

Department of Climate Change, Energy, the Environment and Water

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# What we heard report

Review of the non-urban metering framework

February 2024





# Acknowledgement of Country

The Department of Climate Change, Energy, the Environment and Water acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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# Executive summary

In 2018, the NSW Government introduced a new framework to measure and meter non-urban water take, to be rolled out in stages over several years.

The non-urban metering rules intend to ensure the vast majority of licensed water take in NSW can be measured, to support and improve water management in NSW. The first compliance date in the rollout of the non-urban metering framework was 1 December 2020, requiring water users with surface water pumps larger than 500 mm to comply, and the rollout has continued for water users in the northern and southern inland regions of the state.

With low compliance rates and known barriers impacting water users' ability to comply, the NSW Government initiated a review into the framework to look at ways to make it quicker and easier for all water users to comply.

This *What we heard report* details the feedback we received during the consultation period of 30 October to 26 November 2023.

Community feedback indicated support for many of the options proposed in the *Review of the non-urban metering framework – Issues and options paper* and additional actions were identified for the government to consider. The key issues raised in feedback related to barriers to compliance and included:

- the cost of compliance
- availability of duly qualified persons (DQPs)
- a need for greater flexibility in the ways water users—particularly smaller water users—can comply with the non-urban metering framework
- simplification of the requirements to help water users understand their obligations.

Feedback was captured through discussion at online information sessions with water users, community members and industry bodies, an online survey and written submissions. During the consultation period the Department of Climate Change, Energy, the Environment and Water (the department) received 124 survey responses, 28 public submissions and saw 252 people attend 3 public webinars. Feedback from a joint water sector research program conducted from mid to late 2023 has also been incorporated in this report.

This feedback is directly informing a review report for the Minister for Water that will recommend actions to help make it easier for water users to become compliant and to ensure water use is being measured and managed fairly and sustainably.

We can't manage what we can't measure. The non-urban metering framework is vital to ensuring a sustainable future for all.

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## About this report

This report provides an overview of what we heard from submissions and discussions with stakeholders on the *Review of the non-urban metering framework – Issues and options paper*.

The purpose of this document is to provide the community with an understanding of the range of feedback we received on the issues and possible options identified to help accelerate implementation of the reforms and identify practical changes to the rules to improve compliance. It also aims to assure community and stakeholders that we have heard the concerns and issues they raised in their feedback.

The report consists of:

- an overview of the engagement process and participation by community members
- a summary of key feedback received in response to the issues and options paper
- detailed feedback received about the issues and possible options and questions asked in the online survey
- next steps for the review.

# Introduction

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## Background

The purpose of the review of the non-urban water metering framework is to look at how to accelerate implementation of the reforms to achieve the policy objectives and identify practical changes to the rules to improve compliance.

The discussion paper, *Review of the non-urban metering framework – Issues and options paper*, provided an overview of what we understand to be the most significant barriers to implementing the rules and describes potential options to address the key issues, based on feedback received over several years of working with water users, metering suppliers and installers to implement the rules.

This report summarises key community and stakeholder responses to the options documented in the discussion paper.

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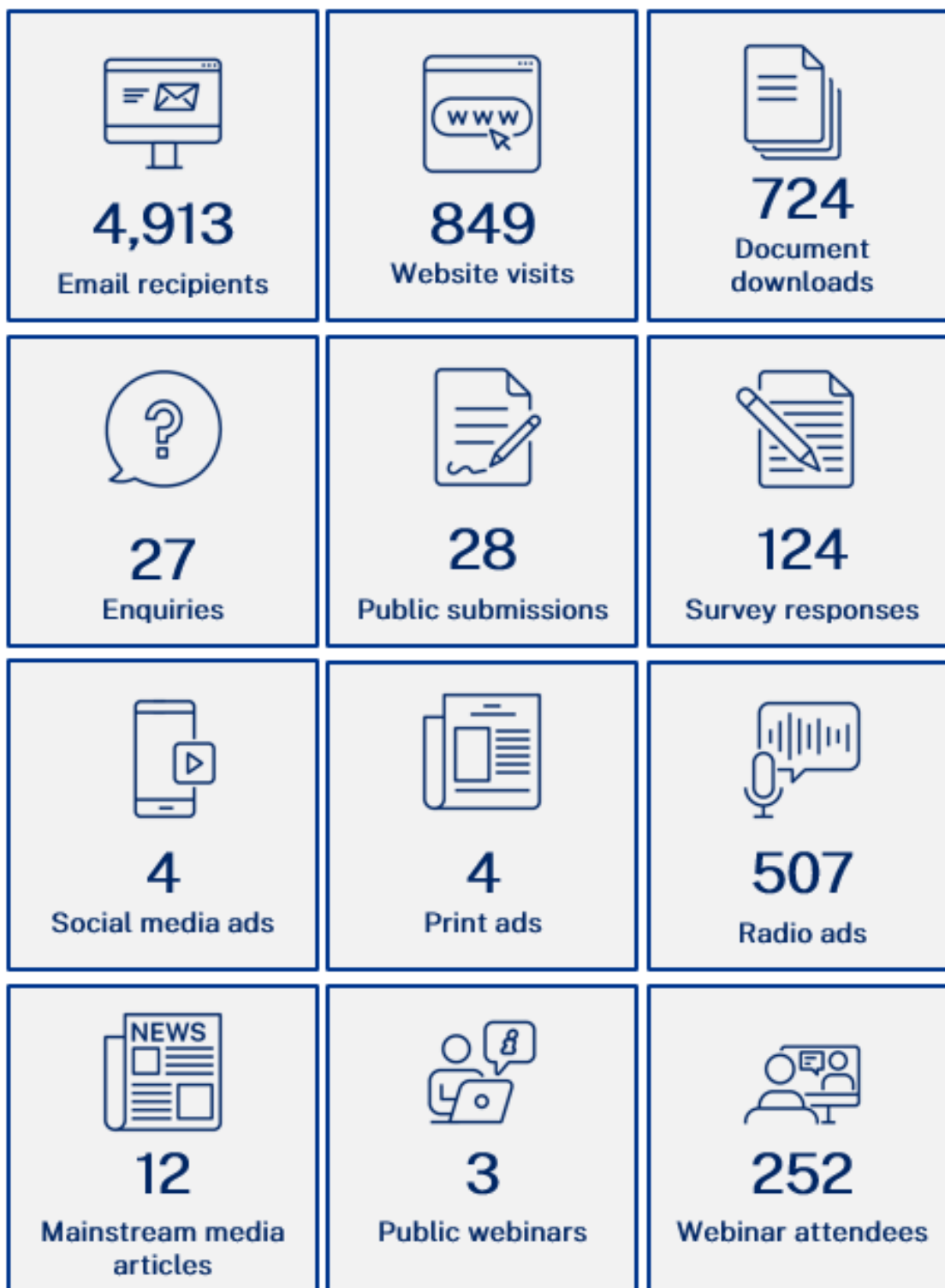
## Engagement overview

Public consultation on the non-urban metering review commenced on 30 October and closed on 26 November 2023. The department released a discussion paper and sought feedback from the public and stakeholders during this period using a range of consultation methods, including through:

- stakeholder meetings, before and during the public consultation period with:
  - Commonwealth and other state government agencies
  - members of peak bodies and water user organisations
  - metering equipment installers
- online public information sessions
- an online survey
- written submissions.

The consultation was promoted in print, radio and social media ads, and by email to the department's Water e-Newsletter subscribers and peak bodies. Figure 1 provides an overview of engagement statistics during the consultation period.

Figure 1. Summary of non-urban metering review engagement statistics



Feedback from a NSW Joint water sector research program conducted from mid to late 2023 in which customers and community were also asked about metering (as part of the wider survey) has also been incorporated in this report.

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## What we heard

Feedback received through the various channels reflected support for efforts to improve metering and measurement of non-urban water use. Feedback also confirmed that there are barriers to meeting the compliance requirements.

Many of the options proposed in the discussion paper were supported and additional actions were identified for government to consider.

### Key issues raised

- **Cost of compliance**, particularly for smaller and lower risk water users. Feedback supported exemptions or the ability to use less prescriptive measurement pathways for lower risk/small water users and advocated greater cost sharing – with government – of the implementation of the reforms.
- **Availability of duly qualified persons (DQPs)**: There is evidence of market failure in the supply of DQPs and this has impacted on water users' ability to comply within the required timeframes.
- **Call for greater flexibility** in the ways that particular water users can comply with the intent and objectives of the non-urban metering framework. A need for more practical means of measuring take, other than conventional metering methods, for unregulated river licences that take overland flow and some environmental water delivery modes was identified.
- **Simplification**: Many water users find it difficult to understand their compliance responsibilities. A key concern is the perceived inconsistency between overlapping rules. In some water sources this has the effect of requiring metering for small works that were authorised before the new framework came into effect, but allows new small work approval holders in the same water source to access the size-based metering exemptions
- **Coastal compliance deadline**: It was recommended that the current compliance deadline of 1 December 2024 be reconsidered to allow the outcomes of the review to be determined and allow for more direct engagement with coastal water users, to help them understand their obligations (as has occurred in other tranches).



# Feedback on options

This section outlines feedback received on each of the options presented in the issues and options paper. This feedback includes survey responses, questions and comments made in webinars, and submissions received.

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## Ensuring that metering requirements only apply to works taking water

### Issue

Many works are unintentionally identified as requiring metering

The intention of the metering framework is that only works taking licensed water from a water source are required to be metered. Currently, there are ‘unintended works’ – that is, works that do not take licensed water – that appear to require a meter. Unintended works include works that don’t take water from the water source, unconstructed works, derelict works, or works used solely for basic landholder rights.

Desktop analysis indicates that approximately 32% of all work approvals only authorised one work (pump or bore). We can assume the pump or bore needs to be metered unless it is used solely to take water under basic landholder rights. The remaining 68% of work approvals authorised two or more works, making it difficult to determine which take licensed water and require metering.

This is leading to water user confusion, less efficient compliance activities and more difficulties detecting potential illegal take.

