NEW SOUTH WALES IRRIGATORS' COUNCIL

Addressing Metering Compliance Barriers

Review of the implementation of the **NSW Non-Urban Water Metering Policy**

Executive Summary

This report identifies barriers that delay or prevent NSW water users from complying with the NSW Non-Urban Water Metering Policy (herein Metering Policy) and suggests pathways forward to accelerate progress on compliance.

From the outset, the NSW irrigation industry supports continual improvements to metering, monitoring and measurement of water use; supports sustainable limits on water use; and has zero tolerance for non-compliance with water laws. NSWIC welcomes the NSW Government's review of the implementation of the Metering Policy to identify and address barriers that require urgent attention.

This report follows a report released by NSWIC titled "Barriers to Metering Compliance" in August 2021 which documented legitimate barriers to compliance resulting from policy implementation, administration, and technical failures. The irrigation industry has been on the forefront of making these issues known to the relevant authorities and seeking timely and decisive action. It is concerning that many of these barriers remain persistent and had not been publicly acknowledged or addressed until this review was announced. To be clear, irrigators want to comply with the new Metering Policy and are making their best efforts to comply – but these policy implementation barriers are beyond the control of water users.

Barriers to metering compliance continue to span all aspects of the reform; from communication and education of the reform, confusing overlaps in policy instruments, market shortfalls such as difficulty accessing appropriate meters, lack of local DQPs, connecting to telemetry, and ongoing issues with maintenance of meters. All this is overshadowed by the costly nature of this reform on irrigators who are responsible for 100% of the cost-recovery, despite the reform being driven by the NSW Government imposing ambitious standards beyond the requirements of the National Water Initiative (2004). This leaves irrigators, particularly smaller users, questioning their ability to remain financially viable.

As part of the review, NSWIC calls on the NSW Government to consider a suite of recommendations that identify pathways for compliance and resolve the barriers to compliance.

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Summary of Recommendations

In collaboration with NSWIC member organisations, the following recommendations provide guidance to the NSW Government for pathways towards improving metering compliance rates.

NSWIC notes that it is currently a very challenging period of time for the NSW irrigation industry and our communities, particularly with the Federal Government seeking substantial amendments to the Murray-Darling Basin Plan. NSWIC notes that many of our members have reported not having the time or resourcing to effectively engage in the Metering Policy consultation, due to engagement in other, exceptionally high-risk policy changes occurring concurrently. NSWIC urges DPE not to take a lack of engagement as a sign of a lack of interest, and instead encourages further engagement following this period.

The NSW irrigation industry has invested significant resources, including finance and time, into the new Metering Policy. It is essential that this review find practical and efficient methods for policy implementation, as opposed to back peddling on metering requirements.

1. Provide an automatic temporary exemption for known barriers.

1) NSW Government provide a list of automatic temporary exemptions for known barriers beyond the control of water users, until such a time as the barriers can be overcome (noting the Minister may revoke or amend the exemption at any time). These exemptions include, but are not limited to:
   a) Inconsistent metering conditions exemption
   b) Unavailable Duly Qualified Persons exemption
   c) Data Logger and Telemetry exemption
   d) Faulty Meter exemption

2) NSW Government provide a mechanism to provide for special circumstances not listed for automatic temporary exemption (i.e., site-specific circumstances), that enables the DQP to formally register the circumstances that inhibit full compliance, and the user to be temporarily exempt from requirements, until compliance becomes feasible.

This is intended as an interim measure while barriers are resolved.

2. Pathway to correctly nominate works.

3) Provide a simple pathway for water users to correctly identify inactive works that are not used to take licensed water from a water source, or which only take water under a basic landholder right. The administrative process must be:
   a) Cost-free.
   b) Easily reversible, subject to meeting the metering requirements at such a point in time as the work becomes active again.
   c) Streamlined by removing inactive work physical impediments (i.e. so declaring a work as inactive replaces the need for physical impediments).
   d) NRAR to hold the responsibility of performing inactive work surveillance to ensure compliance.

3. Remove inconsistent metering conditions on licences.

4) NSW Government to remove pre-existing specific metering conditions on licences, and instead refer to one instrument – the non-urban water Metering Policy. This includes a "to the extent of any inconsistency" clause to provide further assurances on this.

5) NSW Government to resolve all inconsistencies between licence conditions, Water Sharing Plan and the Non-Urban Water Metering Policy, particularly noting that under the current policy settings:
   a) water users with surface water pumps less than 100mm and groundwater bores with an external diameter bore casing less than 200mm are excluded; and
   b) compliance date for coastal NSW is 1 December 2024.

4. Metering requirements that target risk.

6) Review the exemption under the work size-based framework. Currently the framework states that water users with surface water pumps less than 100mm and groundwater bores with an external diameter bore casing less than 200mm are excluded. NSWIC suggests:
   a) Groundwater bore measurement should be 100mm consistent with surface water pumps, with the measurement point being the diameter of the outlet.
   b) Groundwater wells to be eligible for the same exemption as groundwater bores – noting that it is the size of the pump within the well that affects water uptake.

7) Continue requirement for DQP certification of AS4747 meters - NSWIC does not support removing this requirement due to the risk of damaging the irrigation industry's reputation and the integrity of the reform.

8) Permanently implement the "small, low risk works used solely to take water under a stock and domestic water access licence" exemption (lapses on 1 December 2024).

9) Further consultation with industry on the introduction of a "low volume water user" opt-in exemption, or alternative strategies, to provide less costly options for low volume water users.

10) A further 12-month extension to 1 December 2025 (at minimum) for coastal compliance to address:
    i) Concerns that the current coastal compliance deadline of 1 December 2024 is not sufficient time to effectively implement and react to proposed regulatory changes as part of the metering review.
    ii) Address DQP shortages in coastal catchments.
    iii) Drought conditions predicted to affect coastal catchments throughout 2023-24, which may hinder in-situ meter testing and impact farm productivity and income.
    iv) Implement an effective education strategy engaging all coastal water users on their water use requirements including water ordering, measurement, recording and reporting.

11) Practical and simple reporting requirements - water users to submit a monthly statement on the months they take water using a work. If a statement is not submitted, WaterNSW to recognise that the work was not used to take water that month. This streamlines data collection and removes the administrative burden on time-poor farmers, many of whom only pump when required (e.g., dry conditions).

5. Revisit meter installation and certification requirements.

12) NSWIC supports Government coordination of DQP services to match supply with demand.
    i) The Government should assume responsibility for DQPs as this appropriately shifts the onus onto Government to deliver its reform.
    ii) This is preferred to alternative options, such as removing the DQP requirement or enabling the water user to self-certify, as these are seen as watering down the reform and undermining its integrity.
    iii) Existing agencies such as WaterNSW could take on this responsibility. If this were to occur, the Government must appropriately resource and fund a public-sector service to deliver its reform, to avoid repeating past mistakes of where farmers were paying for services and compliance that agencies failed to deliver.
    iv) While supported, the Government assuming responsibility for DQPs is considered only a part of the solution.

13) NSWIC supports more support services for DQPs, specifically that streamline administrative tasks.

14) NSWIC supports the Government identifying areas of high demand and coordinating DQP services to match the need. However, we oppose this occurring on a fee-for-service basis.

15) NSWIC supports expanding the DQP workforce by amending the rules and training skilled workers via a short course.

a) This initiative will not address worker shortages experienced in regional NSW. If within the private sector, adequate financial incentive for these services will be imperative. At present, many service providers – such as engineers, surveyors, electricians, etc. – are in high demand and can profit more from their standard business services than DQP services.

16) NSWIC opposes less prescriptive installation pathways for closed conduit meters. Due to the ongoing barrier of DQP accessibility and negative public perception that water users watering down the reform.

17) NSWIC supports the Department's desire to review the requirement for in-situ accuracy testing which is not mandated under the national metering standards and not achievable with current DQP availability.

6. Revisit management of telemetry systems.

18) NSWIC does not support the review of the Data Logging and Telemetry Specifications 2021. There is currently enough information to inform the decision to decouple telemetry from the metering reform. The specifications could be revisited when a data loggers and telemetry implementation framework is developed.

19) NSWIC supports the decoupling of data loggers and telemetry from meter installation requirements. This will:
   a) increase metering compliance;
   b) permit time for the DAS to be operational and receive data properly;
   c) ensures the selected telemetry equipment can meet cyber security requirements (many pre-installed telemetry units cannot connect to the system for this reason); and
   d) allow for development of a practical strategy for data loggers and telemetry to ensure compliance can be achieved practically before deadlines are set.

20) NSWIC supports the Government assuming responsibility for telemetry systems. The single source of truth for water users is their water meter. The Government should accept the additional responsibility to transmit water extraction data from a meter to Government. This would include Government coordination and bulk procurement, installation, maintenance, and ownership of all data-loggers and telemetry systems (unless the water users opts-out and selects private ownership).

21) NSWIC supports the Government providing recommended data loggers and meters combinations for optimal functionality. The cost of these combinations must be taken into consideration for water users and businesses of all sizes.

7. Revisit overland flow measurement pathways.

22) NSWIC opposes the proposal to exempt water users taking overland flow under an unregulated access licence from metering requirements. This would feed into further negative public perceptions, would lack political support for regulatory change, and does not work towards an enduring solution.

23) Revisit the Floodplain Harvesting measurement policy to ensure it is effective practically – (e.g., revise the timeframes for FPH implementation, accounting for the time required for the current market failure to respond to demand).

24) Improve private and government-installed secondary devices that are not fit for purpose (e.g., gauge board height markings).

25) NSWIC proposes that entitlement holders should be permitted to take Floodplain Harvested or overland flow water with approved, certified secondary meters until such time that the following barriers are addressed:
    a) The shortage of DQPs prepared to install storage meters.
    b) The availability of primary storage meters is improved.
    c) The configuration and linkages of storage curves to storage meters and the DAS is streamlined so users can readily access data to enable them to be compliant.
    d) Sufficient resources are allocated to WaterNSW to upgrade the DAS system to be fit for purpose for DQPs and water users.
    e) Surveyors can utilize the newly approved improvements to survey requirements.

26) Continue water user consultation to find a solution to policy failures, such as:
    a) Enabling users to identify a specific Local Intelligent Device (LID) in a storage within a works approval to take Floodplain Harvested water while still irrigating from other storages within a works approval, without the requirement to subdivide the works approval; or
    b) The measurement of water taken from the storage via a different outlet to the one used to take Floodplain Harvesting entitlement.

8. Improve practical reporting process: general water usage reporting.

27) Develop a clear education strategy (encompassing in-person, print and online resources) for water usage reporting expectations, particularly for smaller and coastal water users. This could include resources on water ordering, recording, and reporting via logbook and iWAS.

28) WaterNSW to send out a monthly and/or annual automated message (water users to nominate for email, letter, or text) prompting water users to record their water use. Include the due date (if applicable), a link

to iWAS (online) or a logbook (physical). This requires an up-to-date database of customer details as well as correct licence information on the Water Access Licence Register.

29) Development of an iWAS app for improved access on mobile phones – water users can input meter readings while in the field. This prevents double handling data of data; once in the field, then again when entering data into iWAS on a desktop computer.

30) Practical and simple reporting requirements - water users required to submit a monthly statement on the months they take water using a work. If a statement is not submitted, WaterNSW to recognise that the work was not used to take water that month. This streamlines data collection and removes the administrative burden on time-poor farmers, many of whom only pump when required (e.g., dry conditions).

31) We do not support any attestation/confirmation of data submitted by telemetry, as this form of data reporting is out of the control of water users.

9. Improve practical reporting process: faulty meters.

32) Due to the ongoing implementation barriers (e.g., access to DQPs, and fit for purpose meters), we strongly do not support amendment to Regulation to place parameters such as time limits for the repair or replacement of meters.

33) For the s91i Extension Form, add a question to clarify the length of extension the water user is requesting (in addition to water users providing the proposed date that the metering equipment will be repaired/replaced). Providing an extension for this requested length of time (as opposed to requiring monthly forms) will reduce the administrative burden for water users and WaterNSW.

10. Review cost-share arrangements.

34) The NSW Government must pay for its own reform, which was driven by the Government's failure to deliver compliance services that water users had paid for in previous pricing determination periods. If the industry is made to accept a 100% user-share to cover the reform costs, there is a reasonable expectation that the reform will be effective, deliverable, and achieve its intended outcomes with an adequate level of service.

11. Develop a clear communication strategy.

35) Water agencies to collaboratively develop a clear educational approach to inform coastal NSW about the metering reform and their upcoming compliance date of 1 December 2024, including;

a) Informative and succinct online and print resources (e.g., information booklets, factsheets, videos)
b) In-person consultation opportunities, held in local community hubs such as ServiceNSW
c) A metering information 'roadshow', similar to those previously held inland
d) Further development of resources available on WaterNSW website to inform water user of their measurement, recording and reporting requirements, including;
    i) Improved communication of customer forms; and
    ii) Navigation and streamlining improvements to iWAS.

NSW Irrigators' Council

The NSW Irrigators' Council (NSWIC) is the peak body representing irrigation farmers and the irrigation farming industry in NSW. NSWIC has member organisations in every inland valley, and several coastal valleys. Through our members, NSWIC represents more than 12,000 water licence holders who access regulated and unregulated surface water systems, and groundwater systems. NSWIC's member organisations include valley water user associations, food and fibre groups, irrigation corporations and commodity groups from the rice, cotton and horticultural industries.

