these linkages and the final outcome will result in unnecessary social and economic impact, beyond that required by the licence and compliance to long-term legal limits.

The GVIA did not find that the Department provided an appropriate level of detail to have an informed decision around different accounting approaches. They provided evidence to support the proposed 5-year option but could not provide or confirm our own estimates of shares, that could be proposed for a three-year accounting rules.

With this in mind, we have found it challenging to undertake due process and diligence on behalf of our members. As a result, all we can do, as part of this process, is support in-principal rules which ensure future access of floodplain and overland flows remains within long-term legal limits but balances the highly variable nature of overland flows in northern ephemeral systems - which only occur when our rivers are full and spilling and water is most abundant.

Using averages in this way must allow for peak use at these rare times when we are in flood, therefore having opportunity to accrue account water for when a flood occurs, to provide our region and its economy the opportunity to access water to store it for future use. An accounting approach in this manner provides our community and the industry certainty around water available for irrigation at times, but ensures overall limits can be achieved in the long-term.

Issuing shares as proposed at 108,000 unit shares and allowing these to be managed over a 5-year accounting period with a maximum account limit of five times unit shares, allows a theoretical maximum take in a flood of 540,000ML. That is theoretical because every individual licence holder would need to carryover all of their allocation for the full five years to have it available for access and would mean a flood on the scale of 2011 and 2012 would be needed to trigger than access. It's important to note that this new compliant volume maximum account limit is 28% lower than the most recent highest volume of 759,000ML in 2000 meaning there will be more water to top up even the largest of floods if they occur.

If alternative approaches outside that proposed in the compliance scenario, which included 5-year accounting sequences with a maximum account limit of five times unit shares are considered by government, then they must be modelled in terms of benefits and impacts. The environmental, legislative and social and economic considerations should all be included but this has not been done. This is demonstrated by our analysis below, which highlights the risk to reliant industries and communities of not aligning accounting rules with the intent of the program to licence the historical form of take within legally defined limits, no more or no less.

For example modelled unrestricted floodplain harvesting over the last 10 years was compared with different accounting strategies of annual accounting using long-term average shares and 5 year accounting with long-term average shares. The outcome indicated that the annual accounting approach that incorrectly assumes long-term shares results in an additional impact of \$1.2B due to extreme restrictions in 2011, 2012 and 2016 resulting in average take over that 10-year period being just 40,121 ML/year. Whereas, under a 5-year accounting rule using a fully transitional licence arrangement the community impact is much less at \$300M with average take over the same 10-years to 92,260 ML/year, which is below the long-term compliance target of 93,200ML/year⁹.

The issue is that by applying long-term thinking in a short-term approach, this reform can easily move away from being a licence and compliance reform and becomes environmental recovery by stealth. The accounting framework should focus on ensuring legal limits, rather than driving overall water use below these legal limits which is clearly demonstrated by the above scenario.

Unfortunately we could not undertake other analysis, particular of the three-year accounting approach, as the shares under different accounting frameworks could not be confirmed.

It is important to note that to achieve just the compliance target, there is an estimated average community impact of \$93M¹⁰ to achieve these limits which government has not considered as part of the policy. The cumulative community impact of this reform and how it is being implemented must be acknowledged, and mitigated by government, to ensure there is no irreversible social and economic impact on regions where this is being implemented.

We support an accounting framework that uses long-term entitlements and carryover provisions that balance variability of this form of access but ensure long-term take is within legal limits. The entire Gwydir Floodplain has not had overland flow opportunity since 2011 and 2012, when devastating flooding impacted the entire north-west and the Menindee Lakes filled and spilled. While some individuals may have had isolated access as in 2016

⁹ Presented in Table 1 Rainfall Runoff Exemption and Modelling Outcomes, Supplementary Report, March 2020 https://www.industry.nsw.gov.au/__data/assets/pdf_file/0011/354278/rainfall-runoff-gwydir.pdf

¹⁰ Calculated from the average volume being reduced by the opportunity cost to the community per foregone ML which is \$1742/ML (\$800/ML farm gate times 2.178 ABS community multiplier).

and more recently in 2020, the variable and episodic nature must be reflected in the framework.