### Possible responses

The issues and options paper identified that it needs to be easier for water users to identify for government whether works are used to take licensed water from a water source or not, which could be done by:

1. Requiring water users to identify those works that *do* take licensed water from a water source and deeming those not notified as not taking licensed water and not subject to metering requirements, or

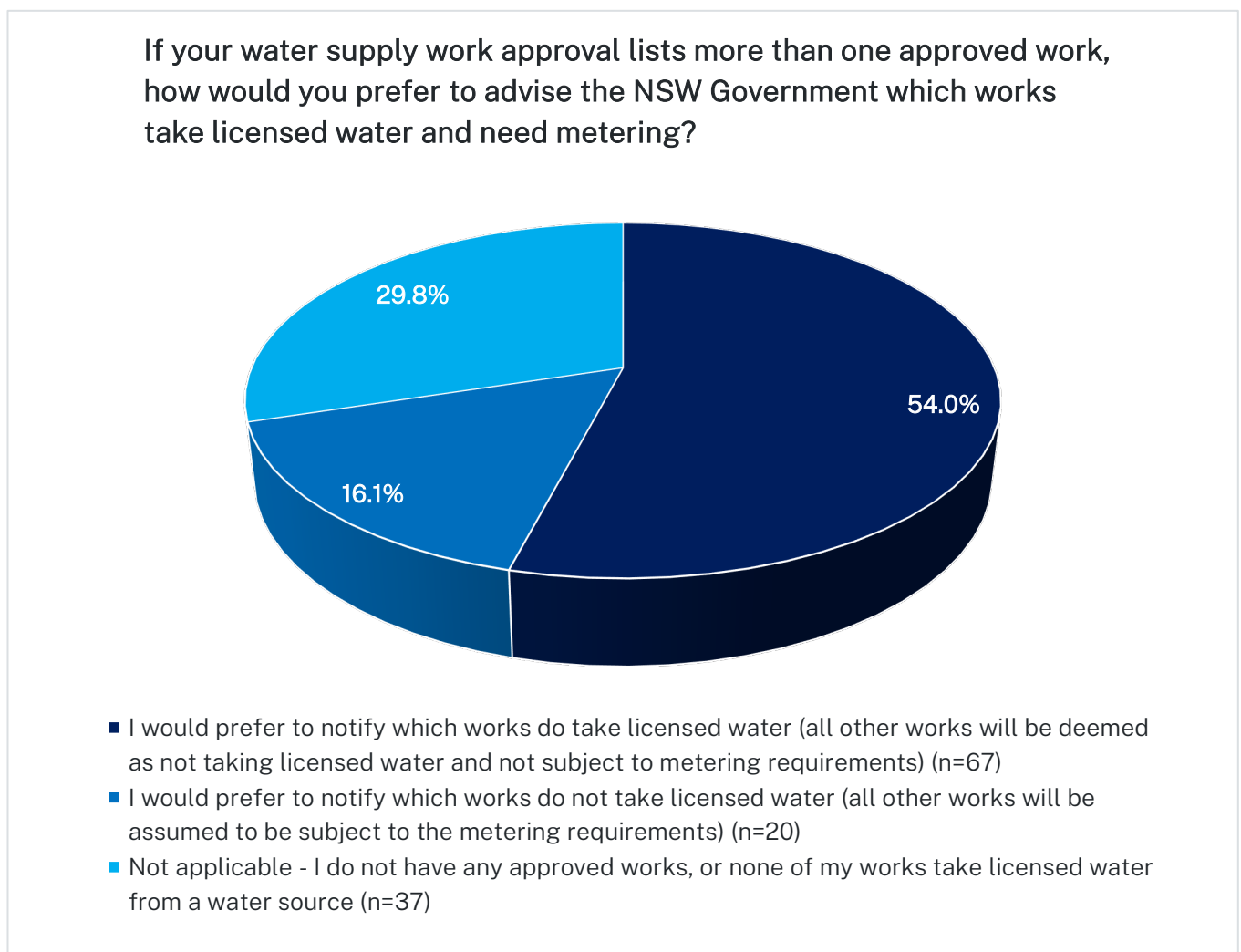
2. Water users could identify those works that *do not* take licensed water, or which only take water under a basic landholder right, and all other works would be assumed to take licensed water from a water source and be subject to the metering requirements.

## Survey responses

**Survey question** (Figure 2): If your water supply work approval lists more than one approved work, how would you prefer to advise the NSW Government which works take licensed water and need metering?

- 54% (n=57) of respondents prefer to notify which works *do* take licensed water, on the understanding that all other works will be deemed as not taking licensed water and therefore not subject to metering requirements
- 16% (n=20) prefer to notify which works *do not* take licensed water
- 30% (n=37) of respondents indicated that this issue did not apply to them.

Figure 2. Summary of survey responses about identifying works that take licensed water



## Observations from surveys, submissions and webinars

- Feedback in webinars suggests support for ensuring that the non-urban metering requirements are more targeted – that is, capturing only those works that take licensed water.
- Accurate data about which works do and do not take licensed water is seen as critical to the success of the reform, with the perception that a lack of data accuracy undermines overall confidence in the rules.
- Submissions identified the need to clarify what constitutes an ‘exempt’ work, as the lack of clarity is thought to result in possibly exempt works being identified as requiring metering.
- There were calls in written submissions to have the statement of approval provide clear identification of which works do require metering.
- Many called for the process to mark works as inactive to be simplified and made easily reversible, along with reducing (or removing) the associated fees and the requirement to make the work incapable of taking water.

## Overall feedback summary

A key analysis of this survey question is that 66% of respondents identifying as water users (n=91) indicated a preference to notify which works *do* take licensed water.

There was strong agreement with the need to ensure that metering only applies to works taking licensed water, with most support for a system that focuses on identifying works that *do* require metering rather than identifying those that *do not*. It was considered that the owners of these works would be more likely to be aware of the metering requirements and have a better understanding of the need for compliance.

Comments stressed that accurate data was important to the success of the reform and that a lack of accuracy served to undermine confidence in the rules.

## Clear identification of works requiring metering

It was recommended that the statement of approval for works should clarify which works are exempt from the non-urban metering requirements, which works are taking licensed water and which are taking water under basic landholder rights (BLR). It was suggested in these submissions that the lack of clarity may result in works being identified that do not require metering which leads to the appearance of lower rates of compliance. Providing this information in simple, accessible language on the statement of approval was suggested to help reduce water user confusion.

## Process for making works inactive

Approximately half of the written submissions received raised concerns about the process of making works inactive. These submissions indicate that it is common for water users to have works that may be inactive for long periods of time, and that the ability to easily put the work to use again is important.

The current process is considered an administrative burden – with water users having to apply to WaterNSW both to make a work inactive, and again if they want to make it active again. The payment of fees to make a work inactive and to make it active again were of particular concern, making the current process too expensive.

Responses also identified the practical issue of having to physically make an inactive work incapable of taking water, citing the expense of these works – both at the time of making the work inactive and if the water user wishes to make the work active again – as well as the impracticality if that work is also used to take water under a basic landholder right.

The feedback received can be summarised as requesting a simple process with no associated fees and which is easily reversible.

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## Reviewing metering requirements to target risk more effectively

### Issue

The current rules may not meet the policy objective of minimising undue costs on smaller water users.

Many small water users are required to meter at a cost that may be disproportionate to the risk posed by the water take.

All water supply works require a meter unless an exemption applies. There is currently a work size-based exemption, which links the requirement to have a meter to the risks of the individual work and the physical ability to take water – regardless of access licence shares or volume of take.

This approach was preferred – and supported with stakeholder feedback – when the framework was established, however evidence from implementation of the current rules suggests that they may be imposing disproportionate costs for the risk posed by some water users, particularly smaller or infrequent water users. The large number of small water users required to meter under the rules is also creating a demand for meter installations that cannot be met by the current market of active DQPs.

Further, the current exemptions based on work size thresholds do not apply across all water sources because there were already universal metering requirements in place across 13 surface water sharing plans before the introduction of the non-urban metering framework.

Universal metering is also required in 55 at-risk water sources because the level of licensed entitlement is equal to, or above, the sustainable limit for extraction of water from these water sources. Metering conditions were in place in these water sources before the rollout of the metering framework.

The intent of the metering provisions in the Water Management (General) Regulation 2018 was to maintain or enhance metering requirements rather than roll back on existing requirements. However, feedback tells us the overlapping rules are creating confusion and are imposing undue costs on small, low-risk water users.

### Possible responses

The issues and options paper outlined two possible responses to address this issue:

1. Enabling less prescriptive measurement standards for low-risk water users in water sources subject to universal metering requirements

2. Assessing whether metering requirements would be better defined by volume-based thresholds, with associated measurement and reporting requirements reflecting risk to a water source. A possible model for state-wide volume-based metering and measurement obligations was outlined in the *Review of the non-urban metering framework – Issues and options paper*.