Introduction

For background on the Metering Policy, read the 2021 NSWIC Barriers to Metering Compliance Report.

The NSW irrigation industry supports continual improvements to metering, monitoring and measurement of water use; supports sustainable limits on use; and has zero tolerance for non-compliance with water laws.

However, the new Metering Policy roll-out has faced significant barriers beyond the control of irrigators that delay or prevent irrigators from compliance. Almost all barriers reported by NSWIC in August 2021 remain. This is the result of DPE-Water and WaterNSW failing to execute their responsibilities effectively to deliver the reform, and to address barriers at the earliest opportunity.

The nature of these systemic barriers, in that they are administered by relevant agencies, highlights that the barriers are beyond the control of irrigators. Irrigators note that the scale and impact of metering barriers is greater than claimed by the Government agencies responsible for rolling out the Metering Policy, and without Government intervention the likelihood of policy failure is high.

The NSW irrigation industry has invested significant resources, including finance and time, into the new Metering Policy. It is essential that this review find practical and efficient methods for policy implementation, as opposed to back peddling on metering requirements.

The ongoing implementation issues are widely recognised. For example, when announcing the no-meter, no-pump Metering Policy review in June 2023, the NSW Water minister noted: *"We know there are some valid reasons for this including difficulties in accessing the right people to install new meters, supply chain disruptions, the cost of equipment and of course the recent flooding. These are barriers we will be addressing*[1]*."*

[1] NSW Government (26 June 2023). 'No-meter, no-pump. NSW Government announces a thorough review to crackdown on non-urban metering compliance.' [Website]. https://water.dpie.nsw.gov.au/news/no-meter-no-pump.-nsw-government-announces-a-thorough-review-to-crack-down-on-non-urban-metering-compliance

This was supported by an email from the Natural Resources Access Regulator (NRAR) on 11 July 2023 to water users that read, *"As you would know, some water users have experienced barriers to compliance, such as: a shortage of qualified installers and certifiers, impacts of COVID-19 restrictions, impacts of widespread flooding across NSW, some lingering supply chain issues."*

The IGWC Metering Report Card 2021-2022 also noted barriers to compliance, specifically identifying the shortage of available and accessible Duly Qualified Persons (herein DQPs): *"The Inspector-General understands that the actual number of active and available CMIs in NSW (known as DQPs in NSW) is significantly lower than this number [175] and is a significant risk to Metering Policy implementation in NSW. As NSW have a significant number of meters as part of their reform program, the number of CMIs available will be vital for ensuring their metering reform goals are met."*[2]

The Metering Policy review is welcomed by industry, which has long communicated farmers' will to comply, but noted obstruction by external barriers and anomalies that make compliance impossible and leave smaller water users facing exorbitant costs.

[2] Inspector General of Water Compliance. 'Murray-Darling Bason – Metering and Measurement Report Card'. https://www.igwc.gov.au/sites/default/files/2023-07/igwc-metering-report-card-2021-22.pdf

Terms of reference

DPE Water included the following focus questions in the metering consultation paper. Short answers to each focus question can be found in Appendix B.

1. **Ensuring that metering requirements only apply to works taking water:**
   - What would make it easier for water users to give government this information?
2. **Reviewing metering requirements to target risk more effectively:**
   - Should there be flexibility in metering and measurement standards reflecting risk to water sources, or should there be one standard across the board?
   - Would it be easier to understand and comply with metering rules based on entitlement or volume of take than the current approach based on infrastructure size?
   - If a volumetric approach was to be implemented, should it be consistent across the state, or tailored by catchment to reflect the different water use behaviours and water management risks in different areas?
   - What are the practical implementation challenges that water users might experience in complying with metering requirements based on volume of take or entitlement?
   - Are there any issues specific to different industries that take water under a licence that should be considered in relation to the possible options described?
3. **Revisiting installer requirements to accelerate progress:**
   - Who should install metering equipment?
   - Do you think there would be benefits from government involvement in the DQP market? For example:
     - if government contracted and coordinated DQP services then passed on the costs?
     - if government provided fee-for-service DQPs?
   - What forms of further training or support would make it more viable for already qualified DQPs to actively participate in the market?
   - Is there benefit in revisiting the skill sets and training required for DQPs? Are the current training and certification requirements limiting the market or are the other factors more significant?
4. **Making data systems and equipment standards more fit for purpose:**
   - Would separating the requirements for meter installation from data loggers and telemetry be beneficial? Would an extension of the compliance timeframes for data logging requirements be helpful?
   - Would government support for rolling out data loggers and telemetry be beneficial?
   - What are the benefits and risks if government was more prescriptive about the suitable products/technologies and combinations of meters and data loggers?
   - Do water users want access to more frequent meter data?
   - Is it important to be able to use existing telemetry systems that are currently excluded (e.g., SCADA)?
   - What forms of training and support would make it easier for DQPs to navigate data logger and telemetry installation?
5. **Improving water use reporting:**
   - How can we improve the mechanisms for water use reporting?
   - What would make it easy for water users to complete an annual attestation of the volume of water taken and how it was measured?
6. **Ensuring a measurement pathway for take of overland flow in unregulated water sources:**
   - Will this proposed change enable appropriate measurement and reporting of overland flow take in unregulated river entitlements?
7. **Strengthening compliance and enforcement powers:**
   - Do you think the suggested improvements to compliance and enforcement tools will clarify the expectations on water users and make the system fairer?

What progress has been made?

The Metering Reform has been in place for five years, with large water users, northern inland and southern inland areas (tranches one, two and three) now required to comply. Water users in coastal NSW (tranche 4) are due to comply by 1 December 2024 (unless a condition on the water access licence states otherwise).

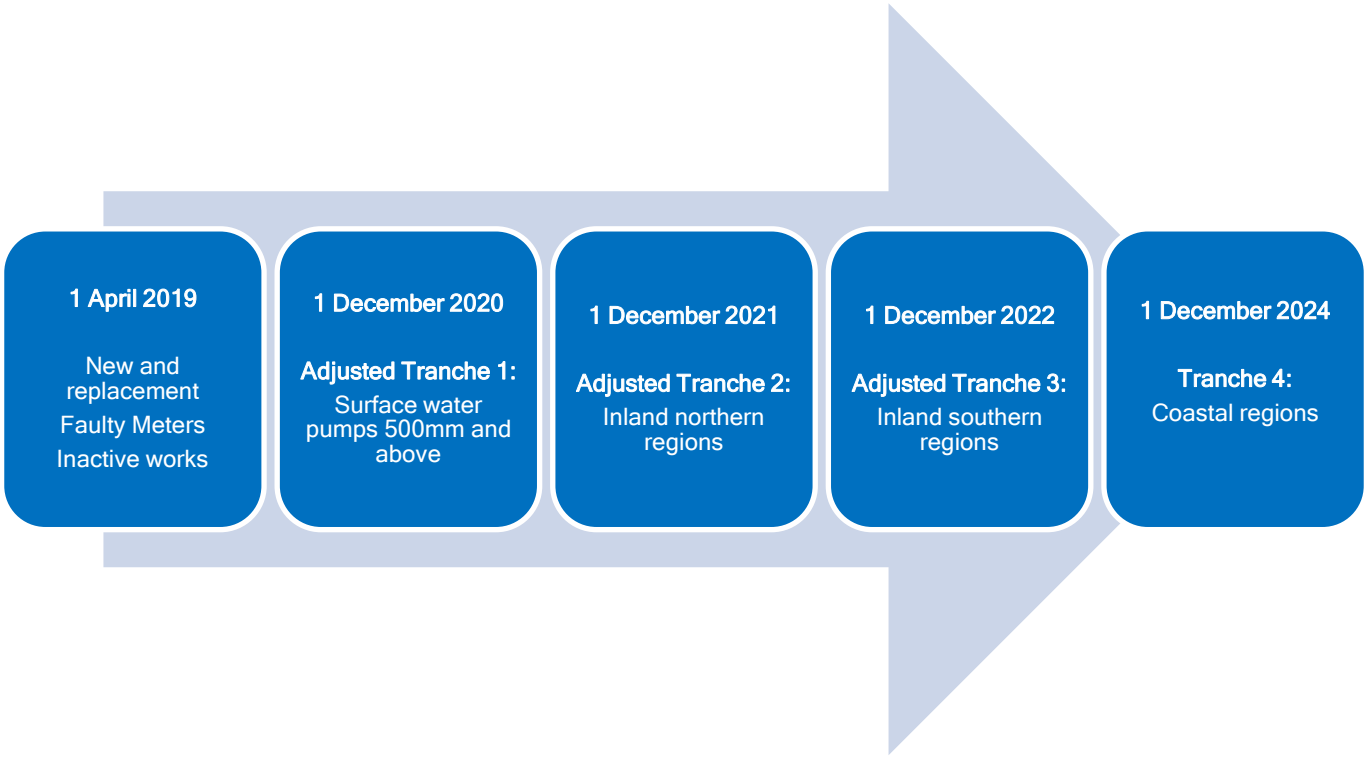

Figure 1: Timeframe for rollout of the Metering Policy

The Natural Resource Access Regulator (NRAR) is required to undertake regular reporting on metering compliance – that is, compliance to the new Metering Policy.

NRAR notes that when undertaking compliance visits to Adjusted Tranche 1 water users, field officers found many pumps "were smaller than the 500mm threshold or unable to take water". By excluding these works, NRAR reported that "over 90% of active works 500mm and above have accurate meters in place[3]".

These positive statistics are supported by compliance results in the metering compliance state of play (2020 group). Key figures show that for Adjusted Tranche 1 water users (n=547):

- 69% of works fully comply with the new rules.
- More than 80% of pumps NRAR inspected are connected to independently certified accurate meters.

[3] Natural Resources Access Regulator. 'Metering Compliance Reports' [website]. https://www.nrar.nsw.gov.au/progress-and-outcomes/metering-compliance-reports

- Fully compliant works statewide were calculated as (figures correct as of 1 December 2021):
  - 23% in July 2021.
  - 54% in September 2021.
  - 69% in December 2021. [4]

Overtime, NRAR has altered its data collection and reporting methods. Methods now rely on information from the water licensing system and DQP Portal – two systems fraught with inconsistencies and often incorrect.

Furthermore, the data does not acknowledge the compliance of works to previous metering requirements. This can incorrectly lead the media and general public to believe that irrigators have made no attempt to meter and record their water take, when in truth many meters compliant to earlier requirements are still in place while irrigators work to overcome external barriers associated with the new gold-standard metering requirements.

The most recent NRAR metering compliance figures from July 2023[5] report that:

Tranche	**Location**	**Overall compliance rate for all works***	**Overall compliance rate for all active works****
2	Northern Inland	10%	20%
3	Southern Inland	22%	35%
4	Coastal Regions	Not calculated	Not calculated

Table 1: NRAR metering compliance data July 2023

*Includes all works that the Metering Policy applies to

** Excludes works that are likely to be inactive or unable to take water

The DPE Water metering consultation paper suggest compliance rates for active works capable of taking water:

Tranche	**Water Users**	**Compliance rate**
1	Surface water pumps >500mm	>70% (data from fieldwork)
2	Northern Inland	20%
3	Southern Inland	38%
4	Coastal	N/A compliance date not yet reached

[4] Natural Resources Access Regulator. 'Metering compliance state of play: 2020 group' [website]. https://www.nrar.nsw.gov.au/how-to-comply/metering/compliance-state-of-play

[5] Natural Resources Access Regulator. 'Metering Compliance Reports' [website]. https://www.nrar.nsw.gov.au/progress-and-outcomes/metering-compliance-reports

Table 2: DPE Water metering compliance data October 2023[6]

In June 2020, DPE estimated coastal NSW had 6000 works that would need to comply by 1 December 2024[7]. With the metering reform roll-out expected to take a further 10 years[8], it is clear a significant amount of work must be done to overcome barriers to increase compliance rates across inland and coastal regions.

