



Submission to NSW Government on:

NSW Water Reform Action Plan

By:

Gwydir Valley Irrigators Association Inc

April 2018



making every drop count

Table of Contents

1	Summary and Purpose	3
1.1	List of Recommendations.....	3
2	Introduction	6
3	About the GVIA	7
3.1	Our region.....	7
3.2	What we do.....	10
3.3	Contacts	10
4	Water take measurement.....	11
4.1	Challenges.....	13
4.1.1	Availability of meters	13
4.1.2	Resources	13
4.2	Transitional arrangements	13
4.3	Priorisation for implementation.....	14
4.3.1	Catchment scale prioritisation	14
4.3.2	Thresholds requirements	15
4.4	Telemetry and communication	16
4.5	Ownership	16
5	Management of Environmental Water	17
5.1	Barriers to improving management	18
5.1.1	Legislative framework and context.....	18
5.1.2	Understanding the issue	20
5.1.3	Resources and effort.....	21
5.2	Discussion on proposed strategies	22
5.2.1	Temporary restrictions	22
5.2.2	Access rules changes	22
5.2.3	Implementation of Individual Daily Extraction Limits and event management.	22
5.2.4	Rules based triggers.....	22
6	Transparency Measures	23
6.1	Streamline Access	24
6.2	Reporting and Communication.....	25
7	Floodplain Harvesting Policy	27
8	Exposure Bill.....	28

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 NSW Government during their consultation on the NSW Water Reform Action Plan.

This document aims to represent the concerns, views and experiences of our members, not as individuals but as a local industry. Each member reserves the right to express their own opinion and is entitled to make their own submission.

Every member of the GVIA is also a member of the NSW Irrigators Council and as such we endorse their submission unless clearly outlined otherwise.

1.1 List of Recommendations

1. The NSW Government utilise the following seven objectives in developing their water take measurement strategy:
 1. That the take of water can be accurately and reliably determined;
 2. That meters used to measure water take are auditable, verifiable and accurate;
 3. That data from meters can be easily communicated to relevant authorities;
 4. That mandatory requirements and resources are targeted to high risk water users (i.e. those that have a greater capacity to take water in high risk water sources);
 5. That the benefits of water measurement outweigh the costs;
 6. That the framework is simple to understand, comply with, administer and enforce; and
 7. That implementation of the framework enables better resource management.
2. The focus of the meter component of the NSW Government water take measurement strategy be on ensuring a meter is auditable, verifiable and accurate, with the following performance indicators:
 - a) Accuracy: within +/-5% in the field rather than the Australian Standard AS4747
 - b) Installation and validation: by certified meter installer
 - c) Seals: tamper proof seals must exist
 - d) Maintenance records: maintenance records maintained and re-validated every 5-years
 - e) Data capture: capacity to record volumetric flow rate and the date, time and duration of water take.
 - f) Data transmission: ability for data to be transmitted to the relevant authorities on a range of frequencies.
3. The NSW Government develop detailed transition policy that:
 - a) Retrospectively verifies and validates newly pattern-approved meters already installed;
 - b) Provides opportunity to upgrade meters in situ to the standard; and/or

- c) Grandfathers non-pattern approved meters, which meet key accuracy requirements in situ for at least five years up to their life cycle.
4. The GVIA supports a staged implementation and recommends the following timelines be considered:
 - Stage 1: 2019-20 - High priority catchments (inland unregulated) and self-regulated high-risk users.
 - Stage 2: 2020-22 - Medium priority catchment and other users (remaining unregulated, inland groundwater, regulated).
 - Stage 3: 2022-24 - All others.
 5. For the Gwydir Valley, that an individual's capacity to take water as defined by their infrastructure and history of usage, should be used to determine whether a meter is required or not. Analysis would suggest that:
 - a) 110mm/4inch pump or an average take of 50 megalitres for regulated and unregulated over the last 5-years;
 - b) 152mm/6inch pump or an average take of 50 megalitres for groundwater over the past five-years.
 6. A communications strategy be developed that minimises communications costs, ensures data security and be readily implemented and recognises a preference for a private ownership model for meters.
 7. Licence holders be offered the choice of:
 - a) WaterNSW issued subscriber identity module (i.e. SIM card). This would enable WaterNSW to poll the site directly and securely. On-going data contract costs would be reduced due to WaterNSW managed accounts (particularly for satellite services). Existing services within WaterNSW enable rapid deployment.
 - b) Owner supplied communications. Meter owners should retain the right to poll their own meters without duplication of telemetry. This provision ensures security of private networks and captures sites already privately polled. Where meter owners choose their own communications strategy and data is not directly polled by WaterNSW, a secure and reliable data conveyance is required (e.g. Authenticated web service). Owners would be subject to the same data provision standards.
 8. A preference for private ownership model for new meters with government assistance provided via low interest loans where requested.
 9. In addition to the principles outlined, we recommend that the NSW Government also include a guiding principle in better management of environmental water that the methodology be:
 - a) Adaptive and able to be evaluated and reported – so that measures can be adopted, revised overtime as technologies and knowledge improves.
 10. Any rule provisions granted to environmental water users should also be made available to other water users in the system, ensuring that not one type or category of user is granted special rules over another.
 11. The NSW Government evaluate how future strategies to improve environmental water remain consistent with the current legislative framework and reform agenda's and

identify where compensation to individuals or communities will be required, if they are inconsistent.

12. The NSW Government get agreement on the following key issues prior to finalising any strategies:
 - a) Defining what environmental water needs better management.
 - b) Determining if we can confidently identify it and track its movement.
 - c) Communicating what standard is expected when calculating, identifying, monitoring and reporting on environmental water use.
13. The NSW Government consider a staged approach to addressing government transparency in water administration as outlined below in Figure 1. Our proposed steps to improving accessibility of information on water availability and usage should focus on internal reform on key building blocks (as outlined in other consultation papers) including, the implementation of an agreed water take policy, effective compliance implementation and regular reporting of progress on these aspects, before addressing ways to improving how people can access the information currently available while also considering current gaps in what is available at a valley level.
14. The following outstanding issues be addressed to further help water users form an informed position. These are:
 - a) Consistency between valleys in model assumptions to determine either long-term or short-term entitlements;
 - b) Demonstration of consistency of policy options with the NSW Water Management Act and Basin Plan principles; and
 - c) Clarity of the equity of both options for water users in and out of a designated.
15. The NSW Government implement a FPH policy that provides the most secure legislative option for continuing this legitimate access into the future and we understand this to be representing floodplain and rainfall runoff as a licence.
16. That individual FPH account limits be determined through the Stakeholder Advisory Panel consultations and presented in Water Sharing Plans which can be reviewed throughout the public submission process.
17. A staged FPH monitoring approach by the NSW Government that recognises advances in technology that improve accuracy, if it continues to recognise the following monitoring principles:
 - Delivers shared outcomes;
 - Provides irrigator choice;
 - Fit for purpose;
 - Cost effective;
 - Achievable;
 - Repeatable; and
 - Auditable.
18. The draft Exposure Bill be re-drafted following the public consultation process and a new consultation process be established particularly for that component of the reform strategy.