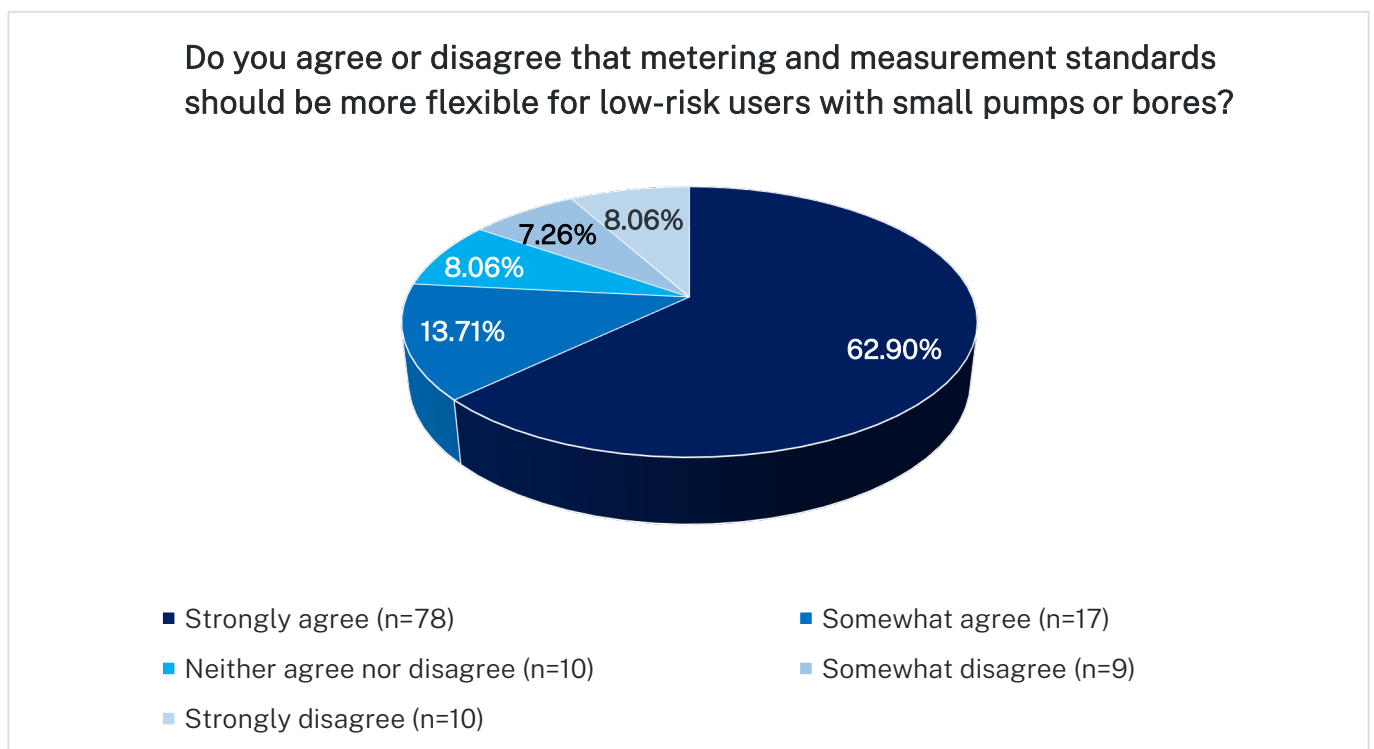
## Less prescriptive standards for low-risk water users

### Survey responses

**Survey question** (Figure 3): Do you agree or disagree that metering and measurement standards should be more flexible for low-risk users with small pumps or bores?

- 62.9% (n=78) of respondents strongly agreed that standards should be more flexible
- 13.71% (n=17) indicated that they somewhat agree
- 8.06% (n=10) of respondents neither agreed nor disagreed
- 7.26% (n=9) of respondents somewhat disagreed
- 8.06% (n=10) of respondents strongly disagreed that standards should be more flexible.

Figure 3. Summary of survey responses about flexible standards for low-risk users



## Observations from surveys, submissions and webinars

- Over 75% of survey respondents agreed that metering and measurement standards should be more flexible for low-risk users with small pumps or bores.
- When examining the survey responses from water users, of 91 respondents, approximately 82% (n=75) agreed that more flexibility should be provided.
- Written submissions indicated support for greater flexibility to provide less costly options for small and low-risk water users.
- It was proposed that government consider options smaller and low-risk water users are already using, for example, less prescriptive meters, power meters and simple data loggers – which are available, cheaper to implement and maintain.

## Overall feedback summary

Both survey responses and written submissions from individuals and industry bodies show support for metering and measurement standards to be more flexible for small, low-risk water users. There was, however, consistent feedback supporting the requirement for AS4747 meters to be installed and validated by DQPs, with concerns that removing this requirement risks damaging the integrity of the reform.

## Cost of compliance

It was generally agreed that the current metering requirements do not meet the policy objective of minimising undue costs for smaller water users. There was strong support in submissions to reduce the cost burden for small, low-risk water users, with recommendations to enable installation requirements for closed conduit meters to be less prescriptive for these water users. It was suggested that smart electricity meters be allowed, explaining that these are installed above flood levels, provide cost benefits, and that stock availability means there is more choice for how to comply while also maintaining system integrity.

The cost of installing and maintaining AS4747 compliant meters is considered prohibitive for small, low-risk water users and there is support for both the current size-based framework and ongoing volume-based exemptions. However, many submissions noted caution that implementing volume-based exemptions would require further investigation and consultation with industry to ensure a robust model was put in place.

## Consistent metering conditions

Feedback stressed the importance of government identifying one policy instrument governing compliance requirements and removing pre-existing conditions in water sharing plans which create confusion and inconsistency for water users who may otherwise be eligible for exemptions.

## Clarity

A number of submissions called for clarity around the definitions of what it means to be a *small* or *low-risk* water user. Others encouraged the department to clarify the position on the current exemption for small, low-risk works taking water under a domestic and stock water access licence which is due to expire on 1 December 2024. Some proposed that this exemption be extended (for varying periods), others believe it should be implemented permanently.

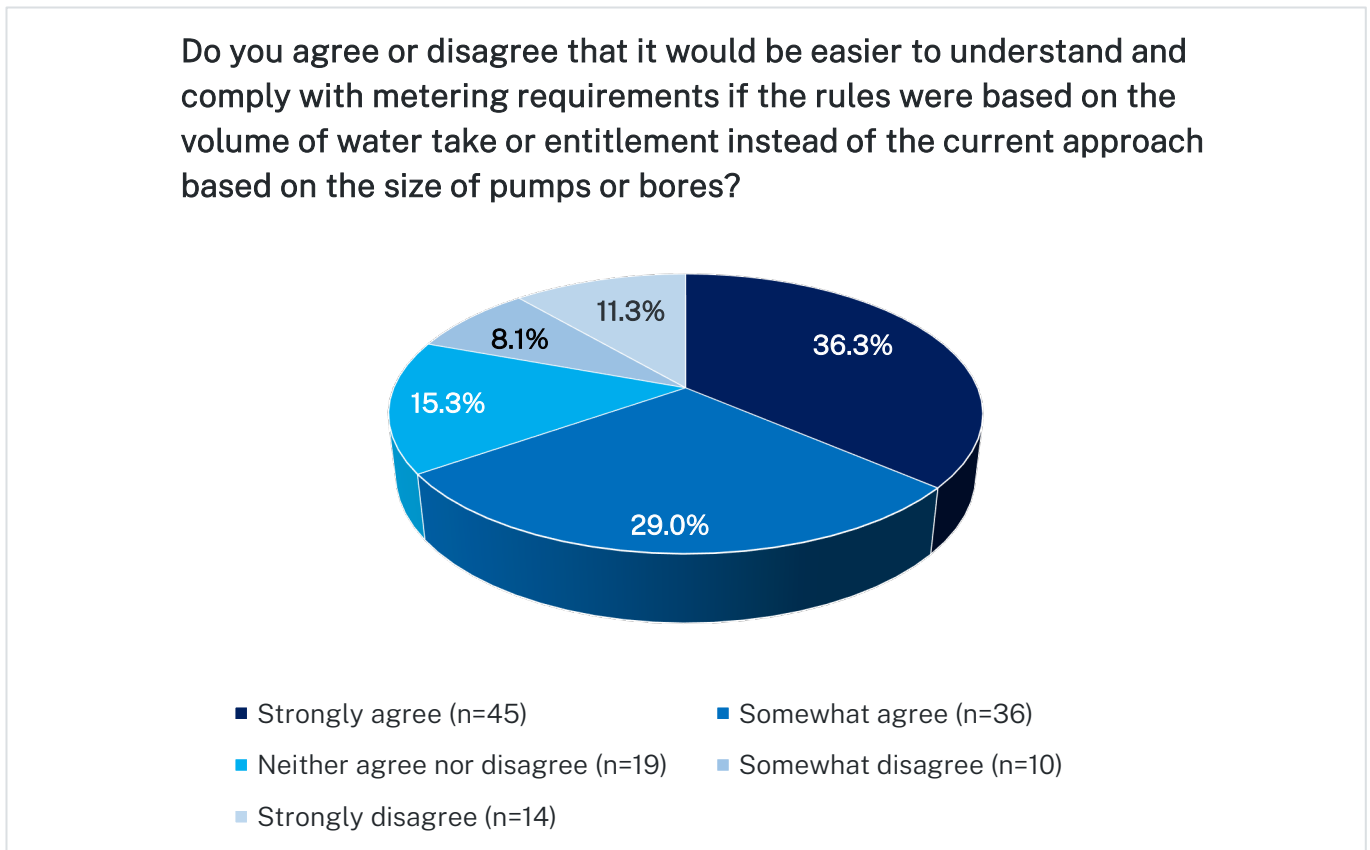
## Volume-based or work-size based thresholds

### Survey responses

**Survey question** (Figure 4): Do you agree or disagree that it would be easier to understand and comply with metering requirements if the rules were based on the volume of water take or entitlement instead of the current approach based on the size of pumps or bores?

- 65.3% (n=81) of respondents strongly agreed or somewhat agreed that rules based on volume of water take or entitlement would be easier to understand
- 15.3% (n=19) of respondents neither agreed nor disagreed
- 19.4% (n=24) of respondents somewhat disagreed or strongly disagreed that rules based on volume or entitlement would be easier to understand.