The National Water Initiative

The National Water Initiative (NWI) 2004 is a national framework agreed on by all Australian states and territories. It sets out 10 objectives across eight reform areas to achieve a nationally compatible market, regulatory and planning based system of managing water referencing the resources that optimised economic, social and environmental outcomes. Of note, jurisdictions agreed to work towards:

> *Information: 86. States and Territories agree to:*
>
> *i. improve the coordination of data collection and management systems to facilitate better sharing of this information;*
>
> *ii. develop partnerships in data collection and storage; and*
>
> *iii. identify best practice in data management systems for broad adoption.*
>
> *Metering and Measuring 87. The Parties agree that generally metering should be undertaken on a consistent basis in the following circumstances:*
>
> *i. for categories of entitlements identified in a water planning process as requiring metering;*
>
> *ii. where water access entitlements are traded;*
>
> *iii. in an area where there are disputes over the sharing of available water;*
>
> *iv. where new entitlements are issued; or*
>
> *v. where there is a community demand.*
>
> *88. Recognising that information available from metering needs to be practical, credible and reliable, the Parties agree to develop by 2006 and apply by 2007:*
>
> *i. a national meter specification;*

[6] Department of Planning and Environment (October 2023). 'Review of the non-urban metering framework – Issues and options paper.' https://water.dpie.nsw.gov.au/__data/assets/pdf_file/0007/586492/review-of-num-framework-discussion-paper.pdf

[7] NSW Government (June 2020). 'Industry Guide – Works Requiring a Meter'. https://water.nsw.gov.au/__data/assets/pdf_file/0005/312773/faq-works-requiring-a-meter.pdf

[8] Department of Planning and Environment (October 2023). 'Review of the non-urban metering framework – Issues and options paper.' https://water.dpie.nsw.gov.au/__data/assets/pdf_file/0007/586492/review-of-num-framework-discussion-paper.pdf

ii. *national meter standards specifying the installation of meters in conjunction with the meter specification; and*
iii. *national standards for ancillary data collection systems associated with meters.*

Reporting 89. The Parties agree to develop by mid-2005 and apply national guidelines by 2007 covering the application, scale, detail and frequency for open reporting addressing:
i. *metered water use and associated compliance and enforcement actions;*
ii. *trade outcomes;*
iii. *environmental water releases and management actions; and*
iv. *availability of water access entitlements against the rules for availability and use.*[9]

In the Irrigation Australia Limited (IAL) submission to the Productivity Commission's National Water Reform Inquiry, IAL calculated the percentage compliance of each state to the NWI. States were assessed on their compliance to several requirements, and their percentage compliance calculated:

National Framework Requirements	NSW	QLD	VIC	SA	ACT	TAS	NT	WA
Implementation of the national standard for meter construction, installation and maintenance (AS4747)	5	2 (1)	3 (1)	5	4 (1)	4 (1)	2 (1)	2 (1)
Use of a Certified Installer and Validator for installation	5	0 (2)	3 (2)	0 (1)	0 (2)	2 (2)	0 (2)	0 (2)
Use of a Certified Installer and Validator for validation	5	5	5	3 (2)	0 (3)	4 (3)	0 (3)	0 (3)
Any meter installed after 30 June 2010 must comply with the national metering standards as at July 2020	3 (1)	0 (3)	2 (3)	2 (3)	3 (4)	0 (4)	0 (4)	0 (4)
Any meter installed prior to 1 July 2010 shall be replaced with a compliant meter by 1 July 2020	0 (2)	0 (4)	2 (2)	0 (4)	0 (5)	0 (5)	0	0 (5)
Total score from 25	**18**	**7**	**15**	**12**	**7**	**10**	**2**	**2**
Percentage compliant	**72%**	**28%**	**60%**	**48%**	**28%**	**40%**	**8%**	**8%**

Table 3: IAL assessment and compliance scores for each state and territory[10]

[9] DCCEEW. 'Intergovernmental Agreement on a National Water Initiative'. https://www.dcceew.gov.au/sites/default/files/sitecollectiondocuments/water/Intergovernmental-Agreement-on-a-national-water-initiative.pdf

[10] Irrigation Australia. (August 2020). 'National Water Reform Inquiry.' https://www.pc.gov.au/__data/assets/pdf_file/0010/255259/sub003-water-reform-2020.pdf

Table 3 demonstrates the investment made by the NSW irrigation industry to implement this reform. Further analysis by IAL found that NSW have achieved full policy compliance in:

- Implementation of the national standard for meter construction, installation, and maintenance (AS4747).
- Use of a Certified Installer and Validator for installation.
- Use of a Certified Installer and Validator for validation.

While this review is important to ensure implementation of the new Metering Policy, and continued improvements, it must be considered in the context of the progress NSW has already made towards, and beyond, national metering standards.

It is important to recognise the support of the NSW irrigation industry to achieve 72% compliance against the NWI in 2020. With further investments in the reform by NSW farmers over the last three years, it is likely this percentage is now higher. This should be acknowledged by the NSW Government.

Recommendations to address metering compliance barriers

In collaboration with NSWIC member organisations, the following recommendations have been put together to provide guidance to the NSW Government for pathways towards improving metering compliance rates. While these recommendations represent a consensus view, some member organisations may have differing views on some details.

NSWIC notes that it is currently a very challenging period of time for the NSW irrigation industry and our communities, particularly with the Federal Government pursuing substantial legislative amendments to the Murray-Darling Basin Plan. NSWIC notes that many of our members have reported not having the time or resourcing to effectively engage in the Metering Policy consultation, due to exceptionally high-risk policy changes occurring concurrently elsewhere. NSWIC urges DPE not to take a lack of engagement as a sign of a lack of interest, and instead encourages further engagement following this period.

The NSW irrigation industry has invested significant resources, including finance and time, into the new Metering Policy. It is essential that this review finds practical and efficient methods for policy implementation, as opposed to back peddling on metering requirements.

1. Provide an automatic temporary exemption for known barriers

Almost all recognised barriers are beyond the control of water users. At present, the known barriers cause widespread technical-non-compliance, which presents highly skewed data on compliance rates, and causes water users significant stress and anxiety.

RECOMMENDATIONS

1) NSW Government provide a list of automatic temporary exemptions for known barriers beyond the control of water users, until such a time as the barriers can be overcome (noting the Minister may revoke or amend the exemption at any time). These exemptions include, but are not limited to:
   a) Inconsistent metering conditions exemption
   b) Unavailable Duly Qualified Persons exemption
   c) Data Logger and Telemetry exemption
   d) Faulty Meter exemption

2) NSW Government provide a mechanism to provide for special circumstances not listed for automatic temporary exemption (i.e., site-specific circumstances), that enables the DQP to formally register the

circumstances that inhibit full compliance, and the user to be temporarily exempt from requirements, until compliance becomes feasible.

This is intended as an interim measure while barriers are resolved.

2. Pathway to correctly nominate inactive works

CASE STUDY – Bega Valley inactive works on unregulated rivers

Across three unregulated water sources in the Bega Valley, a large number of water licences are not being used, however they have not been switched to inactive due to the associated administrative and practical costs. Data provided by the Bega Valley Water Users Association illustrates the high number of inactive works:

Candelo Creek	**Upper Bega/Bemboka River**	**Tantawanglo Creek**
21 Water Licences	**69 Water Licences**	**33 Water Licences**
4 active licences (63% licensed volume)	29 active licences (83% licensed volume) – 22 of these are government-owned	5 active licences (69% licensed volume)
17 inactive licences (37% licensed volume)	40 inactive licences (17% licensed volume)	28 inactive licences (31% licensed volume)

More information available in Appendix B.

Earlier tranches of the reform indicate that many works are not active, but are not registered as 'inactive' with WaterNSW. The metering consultation paper recognises this, suggesting that if exempted works were correctly identified, this would result in a reduction of 55% of works.

Incorrect status information skews compliance data (as inactive works are marked as non-compliant, when they just need to be registered as inactive). This is a problem shared by both the water user and the regulator, and is part of a broader issue of the WaterNSW register being out of date, and not fit for purpose. We understand that a key reason is the significant fees associated with notifying WaterNSW of inactive works.

NSWIC supports adopting a no-cost approach to updating the WaterNSW database, such as to mark a work as inactive, or notifying of a smaller work size than what is notified on the approval. These simple administrative tasks carry significant costs shown through 2023-24 application fees:

APPLICATION TYPE	FEE
New basic landholder right bore - groundwater assessment NOT required	$1,004.93
New basic landholder right bore - groundwater assessment required	$1,166.90
Amend approval (administrative) - make a work/s inactive or withdrawn inactive status	$603.50
Water Access Licence dealings – regulated rivers	$852.95
Water Access Licence dealings - unregulated rivers	$2,725.26
Water Access Licence dealings – groundwater	$5,589.27
Water Access Licence dealings – low risk, unregulated river and groundwater (e.g., remove a nominated work on a Water Access Licence)	$1,234.92
Dealings (administrative) – request a correction or amendment to the Water Access Licence Register	$545.49

Table 4: WaterNSW 2023-24 application fees[11]

Of note is the administrative cost of making works inactive or withdrawing an inactive status, which costs $603.50. This cost is prohibitive for smaller farmers across NSW who want to comply with the Metering Policy by changing the status of their work to inactive.

Furthermore, many water users have works that are inactive in practice for long periods of time, but the water users want the ability to switch this work back to being active in the future, so are hesitant about marking it as inactive. At present, this would require two rounds of large administrative fees in addition to complying with current 'inactive work' physical impediments requirements; the water user will need to demonstrate the work is physically incapable of taking water (e.g., pipes removed and pump disabled, or pipes are sealed shut and connected to a tamper proof device)[12].

Making a work inactive or returning to an active status becomes difficult to reverse, cost-prohibitive due to regulatory and physical labour requirements (further complicated by the lack of DQP's) and time-intensive. This increases water users concerns that once a work is marked as inactive, they may face challenges to switching it back to active, thereby losing their water access.

RECOMMENDATIONS

3) Provide a simple pathway for water users to correctly identify inactive works that are not used to take licensed water from a water source, or which only take water under a basic landholder right. The administrative process must be:
   a) Cost-free.

[11] WaterNSW. 'Applications and Fees.' [website]. https://www.waternsw.com.au/customer-services/water-licensing/applications-and-fees

[12] NSW Government. (November 2020) 'NSW Non-Urban Water Metering Policy.' https://water.dpie.nsw.gov.au/__data/assets/pdf_file/0017/312335/nsw-non-urban-water-metering-policy.pdf

b) Easily reversible, subject to meeting the metering requirements at such a point in time as the work becomes active again.
c) Streamlined by removing inactive work physical impediments (i.e., so declaring a work as inactive replaces the need for physical impediments).
d) NRAR to hold the responsibility of performing inactive work surveillance to ensure compliance.

Remove inconsistent metering conditions on licences

The NSW Metering Guidance Tool notes several water supply works have an existing metering condition, including: MW0559-00001, MW2435-00001, MW2452-00001, MW3192-00001, MW3838-00001, MW7038-00001, MW7038-00002, MW7039-00001, MW7039-00002, MW7086-001, MW7086-0002, and MW7116-0001. The metering guidance tool notes that water users with these licence conditions are already required to comply with new metering requirements, regardless of the compliance deadlines presented by water agencies at community information sessions.

The overlapping metering requirements on licence conditions, Water Sharing Plans (WSPs) and the Metering Policy have led to confusion over what and when water users need to comply with. To improve compliance, all metering requirements should be captured under one policy instrument, the Metering Policy, to remove inconsistencies and water user confusion.

CASE STUDY: Condition MW2452-0001

Condition MW2452-0001 was implemented in 2018, requiring users to immediately comply with the Metering Policy introduced during changes in their water source Water Sharing Plans.

The MW2452-0001 condition states:

A. The metering equipment must accurately measure and record the flow of all water taken through the water supply work authorised by this approval,
B. The metering equipment must comply with the Australian Standard AS4747: 'Meters for nonurban supply', as may be updated from time to time,
C. The metering equipment must be sited and installed at a place in the pipe, channel or conduit between the water source and the first discharge outlet. There must be no flow of water into or out of the pipe, channel or conduit between the water source and the metering equipment, and
D. The metering equipment must be operated and maintained in a proper and efficient manner at all times.

According to the NSW Metering Guidance Tool, condition MW2452-0001 can be found on water supply work approvals located in Hunter and Richmond regulated river water sources. Despite the coastal NSW compliance date of 1 December 2024, affected water users "should already have metering equipment that complies with the non-urban metering rules"[13]. Also captured by this condition are smaller water users who, in the absence of this condition, would be exempt from the non-urban metering requirements.

[13] NSW Government. 'NSW Metering Guidance Tool". https://oeh.au1.qualtrics.com/jfe/form/SV_0IgAMS3MAhK606O

RECOMMENDATIONS

4) NSW Government to remove pre-existing specific metering conditions on licences, and instead refer to one instrument – the non-urban water Metering Policy. This includes a "to the extent of any inconsistency" clause to provide further assurances on this.

5) NSW Government to resolve all inconsistencies between licence conditions, Water Sharing Plan and the Non-Urban Water Metering Policy, particularly noting that under the current policy settings:
   a) water users with surface water pumps less than 100mm and groundwater bores with an external diameter bore casing less than 200mm are excluded; and
   b) compliance date for coastal NSW is 1 December 2024.

3. Metering requirements that target risk

CASE STUDY – Smaller users on the Upper Namoi Groundwater water source

The Upper Namoi Ground Water Source (zones 1-12) are listed as at-risk groundwater sources. They are categorised as at-risk due to being over allocated. Consequently, all bores must have a meter, regardless of their size (unless only taking water for BLR)[14].

There are a significant number of smaller water users with pump size smaller than 100mm and an entitlement of less than 20ML, that are unable to access the metering exemption due to their location on this at-risk water source. The question remains of how much risk these water users pose to the sustainable yield of the aquifer, particularly when considering water sharing plan rules and the use of available water determinations to ensure compliance with the long-term average annual extraction limit (LTAAEL).

Water users have different risk profiles based on the size of a groundwater or surface water pump, the number of works on a property, water access licence volume, frequency and nature of use, and the type and status of the water source.

NSWIC agrees that the current rules do not meet the Metering Policy objectives to:

- minimise undue costs on smaller water users; and,
- metering requirements are practical and can be implemented effectively.

NSWIC welcomes the clarification of the objectives of the Metering Policy through the metering consultation paper.

Currently, smaller water users present a low risk to their water sources. However, they are still expected to purchase the same metering equipment as larger, higher-risk water users (see table 5 for meter prices). This requirement threatens the financial viability of small farms, demonstrating the requirements are not practical nor consistent with the Metering Policy.