However, analysis of past overland flow opportunity and likely changing climate scenarios suggests that the time between events is likely to increase and the 5-year and maximum five times unit shares maximum account limit may not be appropriate. Recent analysis included in the Gwydir Regional Water Strategies highlighted many of these likely outcomes under a climate change scenario, suggests extended dry periods with a risk of:

- prolonged droughts that receive less total rainfall than those in the observed record (such as the WWII Drought)
- more frequent short, sharp droughts, similar to the most recent drought
- less frequent, but higher magnitude large flow events
- culminating impact of intense rainfall that changes in seasonality slightly and higher temperatures will change inflow patterns – particularly timing, needing more rainfall to generate inflows.¹¹

Because overland flows occur when our rivers or floodplains are full and spilling, and which may not occur as regularly or as often into the future, it is likely that accounting periods may need to be adjusted and lengthened to reflect this and allow the opportunity to access floodwater when it is abundantly available.

Notwithstanding, the GVIA in-principle, supports rules which ensures future access remains within limits but balances the highly variable nature of overland flows in northern ephemeral systems. There must be balance between entitlements and carryover that mimics the high variability of the system. They allow individuals to manage their take during times of abundance (during a flood) but also provide limits on the total take, which means government can manage current and future growth. If an alternate approach that move away from long-term averages is proposed, then these approaches must be fully modelled and consulted. The benefits and impacts in terms of environmental, legislative and social and economic considerations should all be assessed before a decision is made.

The GVIA therefore do not support annual accounting with a preference for 5-year accounting sequence which allows up to five time the unit shares to be the maximum limit as it appears to be the best approach to administering a highly variable resource.

Recommendation: Support accounting rules that ensure future access of floodplain and overland flows, remains within long-term legal limits but balances the highly variable nature of overland flows in northern ephemeral systems, which only occur when our rivers are full and spilling and water is most abundant. We support five-year accounting program to allow for the variability in flows to provide a long-term limit on take and manage future growth.

We note the mandatory conditions and establish licencing framework that provides a framework to manage overall take within the required three-year accounting period of 300% in three years. It appears that the Department wrongly suggested that take limit would exist for floodplain harvesting that is less than the proposed accounting period, to be limited to the overall valley compliance in three-years. This is inconsistent approach to addressing accounting periods and must be rectified when the final period is determined.

¹¹ Draft Gwydir Regional Water Strategy, NSW DPIE 2020
https://www.industry.nsw.gov.au/data/assets/pdf_file/0016/324511/draft-rws-gwydir.pdf

Account Initialisation (Question 9)

Given the very limited opportunities for overland flows have occurred over most of the past two decades, these conditions alone should support an initialisation that is representative of the maximum allowable account limit. This is required to ensure that the community has an opportunity to recover from drought. However, an equitable process, is that Department determine what could be modelled to be available in accounts assuming that this compliance approach was initiated in either 2011 or 2012, the last time accounts would have been fully utilised.

This process reflects what access may have been available and adjusts the water available under the licencing program for this water access, to ensure ongoing take can also be within compliant levels of take. It acts to provide a transitional arrangement that matches the long-term outcomes of the legal limits with the seasonal and valley-scale variation in access. The alternative as recommended in the Border Rivers, applies short-term strategies to long-term policy and provide a blunt, restriction at the beginning of the new licencing arrangement resulting in the immediate reduction in water being far greater than the long-term requirements, which will result in impacts far greater and more broad ranging than those estimated by just achieving compliant levels of take.

The concern is that if a transitional arrangement like this is not established and a flood occurs in the first years of the program, the rare opportunity to access up to the new lower but compliant, long-term volume will be missed. For example, if flooding occurs, on the scale similar to 2011 and 2012, and no transitional arrangements are provided then this could be \$1.1B lost in economic activity to our community, which cannot be regained, and will put the region into a government enforced drought. In this circumstance the overall impact of the reform will be greater than that required to achieve compliant legal limits on take and will not have any additional environmental benefit given the scale of the flooding already occurring.

This approach also recognises the antecedent conditions within a valley, by reflecting what if floodplain opportunity may have occurred within a region. The fact that floodplain opportunity occurs when rivers and creeks, and floodplains are full and spilling meaning that existing sharing rules already provide for critical environmental and in-stream connectivity which were raised a reasons for not allowing for transitional accounting arrangements in the Border Rivers.