Figure 4. Summary of survey responses about rules based on volume or take



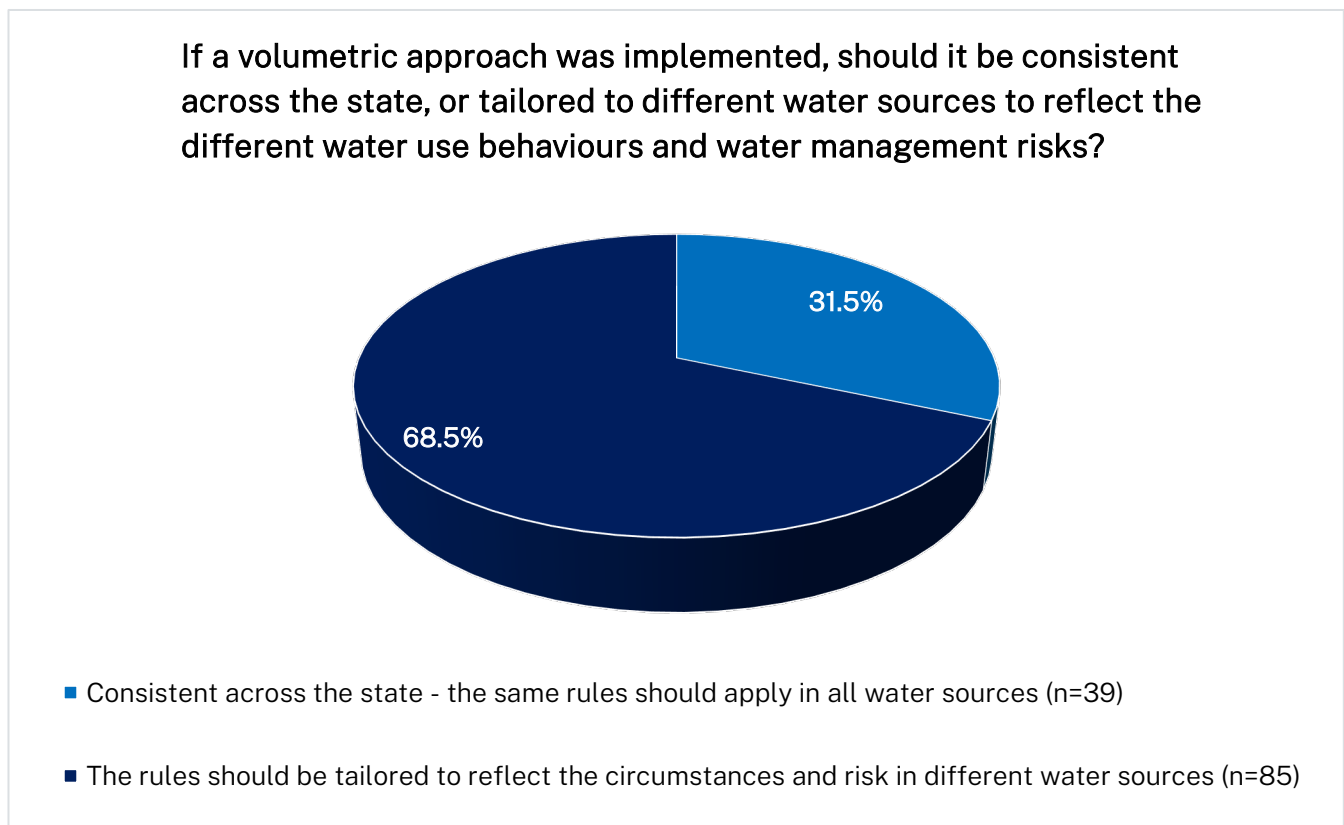


## Survey responses

**Survey question** (Figure 5): If a volumetric approach was implemented, should it be consistent across the state, or tailored to different water sources to reflect the different water use behaviours and water management risks?

- The majority of survey respondents, over 68%, preferred a tailored approach to implementing a volumetric model.
- When comparing the survey responses from respondents who identified as water users (n=91), over 73% preferred a tailored approach to implementing a volumetric model.

Figure 5. Summary of survey responses for implementation of a volume-based model



## Observations from surveys, submissions and webinars

- Over 65% (n=81) of survey respondents agreed that rules based on volume of water take or entitlement would be easier to understand and comply with.
- Some submissions indicated support for a volume-based approach, while others expressed support for maintaining the current work-size based framework, or a combination of both.
- Submissions indicated that the current state is causing confusion and proposed one policy instrument be used to set metering conditions.
- There was some support for small water users to be exempted from metering rules.

- There was support in written submissions for making the temporary exemption for small, low-risk works taking water under a domestic and stock water access licence permanent.
- Some submissions expressed caution about changes causing disparity across the state, urging consistency to be applied to all regions, while also noting that inland and coastal regions use water differently and face different challenges.
- There was some concern raised that catchment-based volume thresholds may create inequity across regions and the perception of less stringent rules applying to some water users when compared to others. It was also suggested that a flexible, catchment-based approach may cause confusion and attract criticism.
- However, feedback also suggested that a one-size-fits-all approach may not be appropriate given the different water use profiles, regulatory requirements and rights allowances across different valleys and between inland and coastal areas.
- A small number of submissions recommended a cost-benefit analysis be conducted before implementing a volume-based model, and some preferred a single volume-based standard state-wide.
- Several submissions preferred a volume-based model to minimise significant costs, including the ongoing cost of telemetry, for smaller water users. This focus on minimising costs for small water users was a consistent theme in all feedback received.

## Overall feedback summary

Survey responses by water users indicate some support for volume-based rules, while many submissions suggested some reluctance to move away from the current rules based on work-size given the significant investment of time and money by water users based on the current settings.

Those submissions supporting a volume-based model noted that it would minimise complexity and costs for small water users, particularly the costs associated with telemetry. Some suggested that a cost-benefit analysis would be required before implementing a volume-based model and others that this approach should be tailored by catchment or water source.

Some support was expressed for any volume-based model to consider water take of 100 ML or more to be the threshold for metering requirements to apply, recommending self-reporting for water users under this threshold.

There was concern expressed that changing to a volume-based model would result in inequity for those water users who have already become compliant under size-based thresholds.

## Limitations of work-size thresholds

Some stakeholders expressed a view that the work-size based threshold may be imposing disproportionate costs on smaller or infrequent water users, citing the following examples:

- small pumps which draw volumes of water continuously from high-risk water sources presenting much greater risk than larger diameter pumps drawing water intermittently from lower risk water sources
- the application of work size thresholds to the outer casing of groundwater works, measuring the size of the well rather than the internal pump that actually takes water. In many cases, particularly on the coast, if the work-size threshold applied to the internal pump taking water, these works would be exempt.

Just under half of the written submissions recommended that, under a work-size based model, the list of exemptions be reviewed to provide less costly options for small, low-risk water users. This includes the temporary exemption for small, low risk works used solely to take water under a stock and domestic water access licence.

## Reluctance to remove work-size thresholds

While recognising the shortfalls of the work-size thresholds, there was strong support for maintaining the current work-size based model considering the significant investment made by inland water users whose compliance dates have already passed.

Some suggested maintaining the work-size thresholds and updating the rules to overcome some of the existing limitations with this approach, such as the application of thresholds to internal pumps in groundwater works, with a consistent 100 mm work-size threshold applying to both surface water and groundwater works.

There was a consistent recommendation to review all existing exemptions with the goal to provide less costly options for smaller and low risk water users across NSW, particularly for smaller water users in at-risk water sources.

Some suggested a dual model with both work-size and volume-based thresholds, subject to the volume-based threshold being consulted on further. It was noted that a dual work-size and volume-based framework would be particularly beneficial for the coastal region as they have not yet reached their compliance date.

## Practical challenges to implementation of a volumetric model

Survey respondents were asked to provide free-text responses to identify practical challenges they saw in the possibility of a volume-based model being implemented. A total of 82 comments were received. The feedback reflects a diverse set of concerns, emphasising the need for careful

consideration of costs, clarity in rules, flexibility in approaches and addressing practical challenges associated with metering and telemetry.

- Approximately 28% of responses (n=23) expressed significant concerns about the overall costs of metering and telemetry, particularly small water users who find it hard to justify the expense. Concerns were raised about potential financial losses for water users and the possibility of seeking compensation if rule changes mean expensive equipment was installed unnecessarily.
- More than 12% of respondents (n=10) raised concerns about how volume-based metering would work. Questions include how and when volume would be measured, how it applies to different water sources and variations during seasons or drought periods.
- 7% of respondents (n=6) expressed concerns about the implications of water trading.
- Water user confusion is a common theme, several respondents (n=7) were concerned rule changes might introduce further complexity and confusion.
- Several respondents believe that a one-size-fits-all approach is not suitable for all water users, advocating for greater flexibility, suggesting options for both volume and work size metering to accommodate the diverse needs of water users.
- Concerns were also raised about the practical challenges of pumps and meters moving during flooding or extreme weather events. This issue, while not specific to volume-based metering, highlights the need to consider and address challenges that may arise under varying environmental conditions.

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## Revisiting installer requirements to accelerate progress

### Issue

There are not enough active duly qualified persons to install all the meters required.

Under the metering framework certified meter installers, or in the case of open channel meters, certified practising hydrographers must install, maintain and validate meters.

Becoming a certified meter installer – referred to a duly qualified person (DQP) in NSW – involves completing specific certification requirements and a three-day course run by Irrigation Australia Limited. Additional course requirements and skills are required to become a certified practising hydrographer.

Data indicates that only 114 of approximately 230 qualified DQPs registered with WaterNSW have operated in NSW and only 86 were actively installing metering equipment in 2023. The number of active DQPs available to install, maintain and validate the meters required for the ongoing rollout of the metering framework is unlikely to meet water user demand.

Some of the contributing reasons outlined in the issues and options paper are high administrative burden, labour and workforce shortages in regional areas and a disconnect between DQPs and water users (in light of the vast geography of the state).

### Possible responses

The issues and options paper outlined the following possible responses to address this issue:

1. Government coordinating DQP services to match supply with demand, coupled with increased support services for DQPs
2. Government installation in targeted areas
3. Options to increase the DQP workforce by expanding definitions for who can be a DQP
4. Enabling less prescriptive installation pathways for closed conduit meters
5. Review maintenance and five-yearly revalidation requirements

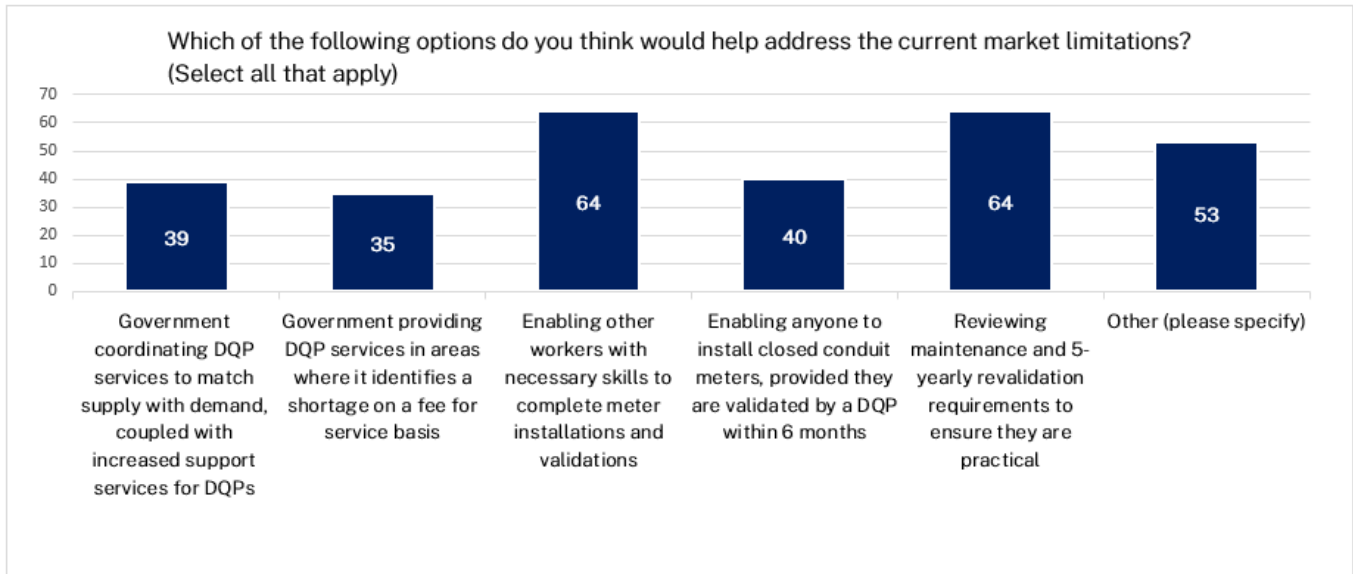
### Survey responses

**Survey question** (Figure 6): Which of the following options do you think would help address the current market limitations?