Model	Size	Price (Per unit)	Model	Size	Price (Per unit)
NETAFIM WOLTMAN TURBO WATER METER – WST FLANGED	50mm	$1,182.00	SIEMENS MAG8000 REMOTE 10M WITH NMI	DN50 (2”)	$3,901.80
	65mm	$1,558.00		DN100 (4”)	$3,977.30
	80mm	$1,392.00		DN150 (6”)	$4,385.30
	100mm	$1,511.00		DN200 (6”)	$4,717.30

[14] WaterNSW. (November 2022). ‘At-risk groundwater sources.’ https://www.waternsw.com.au/__data/assets/pdf_file/0010/171289/Metering-fact-sheet-At-risk-groundwater-sources-091122.pdf

	150mm	$2,702.00		DN250 (10")	$5,214.30
	200mm	$3,312.00		DN300 (10")	$6,418.80
	250mm	$5,993.00	SIEMENS MAG5100W WITH MAG6000CT, REMOTE 10M	DN50 (2")	$2,948.80
	300mm	$6,794.00		DN100 (4")	$3,032.80
NETAFIM OCTAVE ULTRASONIC WATER METER	Octave 2" SST Flanged *without pulse module	$3,438.00		DN150 (6")	$3,473.30
	Octave 3" SST Flanged *without pulse module	$3,936.00		DN200 (8")	$3,834.30
	Octave 4" SST Flanged *without pulse module	$4,483.00		DN250 (10")	$4,368.80
	Octave 6" SST Flanged *without pulse module	$6,733.00		DN300 (12")	$5,675.30
	Octave 8" SST Flanged *without pulse module	$7,632.00			
	Octave 10" SST Flanged *without pulse module	$9,820.00			
	Octave 12" SST Flanged *without pulse module	$10,906.00			
	Open drain pulse output	$300.00			

Table 5: Netafim meter prices (as of 4 October 2023) and Siemens meter prices (as of 9 October 2023)

The work size-based framework is a foundational principal of the Metering Policy. With the policy now in its fifth year of implementation, there has been significant investment of time, finances and labour to comply with this framework by water users of all entitlement sizes across the state. Considering this, NSWIC:

- Supports further consultation to ensure the practical and enduring implementation of the work size-based framework.
- Opposes the change to a volume-based framework, as this will perpetuate inequity for water users who have invested into the requirements of the current policy.
- Opposes the change to a flexible catchment-based approach, as this will suggest a non-standardised approach to a state-wide policy which may cause confusion and attract criticism.
- Supports all water users with pumps under 100mm in size or groundwater bores with an external diameter bore casing less than 200mm exempted from the Metering Policy, regardless of licence conditions.

Further evidence warning against adoption of the volume-based framework is the recent return of coastal harvestable rights from 30% back to 10%, the result of a lack of extraction data in coastal catchments in NSW[15].

[15] Department of Planning and Environment. 'Sustainable water extraction in coastal catchments.' https://water.dpie.nsw.gov.au/__data/assets/pdf_file/0007/583342/Sustainable-extraction-in-coastal-catchments-fact-sheet.pdf

This calls into question whether the Government has effective data management, particularly along the coast, to calculate sustainable levels of extraction. This data is required to effectively implement a volume-based framework.

Less prescriptive metering standards form smaller and low risk water users

An Industry Guide developed in June 2020 calculated the following number of works in each region of NSW:

Surface water			Groundwater		
Work size (mm)	**Inland NSW**	**Coastal NSW**	**Work size (mm)**	**Inland NSW**	**Coastal NSW**
0-49	42	42	**<50**	332	360
50-99	411	572	**50-99**	35	1
100-149	2,453	2,280	**100-199**	1,362	53
150-199	1,152	295	**200-299**	2,064	785
200-249	675	79	**300-399**	1,546	123
250-299	626	23	**400-499**	656	31
300-349	880	30	**500-599**	343	4
350-399	408	9	**600-699**	125	8
400-449	503	5	**700-799**	52	6
450-499	121	3	**800-899**	23	0
			900-999	111	22
			1,000-1,199	159	71
			>=1,200	683	934
			Excavations	217	259
Total	**7,271**	**3,338**	**Total**	**7,708**	**2,663**

Table 6: Estimated number of works requiring a meter in NSW from June 2020[16]

While Tranche 1, 2 and 3 have passed their compliance date, 6000 works in coastal NSW will need to be compliant by the Tranche 4 deadline of 1 December 2024. Both inland and coastal regions have a notable number of works (estimated 1795) that fall under the 100mm work size-based threshold.

Definitions for 'low risk' and 'smaller' water users have not been provided. For clarity, we will define them as:

- Low risk – water users that are not drawing from an at-risk water source.
- Smaller water users – water user that has a pump less than 100 mm in diameter or a groundwater bore with an external diameter bore casing less than 200mm.

In addition to water users that fall under the work size-based framework, there are several exemptions from the non-urban metering rules under current policy settings. These include:

- Works used solely to take water under a basic landholder right (BLR).

- Works that have been made inactive.
- Works that cannot physically comply with the non-urban metering rules.
- Works that are not nominated against a water access licence.
- Small, low risk works used to take water under a domestic and stock water access licence (lapses 1 December 2024).
- Works located in a telemetry blackspot.
- Notification of smaller works.

The current exemptions remove metering compliance requirements for inactive works, works used solely for BLR, and works that are smaller than their works approval and fall under the size threshold. A temporary exemption has been provided for smaller and low-risk water users that solely take water under stock and domestic water access licence, however this will lapse on 1 December 2024 and will be reviewed during this metering review process.[17]

While these exemptions make some effort to ease compliance requirements, more can be done. As acknowledged in the metering consultation paper, "*work size is not always the best indicator of actual take or risk, such as when a small pump is used continuously, or a large pump is only used intermittently.*"

This acknowledgement merits the consideration of a volume-based framework, specifically in the coastal region who have not yet reached their compliance date. However, further analysis into the practical application and impact of the volume-based framework is essential before any decisions are made, with this work also recognising the investment into the work size-based framework made by coastal water users.

To accelerate compliance in low-risk and at-risk water sources, a preliminary consideration could be the introduction of an opt-in exemption for "low volume water users"; an exemption for water users that fall under a specific average annual usage and therefore represent a lower risk to their water source.

To qualify for this exemption, a low volume water user would need to provide evidence of their last five years of water usage through a logbook (e.g., WaterNSW CI 250 annual recording form)[18], online on iWAS or other acceptable methods. If their average annual water usage over the five-year period is less than a specific volume (e.g., 10ML[19]) they would qualify for the exemption.

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[17] NSW Government. 'Exemption for small stock and domestic water access licence holders.'[website]. https://water.dpie.nsw.gov.au/nsw-non-urban-water-metering/latest-information/updates/exemption-for-small-stock-and-domestic-water-access-licence-holders

[18] WaterNSW. 'CI 250 annual recording form.' https://www.waternsw.com.au/__data/assets/pdf_file/0009/217692/CI-250-annual-recording-form..pdf

[19] 10ML used as an example due to its use as an indicative volume in the metering consultation paper – the DPE would need to provide research underpinning why a specific volume is selected.

Consequently, the measurement standard would fall under the proposed volume-based framework[20]:

- No meter is mandated, but trading is prohibited without a measuring device (subject to the Access Licence Dealing Principles Order 2024).

Recording and reporting compliance requirements would align with that of "all non-metered works"[21]:

- Record water usage each month in a logbook, online on iWAS or other acceptable method.
- Report licensed (and BLR water) usage within 28 days of the end of the water year.

An exemption such as this could provide a pathway for all licensed water take to be measured and reported; for most water take to be metered (<95% of total licensed entitlement); and for measurement requirements to reflect risk to water sources while offering lower-cost options for lower risk low volume water users.

An exemption built on these principles would be of particular benefit for coastal water users. DPE notes that in "East of the Great Dividing Range, the terrain is steeper, and the climate is generally wetter with faster flowing rivers that run east to the ocean (short, high gradient coastal streams)[6]". Unregulated water sources are more common on the coast and subject to fewer water management activities, aside from cease-to-pump events.

Coastal water users have different risk profiles and water use patterns; many farmers exclusively pump water when it is dry. This intermittent usage of supplementary flows may mean a water user only pumps for a few months every couple of years, meaning coastal NSW is characterised by water users that often have dozer or sleeper licences. It is also common for coastal water users to have multiple small pumps that operate infrequently, and pump low volumes of water.

RECOMMENDATIONS

6) Review the exemption under the work size-based framework. Currently the framework states that water users with surface water pumps less than 100mm and groundwater bores with an external diameter bore casing less than 200mm are excluded. NSWIC suggests:
   a) Groundwater bore measurement should be 100mm consistent with surface water pumps, with the measurement point being the diameter of the outlet.
   b) Groundwater wells to be eligible for the same exemption as groundwater bores – noting that it is the size of the pump within the well that affects water uptake.

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[20] Department of Planning and Environment (October 2023). 'Review of the non-urban metering framework - Issues and options paper.' https://water.dpie.nsw.gov.au/__data/assets/pdf_file/0007/586492/review-of-num-framework-discussion-paper.pdf

[21] WaterNSW. 'Recording and Reporting.' [website]. https://www.waternsw.com.au/customer-services/metering/recording-and-reporting

7) Continue requirement for DQP certification of AS4747 meters - NSWIC does not support removing this requirement due to the risk of damaging the irrigation industry's reputation and the integrity of the reform.

8) Permanently implement the "small, low risk works used solely to take water under a stock and domestic water access licence" exemption (lapses on 1 December 2024).

9) Further consultation with industry on the introduction of a "low volume water user" opt-in exemption, or alternative strategies, to provide less costly options for low volume water users.

10) A further 12-month extension to 1 December 2025 (at minimum) for coastal compliance to address:
    i) Concerns that the current coastal compliance deadline of 1 December 2024 is not sufficient time to effectively implement and react to proposed regulatory changes as part of the metering review.
    ii) Address DQP shortages in coastal catchments.
    iii) Drought conditions predicted to affect coastal catchments throughout 2023-24, which may hinder in-situ meter testing and impact farm productivity and income.
    iv) Implement an effective education strategy engaging all coastal water users on their water use requirements including water ordering, measurement, recording and reporting.

11) Practical and simple reporting requirements - water users to submit a monthly statement on the months they take water using a work. If a statement is not submitted, WaterNSW to recognise that the work was not used to take water that month. This streamlines data collection and removes the administrative burden on time-poor farmers, many of whom only pump when required (e.g., dry conditions).

4. Revisit meter installation and certification requirements

CASE STUDY: Shortage of Duly Qualified Persons

In response to a survey run by Murrumbidgee Groundwater Inc and Murrumbidgee Private Irrigators Inc, a member provided the following responses:

1. Have you personally experienced any challenges or difficulties when complying with the non-urban water metering framework? If yes, please describe the challenges you have encountered.
"We have faced enormous challenges finding a DQP to install our meter on our irrigation bore. To date we have been in discussions with 6 DQPs regarding our meter installation. All have taken our details and discussed the work both over the phone and email, however they have either contacted us to say ultimately, they are too busy to do the job, and passed us on to another person, or simply not returned phone calls or followed up as promised.

"It has been left to us to chase all of the installers to try and get a contract of service in place. We still have not been successful. One of the DQPs we engaged with at length (who ultimately said they couldn't do the job) stated that it is just not worth the DQP's time in the paperwork they need to complete on their end with WaterNSW to justify doing the job.

"They have basically closed their books as there are too many meters to install and they don't have the capacity to complete the regulatory work on their end to have any kind of ROI for their businesses."

2. Do you believe there are significant barriers to implementing the non-urban water metering rules? If so, please specify the most significant ones applicable to you?
"The primary barrier to us complying with the rules is finding a DQP to install and sign off on our meter. We have a meter and want to comply, but completing the task is out of our hands and it has taken more time and effort than it should have to complete the task. It is completely unreasonable to expect irrigators to call and chase more than 6 separate DQP's to complete a simple meter installation.

"The NSW Government needs to resource WaterNSW to supply and install the required meters with telemetry as the system as it currently stands is failing those with the most to lose - the farmers. None of the DQPs who have committed to installing our meter and fail to follow through face prosecution from NRAR - only us.

"The system to log and record take through WaterNSW must be much more user friendly as well and the Customer Dashboard being developed must be completed as a matter of urgency and include an easy-to-use reporting function."