2 Introduction

The Gwydir Valley Irrigators Association (GVIA) as the representative body for irrigation entitlement holders in the Gwydir Valley, supports the NSW Government in making informed, balanced and decisive action to improve confidence in how water is being administered, managed and used in NSW. To achieve this overall objective the NSW Government must make several critical steps, in a range of areas of its business. We recognise that the NSW Water Reform Action Plan is just one of those steps in this process.

We welcomed the genuine consultation approach by the NSW Government on the NSW Water Reform Action Plan, through the release of specific consultation papers and delivery of individualised, community consultation sessions around the State. We were pleasantly surprised at the success of workshops attended by our members in Sydney, Bourke and Moree.

However, we urge the NSW Government to continue their genuine approach and to provide appropriate resources to the following phases of the action plan process. For example, the next phase of collating and aggregating this widely collected feedback to inform future policy, finalising this policy and then communicating that with communities, will be no small task complicated by the raising of expectations made during this current step.

We believe that the release of the draft Exposure Bill was premature and a poor decision. The incorporation of both policy and legislative reviews in the one-step, may save time but will act to undermine the consultation objective. We recommend further consultation on a final draft Exposure Bill is undertaken following the finalisation of policy decisions.

On the four key areas included in the consultation process as part of the action plan, the GVIA contends that each paper is relevant to our members and as such, has provided detailed comment and a total of 18 recommendations, as outlined in the following sections and summarised below.

Water take measurement

We are of the understanding that the standard of measurement in the Gwydir Valley is high, with active irrigators adopting the most accurate technology commercially available¹. Irrigators adopt high accuracy technology at their own cost, due to the high value of their asset and because it meets their requirements to know exactly how much water they have at any point in time. Irrigators in our region, couldn't be the industry leaders in water-use efficiency, if they didn't have this standard of information.

We therefore believe that all water take must be measured with the majority of take metered through highly accurate devices². All measurement must be auditable, verifiable and within accuracy requirements, but that accuracy and measurement methodology may vary depending on the establishment of state-wide but valley specific thresholds and or the

¹ The GVIA surveyed members regarding their meter fleet in early 2018 with 92% of respondents using a meter to measure their water take with 77% of all water take measured via a current model electromagnetic meter.

² Independently verified of within +/-5% in the field.

category of water take. The NSW Government must be pragmatic in accepting that a single solution may not effectively address our overall objective of re-building the community's and water-users confidence that everyone is receiving their fair share, no more and no less of our precious resource.

Better management of environmental water

Whilst there remain several barriers to developing agreed strategies to improve environmental management, an informed discussion on how we respect all water user's rights to utilise their water; either irrigators or the environment must occur. Community expectation demands this, just as they asked irrigators to do more with less, they now are building towards the same for the environment.

We must quickly learn from experience in regions like the Gwydir Valley, with a long-history of environmental water management but also explore practical options, within the legislative framework, rather than seeking short-term solutions outside this framework.

Transparency measures

We believe that the best strategy to improve government transparency is to adopt a staged approach that focus on internal reform process with an aim to improve how the NSW Government does business while improving accessibility of information on water availability and usage and considers current gaps in what is available at a valley level.

We do not believe that the provision of individual licence holders information either in real-time (or delayed) will in isolation, improve community confidence in water administration and management but that an improvement in government practices and accessibility of information will start this process.

Implementing the Healthy Floodplains project

The GVIA is committed to implementing the Healthy Floodplains Project to incorporate legitimate floodplain access into the licencing framework. The benefits of implementing this project for industry, the community and the environment are substantial considering the future sustainability of the local irrigation industry relies on the continuation of this unique form of take.

Whilst we recognise a range of limitations in having full confidence moving forward, we support the implementation of a policy that provides the most secure legislative option for individuals and would support, valley-by-valley implementation for account management and a conditional stage monitoring approach.

3 About the GVIA

3.1 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 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.

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 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 use⁵. 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

³ Cotton Catchment Communities CRC Communities and People Series 2009

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

⁵ Based on IQQM long-term modelling and the volume of water purchased for the environment

Year	Program	Volume of entitlement
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
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 regions⁶.

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

⁶ Social and Economic Analysis of the Moree Community, 2009. Cotton Catchment Communities CRC

to 2011 including education, economic resources and disadvantage, resulting in an estimated 200 jobs lost due to the implementation of the Basin Plan in the region^{Error! Bookmark not defined.}.

3.2 What we do

The GVIA's mission is to build a secure future for our members, the environment and the broader Gwydir Valley community through irrigated agriculture, we can do this together by making every drop count in the river or the aquifer, on-farm, for the environment, or for our community⁷.

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.

3.3 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: 0427 521 399

⁷ For more information, see our corporate video on <https://vimeo.com/177148006>

Email: gvia@gvia.org.au

Chairman: Joe Robinson

Executive Officer: Zara Lowien

4 *Water take measurement*

The GVIA believe that all water take must be measured with the majority of take metered through highly accurate devices⁸. All measurement must be auditable, verifiable and within accuracy requirements, but that accuracy and measurement methodology may vary depending on the establishment of state-wide thresholds and or the category of water take.

The Gwydir Valley is a diverse region of regulated, groundwater and unregulated water take, and the standard of measurement is high, with active irrigators adopting the most accurate technology commercially available⁹. Irrigators adopt high accuracy technology at their own cost, due to the high value of their asset and because it meets their requirements to know exactly how much water they have at any point in time. Irrigators in our region, couldn't be the industry leaders in water-use efficiency, if they didn't have this standard of information.

Hence, we fully support the key objectives of the NSW Government's future water take measurement and metering approach, as specified in the Consultation Paper on 'Water Take Measurement and Metering', including:

1. That the take of water can be accurately and reliably determined;
2. That meters used to measure water take are auditable, verifiable and accurate;
3. That data from meters can be easily communicated to relevant authorities;
4. That mandatory requirements and resources are targeted to high risk water users (i.e. those that have a greater capacity to take water in high risk water sources);
5. That the benefits of water measurement outweigh the costs; and
6. That the framework is simple to understand, comply with, administer and enforce.