For example, in the Gwydir, localised flooding and floodplain harvesting opportunity was triggered in December 2020 when unregulated inflows above the floodplain were higher than the operating capacity of river infrastructure, resulting in most flows naturally diverting down to the Lower Gwydir and watercourse area. Supplementary rules provided the framework to share water between the environment and water users by providing the first 500ML to the wetlands and sharing all flows 50:50 between users and the environment. This resulted in 40,000ML available to water users and the environmental water users, while flows to the wetlands are estimated at 50,000ML and a further 38,000ML¹² of outflows from the catchment (from Gil Gil, Mehi but mainly from the Thalaba). This is prior to held delivered by the Commonwealth Environmental Water Holder released later for the Northern Water Hole top up flow.

¹² Realtime water analysis of key gauges, Thalaba, Galloway, Mehi at Collarenebri, Lower Gwydir and Gingham.

Normal sharing conditions provided the framework for these outcomes, incorporating floodplain licencing will ensure there is a more complete understanding of water use in these events. Nonetheless, we contend that environmental needs within our valley have already been readily achieved through normal water sharing rules and these arrangements have also provided downstream connectivity. Which suggest that any account limitations because of drought or environmental and connectivity desires, are going over and beyond what is required by the licencing and compliance requirements of this policy.

Even under a fully transitioned licence (using the modelled account balance as suggested) it will result in water foregone in these circumstances but at least our industry and community could have a share in the flows, at the required long-term volume.

The GVIA also note that under the Achieving Sustainable Groundwater Entitlements, whereby long-term take and entitlements in the Lower Gwydir Groundwater Water Source were greater than allowable limits at the time, the NSW Government took steps to transition these users through to compliance over an average of 8-years. The approach of establishing transitional licence conditions is therefore not new and not without precedent in categories of water take whereby legal limits are not achieved.

The recommended approach is consistent with initialisation during those reforms whereby it was recognised that a transitional approach was required to step into the new licencing framework and avoid unnecessary negative impacts by sudden water user behaviour responses.

Recommendation: Transitional account management rules are enabled that pre-determine via modelling what water could available in accounts if the floodplain harvesting licencing and compliance approach was initiated in either 2011 or 2012, the last time accounts would have been fully utilised. This approach aligns the long-term objectives of the policy and ensure that the overall impact of the reform is not greater than that required to achieve compliant legal limits without detracting from environmental or floodplain flows.

Available Water Determinations (Question 10)

The GVIA support allowing available water determinations to be varied to ensure take remains within limits, but particularly if metering and monitoring data reveal the rules are so restrictive that future take is below allowable limits. If an updated model scenario is undertaken that proves the rules were too restrictive then there needs to be a mechanism to adjust access to achieve this limit.

It is important that governments can take action to enable all opportunities for water users to have access to their legally defined volume of water. If there is water that should be made available then governments have a responsibility to make good and make efforts to enable rules to access it. This rule provides a consistent approach, allowing for this to occur. We support raising accounting limits to allow for the carryover of this additional water, consistent with long-term accounting approach.

Recommendation: Available water determinations should be enabled to be varied to ensure 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. This rule provides a consistent approach, allowing for this to occur. We support raising accounting limits to allow for the carryover of this additional water, consistent with long-term accounting approach.

Trade (Question 12)

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 Initiative¹³. The rules developed should ensure they are consistent with this and recognise the Trading Rules, contained within *The Murray Darling Basin Plan (2012)* Cth as well.

In the circumstance of floodplain harvesting which has not be transitioned from land and where future licencing conditions will provide restrictions on current practice, trade is essential to allow a mechanism for water users and the community to adapt to these new rules and requirements, which are reducing water availability in our valley from this source of water 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 also broad-ranging, the range of market participants that can now be involved. There are 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 which should also be recognised.

See examples below.

¹³ 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>

For example: the market provides new opportunities for all water users to maintain and/or improve their use of water and mitigate risks posed by reduced water availability, whilst ensuring total valley take is restricted within limits.

Water user A is likely to receive 1000 unit shares of FPH entitlement. However, with eligibility restrictions and a valley-wide growth of 31% calculated in extractions above plan limit, this volume does not represent his current actual long-term take of 1,310 unit shares.

Water user B has 300 unit shares but historically this was 393 unit shares when they were active irrigators but given the metering requirements and the lack of certainty around floodplain flows, they no longer want to be an irrigator. They already have sold their other entitlements to other water users. They have closed their gates and do not collect water from outside their developments.