A Duly Qualified Persons (herein DQP) is trained with qualifications from Irrigation Australia Limited (IAL) to carry out metering work such as installing, validation, certification, and maintenance. Figure 3 shows the locations of current DQPs across NSW as listed on IAL on 04/08/2023:

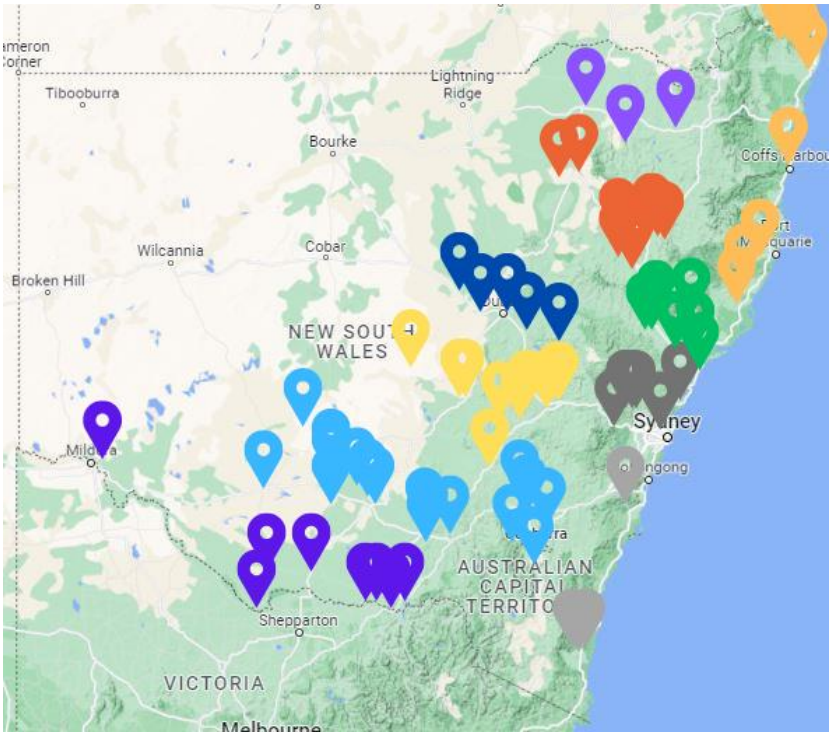


Figure 2: Map of DQP Locations Across NSW as of 4 August 2023

The IGWC Metering Report Card stated that the number of DQPs in NSW had increased to 175 in the period 2021-22. However, it was also noted that: *"the actual number of active and available CMIs in NSW (known as DQPs in NSW) is significantly lower than this number and is a significant risk to Metering Policy implementation in NSW... the number of CMIs available will be vital for ensuring their metering reform goals are met*[22]*."*

This comment is consistent with the experience of NSW irrigators, who have expressed concern over the decline in available DQPs. In the 2021 NSWIC Barriers to Metering Compliance report, 76 DQPs in NSW were contacted. Of those contacted, 44 remain listed on the IAL website in August 2023, suggesting that within the two years, 42% of DQPs had stepped out of the role. This calls into question whether this form of business is financially viable and rewarding in the long term for the private sector.

The metering consultation paper acknowledges the DQP shortage, highlighting there are not enough active DQPs to install the meters required. Three key reasons given for this shortage:

- High administrative workload (DQP portal not fit for purpose), and burden of regulatory risk.

[22] Inspector General of Water Compliance. 'Murray-Darling Bason – Metering and Measurement Report Card'. https://www.igwc.gov.au/sites/default/files/2023-07/igwc-metering-report-card-2021-22.pdf

- Labour and workforce issues in regional areas.
- Geographical disconnection between DQPs and water users.

In addition to these barriers, water users and DQPs have also noted these concerns:

- The high cost and time commitment required by individuals and/or businesses to do the training with IAL (estimated to be $3000);
- DQPs employed by a particular farm/business who are not available to service the wider community;
- Loss of investment and expertise when trained individuals and/or staff change employment;
- Businesses prioritise other paid services (e.g., welding, fabricating, or engineering);
- A lack of financial incentive that makes it not worthwhile;
- DQP difficulty in achieving IAL requirements for annual accreditation (e.g., minimum number of validations performed per year);
- Heavy workload, physically and administratively, to be completed for each installation and certification;
- Lack of local DQPs increases demand on remaining DQPs;
- Lack of DQP training for certain practical skills (e.g., portable meters, in-situ testing methods);
- DQP portal is not fit for purpose making administrative work harder;
- The infancy of the Metering and Measurement Marketplace; and,
- There is only one institution providing training to become a DQP which may bottleneck the market.

In-situ testing affected by drought conditions

A further issue for DQPs is performing in-situ testing. In-situ accuracy testing ensures a meter is operating within ±5%. It is required when a water user wishes to use a water meter that is not pattern-approved, and during the 5-year recertification process performed by a DQP[23].

During the critical implementation phase for Tranche 1, in-situ testing could not occur due to severe drought. This prevented progression towards compliance, or at least caused significant delays until water was available for testing to take place.

With the declaration of El Nino conditions returning at the end of 2023, it is likely similar conditions will affect water users in Tranche 4 seeking to become compliant or Tranche 1 water users engaging in recertification activities throughout 2024.

[23] Department of Planning and Environment. (2019). 'Maintenance Specifications 2019.' https://water.dpie.nsw.gov.au/__data/assets/pdf_file/0015/312360/Maintenance-Specifications-Gvt-Gazette-No-27-Friday-29-March-2019.pdf

In-situ accuracy testing is currently outside the scope of the national metering standards, DQPs are unable or unwilling to undertake the testing[24] and it requires services and resources that the NSW government cannot currently provide. For these reasons, NSWIC supports the Department's suggestion to revisit the requirement for in-situ accuracy testing.

DPQs are required for initial installation and certification, and meter recertification every five years; it is essential that the number of DQPs available can meet demand. Despite Government reassurances that the private market will meet demand, this has not occurred. If not addressed, this market failure will result in policy failure.

RECOMMENDATIONS:

The Department has put forward several possible responses for consideration:

12) NSWIC supports Government coordination of DQP services to match supply with demand.
    i) The Government should assume responsibility for DQPs as this appropriately shifts the onus onto Government to deliver its reform.
    ii) This is preferred to alternative options, such as removing the DQP requirement or enabling the water user to self-certify, as these are seen as watering down the reform and undermining its integrity.
    iii) Existing agencies such as WaterNSW could take on this responsibility. If this were to occur, the Government must appropriately resource and fund a public-sector service to deliver its reform, to avoid repeating past mistakes of where farmers were paying for services and compliance that agencies failed to deliver.
    iv) While supported, the Government assuming responsibility for DQPs is considered only a part of the solution.

13) NSWIC supports more support services for DQPs, specifically that streamline administrative tasks.

14) NSWIC supports the Government identifying areas of high demand and coordinating DQP services to match the need. However, we oppose this occurring on a fee-for-service basis.

15) NSWIC supports expanding the DQP workforce by amending the rules and training skilled workers via a short course.
    a) This initiative will not address worker shortages experienced in regional NSW. If within the private sector, adequate financial incentive for these services will be imperative. At present, many service

[24] Department of Planning and Environment (October 2023). 'Review of the non-urban metering framework - Issues and options paper.' https://water.dpie.nsw.gov.au/__data/assets/pdf_file/0007/586492/review-of-num-framework-discussion-paper.pdf

providers – such as engineers, surveyors, electricians, etc. – are in high demand and can profit more from their standard business services than DQP services.

16) NSWIC opposes less prescriptive installation pathways for closed conduit meters. Due to the ongoing barrier of DQP accessibility and negative public perception that water users watering down the reform.

17) NSWIC supports the Department's desire to review the requirement for in-situ accuracy testing which is not mandated under the national metering standards and not achievable with current DQP availability.

NSWIC does not support the use of fee-for-service models or increasing the cost under WAMC to address the shortage of DQPs. As the industry has been made to accept a 100% user-share to cover the reform costs for the metering reform, the Government needs to fund the appropriate level of service, which has not been provided in previous price-determination periods.

It is also noted that this reform is in part the result of inadequate service delivery by Government previously, in terms of metering and compliance, despite charging water users for these services. It is the Government's responsibility to rectify this poor service delivery and cover the costs of doing so.

5. Revisit management of telemetry systems

CASE STUDY: Mobile Coverage Outages

Several water users in the Namoi Valley report that they have experienced service outages from Telstra. When the outage occurred, they received a message from the telemetered groundwater bore meter saying, "transmission failure". Consequently, they submitted a s91i form, and were notified to do manual reads, and that a DQP must attend within 21 days. However, when the Telstra service returned, a notification was sent out stating, "source record is up to date".

A water user requested advice from NRAR to clarify if the system had 'self-reset" or similar, and no longer required a DQP to attend nor submission of a s91i. If required, the DQP would be very expensive, traveling close to 300KM for the round trip, and would be unavailable to attend the site for several weeks.

The water user tried contacting NRAR seven times on the advertised phone number with no success. They emailed the NRAR enquiries address with their query on 23 August, and waited until 8 September, over two weeks, to get a response. The message stated:

"I have consulted a Compliance Officer and they have accessed the relevant information in the DQP portal. Information indicates that telemetry is now logging and therefore a DQP is only required at the discretion of the licence holder."

Due to the frequency of these coverage outage events, the local industry group suggests that their members submit a 91i on receipt of the "transmission failure" message and submit a s91i completion form after the message of the "source record is up to date" is received. It is suggested that water users also perform manual meter readings and request the services of a DQP to recertify the meter. This is an onerous and expensive administrative burden for water users for a barrier beyond their control.

CASE STUDY: Reprogramming LIDs

Water users in Northern Inland (Tranche 2) report the need to replace their meters. While the existing LID is still functional, it must be sent off to be reprogrammed before it can be used with the new meter. The process of reprogramming the LID has a 7–12-day turnaround, which results in two visits to the site by a DQP. Water users wonder if it is possible to reprogram the LID onsite.

As an alternative option, the water user could pay an additional $1400 for a new LID to be installed with the meter at the same time.

CASE STUDY: DAS Other Telemetry Device option

A private irrigation infrastructure operator (IIO) in the Murray reports having difficulties with its application for an 'equivalent' telemetry system, which would allow them to continue using their current telemetry system and avoid purchasing and installing new LIDs.

The proposal was submitted in July 2021. Despite multiple DPE meetings and amending the proposal to add more information, a resolution has still not been found. They continue to wait for a solution almost 2.5 years later.

The IIO does not want to waste any more time and wants clarity on what to do, even if it means purchasing multiple new LID's. They suggest that the Other Telemetry Device option process should be streamlined with clear expectations (including cyber security requirements) and timely approval/rejection.

Under current policy settings, all surface and groundwater works captured by the Metering Policy need to be fitted with an accurate meter and a Local Intelligence Device (LID) with capabilities to transmit meter data to the Government via telemetry. Water users with surface water works, except pumps less than 200mm, need to transmit data via telemetry to the Data Acquisition Service (DAS). Other water users can use the LID as a data logger only, with the data downloaded annually by an authorised person[25].

Telemetry requirements were promoted to users throughout early consultation process and policy as providing user and operations benefits. For example, the Metering Policy indicates that data collected by the DAS, and through manual recording and reporting, will assist NRAR, WaterNSW and DPE to undertake compliance and enforcement, billing and other water management activities, and support water users and the river operators in managing water resources across NSW.[26]

The metering consultation paper notes that the installation of data loggers and telemetry are typically where delays are experienced, often due to the following reasons:

- Data logger in-field installation issues e.g., battery life degradation.
- Lack of prescription for meter and data logger combinations affecting performance and data quality.
- Challenges with the installation, configuration and connection of data loggers and telemetry, leading to incorrect installation and poor data quality (if any).
- Poor data output of telemetry systems, requiring further investment of resources to correct.

[25] NSW Government. (November 2020). 'NSW Non-Urban Water Metering Policy.' https://water.dpie.nsw.gov.au/__data/assets/pdf_file/0017/312335/nsw-non-urban-water-metering-policy.pdf

[26] NSW Government. (November 2020). 'NSW Non-Urban Water Metering Policy.' https://water.dpie.nsw.gov.au/__data/assets/pdf_file/0017/312335/nsw-non-urban-water-metering-policy.pdf

- Lacking ability to integrate with other established telemetry systems (excluded due to data and cyber security requirements), imposing additional costs on water users.
- Device specifications prevent in-situ configuration.

In addition to the barriers above, water users also note:

Mobile connectivity blackspots and coverage outages are a consistent issue, preventing the transmission of data from pump sites. Telstra is upgrading mobile coverage from 4G to 5G, causing concern about teething issues as the system is established, and an increased frequency of outages. This connectivity deficiency prohibits water users from being fully compliant with the Metering Policy and requires the submission of an s91i form each time an outage occurs. These events can occur multiple times a day, placing an administrative burden on time-poor water users who have no control over these systems.

The loss of institutional WaterNSW institutional knowledge due to the recent organisational restructuring, resulting in the allocation of new staff with minimal experience in water management activities. Water users report that they were consulted on the development of the DAS portal, however, this feedback was lost throughout the restructure. Consequently, the DAS has user-unfriendly design, unclear, undefined, and irrelevant measurements that do not assist water users manage their water usage effectively.

Lack of communication between the DAS and Water Accounting System. In 2021, WaterNSW advised that the DAS has not been configured for real time access by WaterNSW to allow for more efficient river operations, nor it is connected to the accounting system iWAS and there is no timeline for implementation.

All barriers listed above prevent water users from experiencing the benefits of telemetry. These barriers often take multiple DQP visits to resolve, which prolongs the compliance journey. Issues continue to inhibit the effective installation and implementation of this telemetry, causing many irrigators to be non-compliant through no fault of their own.

In response to these failings, NSWIC calls for the NSW Government to take over responsibility for the purchase, installation, certification, management and data collection of telemetry systems.

RECOMMENDATIONS

The Department has put forward several possible responses for consideration:

18) NSWIC does not support the review of the Data Logging and Telemetry Specifications 2021. There is currently enough information to inform the decision to decouple telemetry from the metering reform. The specifications could be revisited when a data loggers and telemetry implementation framework is developed.