These six objectives, in addition to a recommendation to include an objective to ensure that improved measurement enables better resource management, should guide the NSW Government's future approach in developing an efficient, equitable and enduring methodology that will be flexible enough to meet the required objectives but cognisant of the need to establish thresholds for implementation, provide adequate transition allowances and overcome barriers to implementation. After all, it is the NSW Government's responsibility to re-build the community's and water-users confidence that everyone is receiving their fair share, no more and no less.

We therefore, recommend the NSW Government utilise the following seven objectives in developing their water take measurement strategy:

- 1. That the take of water can be accurately and reliably determined;**

⁸ Independently verified of within +/-5% in the field.

⁹ The GVIA surveyed members regarding their meter fleet in early 2018 with 92% of respondents using a meter to measure their water take with 77% of all water take measured via a current model electromagnetic meter.

2. That meters used to measure water take are auditable, verifiable and accurate;
3. That data from meters can be easily communicated to relevant authorities;
4. That mandatory requirements and resources are targeted to high risk water users (i.e. those that have a greater capacity to take water in high risk water sources);
5. That the benefits of water measurement outweigh the costs;
6. That the framework is simple to understand, comply with, administer and enforce; and
7. That implementation of the framework enables better resource management.

We do have concerns with pursuing a fast-paced implementation of AS4747 may result in perverse measurement outcomes and limit the market's scope to provide innovative water measurement technology. For example, we estimate 77% of the water taken in the Gwydir Valley is measured via a current-generation electromagnetic meter which can be verified to read within the in-field accuracy requirements of the Australian standard, whilst also meeting the other measurement specifications. However, these meters may require immediate replacement, if the manufacturer does not receive pattern approval through the National Measurement Institute or the installations cannot be independently verified in-situ. To replace modern accurate, auditable, verifiable meters due to an administrative technicality appears in-practical, cost ineffective and illogical provided metering objectives can be achieved. Particularly when it is acknowledged that pattern-approval alone does not necessarily lead to more accurate measurement of water take, its rather the process of verification and maintenance that maintains accuracy.

Therefore, we recommend that the focus of the meter component of the NSW Government water take measurement strategy be on ensuring a meter is auditable, verifiable and accurate, with the following performance indicators:

- a) **Accuracy: within +/-5% in the field rather than the Australian Standard AS4747**
- b) **Installation and validation: by certified meter installer**
- c) **Seals: tamper proof seals must exist**
- d) **Maintenance records: maintenance records maintained and re-validated every 5-years**
- e) **Data capture: capacity to record volumetric flow rate and the date, time and duration of water take.**
- f) **Data transmission: ability for data to be transmitted to the relevant authorities on a range of frequencies.**

The challenge in pursuing a single standard will also be exacerbated when considering other forms of take and usage, as with environmental water delivery, irrigation corporations and capturing of overland flow (Floodplain Harvesting). Where measurement objectives in terms of auditability, verification and accuracy limits are still required but that traditional metering options will not be applicable. We must be pragmatic in accepting that a single solution may not effectively address our overall objective of re-building the community's and water-users confidence that everyone is receiving their fair share, no more and no less of our precious resource.

4.1 Challenges

The GVIA is concerned that in perusing a single standard like AS4747 for metered water take without accepting its limitations or exploring significant barriers to successful implementation, may drive perverse measurement outcomes and not meet our key objectives to have an auditable, verifiable and accurate measurement system that re-build's the community confidence in water administration and management.

The following sections identify several challenges that must be addressed, if the NSW Government continues to seek broad-scale implementation of AS4747.

4.1.1 Availability of meters

There are only a narrow range of meters that are considered 'pattern-approved'. For any measurement strategy to be cost-effective and provide user choice, there must be multiple meters in each size category to fulfil a need for 'readily available' meters. The current list of available meters, as outlined below is not substantive:

- Krohne Waterflux 3070
- Siemens MAG 8000
- ABB Aquamaster 3 FEV2
- Aquamonix I500 and IR2060
- Sensus WP Dynamic
- Euromag MUT 2200EL

Further to this, to assess the industry's ability to implement the AS4747 an assessment of the number of meters currently available from manufacturers and the number of meters required to be installed should be established.

4.1.2 Resources

The GVIA supports in principle the requirement to have meters installed by certified meter installers as well as validated regularly. However, assessment of the availability of certified meter installers in each region and our capacity to train additional meter installers needs to occur. A staged approach to implementation will help to address any short-falls in qualified resources.

Further consideration to streamlining training of previously certified installers who allowed their certification to lapse should also be considered.

4.2 Transitional arrangements

A transition program is essential in providing a strategy to address the lack of supply and or user choice in meter type and resourcing concerns, while continuing to deliver on key objectives of the metering program. For example, in the Gwydir Valley, we are aware that most meters installed (covering 77% of licenced take by irrigators) is measured using a current- generation electromagnetic meter like a Mace Series III Agriflow, which is not pattern approved nor are we aware of whether the installations were by qualified meter installers and to the specified requirements. While Mace may seek pattern approval, this does not address the challenges of retrospectively verifying the installations in situ.

Such a program should also allow for the current large number of high-standard, non-pattern meters being adopted as best practice, provided they can be validated in situ and the installations verified.

We therefore recommend that the NSW Government develop detailed transition policy that:

- a) Retrospectively verifies and validates newly pattern-approved meters already installed;**
- b) Provides opportunity to upgrade meters in situ to the standard; and/or**
- c) Grandfathers non-pattern approved meters, which meet key accuracy requirements in situ for at least five years up to their life cycle.**

Meters that cannot demonstrate they meet the accuracy requirements (or cannot be upgraded to AS4747), should be replaced as required by the determined implementation strategy.

4.3 Priorisation for implementation

The GVIA considers there is a two-stage prioritization for implementation; step one determines if your region is a priority catchment for fast-tracked implementation and step two, which is a valley-specific process that determines thresholds for implementation of a meter or measurement device.

The GVIA supports a staged implementation and recommends the following timelines be considered:

- **Stage 1: 2019-20 - High priority catchments (inland unregulated) and self-regulated high-risk users.**
- **Stage 2: 2020-22 - Medium priority catchment and other users (remaining unregulated, inland groundwater, regulated).**
- **Stage 3: 2022-24 - All others.**

Noting that the implementation timeframe doesn't preclude users of meeting their timeframes earlier than required but rather provides scope for addressing resource constraints outlined earlier.