Environmental Water Holder A recognises there are key environmental benefits from targeting additional water in a moderate flood to identified sensitive sites but the use of traditional water entitlements takes 10-14 days for release and there are operation and licence constraints that restrict delivery to the desired flow outcomes to maximise the benefit of the outcomes.

A Licencing Framework With Trade:

Allows **Water user B** to sell their shares to either **Water User A** or **Environmental Water Holder A**, at a competitive market price that they are comfortable with using an open and transparent market.

Water User A can set a market price to ensure their long-term water portfolio can continue to support their business without increasing the total valley level of take. The purchase of entitlements is within their long-term historical take limit.

Environmental Water Holder A can set a market price to maximise the environmental benefit of natural flow events, in an efficient manner enhancing the benefits of the restricting take to legal limits.

A Licencing Framework Without Trade:

Water User A must use the remaining entitlement markets to top-up their total long-term water portfolio to continue to operate at their current productive levels. If they can't, they may not be able to continue to irrigate their current developed areas and may need to reduce staff.

Water User B land asset value will be reduced without an opportunity to offset this decline with trading of the floodplain harvesting licences as with their other entitlements. Water user B has an asset that they don't want, it is not worth owning through no fault of their own, they cannot sell and do not want to use it but must pay fees and charges.

Environmental Water Holder A may need to continue to compromise environmental benefits or seek expensive alternatives to address operational constraints at the expense of the tax payer.

A real-life example is 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'. The factsheet explains:

"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."¹⁴

¹⁴ <https://www.environment.gov.au/system/files/pages/fa9ca650-4c28-4c01-94ce-97cf9df01d13/files/commonwealth-overland-flow-licences-lower-balonne.pdf>

Communication throughout this event via updates on their website¹⁵ 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.”¹⁵

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.”¹⁵

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

While the GVIA support a trading framework we have concerns with the zones proposed to be implemented. We agree that we must prevent growth in sensitive areas which can be clearly outlined by mandatory restrictions on new works in the Floodplain Management Zones A and D as proposed. But the establishment of broad sub-catchment trade zones as proposed provide an artificial barrier to the market, which will result in inequitable outcomes between designated zones and should be removed.

For example, this establishment of sub-catchment boundaries, may result in only a limited number of catchments having trade as an opportunity to offset the compliance restrictions which are socialised across the valley. This would restrict the potential market price but also be inequitable for water users in other zones, that have also had the same reduction in water availability, but they have no willing sellers in their sub-catchment.

The proposals seem also impractical to implement given they provide artificial barriers which do not reflect farm boundaries or operations. This is evident by the inability for the Department to explain how a water user who crosses multiple trade boundaries could operate, given one licence volume is proposed to be issued and which zone they could seek trades from within.

Removing of the proposed trade zones will also ensure greater consistency with the Basin Plan Trade Rules.

Rather we 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 proposed individual limits which equal the current long-term take as defined as maximum number of shares. Individuals are free to trade up to these limits freely within anywhere within the floodplain. This allows some water users to manage their take back to these historical limits, whilst reducing access elsewhere. This will allow for greater market flexibility and remove the unnecessary barriers created by the proposed zones.

The sub-catchment zones also appear to be impractical to implement given that they do not reflect farm layouts or farm management, applying an artificial barrier. This is evident by the inability for the Department to explain how a water user who crosses multiple trade

¹⁵ <https://www.environment.gov.au/water/cewo/catchment/lower-balonne-updates>

boundaries could operate, given one licence volume is proposed to be issued and which zone they could seek trades from within, and if they can move water across the zones.

We recommend that applications to transfer entitlement above their current conditions limit, should be considered to be subject to a more detailed assessment, which could assess downstream flows and environmental impacts.

Given infrastructure limitations, we support permanent trade but not temporary trading at this stage.

The perceived risks associated with trade are mitigated by a strong and robust measurement and compliance program, which we believe has been proposed and currently being implemented.

Recommendation: An open and transparent trading framework must be enabled immediately upon licencing 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: GVIA recognises that a process to ensure sensitive areas are protected from growth but contend that mandatory conditions proposed will achieve these outcomes. Therefore, trade should 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.

Comments on Active Management (Question 13)

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 in some sections of the valley, when it can be clearly demonstrated that this water is additional to the system, is required. The message from the affected members was that they 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.

However, as we stated throughout the Active Management consultation process, even though the Gingham, Lower Gwydir and Mallowa water sources are historically targeted for environmental releases, the overall risk to held environmental water deliveries above what has historically always occurred (prior to the Basin Plan) is minor given the natural constraints on delivery, small volume of extraction licences and the construct of the current unregulated water sharing plan commence to pump thresholds.