19) NSWIC supports the decoupling of data loggers and telemetry from meter installation requirements. This will:
    a) increase metering compliance;
    b) permit time for the DAS to be operational and receive data properly;
    c) ensures the selected telemetry equipment can meet cyber security requirements (many pre-installed telemetry units cannot connect to the system for this reason); and
    d) allow for development of a practical strategy for data loggers and telemetry to ensure compliance can be achieved practically before deadlines are set.

20) NSWIC supports the Government assuming responsibility for telemetry systems. The single source of truth for water users is their water meter. The Government should accept the additional responsibility to transmit water extraction data from a meter to Government. This would include Government coordination and bulk procurement, installation, maintenance, and ownership of all data-loggers and telemetry systems (unless the water users opts-out and selects private ownership).

21) NSWIC supports the Government providing recommended data loggers and meters combinations for optimal functionality. The cost of these combinations must be taken into consideration for water users and businesses of all sizes.

6. Revisit overland flow measurement pathways

CASE STUDY: Floodplain Harvesting Metering

To comply with floodplain harvesting measurement rules, specific primary metering equipment must be installed. A northern Basin farmer chose to undertake the storage measurement method and engaged a Certified Storage Meter Validator (CSV), for this task.

The farmer actively communicated with WaterNSW and DPE about the difficulties they encountered while installing the metering equipment. For example, the length of time to perform and analyse data to establish a survey curve extended beyond what was expected. The CSV required 90+ minutes to set up and gather required data from one corner of the storage, resulting in over six hours of work required to get data (not including analysis) for a storage curve.

While DPE spatial services were engaged to assist develop methods to help the surveyors perform the required actions to establish a storage curve, many issues are yet to be addressed. As several storages are included in one work approval, if one storage is not compliant, the work is not compliant.

CASE STUDY: Use of Secondary Devices

A farmer in the northern Basin reports significant issues with mobile connectivity of approved telemetry options across their primary and secondary properties.

On their primary property, three Mace meters and LIDs were installed to meet the timeline for their region. Despite this installation, the farmer is unsure if the LID is working correctly, as this data is not accessible through DAS or iWAS.

They also have several on-farm storages at their primary farm. One storage has a Government-funded primary and secondary gauge board, with an additional Goanna secondary device installed. CMI surveyors have deemed this storage to be compliant. However, the remaining storages only have Goanna secondary devices installed and are awaiting completion of surveying to finalise the installation of primary devices.

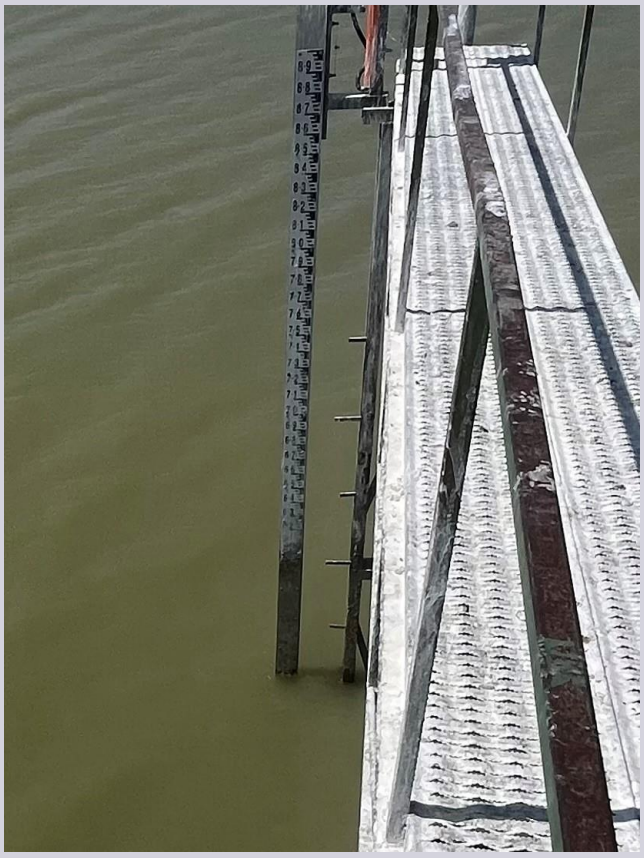
Similarly on the secondary property, the LIDs are deemed as non-compliant due to ongoing data connectivity issues based on location. Additionally, the on-farm storages only have Goanna secondary devices installed, which report dam volumes several times an hour on the private Goanna connectivity system. The CMI surveyors are continuing to do their work before installing the primary metering devices that are currently being ordered in.

Despite undertaking work and installing equipment to meet regulation, this water user remains non-compliant through no fault of their own and is at NRAR's discretion as to whether regulatory action is taken.

CASE STUDY: Unsuitable Gauge Boards

A farmer in the Northern Basin paid $7000 for the installation of a gauge board. After 6 months of use they took the following picture, showing that the lower height markers had been washed off.

While this temporary solution had been requested as an option by water users and is designed to be a back-up, this demonstrates that the materials regulated for this interim solution have not been fit for purpose. In comparison, wooden painted gauge boards have been reported to work on farms for extended periods of time.



Water users who receive a floodplain harvesting access licence must install metering equipment under Clause 238B of Water Management (General) Regulation (2018). The primary telemetered metering equipment must be installed within 12 months from the first time their floodplain harvesting access licence is credited and is to be placed either on storages used for floodplain harvesting, or at the point where water is taken.

Floodplain harvesting compliance deadlines are being rolled out across several northern Inland catchments:

Valley	**Licensing framework commenced (secondary metering required at minimum)**	**Compliance date (primary metering equipment required)**
Gwydir	15 August 2022	15 August 2023
Border Rivers	15 August 2022	15 August 2023
Macquarie	1 March 2023	1 March 2024
Barwon Darling	1 April 2023	1 April 2024
Namoi	To be determined	To be determined

Table 7: Compliance dates for floodplain harvesting[27]

There are significantly more barriers to compliance than those listed in the metering consultation paper. The policy development for measuring overland flow and floodplain harvesting in unregulated and regulated river systems is impractical and entitlement holders are facing significant barriers to meet compliance requirements.

NSWIC appreciates the open active interaction with WaterNSW and DPE to find solutions to these problems, but progress is exceedingly slow and more resourcing needs to be allocated to address problems, including:

- The timeframes for full compliance with primary storage meters are too short;
- The shortage of DQPs prepared to install storage meters;
- The shortage of primary storage meters;
- Unfit for purpose configuration and linkages of storage curves to storage meters and the DAS;
- Telemetry connection issues preventing connection to DAS;
- The lack of resources allocated to WaterNSW to upgrade the DAS to a system more able to meet the needs of DQPs and entitlement holders. (NB: Water users appreciate WaterNSW has made improvements to the DQP portal and is working hard to continue to improve the system);
- Current policy preventing irrigation during Floodplain Harvesting events;
- Inability to measure water taken from the storage via a different outlet to the one used to take Floodplain Harvesting entitlement; and
- Unfit for purpose government-installed secondary devices (e.g., gauge board markings wash off easily, or are unreadable preventing measurement readings).

[27] Natural Resources Access Regulator. 'Floodplain harvesting.' [website]. *https://www.nrar.nsw.gov.au/how-to-comply/floodplain-harvesting*

RECOMMENDATIONS

22) NSWIC opposes the proposal to exempt water users taking overland flow under an unregulated access licence from metering requirements. This would feed into further negative public perceptions, would lack political support for regulatory change, and does not work towards an enduring solution.

23) Revisit the Floodplain Harvesting measurement policy to ensure it is effective practically – (e.g., revise the timeframes for FPH implementation, accounting for the time required for the current market failure to respond to demand).

24) Improve private and government-installed secondary devices that are not fit for purpose (e.g., gauge board height markings).

25) NSWIC proposes that entitlement holders should be permitted to take Floodplain Harvested or overland flow water with approved, certified secondary meters until such time that the following barriers are addressed:
    a) The shortage of DQPs prepared to install storage meters.
    b) The availability of primary storage meters is improved.
    c) The configuration and linkages of storage curves to storage meters and the DAS is streamlined so users can readily access data to enable them to be compliant.
    d) Sufficient resources are allocated to WaterNSW to upgrade the DAS system to be fit for purpose for DQPs and water users.
    e) Surveyors can utilize the newly approved improvements to survey requirements.

26) Continue water user consultation to find a solution to policy failures, such as:
    a) Enabling users to identify a specific Local Intelligent Device (LID) in a storage within a works approval to take Floodplain Harvested water while still irrigating from other storages within a works approval, without the requirement to subdivide the works approval; or
    b) The measurement of water taken from the storage via a different outlet to the one used to take Floodplain Harvesting entitlement.

7. Improve practical reporting processes: General water usage reporting

The metering reform included an updated requirement for recording and reporting water take, depending on the standard of metering equipment installed:

	Record and report requirements		
	Licensed water take	**Water take under BLR or licence exemption**	**Confirm water taken according to conditions**
Unmetered works	Record – within 24 hours Report – Annually within 28 days of end of water year	Record – within 24 hours Report – Annually within 28 days of end of water year	Record – within 24 hours Report – Annually within 28 days of end of water year
Metered works without telemetry	Record – automatic by LID Report – each month	Record – within 24 hours Report – each month	Record – within 24 hours Report – Not required
Metered works that take BLR	Record – automatic by LID Report – automatic by LID	Record – within 24 hours Report – within 14 days after each month	Record - within 24 hours Report – Not required

Table 8: Summary of recording and reporting requirements for non-urban metering reform[28]

There are several barriers that affect compliance with recording and reporting requirements:

- The iWAS platform – Water users appreciate the ongoing improvements made to iWAS, noting that when familiar with the platform it provides a helpful way to order water, record water take, and review water usage patterns. Issues remain, including:
    - Mobile connectivity outages preventing access to iWAS;
    - iWAS platform outages preventing the timely recording of water usage data;
    - Navigation difficulties, particularly when checking multiple works approvals, water sources and/or pump sites, entering multiple meters readings (requires all readings to be entered at once), or amending a reading if an error is made (requires customer to contact WaterNSW customer service centre).
- Lack of clear communication about water recording and reporting requirements;
    - Minimal communication about WaterNSW customer forms such as the no-meter CI250 annual reporting form – many water users do not know this form exists;
    - Most information is presented on water agency websites or online newsletters – not all water users know how to subscribe, find, or use these resources;
    - A lack of in-person WaterNSW staff in regional areas;
    - Poor response times via phone and email to customer inquiries.

[28] NSW Government. 'What water users need to know.' [website].https://water.dpie.nsw.gov.au/nsw-non-urban-water-metering/what-water-users-need-to-know

RECOMMENDATIONS

27) Develop a clear education strategy (encompassing in-person, print and online resources) for water usage reporting expectations, particularly for smaller and coastal water users. This could include resources on water ordering, recording, and reporting via logbook and iWAS.

28) WaterNSW to send out a monthly and/or annual automated message (water users to nominate for email, letter, or text) prompting water users to record their water use. Include the due date (if applicable), a link to iWAS (online) or a logbook (physical). This requires an up-to-date database of customer details as well as correct licence information on the Water Access Licence Register.

29) Development of an iWAS app for improved access on mobile phones – water users can input meter readings while in the field. This prevents double handling data of data; once in the field, then again when entering data into iWAS on a desktop computer.

30) Practical and simple reporting requirements - water users required to submit a monthly statement on the months they take water using a work. If a statement is not submitted, WaterNSW to recognise that the work was not used to take water that month. This streamlines data collection and removes the administrative burden on time-poor farmers, many of whom only pump when required (e.g., dry conditions).

31) We do not support any attestation/confirmation of data submitted by telemetry, as this form of data reporting is out of the control of water users.

8. Improve practical reporting processes: Faulty meters

CASE STUDY: Northern Inland faulty meters

A northern inland farmer has reported several issues that have caused their meters to malfunction, including insects in the meter, bird damage to cables, vibration damage, and heat damage from the sun.

While some issues could have been resolved by the farmer, the use of tamper proof seals meant they were unable to perform the needed work (e.g., cleaning) without contacting a DQP. The farmer also reported that previous meters were more robust and if a problem was encountered it could be fixed by the farmer.

CASE STUDY: Faulty meters in coastal areas

A South Coast water user reported that their 8" Netafim meter developed a crack in the screen, stopping the digital display from working, after 3 years of service. All other parts of the meter continued to work.

The water users noted that seven floods had occurred over the meter in that timeframe. The largest flood was at a 3m depth of water, while the others averaged 1m depth of water. The screen was rated for 6m of depth in flooding – demonstrating that it was not fit for purpose for the coastal river setting.

It took 6 months from start to finish to replace the meter, which cost $5000-6000. The DQP had trouble sourcing a replacement and then getting onsite to fit it. WaterNSW contacted the water user every month to renew their s91i extension and they submitted an hour's logbook to keep track of take.

With the Metering Policy now in its fifth year of implementation, metering maintenance barriers are emerging. Due to the use of tamper-proof seals, 'easy to fix' issues such as cleaning debris from within the pump are not possible, as only a DQP can break and re-verify these seals.