The most supported options to address DQP shortages were:

- Enabling other workers with necessary skills to complete meter installations and validations.
- Reviewing maintenance and 5-yearly revalidation requirements to ensure they are practical.

Figure 6. Summary of survey responses for addressing market limitations



### Other suggestions

Several additional solutions to address market limitations were proposed including:

- simplifying the DQP Portal
- allowing anyone to install metering equipment
- removing administrative burdens on installers
- providing financial incentives for DQPs
- government offering more support services for DQPs
- government taking a more hands on approach to assist water users to comply
- improving DQP training, including easing eligibility requirements to maintain certification
- government funding for DQP contracts/services.

A small number of respondents expressed that the rules are too complicated and confusing, further highlighting a need for clarity and simplicity in the regulations to ensure better understanding and compliance.

### Observations from surveys, submissions and webinars

The feedback from survey respondents highlights significant concerns and challenges, particularly related to cost. Over 22% of respondents expressed concerns about the costs associated with metering, emphasising that this burden should be covered by the government. Approximately half of the submissions were clear that they did not support a fee-for-service model or cost increases to cover DQP shortages.

There was strong support in submissions for maintaining the requirement for DQPs to install and validate meters, and it was widely agreed that there is lack of financial incentive for DQPs. These submissions also cited the challenges of labour shortages in regional areas and some suggested administrative and financial support from government to assist DQPs to establish their business may be helpful. DQPs also reported a peak in demand for metering-related work directly prior to compliance deadlines. The high volume of these requests was difficult to service within the required timeframes.

Submissions also contained consistent feedback that the current training model is expensive and not fit-for-purpose, with one submission suggesting the availability of design drawing and installation videos, specific to NSW and manufacturer requirements would be of use.

Many submissions agreed that government management of DQP services in targeted areas would help meet demand and all of these indicated that this would not be supported on a fee-for-service basis.

Just over half of the submissions proposed expanding the definition of who can be a DQP, particularly for small, low-risk water users, reinforcing the need to ensure appropriate governance to maintain standards of installation. Some submissions also called for less prescriptive installation pathways for closed conduit meters for smaller and low-risk water users.

## Overall feedback summary

There was general support for government assuming more responsibility for supporting DQPs or coordinating the need for and delivery of DQP services, particularly in areas with greater shortages. This included government playing a concierge role in bundling jobs together to create greater efficiencies for DQPs who are expected to travel and acquire accommodation.

Some support was expressed in submissions for less prescriptive installation pathways for closed conduit meters for small, low-risk water users as well as the use of smart electric meters calibrated to water use, or some form of QR code check in system to support reporting.

However, there were also some concerns that removing the current requirements for DQP installation and certification would create the perception of watering down the rules.

## Maintenance and revalidation of meters

More than half of the submissions proposed reviewing the maintenance requirements for in-situ accuracy testing, noting that these are not nationally mandated, nor are they possible under current resourcing. The upcoming 5-year revalidations that will be required (some due in 2024) was seen as a critical point that would further burden the DQP market. The current requirement for in-situ

accuracy testing or sending the meter sensor unit to an accredited lab were both seen to create bottlenecks under the current resourcing.

### **DQP training**

Simplifying the training for DQPs was widely suggested, with suggestions including making the training more practically focussed, and more tools and resources available to provide practical and administrative support to DQPs. A common suggestion was to provide training via local trade colleges and TAFE NSW to enable training to be held in conjunction with other trade courses.



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# Making data systems and equipment standards more fit-for-purpose

## Issue

It takes longer to install data loggers and telemetry, and this is typically where installation challenges are being experienced.

The rollout of telemetry is an important element of the non-urban water metering framework to transmit timely water extraction data securely from a meter to government and back to water users. However, as meters are not compliant until a data logger is installed, water users and DQPs have indicated that issues involving the installation of data loggers and telemetry are affecting their ability to meet compliance deadlines.

## Possible responses

The issues and options paper outlined the following possible responses to address this issue:

1. Review of the Data Logging and Telemetry Specifications 2021
2. Decoupling data loggers and telemetry from meter installation requirements
3. Government coordinating bulk procurement and installation, or in certain circumstances, government-owned data loggers and telemetry systems
4. Government prescribing which data loggers and meters must be used together
5. Ensure duly qualified persons are better trained and supported.

## Survey responses

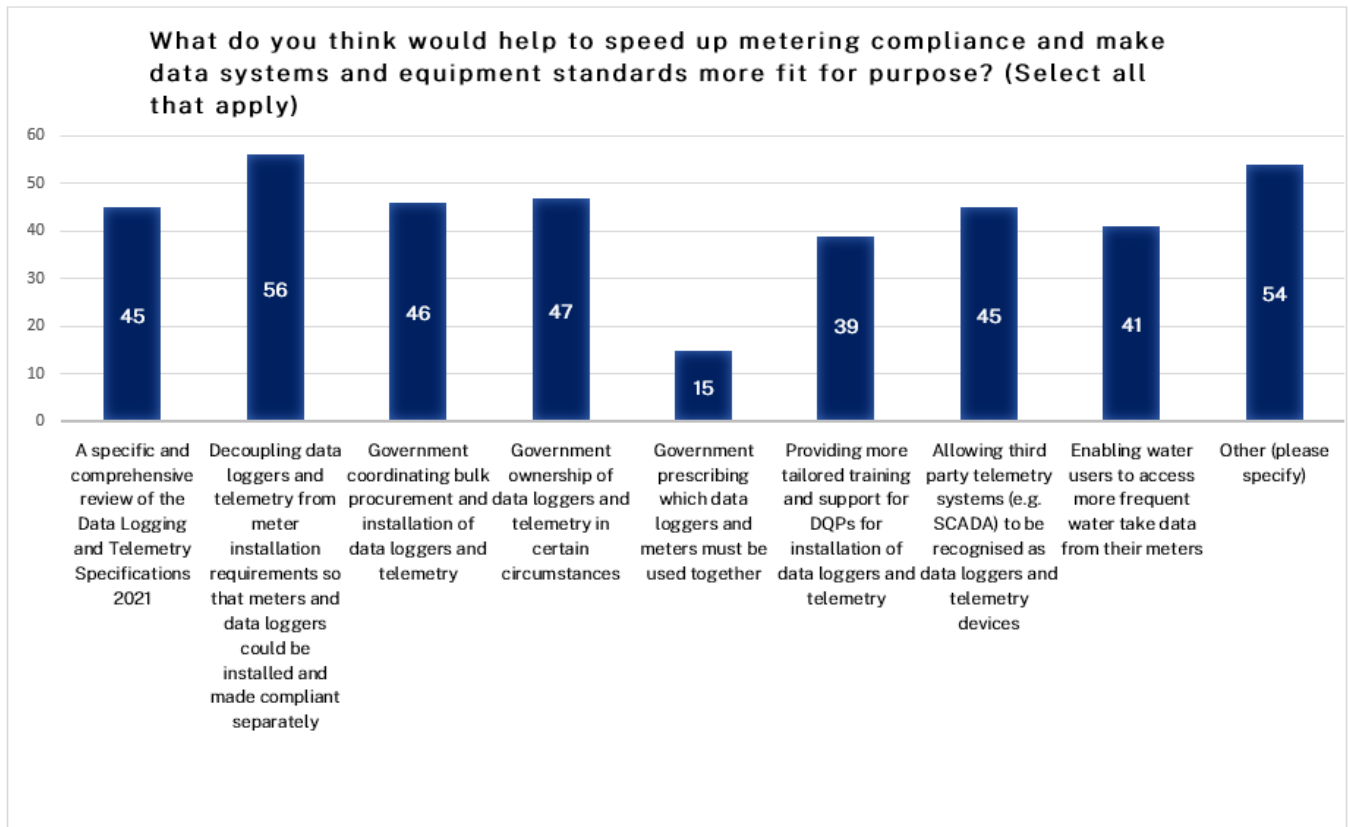
**Survey question** (Figure 7): What do you think would help to speed up metering compliance and make data systems and equipment standards more fit for purpose? (Select all that apply.)

The most supported options to speed up compliance and make data systems and equipment standards more fit for purpose were:

- Decoupling data loggers and telemetry from meter installation requirements so that meters and data loggers could be installed and made compliant separately (n=56)
- Government ownership of data loggers and telemetry in certain circumstances (n=47)
- Government coordinating bulk procurement and installation of data loggers and telemetry (n=46)

- A specific and comprehensive review of the Data Logging and Telemetry Specifications 2021 (n=45)
- Allowing third party telemetry systems (e.g. SCADA) to be recognised as data loggers and telemetry devices (n=45).