We welcomed the NSW Government's recognition of this low risk, particularly in the removal of the Gwydir Water Source as a targeted area within the policy at the time.

We also continue to have concerns around the accuracy of estimation of active environmental water and the timeliness of announcements to water users, given the distance between the point of access and their trigger measurement point. These concerns have seen significant impacts in other valleys, predominately the Barwon Darling where very conservative modelling extended restrictions beyond what was reasonable.

Key to this is that the approach and implementation of active management to date does not indicate that there are systems and measures in place to effectively implement these rules without undue impacts on water users. Active management of floodplain and overland flows adds yet another layer of complexity in managing water in these systems which may be primed with water, near full and spilling.

We must acknowledge there is limited information regarding how floodplains work, there is limited gauging network and no floodplain measurement in these areas to monitor flows. 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 impact of this rule to those individuals being restricted and on the valley compliance limit, has not been determined or considered. As this is a new rule, beyond just licencing historical take within limits, no more or no less, we demand that a socio-economic impact assessment is undertaken.

We therefore cannot support the broad application of Active Management to this resource until safeguards are established that protect water users in times of sudden flood situation.

Recommendation: 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.

[Comments on Water Sharing Plan Amendments \(Question 14\)](#)

The GVIA understands why amendment provisions are presented in water sharing plans, as a means to provide a pathway to improving the plan before its due for review and replacement at the end of its life.

Relying on amendments such as those proposed for the Gwydir Valley 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 this provision for amendment, is acknowledgement of the limitation in monitoring, measuring and forecasting floodplains flows, improvements in implementation must be considered as a factor in considering amendments for access rules.

We support consideration to review and recalibration of the model following the collection of metering data at year five or after a flood event. This will enable further assessment of assumptions around floodplain harvesting opportunity and the suitability of the accounting framework.

Aside from these amendment provisions, we acknowledge that there can be directions to review and amend water sharing plans by the Minister. The GVIA suggests, in any event that a process of strong community engagement for any future amendments, that allow to consider the cumulative effect of water reform on our industry and community and ensures our community at the centre of decision making.

Recommendation: The process of enabling an amendment is outlined to ensure consultation and engagement with affected communities. Amendment provisions for access rules must acknowledge the limitations in monitoring, measuring and forecasting floodplain flows.

Recommendation: An amendment provision to allow for the recalibration of the model with metering data collected from licencing within the first five years or after a flood is recommended.

Gwydir Unregulated Water Sharing Plan

General Comments on the Water Sharing Plan

The GVIA notes that the Unregulated Water Sharing Plan is due for 10-year review in the coming year. We therefore, consider this review as an opportunity to refine and improve the plan in the short-term and address any new information or implementation issues with the floodplain licencing. Most importantly we hope that metering information collected from the implementation of licencing can be included in that process.

Accounting Framework

Accounting Period (Question 15 and 16)

Floodplain harvesting and overland flows occur similarly regardless of their location on a regulated or unregulated section of the Gwydir Valley Floodplain. Therefore, there is no argument to support why accounting framework for this form of access is different in the unregulated to the regulated system. Consistency with other floodplain harvesting entitlements in the valley should be encouraged.

With that in mind, as for the regulated water sharing plan submission, the GVIA can support in-principle rules which ensure future access remains within long-term legal limits but balances the highly variable nature of overland flows in northern ephemeral systems, which only occur when our rivers are full and spilling. This way must allow for peak use at these rare times when we are in flood, to provide our region and its economy the opportunity to access water to store it for future use, when it is most abundant. An accounting approach in this manner provides our community and the industry certainty around water available for irrigation at times but ensure overall limits can be achieved in the long-term.

It is important to note that the government intent of floodplain harvesting licencing is to licence this historical form of take within defined limits, no more or no less, it is not an environmental reform but an essential licencing and compliance reform. Although achieving compliance has environmental benefits.

We therefore, recommend consideration is given to matching accounting frameworks between unregulated and regulated floodplain harvesting licences. Or if this is not possible, that this issue is included as part of the upcoming unregulated water sharing plan review and actual metering data is used to inform that discussion into the future.

Recommendation: Consistency between entitlements in the regulated and unregulated water sharing plans is supported.