Other issues go beyond the control of farmers, such as vibration, heat, and flooding damage. These issues are due to the unsuitable design of meters which have high accuracy but are unable to operate as designed in field conditions. These issues require, at minimum, the assistance of a DQP, and at most the replacement of metering equipment for which the cost rests on farmers to pay.

Not only does this add to demand for limited DQPs, but also puts a further significant cost-burden on water users in service-fees for the DQP. This cost-burden is in addition to the initial cost of the purchase of the metering equipment (see above table for costs), installation services, as well as the ongoing license fees and charges. These costs associated with maintenance are then multiplied by every occasion there is a maintenance issue that requires a DQP callout and revalidation, for each meter that user has.

Current reporting of faulty metering equipment to WaterNSW must occur within 24 hours of a water user becoming aware of an issue using the online Section 91i. Due to further barriers such as DQP availability, many water users have to submit s91i extension forms each month until the issue is resolved. This process becomes an administrative burden due to the need to frequently renew this form.

CASE STUDY: Costs of replacing a battery

A water user in the northern inland recently needed to replace a battery on their meter, which is required to be undertaken by a DQP.

The invoice (cited by NSWIC) was $462 to 'replace battery and revalidate meter'. The cost of the battery itself is only $70.

The water user felt frustrated at this significant financial and administrative burden, as well as the time delays to have the work completed and meter operational again, saying "I don't understand why we can't do this".

It is acknowledged that revalidation processes are important for the integrity of the policy. However, NSWIC recommends adopting pathways to reduce the administrative and cost-burden on water users (see below).

RECOMMENDATIONS

32) Due to the ongoing implementation barriers (e.g., access to DQPs, and fit for purpose meters), we strongly opposes amendment to Regulation to place parameters such as time limits for the repair or replacement of meters.

33) For the s91i Extension Form, add a question to clarify the length of extension the water user is requesting (in addition to water users providing the proposed date that the metering equipment will be repaired/replaced). Providing an extension for this requested length of time (as opposed to requiring monthly forms) will reduce the administrative burden for water users and WaterNSW.

9. Review cost-share arrangements

A significant portion of costs for the Metering Policy are recovered from water users' fees and charges. This is on top of water users having to purchase, install and maintain privately-owned meters.

The irrigation industry is of the position that the NSW Government must pay for its own reform, given the reform was driven by the Government failure to deliver compliance services that water users paid for in previous determination periods. As the industry has been made to accept a 100% user-share to cover the reform costs, there is a reasonable expectation that the reform will be cost-effective, efficient, deliverable, and achieve its intended outcomes with an adequate level of service. This has not been the case.

Cost-Shares
In March 2021, IPART introduced five new charges for WaterNSW to recover 100% of the efficient costs of this reform from water users.

This was contrary to water users' expectations – that while the costs of purchasing, installing and maintaining privately-owned meters would fall on water users', the broader reform costs would be borne by Government.

This expectation is consistent with Hansard records, where the (former) Minister for Regional Water then said:

*"Responsibility for metering costs, including purchase, installation and maintenance of meters, sits with irrigators, while stream gauging and meter reading are costs to Government."*29

Cardno also identified a lack of consultation on the consequent pricing impacts of the reform which caught many water users unaware:

"We considered that this lack on consultation meant that customers were not informed of the potential pricing impacts to account for in business planning and WaterNSW was subsequently not informed of how customers may respond to the policy (as customers have options in some areas)."

It remains a point of disagreement regarding whether this 100% user-share of reform costs is reasonable, and this has only been accentuated by the poor delivery of the reform to date.

NSWIC holds firm to the view that the issue was not with the standard of meters irrigators already had, but the Government's failure on its compliance and enforcement activities, which led to the Matthews Inquiry,

[29] Parliament of New South Wales. (October 2017). 'Natural Resources Access Regulator Bill 2017 Hansard. https://www.parliament.nsw.gov.au/Hansard/Pages/HansardResult.aspx#/docid/HANSARD-1820781676-74714

Water Reform Action Plan, and subsequent Metering reform. The Government responded to the loss of public confidence due to its own failures by setting a higher standard of metering regulation (above the national standard, and any other standard globally) with which water users must now comply. The 'impactor' or driver of this reform, is the public interest pursuit of confidence in government water management, including enforcement and compliance.

NSWIC recommends a review of the cost-shares associated with this reform, to reflect this public-interest, in publicly funding the reform. At least, costs should not be recovered from water users until the government can demonstrate the reform is being delivered effectively and efficiently (i.e. through the suspension of this cost-recovery). The issues raised through this review demonstrate this is clearly not the case at present.

Cost-efficiency

Unless efficient costs can be demonstrated, then it is not appropriate for those costs to be recovered from water users. IPART agreed with this position in their draft supplementary report on metering prices, indicating that in the instance of uncertainty or lacking information, Government should have to at least cover the gap to the extent of that uncertainty:
"We consider WaterNSW should bear the risks and costs associated with the implementation of this policy until it has demonstrated that its proposed costs are efficient so they can be included in regulated prices."[30]

NSWIC remains concerned that water users are left paying for inefficient costs. For example, the Cardno Final Report says:

"… there are a number of key areas where there is no better information available at this point in time to either conclude that WaterNSW's assumptions are robust or to make an accurate and reliable adjustment to the specific cost component."

This was, in part, raised by IPART in the supplementary report on metering during the most recent pricing determination: *"metering processes are still relatively immature and further savings can be made to move to the efficient frontier"*.

The 2023 non-urban water metering review process continues to demonstrate that the Government has not met its obligation to water users to implement an effective and deliverable reform with adequate levels of service. The industry continues to have little confidence in the information underpinning decisions on the efficiency of metering charges, particularly given implementation delays and barriers. This does not demonstrate satisfactory efficiencies to recovery costs from water users.

[30] IPART, (October 2021). 'Draft Report - WaterNSW Rural Bulk Water'. https://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Rural-Water/WaterNSW-rural-bulk-water-prices-from-1-October-2021

Example) Delays cause increasing costs of the reform on water users

The delays in reform implementation as a result of poor policy design, barriers to compliance (and inaction on these barriers for years after they were raised by water users) is further increasing the costs of the reform.

As part of the most recent Pricing Determination, Cardno reviewed proposed expenditure on the Metering Policy, finding: *"If roll-out is delayed, there is potential that some of these costs may need to increase."*

NSWIC is of the strong view that additional costs incurred as a result of poor reform design and delivery should not recovered from water users.

CASE STUDY: Charges for maintenance services not provided

A large number of licenses on the Bega/Bemboka are already metered with Government-owned meters. However, a lot of them are not working. This been reported to WaterNSW but there is no one available to fix them, and they keep getting put on the extension list.

Despite this, the Government has been charging farmers for the maintenance costs of these meters, even though they are not being fixed. Put simply, Government is charging for a service not being provided.
The annual charge is said to be around $400/ meter, noting some farms have more than 1 meter.

Now, WaterNSW are seeking to transfer ownership of the meters to the water users, which in turn, means shifting responsibility for maintenance over to the water users also. Water users have expressed concern that if WaterNSW was unable to attain someone to fix these issues and maintain the meters, how are private farmers supposed to?

RECOMMENDATIONS

34) The NSW Government must pay for its own reform, which was driven by the Government's failure to deliver compliance services that water users had paid for in previous pricing determination periods. If the industry is made to accept a 100% user-share to cover the reform costs, there is a reasonable expectation that the reform will be effective, deliverable, and achieve its intended outcomes with an adequate level of service.

10. Develop a clear communication strategy

CASE STUDY: Communication in the Hunter Valley

In March 2023, farmers in the Greater Hunter received a poorly written letter from WaterNSW and NRAR, stating in bold "Act now to avoid fines or other penalties". Irrigators ranging from farm managers to small family business raised their confusion and displeasure at the abrupt nature of the letter to their local water users' association during on-farm visits that week. These farmers were of the (correct) understanding that they had until 1 December 2024 to become compliant.

This incident demonstrates ongoing ineffective communication that erodes water user's trust towards water agencies involved in educating and enforcing the Metering Policy.

CASE STUDY: Metering options in flood-prone areas

A farmer in coastal NSW uses less than 100ML annually, however, requires multiple pumps on their property. Due to their location on a floodplain, their pump sites have been underwater three times in the last two years. They have recently contacted a DQP to talk through available options and will likely need to install a portable pump set up on a skid.

The farmer noted that finding information about portable metering equipment was hard to find, and they required the expertise of the DQP to help them.

Some water users in the later tranches are unaware of the reform and their obligations – which we anticipate being most significant on the coast. This is because many water users in these regions are very small, irrigate infrequently, or may not even identify as an irrigator (i.e., hobby farmers, caravan park owners, etc.).

The initial tranches of the metering reform across inland NSW included an in-person roadshow to communicate compliance requirements. However, this roadshow has been disbanded. Consequently, the task of spreading information, especially across coastal regions, has been passed on in part to small water user associations. This is an unfair expectation on voluntary associations whose key function is to advocate for their communities and generally do not have the resources required to undertake communication of this scale.

While online tools such as the Metering Guidance Tool provide a helpful service to those who are aware of the reform and their personal responsibility, there are water users who are unaware of the reform, including water users who are not active online, who have poor computer literacy, and those who irrigate intermittently with dozer and sleeper licences.

NSWIC understands that for Tranche 1 of the reform, NRAR contacted water users individually to educate them on compliance requirements. This type of individual contact may be required to ensure every water user understands their responsibilities. However, there are concerns that the WaterNSW database is not up to date, which makes it difficult for the regulator (or agencies) to contact these users. This also raises concerns that correspondence sent to water users may not have reached the recipient. Updating this customer database, and ensuring its ongoing maintenance, is essential.

Further, an ongoing lack of water agency staff presence in regional valleys has resulted in water users finding it difficult to access information and services to find out their requirements. NSWIC members reported that WaterNSW staff giving presentations or coming onsite have travelled from out of town, such as from Deniliquin to perform work in Bega and from Dubbo to perform work in the Hunter Valley. While WaterNSW has claimed that its regional presence has not changed, on the ground experiences suggest otherwise.

RECOMMENDATIONS

35) Water agencies to collaboratively develop a clear educational approach to inform coastal NSW about the metering reform and their upcoming compliance date of 1 December 2024, including;
    a) Informative and succinct online and print resources (e.g., information booklets, factsheets, videos)
    b) In-person consultation opportunities, held in local community hubs such as ServiceNSW
    c) A metering information 'roadshow', similar to those previously held inland
    d) Further development of resources available on WaterNSW website to inform water user of their measurement, recording and reporting requirements, including;
        i) Improved communication of customer forms;[31] and
        ii) Navigation and streamlining improvements to iWAS.

[31] WaterNSW. 'Customer Assistance' [website]. https://www.waternsw.com.au/customer-services/help-and-support/customer-assistance

Conclusion

Whilst it is the responsibility of the water user to demonstrate they have taken all reasonable steps to become compliant, there is now a concerning situation in which full compliance remains impossible in many circumstances, or at best, is significantly delayed.

Urgent Government intervention is required to address these barriers. Ultimately, it is the responsibility of Government to ensure its reform is deliverable, adequately resourced, and that implementation barriers are promptly resolved.

Without intervention to resolve these barriers, there is an impending high risk of policy failure. This poses a major risk to a significant public interest reform, which the industry wants implemented as early as feasible.

APPENDIX A: Responses to Consultation Paper Focus Questions

Ensuring that metering requirements only apply to works taking water:

Question: What would make it easier for water users to give government this information?

To make it easy, the pathway needs to be cost-free, easily reversible, and administrative in nature (not requiring physical impediments).

Reviewing metering requirements to target risk more effectively:

Questions: Should there be flexibility in metering and measurement standards reflecting risk to water sources, or should there be one standard across the board? Would it be easier to understand and comply with metering rules based on entitlement or volume of take than the current approach based on infrastructure size? If a volumetric approach was to be implemented, should it be consistent across the state, or tailored by catchment to reflect the different water use behaviours and water management risks in different areas? What are the practical implementation challenges that water users might experience in complying with metering requirements based on volume of take or entitlement? Are there any issues specific to different industries that take water under a licence that should be considered in relation to the possible options described?

Due to the level of investment by water users into the work sized-based reform, we support implementation of the work size-based reform across the state to ensure its practical and enduring implementation.

Current exemptions that remove metering compliance requirements include works solely to take water under BLR, inactive works, and small, low-risk works to take D&S water. A preliminary suggestion is to investigate a 'low-volume water user exemption' based on average annual water usage over a 5-year period. This exemption could provide less costly and less prescriptive measurement requirements, while requiring that low-volume water users still record and report their water take.

Additionally, NSWIC and its members support the reference to one policy instrument – the non-urban water metering policy. All inconsistencies between licence conditions, water sharing plans, and the metering policy should be amended to come under this policy instrument.

Revisiting installer requirements to accelerate progress:

Questions: Who should install metering equipment? Do you think there would be benefits from government involvement in the DQP market? For example: if government contracted and coordinated DQP services then passed on the costs? if government provided fee-for-service DQPs? What forms of further training or support would make it more viable for already qualified DQPs to actively participate in the market? Is there benefit in revisiting the skill sets and training required for DQPs? Are the current training and certification requirements limiting the market or are the other factors more significant?