4.3.1 Catchment scale prioritisation

High risk water sharing plan areas should be considered as those regions where the current level of metering in existence to any standard, is low¹⁰ and where knowledge on water management and flow is also low¹¹. This would assume that unregulated catchments would be clearly prioritised in the first instance as water take is often estimated. The level of development should also be considered as some unregulated catchments would have limited metering but also limited infrastructure/development.

¹⁰ For example, where only 50% of water take measured.

¹¹ Limited water regulation or resource monitoring with low saturation of river gauging networks or monitoring bores.

The GVIA believes that regulated catchments and highly development resources, like those in the Gwydir Valley have an extremely high level of measurement already and therefore should not be an immediate requirement of the NSW Government but should be considered medium priority catchments due to their level of development. Most inland regulated and groundwater catchments would be considered medium risk.

Catchments that have a high level of measurement and management and a low level of development should be considered low risk.

4.3.2 *Thresholds requirements*

Secondary to where water is taken, is the need to establish thresholds to determine whether a meter or a measurement device is required and by what timeframe. Therefore, thresholds can be used to establish fast-tracked implementation for high risk users.

We recommend that a minimum threshold for installation of a meter is justified based on cost-effectiveness, but that a valley-by-valley approach to the threshold is appropriate. The threshold should enable confidence in the management of the resource for river and/or resource operation, the measurement of water take, and management of environmental flows. All works that fall below the minimum threshold will require measurement via an alternate methodology.

Following an assessment of our meter fleet and data relating to pump size and licenced volumes¹², the GVIA determined that in-valley thresholds should aim to meter the majority of water take within the regulated, groundwater and unregulated systems.

We recommend for the Gwydir Valley, that an individual's capacity to take water as defined by their infrastructure and history of usage, should be used to determine whether a meter is required or not. Analysis would suggest that:

- c) 110mm/4inch pump or an average take of 50 megalitres for regulated and unregulated over the last 5-years;**
- d) 152mm/6inch pump or an average take of 50 megalitres for groundwater over the past five-years.**

Whilst the above thresholds recognise the minimum requirements, there is opportunity to categorise water users into multiple thresholds; low, medium and high-risk users based on the above principles but adjusting their timeframe for implementation and possibly telemetry requirements depending on their capacity to take water. However, for ease of implementation and in recognition of the high standard of metering in existence for what most would perceive high risk users (or large users), entitlement holders that consider themselves large capacity, high risk users will be encouraged to fast-track their implementation on an individual basis. There is no additional benefit in regulating an approach that already exists and allowing the individuals to rapidly self-adopt and transition, in-line with the transitional policy outlined earlier.

Entitlement holders that self-assess they are below this threshold must still measure their water through alternative means which may be but not limited to:

- Electronic reporting of pump hours and calibrated to water volume; or

¹² Presented within the 2015 Water Take Measurement Options Paper

- Electronic reporting of water usage via lower accuracy type meters;

Entitlement holders that have licence but do not have infrastructure are not required to have a meter or a measurement device until infrastructure exists.

4.4 Telemetry and communication

The purpose and intent of adding telemetry over and above the Australian Standards must be clearly defined by Government. The GVIA believes that while telemetry provides additional evidence to the community that objective water take data is directly communicated to the relevant authorities, it should not replace the process of regularly reading water meters or inspecting infrastructure by these relevant authorities.

Notwithstanding, we recommend that a communications strategy be developed that minimises communications costs, ensures data security and be readily implemented and recognises a preference for a private ownership model for meters.

Therefore, we recommend licence holders be offered the choice of:

- c) **WaterNSW issued subscriber identity module (i.e. SIM card). This would enable WaterNSW to poll the site directly and securely. On-going data contract costs would be reduced due to WaterNSW managed accounts (particularly for satellite services). Existing services within WaterNSW enable rapid deployment.**
- d) **Owner supplied communications. Meter owners should retain the right to poll their own meters without duplication of telemetry. This provision ensures security of private networks and captures sites already privately polled. Where meter owners choose their own communications strategy and data is not directly polled by WaterNSW, a secure and reliable data conveyance is required (e.g. Authenticated web service). Owners would be subject to the same data provision standards.**

Following this, data Provision Standards should be determined as a matter of priority. Data provision standards such as polling interval, data granularity and data type will have practical implications for asset selection and power management.

We recommend that data polling and data frequency rates be informed by metering and compliance requirements only and that sub-categories of implementation thresholds should be established. For example, users with low risk behaviour in low or medium risk catchment may not require real-time telemetry or telemetry at all.

4.5 Ownership

The GVIA recommends a preference for private ownership model for new meters with government assistance provided via low interest loans where requested.

Maintaining the current private ownership model for meters in the Gwydir Valley, will provide an incentive to ensure that meter maintenance and replacement occurs in a timely and cost-effective manner, whilst maintaining awareness around the key metering requirements, providing for user choice and streamlining data access.

Government assistance may be considered for some users and this should be considered through the availability of low interest loans through the NSW Rural Assistance Farm Innovation Fund.

5 Management of Environmental Water

Environmental water management has been occurring in the Gwydir Valley in one form or another since the construction of Copeton Dam in the late 1970's¹³. However, the introduction of new users in 2008 onwards with the purchase of licences for environmental purposes has altered behavioural assumptions and influenced how the system operates, what environmental and economic outcomes can be achieved and how the community benefits from the sharing of water resources. The reform was difficult, but implementation was recognised to be much harder, as Government's entered the market with a no regrets with no policy and now there is a Plan¹⁴ that needs to be delivered upon.

There is much to learn as from regions like the Gwydir that have been implementing the Basin Plan since 2012¹⁵ with good success¹⁶. However, just as the community demanded industry do more with less water, the community now appears to demand the same of the environment, or more so demanding the environment achieves everything, without clearly understanding that they only have their share to achieve it with.

There remain several barriers to developing agreed strategies to improve environmental management but that an informed discussion on how we respect all water user's rights to utilise their water; either irrigators or the environment must occur.

Our concern with the consultation paper 'Better Management of Environmental Water' is that it does little to inform this discussion but rather poorly identifies the problem and proposes largely interim strategies that maybe inconsistent with the national reform agenda, are not enduring and do not respect all user's rights. The paper also builds upon a wide-ranging expectation that the environment must achieve everything at any cost.