Account Initialisation (Question 16)

As with the regulated water sharing plan, given the very limited opportunities for overland flows have occurred over most of the past two decades, these conditions alone should support an initialisation that is representative of the maximum allowable account limit. This is required to ensure that the community has an opportunity to recover from drought. As there is no modelled approach for unregulated water users, the most equitable process, is to apply a starting balance that matches the unregulated water availability at the valley-scale.

This process reflects what access may have been available and adjust the water available under the licencing program for this water access, to ensure ongoing take can also be within compliant levels of take. It acts to provide a transitional arrangement that matches the long-term outcomes of the legal limits with the seasonal and valley-scale variation in access. The alternative as recommended in the Border Rivers, applies short-term strategies to long-term policy and provide a blunt, restriction at the beginning of the new licencing arrangement resulting in the immediate reduction in water being far greater than the long-term requirements. This ultimately results in impacts far greater and more broad ranging than those estimated by just achieving compliant levels of take.

The concern is that if a transitional arrangement like this is not established and a flood occurs in the first years of the program, the rare opportunity to access the long-term volume will be missed.

As noted earlier, the recommended approach is consistent with initialisation during those reforms whereby it was recognised that a transitional approach was required to step into the new licencing framework and avoid unnecessary negative impacts by sudden water user behaviour responses.

Recommendation: Transitional account management rules are enabled that pre-determine what could be available in accounts if the floodplain harvesting licencing and compliance approach was initiated earlier. This approach aligns the long-term objectives of the policy and ensure that the overall impact of the reform is not greater than that required to achieve compliant legal limits without detracting from environmental or floodplain flows.

Available Water Determinations

As with the regulated water sharing plan, the GVIA support allowing available water determinations to be varied to ensure take remains within limits, but particularly if metering and monitoring data reveal the rules are so restrictive that future take is below allowable limits. If an updated model scenario is undertaken that proves the rules were too restrictive then there needs to be a mechanism to adjust access to achieve this limit.

Its important that governments can take action to enable all opportunities for water users to have access to their legally defined volume of water. If there is water that should be made available then governments, have a responsibility to make good and make efforts to enable rules to access it. This rule provides a consistent approach, allowing for this to occur. We support raising accounting limits to allow for the carryover of this additional water, consistent with long-term accounting approach.

Recommendation: Available water determinations should be enabled to be varied to ensure 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. This rule provides a consistent approach, allowing for this to occur. We support raising

accounting limits to allow for the carryover of this additional water, consistent with long-term accounting approach.

Active Management (Question 17)

As with the regulated water sharing plan comments, 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 in some sections of the valley, when it can be clearly demonstrated that this water is additional to the system, is required. The message from the affected members was that they 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.

However, as we stated throughout the Active Management consultation process even through the Gingham, Lower Gwydir and Mallowa water sources are historically targeted for environmental releases, the overall risk to held environmental water deliveries above what has historically always occurred (prior to the Basin Plan) is minor given the natural constraints on delivery, small volume of extraction licences and the construct of the current unregulated water sharing plan commence to pump thresholds.

We welcomed the NSW Government's recognition of this low risk, particularly in the removal of the Gwydir Water Source as a targeted area within the policy at the time.

We also continue to have concerns around the accuracy of estimation of active environmental water and the timeliness of announcements to water users, given the distance between the point of access and their trigger measurement point. These concerns have seen significant impacts in other valleys, predominately the Barwon Darling where very conservative modelling extended restrictions beyond what was reasonable.

Key to this is that the approach and implementation of active management to date does not indicate that there are systems and measures in place to effectively implement these rules without undue impacts on water users. Active management of floodplain and overland flows, adds yet another layer of complexity in managing water in these systems which may be primed with water, near full and spilling.

We must acknowledge there is limited information regarding how floodplains work, there is limited gauging network and no floodplain measurement in these areas to monitor flows, 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 impact of this rule to those individuals being restricted and on the valley compliance limit, has not be determined or considered. As this is a new rule, beyond just licencing historical take within limits, no more or no less, we demand that a socio-economic impact assessment is undertaken.

We therefore cannot support the broad application of Active Management to this resource until safeguards are established that protect water users in times of sudden flood situation.

Recommendation: 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.

Trade (Question 18)

As outlined earlier, 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 Initiative¹⁶. The rules developed should ensure they are consistent with this and recognise the Trading Rules, contained within *The Murray Darling Basin Plan (2012)* Cth as well.