NSWIC supports the government assuming responsibility for DQP services in NSW. This includes the coordination of DQP services to match supply with demand, resourcing and funding a public-sector (i.e. WaterNSW) and private sector services to deliver its reform, and providing support to streamline DQP administrative tasks.

NSWIC supports the expanding the DQP workforce by amending the rules and training skilled workers via a short course. This action is only a part of the solution and will not address worker shortages experienced in regional NSW. Adequate financial incentive for these services will be imperative.

We do not support removing DQP certification of AS4747 meters, as this will impact on the irrigated agriculture industry's reputation and the integrity of the reform. Furthermore, we do not support the use of fee-for-service models or increasing the cost under WAMC to address the shortage of DQPs. As the industry has been made to accept a 100% user-share to cover the reform costs for the metering reform, the Government needs to fund the appropriate level of service, which has not been provided in previous price-determination periods.

Making data systems and equipment standards more fit for purpose:

Questions: Would separating the requirements for meter installation from data loggers and telemetry be beneficial? Would an extension of the compliance timeframes for data logging requirements be helpful? Would government support for rolling out data loggers and telemetry be beneficial? What are the benefits and risks if government was more prescriptive about the suitable products/ technologies and combinations of meters and data loggers? Do water users want access to more frequent meter data? Is it important to be able to use existing telemetry systems that are currently excluded (e.g. SCADA)? What forms of training and support would make it easier for DQPs to navigate data logger and telemetry installation?

NSWIC supports the decoupling of data loggers and telemetry from meter installation requirements. Benefits include increasing compliance, permitting time for other systems (e.g., DAS) to be upgraded and made fit for purpose, and the development of a practical and enduring strategy for implementation.

NSWIC also supports the government assuming responsibility for telemetry systems (that water users can opt-out of if they desire). Benefits include the government co-ordination and bulk procurement, installation, maintenance and ownership of the telemetry system, government responsibility for the transmission of data to its own DAS (which is beyond the control of water users), and the selection of data logger and telemetry systems that meet cyber security requirements.

NSWIC also supports the Government providing recommended data loggers and meters combinations for optimal functionality. The cost of these combinations must be taken into consideration for water users and businesses of all sizes.

Improving water use reporting:

Questions: How can we improve the mechanisms for water use reporting? What would make it easy for water users to complete an annual attestation of the volume of water taken and how it was measured?

To improve water use reporting, WaterNSW should develop and implement a clear education strategy (in-person, print, and online) to inform customers of their water ordering, recording and reporting obligations – noting that resources available both online (e.g., iWAS) and in hardcopy (customer forms on the WaterNSW website).

Furthermore, WaterNSW should send out a monthly and/or annual automated message reminding water users to record and/or report their water usage. To ensure reporting requirements are practical, water users should be required to record/report on months that water is taken. If reports are not submitted, it should be recognised that water was not taken that month.

To ensure these efforts are effective, WaterNSW must ensure its customer database and Water Access Licence Register are up to date.

NSWIC does not support any attestation/confirmation of data submitted by telemetry, as this form of data reporting is out of the control of water users, many of whom have not got access to this data.

Ensuring a measurement pathway for take of overland flow in unregulated water sources:

Question: Will this proposed change enable appropriate measurement and reporting of overland flow take in unregulated river entitlements?

NSWIC opposes the proposal to exempt water users taking overland flow under an unregulated access licence from metering requirements. This would feed into further negative public perceptions, would lack political support for regulatory change, and does not work towards an enduring solution. Instead, the FPH measurement policy should be reviewed and made practical, with clear and achievable timelines.

As work is don't to address these barriers, improvements should be made to private, and government installed secondary devices that are currently not fit for purpose (e.g., gauge boards). Additionally, approved, certified secondary meters should be permitted to take FPH or overland flow water.

Finally, ongoing water users consultation is required to find solutions to policy failures such as; identification of a LID in a storage within a works approval to take Floodplain Harvested water while still irrigating from other storages within a works approval, without the requirement to subdivide the works approval; and the measurement of water taken from the storage via a different outlet to the one used to take Floodplain Harvesting entitlement.

Strengthening compliance and enforcement powers:

Do you think the suggested improvements to compliance and enforcement tools will clarify the expectations on water users and make the system fairer?

Due to the ongoing implementation barriers beyond water users control noted in the metering consultation paper and the NSWIC submission, we strongly do not support amendment to Regulation to place parameters such as time limits for the repair or replacement of meters.

APPENDIX B: 3 Unregulated Water Sources in Bega Valley

Candelo CK:
21 Water Licences
4 Active Licences representing 63% of the licenced volume
17 Inactive licences avg Vol 37ML

	Candelo Ck Water Source			
WAL No.	Water Source	Licence Vol	Active	Existing meter
23431	Candelo Creek Water Source	18	No	No
23440	Candelo Creek Water Source	78	No	No
23429	Candelo Creek Water Source	5	No	No
23443	Candelo Creek Water Source	25	No	No
23447	Candelo Creek Water Source	37	No	No
23448	Candelo Creek Water Source	15	No	No
23444	Candelo Creek Water Source	98	No	No
23441	Candelo Creek Water Source	203	No	No
23445	Candelo Creek Water Source	18	No	No
23435	Candelo Creek Water Source	4	No	No
23449	Candelo Creek Water Source	57	No	No
23432	Candelo Creek Water Source	320	Yes	No
23442	Candelo Creek Water Source	13	No	No
23438	Candelo Creek Water Source	6	No	No
23439	Candelo Creek Water Source	5	No	No
23433	Candelo Creek Water Source	50	No	No
23434	Candelo Creek Water Source	104	Yes	No
23436	Candelo Creek Water Source	525	Yes	No
23430	Candelo Creek Water Source	5	No	No
23446	Candelo Creek Water Source	138	Yes	No
23437	Candelo Creek Water Source	1	No	No
	Total Licence Vol	**1725**		
	% licence vol active	63		

Upper Bega/Bemboka River:
69 Water Licences
29 Active Licences representing 83% of the licenced volume
22 Active Licences have Govt meters
40 Inactive licences avg Vol 39ML

	Upper Bega/Bemboka River Water Source			
WAL No.	**Water Source**	**Licence Vol**	**Active**	**Existing meter**
23735	Upper Bega/Bemboka River Water Source	313.5	Yes	?
23783	Upper Bega/Bemboka River Water Source	54	Yes	No
27824	Upper Bega/Bemboka River Water Source	479	Yes	
23729	Upper Bega/Bemboka River Water Source	148	Yes	
23796	Upper Bega/Bemboka River Water Source	130	Yes	Yes
23772	Upper Bega/Bemboka River Water Source	163	Yes	
23745	Upper Bega/Bemboka River Water Source	238	Yes	Yes
23752	Upper Bega/Bemboka River Water Source	180	Yes	No
23770	Upper Bega/Bemboka River Water Source	90	Yes	No
23768	Upper Bega/Bemboka River Water Source	493	Yes	Yes
23787	Upper Bega/Bemboka River Water Source	90	Yes	No
23740	Upper Bega/Bemboka River Water Source	611	Yes	Yes
23771	Upper Bega/Bemboka River Water Source	594	Yes	Yes
23746	Upper Bega/Bemboka River Water Source	330	Yes	Yes
23794	Upper Bega/Bemboka River Water Source	160	Yes	
23718	Upper Bega/Bemboka River Water Source	307	Yes	Yes
23714	Upper Bega/Bemboka River Water Source	195	Yes	
23713	Upper Bega/Bemboka River Water Source	27	Yes	Yes
23742	Upper Bega/Bemboka River Water Source	151	Yes	?
23779	Upper Bega/Bemboka River Water Source	351	Yes	
23767	Upper Bega/Bemboka River Water Source	252	Yes	
23732	Upper Bega/Bemboka River Water Source	430	Yes	Yes
23721	Upper Bega/Bemboka River Water Source	133	Yes	
23751	Upper Bega/Bemboka River Water Source	264	Yes	
23799	Upper Bega/Bemboka River Water Source	29	Yes	
23778	Upper Bega/Bemboka River Water Source	129	Yes	Yes
23800	Upper Bega/Bemboka River Water Source	490	Yes	Yes
24023	Upper Bega/Bemboka River Water Source	516	Yes	Yes
23790	Upper Bega/Bemboka River Water Source	22	Yes	Yes
23733	Upper Bega/Bemboka River Water Source	195	No	No
23795	Upper Bega/Bemboka River Water Source	179	No	No
23780	Upper Bega/Bemboka River Water Source	260	No	No
23757	Upper Bega/Bemboka River Water Source	25	No	No
23782	Upper Bega/Bemboka River Water Source	220.5	No	No
23797	Upper Bega/Bemboka River Water Source	180	No	No

23717	Upper Bega/Bemboka River Water Source	19	No	No
23758	Upper Bega/Bemboka River Water Source	6	No	No
23754	Upper Bega/Bemboka River Water Source	24	No	No
23744	Upper Bega/Bemboka River Water Source	20	No	No
23748	Upper Bega/Bemboka River Water Source	65	No	No
23728	Upper Bega/Bemboka River Water Source	0	No	No
23760	Upper Bega/Bemboka River Water Source	44	No	No
23719	Upper Bega/Bemboka River Water Source	5	No	No
23762	Upper Bega/Bemboka River Water Source	5	No	No
23750	Upper Bega/Bemboka River Water Source	15	No	No
23759	Upper Bega/Bemboka River Water Source	5	No	No
23731	Upper Bega/Bemboka River Water Source	10	No	No
23715	Upper Bega/Bemboka River Water Source	1	No	No
23788	Upper Bega/Bemboka River Water Source	15	No	No
23761	Upper Bega/Bemboka River Water Source	6	No	No
23793	Upper Bega/Bemboka River Water Source	45	No	No
23755	Upper Bega/Bemboka River Water Source	5	No	No
23766	Upper Bega/Bemboka River Water Source	5	No	No
23747	Upper Bega/Bemboka River Water Source	5	No	No
23784	Upper Bega/Bemboka River Water Source	72	No	No
23749	Upper Bega/Bemboka River Water Source	32	No	No
23741	Upper Bega/Bemboka River Water Source	1	No	No
23763	Upper Bega/Bemboka River Water Source	5	No	No
23774	Upper Bega/Bemboka River Water Source	4	No	No
23722	Upper Bega/Bemboka River Water Source	5	No	No
23764	Upper Bega/Bemboka River Water Source	6	No	No
23743	Upper Bega/Bemboka River Water Source	1	No	No
23776	Upper Bega/Bemboka River Water Source	1	No	No
23737	Upper Bega/Bemboka River Water Source	65	No	No
23792	Upper Bega/Bemboka River Water Source	3	No	No
31028	Upper Bega/Bemboka River Water Source	1	No	No
36220	Upper Bega/Bemboka River Water Source	9	No	No
41119	Upper Bega/Bemboka River Water Source	3.5	No	No
41120	Upper Bega/Bemboka River Water Source	3.5	No	No
	Total Licenced volume	**8941**		
	% Licence Vol active	82		
	% Licence Vol active with Govt meters	89		
	Note many of the Govt meters are not working and WaterNSW have not indicated when they will be fixed			

Tantawanglo Ck:
33 Water Licences
5 Active Licences representing 69% of the licenced volume
28 Inactive licences avg Vol 55ML

Tantawangalo Creek Water Source

WAL No.	Water Source	Licence Vol	Active	Existing Meter
23510	Tantawangalo Creek Water Source	3	No	No
23486	Tantawangalo Creek Water Source	1500	Yes	?
23508	Tantawangalo Creek Water Source	49	No	No
23502	Tantawangalo Creek Water Source	173	Yes	No
23481	Tantawangalo Creek Water Source	6	No	No
23484	Tantawangalo Creek Water Source	4	No	No
23492	Tantawangalo Creek Water Source	508	Yes	No
23482	Tantawangalo Creek Water Source	5	No	No
23493	Tantawangalo Creek Water Source	330	No	No
23494	Tantawangalo Creek Water Source	10	No	No
23503	Tantawangalo Creek Water Source	15	No	No
23504	Tantawangalo Creek Water Source	4	No	No
23505	Tantawangalo Creek Water Source	6	No	No
23487	Tantawangalo Creek Water Source	31	No	No
23488	Tantawangalo Creek Water Source	113	No	No
23495	Tantawangalo Creek Water Source	10	No	No
23489	Tantawangalo Creek Water Source	975	Yes	No
23496	Tantawangalo Creek Water Source	210	No	No
23511	Tantawangalo Creek Water Source	45	No	No
23512	Tantawangalo Creek Water Source	1	No	No
23509	Tantawangalo Creek Water Source	25	No	No
23497	Tantawangalo Creek Water Source	358	No	No
23490	Tantawangalo Creek Water Source	2	No	No
23506	Tantawangalo Creek Water Source	208	No	No
23507	Tantawangalo Creek Water Source	1	No	No
23498	Tantawangalo Creek Water Source	1	No	No
23483	Tantawangalo Creek Water Source	5	No	No
23499	Tantawangalo Creek Water Source	5	No	No
23513	Tantawangalo Creek Water Source	5	No	No
23500	Tantawangalo Creek Water Source	16	No	No
23491	Tantawangalo Creek Water Source	240	Yes	No
23485	Tantawangalo Creek Water Source	78	No	No
23501	Tantawangalo Creek Water Source	1	No	No
	Total Licence Vol	4943		
	% Licence Vol active	69		