The GVIA does however support the overarching principles outlined within the consultation paper when considering how to identify feasible solutions, including:

- a) Adverse impacts are mitigated—impacts are identified, and appropriate mitigation measures are put in place.
- b) Unintended gains are avoided—measures, where possible, should not contribute to an increase in water access reliability for downstream water users.
- c) Evidence-based and outcomes focused—measures that look to protect environmental water use best available information and deliver environmental outcomes with considerations of social and economic outcomes, where practical.
- d) Feasible—identify measures that are technically and operationally able to be implemented.
- e) Value for money—measures must present value for money and not be cost prohibitive.

¹³ Refer to the section About the GVIA or visit our website for more information www.gvia.org.au/thegwydirvalley/thegwydirvalley.

¹⁴ The Murray Darling Basin Plan.

¹⁵ The year when the Murray Darling Basin Plan (CTH) 2012 become legislation.

¹⁶<http://www.environment.nsw.gov.au/topics/water/water-for-the-environment/gwydir/annual-environmental-water-priorities>

In addition to the principles outlined, we recommend that the NSW Government also include a guiding principle in better management of environmental water that the methodology be:

- f) Adaptive and able to be evaluated and reported – so that measures can be adopted, revised overtime as technologies and knowledge improves.**

We note that the responsibility for the cost impacts for improved environmental water management should be borne by the Commonwealth for environmental water delivery or the community who demand it, as cost shifting should not be permitted in this process.

With these principles in mind and a strategy to focus on enduring, workable options for the future and not adopting interim solutions. The measures should also be applicable where possible to the whole of NSW to ensure that the mechanisms are transferable where possible and consider existing water sharing and market arrangements.

We also recommend that any rule provisions granted to environmental water users should also be made available to other water users in the system, ensuring that not one type or category of user is granted special rules over another.

5.1 *Barriers to improving management*

5.1.1 *Legislative framework and context*

One of the major hurdles for implementing changes to better manage environmental water, is understanding how river resources are administered, managed and shared, and why the rules that currently exist are such. Most entitlement holders in any valley, have an intimate understanding of how water reform has progressed over-time¹⁷ and hence, become concerned when there are suggestions to unpack this process and seemingly provide one set of users (the environment) a set of new rules or conditions.

The National Water Initiative was agreed in 2004 by COAG and set the foundation for a national framework for water reform with a focus on administration and management of water resources¹⁸.

The NWI was established on key objectives, these being:

- Clear and nationally-compatible characteristics for secure water access entitlements;
- Transparent, statutory-based water planning;
- Statutory provision for environmental and other public benefit outcomes, and improved environmental management practices;
- Complete the return of all currently over-allocated or overused systems to environmentally-sustainable levels of extraction;
- 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;

¹⁷ The GVIA have summarised this process on our website <https://www.gvia.org.au/water-policy/water-management-framework/a-history-of-water-reform/>

¹⁸ <http://www.agriculture.gov.au/water/policy/nwi>

- Clarity around the assignment of risk arising from future changes in the availability of water for the consumptive pool;
- Water accounting which can meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management;
- Policy settings which facilitate water use efficiency and innovation in urban and rural areas;
- Addressing future adjustment issues that may impact on water users and communities; and
- Recognition of the connectivity between surface and groundwater resources and connected systems managed as a single resource.

Key outcomes from the NWI reforms was the establishment of nationally consistent State-based water legislation that:

- Created water rights separate from land;
- Established statutory water plans sharing water between competing users and identifying environmental and consumptive shares;
- Established water registers and accounting of categories of water rights and usage;
- Expanded the water market allowing the movement of water rights between parties;
- Established an economic value for water.

The NSW Government at the time, lead this process with the *Water Management Act (NSW) 2000* and the preparation of water sharing plans, the first of which was gazetted in 2004 and is subsequently under review and transitioning towards Water Resource Plans for the Basin Plan.

The *Murray Darling Basin Plan (CTH) 2012* become the most-recent national reform agenda for water users and communities within the Murray Darling Basin and was developed following the millennium drought and the establishment of the *Water Act (CTH) 2007*. The Basin Plan reforms were designed to give recognition to the previous processes and be consistent with the NWI but identified gaps where environmentally-sustainable levels of extraction, environmental management and consistency in the water market could be improved¹⁹.

Key objectives of the Basin Plan are:

- Determine sustainable diversion limits for water resource planning areas;
- Ensure a more consistent, Basin -wide approach to water planning under accredited State WRPs;
- Provide an environmental watering plan to optimise the environmental outcomes for the Basin;
- Incorporate the water quality and salinity management framework into the Basin Plan;
- Include a mechanism to manage critical human water needs during drought;
- Include rules for water trading; and

¹⁹ <https://www.mdba.gov.au/sites/default/files/pubs/Report-by-Minco-implementing-the-Basin-Plan.pdf>

- Include an approach to monitoring and evaluating the effectiveness of the Basin Plan in meeting its objectives.

In implementing these objectives, the Australian Government made a policy decision to 'bridge the gap' between current extraction and the new SDLs. This decision was largely driven by a need to maintain consistency with the NWI and to protect individual water users, by ensuring there is no change to the reliability of any water access entitlements and rights because of the Basin Plan, as well as increasing the water efficiency of irrigated agriculture across the Basin and other associated benefits. There was also agreement that there would not be a change in the characteristics of licences purchased by the Commonwealth.

These are clearly articulated in the NSW Water Resource Planning factsheet as Basin Plan principles²⁰:

- There will be no adverse impacts on water available to a water access license holder.
- There will be no net reduction in the protection of planned environmental water.
- The Commonwealth is responsible for funding the gap between existing limits and Sustainable Diversion Limits (SDL) water.
- The water resource plan will meet the requirements set out in the Basin Plan

The NSW Government at the time had the following state-based principles as well²⁰:

- Balance social, cultural, economic and environment needs of the community and catchments.
- Are cost neutral for NSW license holders.
- Minimise change for WSPs within their initial ten-year period.

The GVIA believes that many of the interim solutions proposed within the consultation paper would not meet the objectives of the NWI, Water Management Act or the Basin Plan and if consideration of strategies should clearly address these concerns or provide scope for compensation to individuals and their communities, if they cannot be aligned.

The GVIA recommends that the NSW Government evaluate how future strategies to improve environmental water remain consistent with the current legislative framework and reform agenda's and identify where compensation to individuals or communities will be required, if they are inconsistent.