Trade allows a clearly defined market-based mechanism for individuals to manage their businesses into the future and allows. The benefits of a trading framework are also broad-ranging, given the range of market participants that can now be involved. There are 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 which should also be recognised.

However, the existing trading zones within the unregulated catchments already provide significant, unjustified barriers to trade from rivers and creeks and the GVIA has repeatedly requested those to be reviewed. As the floodplains are connected in times of flood there should not be any restrictions to allowing a mechanism for water users to manage their business risk.

As with the regulated water sharing plan feedback, any trades zone in this manner provide an artificial barrier to the market, which will result in inequitable outcomes between zones. The proposal also seems impractical to implement given they provide artificial barriers which do not reflect farm boundaries or operations. This is evident by the inability for the Department to explain how a water user who crosses multiple trade boundaries could operate, given one licence volume is proposed to be issued and which zone they could seek trades from within.

Removing of the proposed trade zones will also ensure greater consistency with the Basin Plan Trade Rules.

Recommendation: The trade zones within the unregulated water sharing plans are not adopted for the purposes of floodplain harvesting rather that the limitations of changes works within floodplain management zones A and D within the mandatory conditions provide the protection needed for sensitive areas.

Recommendation: We recommended the unregulated water sharing plan zones are reviewed as priority as part of the upcoming water sharing plan review scheduled.

¹⁶ 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>

Comments on Water Sharing Plan Amendments (Question 19)

As with the regulated water sharing plan feedback, the GVIA understands why amendment provisions are presented in water sharing plans, as a means to provide a pathway to improving the plan before its due for review and replacement at the end of its life.

Relying on amendments such as those proposed for the Gwydir Valley 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 this provision for amendment, is acknowledgement of the limitation in monitoring, measuring and forecasting floodplain flows, improvements in implementation must be considered as a factor in considering amendments for access rules.

We support consideration to review and recalibration of the model following the collection of metering data at year five or after a flood event. This will enable further assessment of assumptions around floodplain harvesting opportunity and the suitability of the accounting framework.

Aside from these amendment provisions, we acknowledge that there can be directions to review and amend water sharing plans by the Minister. The GVIA suggests, in any event that a process of strong community engagement for any future amendments, that allow to consider the cumulative effect of water reform on our industry and community and ensures our community at the centre of decision making.

Recommendation: The process of enabling an amendment is outlined to ensure consultation and engagement with affected communities. Amendment provisions for access rules must acknowledge the limitations in monitoring, measuring and forecasting floodplain flows.

Model Build

The GVIA acknowledges there has been a significant investment in data and resources, to improve the evidence base utilised within the Gwydir IQQM, including validation of this information at a farm-scale and independent reviews. Because of this significant investment and scrutiny on the Gwydir IQQM, our valley will have one of the most sophisticated valley water management model in existence in NSW and across the Murray Darling Basin.

The model build report provides explanations for many of these processes adopted throughout this process. However, as there have been a number of changes it was not until this report was completed that we had visibility of each of the outcomes for each separate scenario. Reviewing the model build report, there remain a number of areas for improvement that still require attention. Some of these are identified by report, but these include:

- Cap scenario development and assumptions, whereby farm behaviours and efficiencies are not clearly communicated. It is unclear if this scenario is reflective of practices at that time this should be detailed in a cap scenario report including water balance reporting.

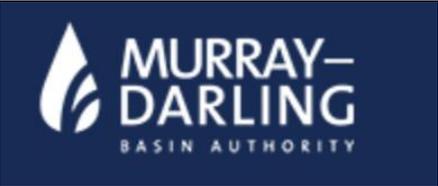
- BDL scenario that still does not reflect drought management operations and whilst improved, continues to over-estimate supplementary access as a result.
- BDL and Current Conditions scenario has limitations acknowledged within the report for estimating rainfall runoff and is one of the reasons, why a portion of rainfall is proposed to be exempt.

Given that the Gwydir IQQM is soon to be replaced with a new Gwydir Source Model, the Department needs to prepare for this and establish a clear process to inform and communicate key stakeholders about this rebuild. Stakeholders will need clarity that this new model will address the area for improvement required in the Gwydir IQQM. But they will also be interested in the development process of the new model and the Department should provide updates at key steps. To re-build a model then to collate this information at the end, in a model build report, will be overwhelming to document. Our recommendation is to bring stakeholders along with this improvement journey and provide, opportunity along the way to provide insight and improvements along that process.