Figure 7. Summary of survey responses to help speed up metering compliance



## Other suggestions

A total of 54 survey respondents selected ‘other’ and provided suggestions to make data systems and equipment standards more fit for purpose, the key themes being:

- Cost – reduce costs or have government assume responsibility (n=11)
- More flexibility – changes to, or removal of telemetry; varied reporting methods such as smart phone apps and manual readings; allow other meters, such as smart electricity meters; system improvements for the data acquisition service (DAS); improvements to meters to include built in data loggers or built in SIM cards (n=12)
- Exemptions – make small water users exempt from telemetry and/or metering (n=7)
- Review the specifications – to provide fit-for-purpose criteria; a simple system that is easy to use (n=5)
- Government to specify which meters and data loggers work together – through better communications and published guidelines (n=4)

- Allow anyone to install metering and telemetry equipment (n=2)
- Greater fines (n=1)
- DQP training – provide a simplified course that is fully funded (n=1)
- Government intervention if there is market failure (n=1).

Almost 20% (n=11) of respondents felt the cost of metering equipment was too high, particularly telemetry. Many expressed a desire for government to take responsibility for owning, installing and maintaining equipment. One respondent emphasised the need for government intervention in cases of market failure.

More than 22% of respondents (n=12) expressed a desire for greater flexibility including the use of different meters and alternative ways to report water take such as apps which could also provide more real-time data. Almost 13% (n=7) of respondents also advocated for flexibility by suggesting small water users be exempt from telemetry and metering, with alternative forms of measuring and reporting allowed.

Some respondents (9% or n=5) further supported the option for telemetry to be separated from metering requirements temporarily, while specifications and criteria were reviewed to ensure data systems and equipment standards are fit for purpose. A few respondents also (7% or n=4) called for the publication of guidelines specifying which equipment works together.

## Observations from surveys, submissions and webinars

Feedback received in submissions showed strong support (n=14) for government ownership and management of data loggers and telemetry systems, noting that the water user is primarily concerned with the water meter and additional requirements should be the responsibility of government. Suggestions included bulk procurement, installation, maintenance and ownership by government – with an option for water users to opt in to own the equipment if they wish; and removing the requirement for telemetry until the DAS is fully operational.

Just under half of submissions noted that if government provided a prescribed list of meter and data logger combinations, these should be cost effective, and several submissions recommended decoupling telemetry from compliance and allowing compliance to be achieved with a meter in place.

There were several submissions (n=14) proposing that there be no time limits for repair or replacement of faulty meters – citing the DQP shortage and resulting delays in making the necessary repairs – and amendments to the s91i self-reporting form to be valid for 6 months to remove the administrative burden of reporting monthly.

## **More frequent access to water use data**

The issue of enabling water users to access more frequent water use data from their meters was raised in submissions and survey responses. Water users throughout the reforms have spoken of the implications of installing new telemetry systems that provide less frequent reporting information than current systems which adds to their regulatory cost burden.

## **Overall feedback summary**

Cost is a consistent feature of feedback from all sources, as are concerns about the DQP shortage limiting water users' ability to install and maintain metering and telemetry equipment. There was broad support for government intervention, particularly in assuming the cost of purchasing, installing and maintaining telemetry.

The majority of respondents are also supportive of metering generally, and many are keen to see AS4747 standards maintained.

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## Improving water use reporting

### Issue

Limited reporting of water take information is compromising effective water resource management.

The metering framework introduced water take reporting requirements. However, there are significant gaps in water take data being sent to WaterNSW. The current rate of reporting is so low in some water sources it is difficult to manage the resource.

All water users are potentially affected by this limited water take reporting. In the absence of accurate information, government must make more conservative assumptions for water resource management and factor this into management decisions – for example, by reducing available water determinations.

Interventions have been trialled to increase water take reporting compliance, like issuing reminder letters. These have helped, but the compliance rates are still too low for sufficient confidence in resource management.

### Possible response

The issues and options paper proposed the introduction of a comprehensive requirement for all water users to annually attest to the volume of licensed water taken, and how it has been measured.

This would require water users with data loggers and telemetry to confirm the accuracy of the transmitted water take data annually, reconciling the annual volume of licensed water taken.

Water users without telemetry would need to confirm the accuracy of the submitted monthly water reports every year, confirming the annual volume of licensed water take.

It would also be an opportunity every year for water users to:

- confirm which works are taking licensed water and how they are metered, including that the meters or measurement devices have been maintained appropriately
- confirm the currency of water user contact information.

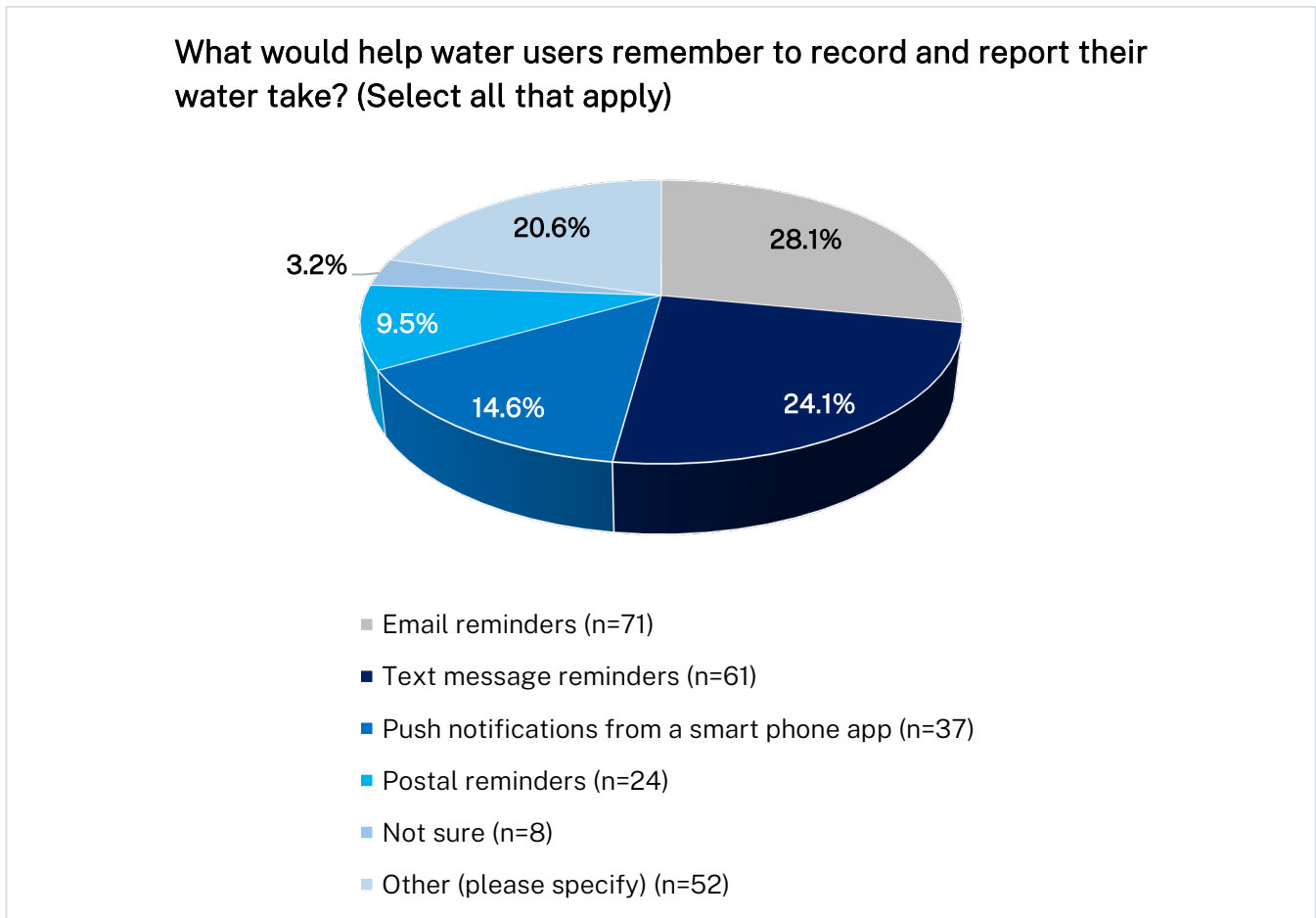
This volume attestation would be recognised in the Regulation, with penalties for providing incorrect information or no information at all. Complemented by a risk-based and proactive audit program by the Natural Resources Access Regulator (NRAR) and remote intelligence capability, this would support desktop compliance assessments by NRAR, reducing costs to all water users.

## Survey responses

**Survey question** (Figure 8): What would help water users remember to record and report their water take? (Select all that apply.)

- The majority of survey respondents preferred email (28% or n=71) and text message reminders (24% or n=61).
- Over 14% of respondents (n=37) preferred push notifications from a smart phone app.

Figure 8. Summary of survey responses to help water users remember to record and report



## Other suggestions

Approximately 11% of respondents (n=6) supported fines or the cancellation of water licences as a means of ensuring compliance. Another suggested approach was preventing water users from ordering water until they provide a meter reading. Six respondents proposed easier and simpler ways to report and record water take such as QR codes or smart phone apps. This highlights the need for more user-friendly and technologically advanced methods for reporting. One respondent suggested providing incentives in the form of bill discounts for timely reporting.

## Observations from surveys, submissions and webinars

A number of submissions (n=16) proposed that reporting should be practical and simple, preferably not with the administrative burden of monthly reporting, and that the absence of reporting should be taken to indicate no water take occurred.

Submissions called for improvements to the data held in the NSW Water Register, and included support for a smart phone app that would enable in-field reporting and reduce the administrative burden for water users.

### Reporting requirements

During webinars there was stakeholder concern expressed that monthly reporting imposes a high administrative burden, particularly for infrequent water users who may only take water once every 3 years. A suggestion was to consider no report to mean no water was taken, meaning reporting would only be required when water was taken. This concept was generally supported as more practical and streamlined.

### Water user attestation

The feedback received across all forums expressed some opposition to requiring water users to attest to the accuracy of data submitted by telemetry – just under half of the submissions and approximately 11% of survey respondents did not support attestation in any form.