As outlined earlier, we also recommend that any solutions with unique rule provisions for environmental water users, should also be made available to other water users in the system, ensuring that not one type or category of user is granted special rules over another.

5.1.2 *Understanding the issue*

Further to understanding the legislative context of how water is administered, managed and shared the GVIA believes there are three major barriers to developing strategies to better manage environmental water, these being:

- a) Defining what environmental water needs better management?
- b) Can we confidently identify it and track its movement?

²⁰ http://www.water.nsw.gov.au/_data/assets/pdf_file/0008/682334/wrp-overview-factsheet-2.pdf

- c) What standard do we expect when calculating, identifying, monitoring and reporting on environmental water use?

The first challenge is a clear and agreed definition of what is environmental water around the Basin. Whilst the consultation paper refers to 'held water' discussions were broad-ranging and there were often confusions between their objective.

There must be agreement on whether Government strategies are focused on 'held environmental water' which has been purchased by Governments over time or 'planned environmental water' which has been negotiated through rules in water sharing plans, or any other water that is not available to industry is key to the discussion.

Once a definition of what category of environmental water we are referring to is established, we must then have a detailed understanding of our ability to identify and differentiate that water, in practical terms, within the system during a flow event as well as assess the costs and benefits that will have. River operators, water regulators and environmental managers need to evolve to work within a system that forecasts environmental water, consumptive water as well as base flows and operate this system to achieve the multiple outcomes as required under the Basin Plan. Understanding our ability to manage this discrete parcel of water is key to which strategies are practical in the long-term and links directly with our discussion below on understanding the resources and effort required to achieve any outcomes.

Finally, there must then be agreement by government's and communities on what the standards to which we expect the management and achievements of environmental water usage must meet. This will essentially drive requirements to monitor and evaluate, accuracy of water measurement and costs.

Only after clearly identifying these gaps, and recognising the legislative framework, can an informed discussion on how to respect all water users rights; either irrigators or the environment and strategies be developed.

We recommend the NSW Government get agreement on the following key issues prior to finalising any strategies:

- a) **Defining what environmental water needs better management.**
- b) **Determining if we can confidently identify it and track its movement.**
- c) **Communicating what standard is expected when calculating, identifying, monitoring and reporting on environmental water use.**

5.1.3 *Resources and effort*

Many of the measures proposed are dependent on the NSW Government agencies responsible for administrating, managing or operating water improving other aspects of their business. For example, the ability for a system like the Barwon-Darling to be semi-regulated requires assessment of the timeframe by which the other aspects required to allow this to happen like when water take can be actively measured, how that new data can inform water operations, as well as, how procedures may be adopted to support a higher level of resource management. A full assessment includes identify gaps, costs and benefits of the technological, engineering and human resources required to implement an agreed standard of management must be considered.

Further to this and as noted above, the responsibility for the cost impacts for improved environmental water management should be borne by the Commonwealth for environmental water delivery or the community who demand it, as cost shifting should not be permitted in this process.

5.2 Discussion on proposed strategies

5.2.1 Temporary restrictions

The adoption of temporary restrictions to water access through the implementation of Section 324 orders (via the Water Management Act) to manage environmental water moving through a system, is clear admission by government and environmental water managers that they are unable to operate in the system in corporation with other users. This action undermines the property rights of all other water users whilst providing environmental entitlements a higher priority right which contravenes the reform objectives of the NWI and the Basin Plan. This proposal suggests those responsible are unable or unwilling to work within the licencing framework.

The GVIA suggests that temporary restrictions should only be considered as a last resort for managing, clearly identified and accountable, held environmental water, in the short-term and are neither a first option or an enduring one.

5.2.2 Access rules changes

Furthermore, any wholesale change on access arrangement in any system will impact property rights and therefore, directly contravenes the reform objectives of the NWI and the Basin Plan and should not be considered further. Dynamic access rules may be possible in regions where there is agreement to implement Individual Daily Extraction Limits, however there has been little appetite for these until recently.

5.2.3 Implementation of Individual Daily Extraction Limits and event management

Individual daily extraction limits (IDELs) are mechanisms contained within many NSW Water Sharing Plans, although rarely if ever, implemented. The implementation of these limits alone does not manage environmental water better but their establishment, may provide the framework by which flows can be better managed on event by event basis. These two options together can harness the good-will of water users to voluntarily manage flows or allow for commercial arrangements to allow flow access for identified outcomes.

The implementation of IDELs with improved event management may provide an agreeable option to better manage environmental flows provided the key barriers to implementation are addressed and resources identified to implement and manage the systems are allocated²¹.

5.2.4 Rules based triggers

The GVIA does not in principle support the establishment or implementation of rule-based triggers for demanding environmental outcomes as an effective tool for better managing environmental outcomes. Rules-based triggers are restrictive and not dynamic enough to adapt to improved science or changed conditions and may result in less than desirable outcomes. Not to mention, that by initiating downstream triggers address only one aspect of

²¹ Refer to above discussions on 5.1 Barriers to improving management.

the possible environmental issue and does not consider likely water availability (are flows available) and management of these flows between water resource units (extraction).

For example, the Interim Unregulated Flow Management Plan for the North-West will be superseded by Long-term Environmental Watering Plans for each catchment in the northern Basin as part of Water Resource Plan development. As such, we would recommend their removal not an agreement to revive their implementation. Furthermore, in the Gwydir Stakeholder Advisory Panel discussions for the development of the Water Resource Plan, there was a similar discussion regarding rules-based triggers for Copeton Dam. Stakeholder's agreed that utilising current planning and decision-making processes, provided the most effective option to achieve a more targeted outcome rather than, setting the rule and being 'locked into' that possible outcome for years to come.

As part of our submission to the Water Sharing Plan and Water Resource Plan development, we asked the NSW Government to investigate the effectiveness of enacting these restrictions for the Interim Unregulated Flow Plan for the North West or indeed any requirement to meet flow management targets in the Barwon-Darling from the Gwydir Valley. The GVIA would like to review evidence of supplementary flows from Gwydir River effluent streams (Mehi and Carole Creek) meeting any of the desired targets without additional inflows into the Barwon-Darling to test our valley's obligations.

The GVIA believe that the requirement for the Gwydir to be a participant in this flow plan (and downstream requirements for the Basin Plan) is an inefficient allocation of resources due to our limited connectivity and historical flow behaviour towards the wetlands. However, we acknowledge that water can be delivered in low volumes out of the valley and hence support active management rather than rules-based approaches to ensure effectiveness and accountability of flow delivery.