Recommendation: The Department establish a clear process to inform and communicate outcomes of the building of the Gwydir Source Model to replace the Gwydir IQQM.

Submission ends.

Attachment A: Stakeholder Expressions of Support for Floodplain Harvesting Licensing & Metering

 <p style="text-align: center;">WENTWORTH GROUP OF CONCERNED SCIENTISTS</p>	<p>Wentworth Group of Concerned Scientists</p> <p><i>“We recognise the progress made on these much needed reforms to ensure all forms of take are licenced, metered and brought into a compliance framework based on diversion limits. We also appreciate that the proposed reform is aimed at reigning in the growth of FPH diversions that have occurred since implementation of the 1993/94 valley-wide Cap on diversions.”¹⁷</i></p>
 <p style="text-align: center;">Australian Government Commonwealth Environmental Water Office</p>	<p>Commonwealth Environmental Water Holder</p> <p><i>“Bringing floodplain harvesting (FPH) into the NSW licencing framework is supported by the Commonwealth Environmental Water Holder (CEWH), in the context of knowing the overall use of the water resource and thereby providing a means to protect significant environmental assets and ecosystem functions within NSW.”¹⁸</i></p>
 <p style="text-align: center;">Environmental Defenders Office</p>	<p>Environmental Defenders Office</p> <p><i>“There are benefits to bringing floodplain harvesting within a licensing and associated compliance framework, such as a requirement that the water taken under a licence must for the first time be metered and measured.</i></p> <p><i>Further, not all floodplain harvesting that has occurred up to the present day will be licensed (that is, the licensing is supposed to reduce the volume of water that is being diverted from floodplains).”¹⁹</i></p>
	<p>Murray-Darling Basin Authority</p> <p><i>“The MDBA is supportive of the suite of reform measures that NSW is undertaking to bring floodplain harvesting into both the NSW licensing and regulatory framework and the Commonwealth framework for regulating water resources in the Murray–Darling Basin.</i></p> <p><i>Measurement and metering of take by floodplain harvesting is critical to building confidence and understanding of the impacts of this form of take on the environment and river flows.”²⁰</i></p>

¹⁷ <https://wentworthgroup.org/2020/12/border-rivers-fph-rules/2020/>

¹⁸ <https://environment.gov.au/system/files/pages/dca287c3-73bd-4ec1-a3b1-c29dd5cf95f9/files/cewh-submission-independent-review-floodplain-harvesting-nsw-water-resource-plan-nov-2018.pdf>

¹⁹ <https://www.edo.org.au/2020/12/09/floodplain-harvesting-without-the-necessary-protections-legal-action-is-a-risk/>

²⁰ <https://www.parliament.nsw.gov.au/lcdocs/submissions/67992/0001%20Murray%E2%80%93Darling%20Basin%20Authority.pdf>

	<p>NSW Irrigators' Council</p> <p><i>“We want full licensing and metering for floodplain harvesting as soon as possible.”²¹</i></p>
	<p>South Australian Royal Commission</p> <p><i>“A licensing and metering regime for floodplain diversions is necessary. New South Wales and Queensland must act on this issue to restore confidence within their own communities and amongst Basin States.</i></p> <p><i>In New South Wales, it is frankly remarkable that a floodplain diversion policy has still not been implemented. Although the policy has been revised, it reveals no substantial change that could justify the failure to implement it. There is no objection, in principle, to the approach canvassed by New South Wales that would require floodplain diversions to be licensed and floodplain structures to be approved, having regard to the impact of diversions and the construction of infrastructure upon the environment and downstream users by reference to a Floodplain Management Area Plan.”²²</i></p>
	<p>South Australian Government</p> <p><i>“The Royal Commission also recommended a licensing and metering regime for floodplain diversions. South Australia supports Basin Governments developing this proposal to strengthen and improve existing regimes aimed at addressing water theft.”²³</i></p>

²¹ <https://www.nswic.org.au/wordpress/wp-content/uploads/2020/09/2020-09-22-MR-FPH-Exemption-Regulation.pdf>

²² <https://www.environment.sa.gov.au/topics/river-murray-new/basin-plan/murray-darling-basin-commission>

²³ https://www.environment.sa.gov.au/files/sharedassets/public/river_murray/basin_plan/sa-response-mdb-royal-commission.pdf