Many respondents (26.7% of 82 respondents) advocated for a simple, cost-free and easy process for people to attest. Various methods were suggested including a smart phone app, email, online or electronic form, postal form, logbooks or diaries. Several respondents, suggested the attestation process should be coupled with reminders such as phone calls, emails or be linked to bills, while some proposed that annual reporting should align with existing reporting requirements such as Local Land Services annual stock reporting to make it easier for farmers.

### Overall feedback summary

Improvements in technology, including up-to-date data and new systems or apps, were raised consistently in feedback across all forums. These options were considered to have potential to make reporting simpler and easier for water users and to improve data availability for government to better manage the resource.

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

## Issue

It is not always practical to measure overland flow take using non-urban metering equipment.

Overland flow can be taken under different types of licensed entitlement, such as floodplain harvesting licences and unregulated river licences. While these different licensed entitlements can all be used to take overland flow, they are currently subject to different measurement rules.

Overland flow taken with an unregulated river licence must be metered in accordance with the non-urban metering framework. This means only closed conduit or open channel metering equipment is permitted to be used.

If overland flow is taken with a floodplain harvesting licence, it must be measured through either point-of-intake metering equipment (closed conduit metering or open channel metering under the metering framework) or storage measurement equipment, under the floodplain harvesting measurement framework.

In many cases, it would be more practical and cost effective if users taking overland flow with an unregulated river licence could measure their take using storage measurement devices, as is allowed under the floodplain harvesting measurement framework.

## Possible response

The issues and options paper outlined a proposal to amend the Regulation so that overland flow taken under unregulated river access licences can be measured by more appropriate equipment that better suits this type of water take. This would align with floodplain harvesting measurement rules and the measurement outcomes of the national standards and agreements.

It was proposed to exempt water users taking overland flow under an unregulated access licence from metering requirements until alternative provisions are in place, giving water users legal certainty while appropriate requirements and any system upgrades to support implementation are developed. In the interim, water take recording and reporting rules, and the proposed annual attestation of water take would apply.

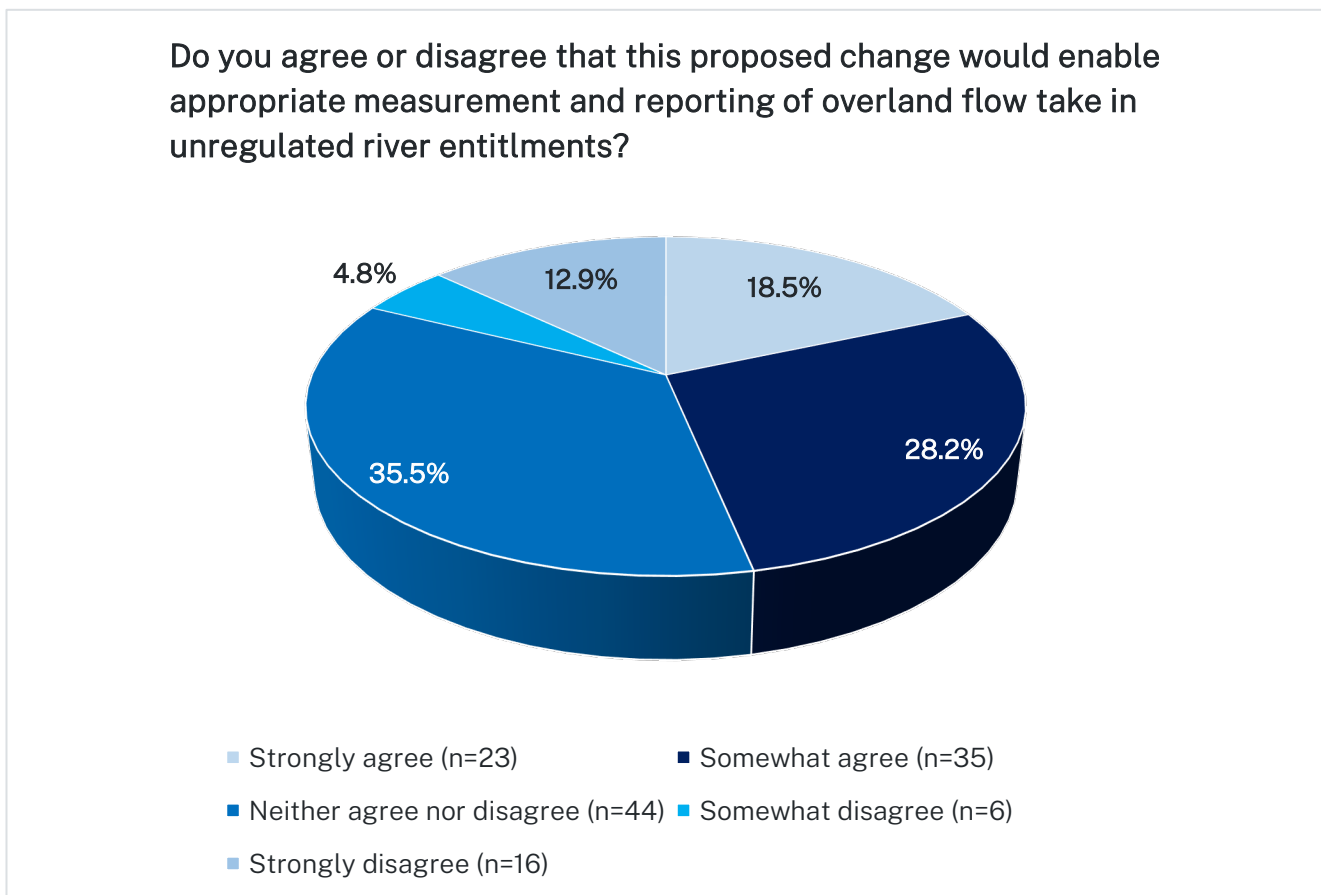


## Survey responses

**Survey question** (Figure 9): Do you agree or disagree that this proposed change would enable appropriate measurement and reporting of overland flow take in unregulated river entitlements?

- 46.7% (n=58) of respondents strongly agreed or agreed that the proposed change would enable appropriate measurement and reporting of overland flow take in unregulated river entitlements
- 35.5% (n=44) of respondents neither agreed nor disagreed
- 17.7% (n=22) of respondents somewhat disagreed or strongly disagreed
- When comparing the survey responses from respondents who identified as water users (n=91), over 47.3% of respondents strongly agreed or agreed that the proposed change would enable appropriate measurement and reporting of overland flow take in unregulated river entitlements.

Figure 9. Summary of survey responses to enable appropriate measurement and reporting of overland flow take



## Observations from surveys, submissions and webinars

Just over half of submissions (n=15) received recommended that the floodplain harvesting measurement policy be reviewed to ensure that it is practically effective, arguing that it is impractical and not currently fit-for-purpose.

Two submissions indicated some reservation about exempting water users taking overland flow under an unregulated river licence from metering requirements. The reasoning for this concern was largely related to the possibility of negative public perception, creating the impression of non-compliance and maintaining the integrity of the reform.

Just under half of submissions (n=13) suggested that unregulated river licence holders be permitted to take overland flow with approved secondary meters until the following barriers are addressed:

- shortage of DQPs to install storage meters
- improved availability of primary storage meters
- 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
- sufficient resources are allocated to WaterNSW to upgrade the IT systems to be fit-for-purpose for DQPs and water users
- surveyors can use the newly approved improvements to survey requirements.

One submission strongly objected to an exemption for unregulated river licence holders, noting that the capture of overland flow is a significant diversion of water that should flow into streams, wetlands and cultural sites as well as recharge of groundwater sources.

## Overall feedback summary

There was support from most survey responses and submissions to exempt water users taking overland flow under an unregulated access licence from the non-urban metering requirements until alternative provisions are in place.

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## Strengthening compliance and enforcement powers

### Issue

Strengthened compliance tools are needed to ensure efficient and effective enforcement outcomes.

NRAR is responsible for compliance and enforcement of water laws in NSW, including the metering rules. Its focus has been to ensure high-volume, active works are compliant, educating water users about the rules and their obligations in the lead up to their compliance deadlines, and monitoring and enforcing compliance amongst groups whose deadline has passed.

To ensure fairness and ongoing proper operation of meters, NRAR needs clear, effective and efficient enforcement tools. In practice, NRAR has found that better tools are needed to reinforce the obligations of all water users, backed up by more effective enforcement powers to encourage compliance.

There are a number of areas where changes are needed to provide for more effective use of enforcement tools.

### Possible response

The issues and options paper outlined the following possible responses to address this issue:

1. Improving provisions around faulty meter equipment – it is proposed to amend the Regulation to ensure that meters are repaired, or replaced if repair is not possible, in a timely way.
2. Clarifying definitions for offence provisions – specifically, clarifying some of the terminology related to s91i of the Water Management Act 2000 regarding taking water when metering equipment is not installed or is not working.
3. Enabling NRAR to issue directions requiring calibration and proper operation of metering equipment – the Act currently enables NRAR to issue directions regarding installation, replacement, use and maintenance of metering equipment. This does not currently extend to calibration or ensuring that metering equipment is operating properly.