6 Transparency Measures

The GVIA supports actions to improve confidence in how water is being administered and used in NSW. To achieve this overall objective the NSW Government must make several critical steps in other areas of its business as the priority. We do not believe that the provision of individual licence holders information either in real-time (or delayed) as suggested within the consultation paper 'Transparency measures', will alone lead to an improvement in confidence. Not to forget that a process to gather and report this information would need to be addressed first before implementation which links directly with the water take strategy.

There are substantial risks to water users, if what we would normally deem private information, is presented in real time. This information can also be critical to the operation of their business; their competitive advantage and commercial strategies. For some, this information maybe market sensitive (especially for those with shareholders) but the major concerns are for everyone, it could lead to market collusion and targeting of individuals by third-parties, to buy or sell water. Hence further discussions around the public provision of information needs to acknowledge and account for the fact that some information (i.e. water account balances and water trading) is commercial-in-confidence and market sensitive.

Furthermore, the GVIA acknowledges the effort by our river operators, WaterNSW to manage deliveries and orders in an efficient manner. We are concerned that by providing

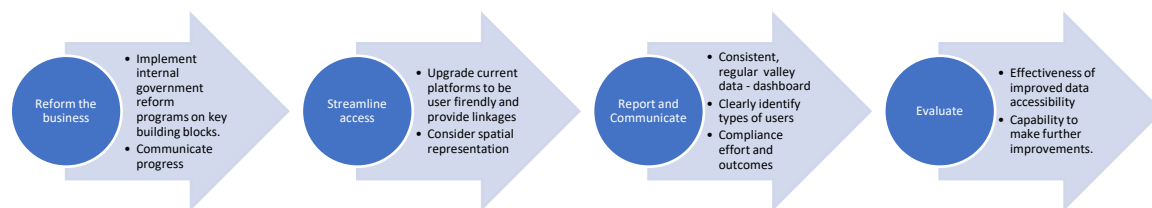
real time account information, river operators maybe limited in their ability to mange the river by being constrained by orders at specific locations and rates, rather than being able to operate the river to the best of their ability.

When considering what information and when it should be available, we ask the NSW Government to consider if it is appropriate that the licence information of all NSW drivers in addition to the registration of their cars and driving history, be available in real time for every car on NSW roads. We know that this information for trucking industry employees is available to the regulator, but should the public know this information, or should the public have confidence that the regulator is collecting and reviewing this information to ensure our safety.

We urge the NSW Government to reconsider, whether the risks of providing this information out way the perceived benefits.

We recommend that the NSW Government consider a staged approach to addressing government transparency in water administration as outlined below in Figure 1. Our proposed steps to improving accessibility of information on water availability and usage focus' on internal reform on key building blocks (as outlined in other consultation papers) including, the implementation of an agreed water take policy, effective compliance implementation and regular reporting of progress on these aspects, before addressing ways to improving how people can access the information currently available while also considering current gaps in what is available at a valley level.

Figure 1: Steps to improving accessibility of information on water availability and usage



6.1 Streamline Access

We believe that there is a significant amount of information already publicly available but that the registers and portals are often difficult to search, you are required to know specific information on the type of water licence or the sub-catchment or planning area to search and the information can be misleading as it doesn't separate different types of users or indicate when it was updated. For example, the real time data network can be search spatially but does not link to the NSW Water Register nor the fee-per-search Water Access Licence database.

We therefore, recommend that how this information is presented is overhauled and streamlined with consideration to providing a spatial search tool as with other registers or

like the NSW Government's existing online portal SEED²² which provides spatial information on an aggregate resource scale for other industries.

6.2 Reporting and Communication

Currently, there is a myriad of reports on water availability and allocation, water balances and resource status that are inconsistently presented, intermittently provided and sometimes do not reflect the publicly available information in other sources, due to time-lag or lack of categorisation. This information, if presented correctly can be powerful tool to help address the lack of understanding on how much water is available to what users, but must:

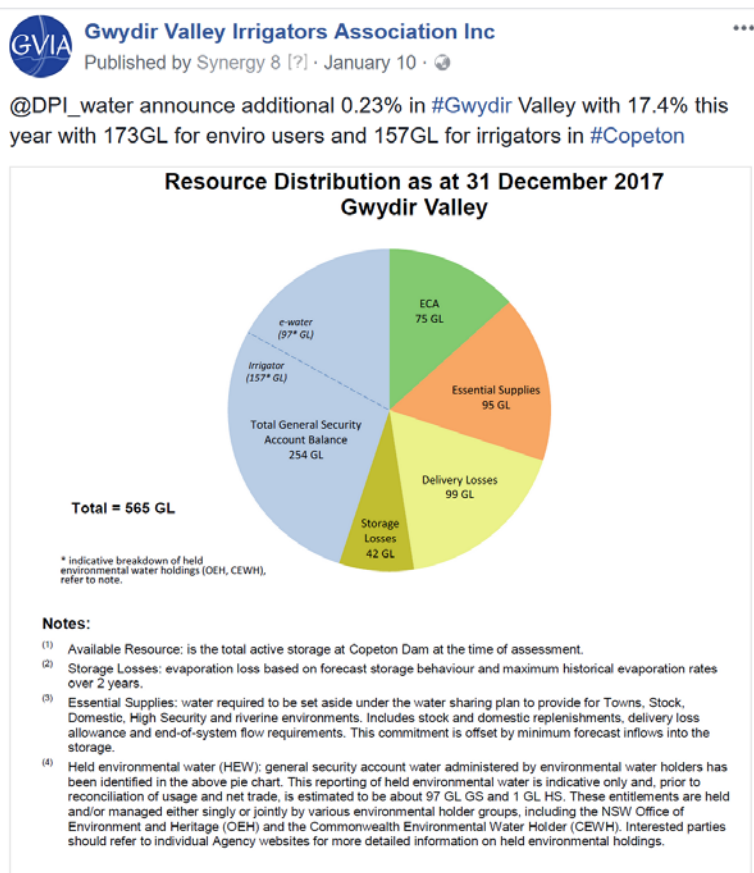
- Remain amalgamated at the valley level;
- Represent both groundwater and surface water;
- Demonstrate the different types of users; agricultural, environmental and or commercial; and
- Report availability, current usage and forecast usage; and
- Be regular and consistent.

For example, WaterNSW provide weekly water availability reports in addition to some valleys receiving monthly or intermittent resource availability reports or allocation announcements. This information is not well understood or accessed by those within the industry and within the community, yet with some re-formatting it could be immensely valuable objective and reliable information resource. The Gwydir's Valley's monthly resource assessment is now separated into environmental and irrigator allocations which allows the GVIA to track and promote either availability or usage by either category which is tracked via our website²³ which we can then repurpose for social media as presented below in Figure 2, which provides those followers a greater understanding of who has what and when.

²² Sharing and Enabling Environmental Data: A shared resource for environmental data <https://www.seed.nsw.gov.au/>

²³ <https://www.gvia.org.au/the-gwydir-valley/water-available-for-irrigation/current-water-availability/>

Figure 2 Example Facebook post of monthly resource allocation



Whilst the Gwydir’s resource assessment provides this level of detail, the NSW Water register does not as it provides the total usage and availability. By updating the register to categorise information by user either; agricultural, environmental or commercial would enhance our ability providing clarity on environmental entitlements and environmental usage, which is relatively new in most areas.

Irrigators and environmental water managers have nothing to loose by improving the communitites understanding of environmental water entitlements and environmental flows. Ideally, we would like to see a system that is capable of tracking all environmental flows from storages through the system automatically.

Furthermore, the reporting of compliance activity and effort should also be considered as a tool to improve confidence in water administration. This should be regular reporting of compliance outcomes either complaints or actions but also effort for example, an update on the number of works sites visited and audited each quarter.

We recommend that this information could be easily summarised in valley specific ‘dashboards’ that provide key statistics, which can be search or validated via linked information sources.

These dashboards, which could be updated as regularly as required (as defined by their data sources) could be on-stop-shop of valley specific information on the followinfg:

- Dam level and releases (current and forecast);
- Actual and permitted take as per usage and SDL complainece reporting (or averages);

- Water availability by licence and usage category;
- Trade snapshot (maximum price and average price); and
- Meter or compliance audit status.

7 Floodplain Harvesting Policy

Floodplain harvesting is the interception of overland flow across a floodplain which is a legitimate form of historical water take that is not well understood. The GVIA is committed to implementing the Healthy Floodplains Project to incorporate legitimate floodplain access into the licencing framework. The benefits of implementing this project for industry, the community and the environment are substantial considering the future sustainability of the local irrigation industry relies on the continuation of this unique form of take.

Due to implementation issues, individuals at this point in time across the five-northern valleys, do not have the same level of information available to them to assess their preference for one policy approach over another. The fact that not all valleys have upgraded model results and indicative licence volumes presents a challenge for everyone, to assess whether the program is enabling legitimate access or seeking to reduce legitimate access now and into the future.

Furthermore, each policy option presents a separate set of risks and challenges which can only be assessed when considering the likely impact of the licencing program at the valley and individual level.

Despite the consultation process and the provision on information regarding valley impacts, there continues to be key outstanding issues that the NSW Government have not clearly communicated.

The GVIA therefore recommend that the following outstanding issues be addressed to further help water users form an informed position. These are:

- a) **Consistency between valleys in model assumptions to determine either long-term or short-term entitlements;**
- b) **Demonstration of consistency of policy options with the NSW Water Management Act and Basin Plan principles; and**
- c) **Clarity of the equity of both options for water users in and out of a designated.**

The GVIA have asked for these principles to be addressed but to-date, have not been satisfied with the NSW Government's response.

Notwithstanding the above, the feedback from our membership was that the most secure legislative option was preferred. We recognise that this may result in a valley-by-valley implementation may result in separate policy strategies between valleys if applicable.

We therefore, recommend the NSW Government implement a FPH policy that provides the most secure legislative option for continuing this legitimate access into the future and we understand this to be representing floodplain and rainfall runoff as a licence.

Noting that individuals have the right to make their own submissions in addition to being able to participate in any upcoming formal submission process once a draft licence package has been determined.

We recommend that individual FPH account limits be determined through the Stakeholder Advisory Panel consultations and presented in Water Sharing Plans which can be reviewed throughout the public submission process.

Finally, the GVIA supports a floodplain monitoring program that recognises the challenges in measuring this form of take. The majority of floodplain harvesting licence recipients will have a combination of water licences and a large proportion may easily determine take of this water through known practices. Harnessing this knowledge will underpin the any future monitoring strategy for floodplain harvesting licences and ensure that the strategy remains fit for purpose.

We've agreed in the past that individuals with floodplain licences will:

- Report annually on the floodplain harvesting take in megalitres to the appropriate authority within three months of the end of the water year via a calculation of farm water use via a process of elimination of all other known forms of water take.
- Maintain records for calculating FPH take for at least five years.
- Maintain FPH interception structures as assessed by the Healthy Floodplains project, unless approval received from the Department to amend.
- Monitor permanent water storages and maintain records of water volumes via either a gauge board, a calibrated storage curve calculation or other mechanism of their choice to be used in the calculation of take.

As such, we support and recommend a staged FPH monitoring approach by the NSW Government that recognises advances in technology that improve accuracy, if it continues to recognise the following monitoring principles:

- **Delivers shared outcomes;**
- **Provides irrigator choice;**
- **Fit for purpose;**
- **Cost effective;**
- **Achievable;**
- **Repeatable; and**
- **Auditable.**

8 Exposure Bill

The GVIA welcomed the genuine consultation approach of the NSW Government through the release of consultation papers and delivery of individualised, community consultation sessions around the State. We were then surprised to review the draft Exposure Bill which, is in contradiction to the consultation process and clearly suggests a direction that the NSW Government intends to take in respect to the protection of environmental flows, metering and the provision of water related information prior to any public consultation on the proposed amendments.

We believe that the release of the draft Exposure Bill was premature and a poor decision. The incorporation of both policy and legislative reviews in the one-step, may be viewed to save time but actively undermines the consultation objective.

We recommend that the draft Exposure Bill be re-drafted following the public consultation process and a new consultation process be established particularly for that component of the reform strategy.

The GVIA have therefore have not commented on specific changes in the exposure bill, in anticipation of the NSW Government undertaking a more thorough and specific consultation process on a final draft amendment bill.

Nonetheless, we do not support the general change in legislative direction by government which appears to:

- Reduce consultation timeframes or opportunity to object to licence or mandatory conditions changes.
- Impose new mandatory conditions on licence holders outside of the Water Sharing Plan process.
- Provide a sub-set of user's priority access or changed conditions, all users within a category should have the same conditions and access arrangements.
- Publish individual user information without their knowledge.

The GVIA have made several recommendations on the separate consultation papers which provide the reasoning behind our objections outlined above.

Ends.