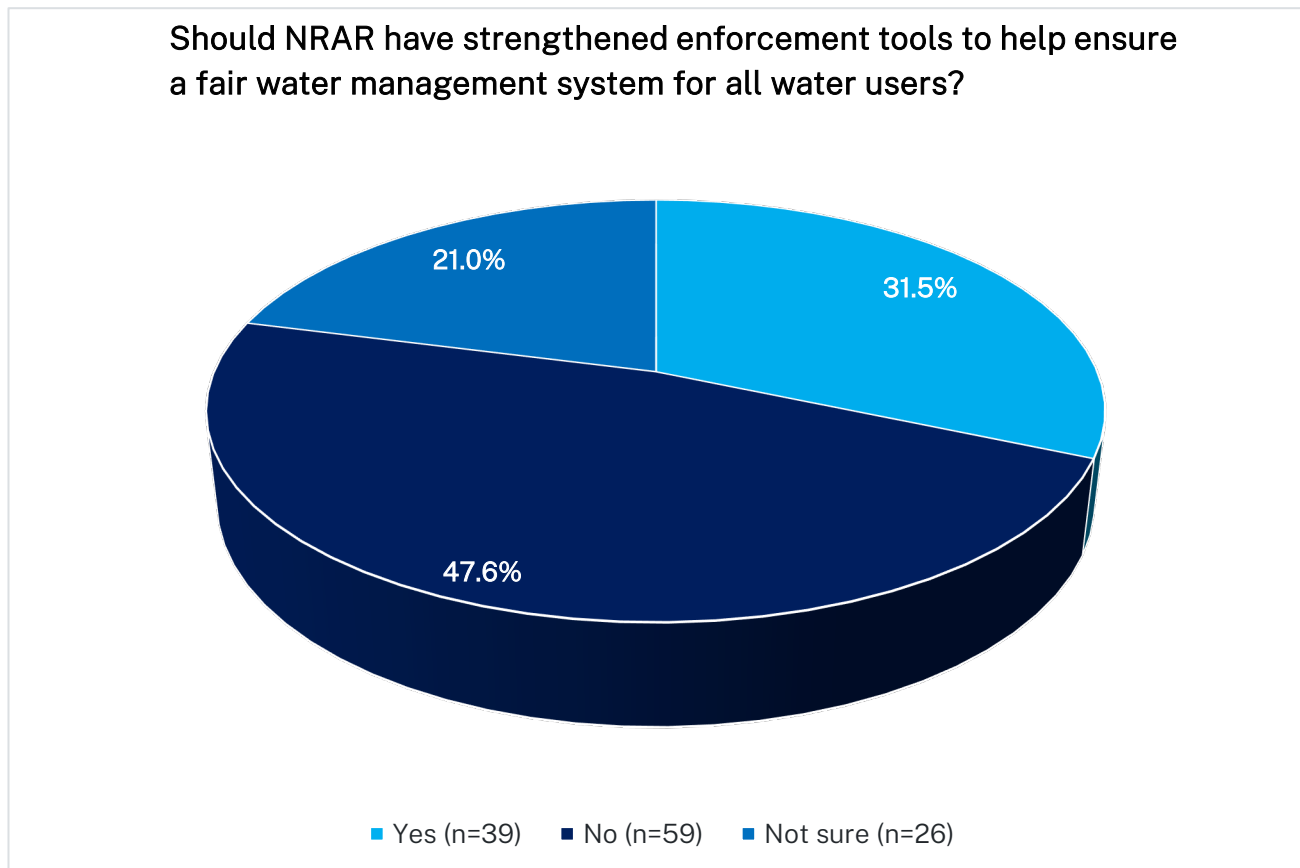
### Survey responses

**Survey question** (Figure 10): Should NRAR have strengthened enforcement tools to help ensure a fair water management system for all users?

- 47.6% (n=59) of respondents did not believe that NRAR should have strengthened enforcement tools

- 31.5% (n=39) of respondents agreed that NRAR should have strengthened enforcement tools
- 21% (n=26) of respondents were unsure
- When comparing the survey responses from respondents who identified as water users (n=91), over 52% (n=48) of respondents did not believe that NRAR should have strengthened enforcement tools while 24.2% (n=22) believed they should.

Figure 10. Summary of survey responses regarding strengthening enforcement tools for NRAR



## Observations from surveys, submissions and webinars

Just under half of the submissions (n=14) did not support placing time limits on the repair of faulty meters, citing the lack of DQP availability as a barrier to water users being able to replace or repair meters. The general view was that until this issue is resolved it is unreasonable to place time limits on water users.

Several water users reported experiencing frequent telemetry failure, often due to environmental factors such as cloud cover or general loss of reception. This triggers alarms to be sent, which then require the water user to submit a s91i faulty metering equipment report. Feedback indicated that it was not practical to submit s91i forms for intermittent coverage losses, which was generally the reason for the alarm rather than an equipment fault, and it was unclear what action was required from the water user in these circumstances.

While there was no support for placing time limits on the repair of faulty meters, 14 submissions supported extending the validity of the s91i reporting form to 6 months to reduce the administrative burden of monthly reporting requirements.

Submissions suggested the use of education and support, for both water users and DQPs, before increasing NRAR's enforcement tools and that funds raised from the existing penalties might be used to this end.

There was support expressed for simplifying the language around offence provisions and having standard penalty codes, like speeding fines, stressing the need to clearly communicate the changes and educate water users before they were implemented.

## **Overall feedback summary**

While some respondents to previous questions indicated that penalties, such as fines or cancellation of licences, might encourage compliance, the majority of respondents to this question did not support NRAR having strengthened enforcement tools.

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## General feedback

Feedback overall welcomed the government's recognition of the barriers to compliance, as well as an acknowledgement that many of the existing barriers are beyond the control of water users. It was clearly expressed in feedback across all forums that there is no tolerance for a lack of compliance with water laws.

There is some reluctance to modify compliance requirements in some – but not all – instances, due to the time, finances and labour invested in the reforms to date. Feedback indicates there is strong support for practical, fair and enduring solutions to the known barriers and the need for clearer pathways for water users to achieve compliance.

### Reduction in cost and simplification of rules

A number of submissions raised the issue of cost of compliance and what they viewed as the significant impact that cost to the water user had on compliance. Responses highlighted the high burden of costs, especially for telemetry, including the ongoing costs. Feedback emphasised a desire for a greater focus on cost sharing, with Government assuming more responsibility for funding implementation of the reform.

There were reservations expressed about changes that would create different compliance requirements for different valleys, water sources or other areas, noting that these changes might create confusion and create inequity. While a level of responsiveness and understanding of local circumstances was seen as important, fairness and the perception of both fairness and integrity of the reform, were also commonly raised issues.

### One thing you would change

There was general agreement in responses that the current framework does not meet the policy objective to minimise undue costs for smaller water users. A number of submissions recommended an automatic, temporary exemption for known barriers, including inconsistent metering conditions (water sharing plans vs metering rules), lack of DQP availability, data logger and telemetry availability and faulty meters.

When asked what single thing they would change about the non-urban metering rules, just over 12% of survey respondents (n=12) expressed a desire to grant more exemptions for small water users from metering rules.

Survey respondents and submissions highlighted the need to improve and fix technology, backroom software and support systems.

Some survey respondents emphasised the importance of more flexibility in reporting and options to install different meters, while others suggested simplifying the rules (n=5), better enforcement of the rules (n=3), the need for more incentives for DQPs (n=3), and a desire for lower costs or government funding for metering (n=4).

## Biggest concerns

Describing the biggest concerns about the non-urban metering rules, 40% of survey respondents (n=45) expressed concerns about the high cost of metering, particularly for small water users. Another concern voiced by 16% of respondents related to the difficulties in accessing DQPs and issues with installation.

Eight survey respondents, (7%), identified problems with metering equipment or systems. Technical issues and malfunctions in the equipment were a source of frustration for users. Almost 12% of survey respondents (n=13) found the rules confusing and too complicated, suggesting the need for clearer and more straightforward guidelines. Seven survey respondents cited inconsistencies and different rules for some water users as a concern.

## Other comments

A concern raised by several survey respondents is the need for greater unity between government agencies, suggesting a need for more streamlined communication and collaboration among the different agencies.

Four survey respondents expressed a need for consistent messaging and clarity regarding who to talk to for information to understand the rules. This underscores the importance of a clear and unified communication strategy to avoid confusion among water users.

Survey respondents and submissions called for extending the coastal compliance date, citing the lack of certainty with the review outcomes yet to be determined.

It was recognised in some submissions that efforts by the department to “identify problems and possible solutions to metering compliance barriers” was appreciated. However, these submissions also stressed the requirement for urgency in moving forward with “the adoption of practical and enduring resolution of those barriers”.

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## Industry specific feedback

### Extractive industry

Industry specific feedback during the consultation process was received from representatives of extractive industries. This submission stressed the difficulty in compliance with metering requirements in relation to:

- metering of extraction from voids
- complicated terminology of work approval conditions
- concerns about a one size fits all approach.

A key issue raised in this submission is how metering requirements apply to voids where there is a mixing of licensed and non-licensed water sources, noting that a pump or meter cannot distinguish between water sources thereby affecting the accurate recording of water take.

As well as providing feedback on the options raised in the issues and options paper, the submission included a number of specific recommendations related to quarry voids, work approval conditions, an allowance for post-meter corrections, and greater reference to the Aquifer Interference Policy.

### Environmental water

The Commonwealth Environmental Water Holder's submission stated that "issues and challenges that are unique to the delivery of water for the environment are not clearly addressed in the options paper". This submission expressed the view that the issues and options paper emphasised irrigation water use, not recognising "the inherent differences and overall lower risk profile associated with environmental water delivery".

The submission recommended development of an overall risk-based approach that incorporates both environment and irrigation water.

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## NSW Joint water sector research program

The department, WaterNSW, and the Natural Resources Access Regulator (NRAR) collaborated on this program to better understand how the 3 agencies are delivering long term value to customers and the broader NSW community in relation to their inter-linked water management, planning and compliance responsibilities. The program included a:

- voice of customer survey with 1,118 water licence holders across regulated, unregulated, and groundwater sources
- community sentiment survey with 450 metro, regional, and rural community members who did not hold a licence or approval



- interviews with 47 stakeholder representatives including from water user associations, peak bodies, local government, and other government agencies.

Insights and customer pain-points related to metering identified through this research program reinforce the messages we heard in response to the discussion paper.

One of the lowest scoring service areas identified through the NSW Joint water sector research program was metering. Stakeholders expressed an overall dissatisfaction and frustration with various aspects of metering policy, rules, compliance costs, and communications channels. Particularly, the costs associated with metering emerged as a key concern, especially among smaller licence holders who perceive a lack of equity in the current one-size-fits-all approach, especially for irregular water users.

Despite positive sentiment regarding the metering review from stakeholders involved in the research program, there were concerns that further repetitive consultation may not be productive. The department is aware of this concern across related government consultations and is working on better alignment in engagement to reduce impost on the community.

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## Next steps

During the public consultation period, hundreds of people – including water users and industry groups – engaged with the department to attend webinars, complete the online survey and provide written submissions.

The feedback outlined in this report is informing the development of a review report to be provided to the Minister for Water that will recommend actions to help make it easier for water users to become compliant and to ensure water use is being measured and managed fairly and sustainably. We will continue to communicate with stakeholders when these recommendations have been confirmed.