



Proposals for strengthening non-urban water measurement

Consultation summary

May 2022

Rural Water Futures

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Summary

State-wide consultation

In 2019 the Queensland Government sought feedback from industry and the community on [proposals for strengthening non-urban water measurement](#) (policy proposals).

The consultation ran from 9 September to 13 December 2019.

Many of the people we spoke to expressed concerns about the impacts of the drought and their ability to meet any new metering requirements. Drought impacts on water users and on sustainable water management have been primary considerations for us in responding to the issues raised and our policy approach.

We received comprehensive feedback in the 324 written submissions and at the 22 stakeholder meetings held across the state. We heard:

- strong support for better accountability for using water;
- broad acceptance that water measurement is key to fairer and more accountable water use; and
- significant support for taking a risk-based approach to water measurement.

Industry bodies, water entitlement holders and community members also raised concerns about:

- the costs associated with the proposed metering requirements;
- where meters should be required;
- the application and scope of telemetry and data loggers;
- transitional arrangements for existing meters; and
- timeframes for implementation.

We have taken time to consider all feedback to ensure what we propose is practical and supports fair and sustainable water management. The extensive feedback along with the work we have done since consultation has helped us to shape the following approach to policy development for metering volumetric water entitlements:

- adopting a staged risk-based approach to implementing new metering requirements by prioritising implementation in areas where the water resource is at the highest risk;
- the use of thresholds and exemptions to ensure small volume, low risk take is not subject to unnecessary metering;
- introducing requirements and standards for existing, new and replacement meters that assure an acceptable level of confidence in meter performance;
- requiring telemetry in areas where the water resource is at higher risk or where there is evidence on non-compliance with entitlements;
- ensuring there is greater consistency in metering standards for both supplemented and unsupplemented water take; and
- ensuring the Department of Regional Development, Manufacturing and Water (the department) can access a wide range of compliance and enforcement tools that effectively deter those who do not follow the rules.

Targeted engagement

In September 2021 we released a proposed framework for measuring overland flow water for consultation with affected stakeholders. From September to December 2021, we undertook combined engagement on the refined policy proposals and the overland flow measurement framework. This was

targeted at peak industry bodies and irrigator groups in the Queensland Murray-Darling Basin (QMDB) as this area has been assessed as our highest priority for improved measurement in Queensland. We attended 14 stakeholder meetings with peak industry bodies, irrigators, water entitlement holders and water service providers.

While there was no formal submission process from the targeted engagement, Agforce and the Queensland Farmers' Federation indicated support for the policy positions both in meetings and in written feedback. Irrigator groups and individuals also indicated support for the policy positions.

Key policy positions supported by stakeholders included:

- the application of the policy on volumetric entitlements;
the state-wide minimum measurement threshold of 5ML;
- the requirement for telemetry on surface water entitlements in the QMDB;
- aligning meter standards across supplemented and unsupplemented water take; and
- transitional arrangements for existing meters and the 600mm threshold for pattern approved meters.

Concerns about meter costs and connectivity and feasibility issues around telemetry continued to be raised. Agforce and the Queensland Farmers' Federation again highlighted that some non-pattern approved meters can be just as accurate (and less costly) than many pattern approved meters.

The overland flow measurement framework was generally supported by peak bodies and irrigators, with good support for the proposed farm-scale measurement plan approach and provision of measurement systems options for water users to choose from. Some concerns were raised about the practicality of using a systems-based water balance calculation method for measuring overland flow volumes.

This document summarises the key issues raised during state-wide consultation and targeted engagement, and our response.

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INTRODUCTION

In 2019, the Queensland Government sought feedback from industry and the community on [proposals for strengthening non-urban water measurement](#) (policy proposals).

The state-wide consultation ran from 9 September to 13 December 2019. We received 324 submissions and comprehensive feedback from industry bodies and water entitlement holders.

In February 2020 we released a high level [overview of the feedback](#) we received during consultation.

Further targeted engagement was undertaken with peak industry bodies and irrigator groups from September to December 2021. This included seeking feedback on a proposed framework for measuring the take of overland flow water.

This report details the issues raised during consultation, and our response to these. It also sets out our policy approach.

Consultation stats

320 +

submissions received

21,000

letters sent to water entitlement holders

22

stakeholder meetings across the state

400+

meeting attendees

Through consultation we sought feedback from industry and the community on policy proposals to:

- provide clarity on which water entitlements must be metered;
- strengthen meter standards to stringently apply the Australian standard;
- require meter installations to be capable of recording, storing and transmitting real time data;
- align meter requirements across all water supply schemes;
- retain the existing delivery and funding model;
- allow existing meters to be transitioned into the new requirements; and
- adopt a risk-based approach to implementing new metering requirements based on risk to and pressure on available water resources.

Many of the people we spoke to during consultation expressed concerns about the impacts of the drought and their ability to meet any new metering requirements.

Drought impacts on water users and on sustainable water management have been primary considerations for us in responding to the issues raised and our policy approach.

Thank you to everyone who participated in the stakeholder meetings, and to those who lodged a submission in response to the policy proposals.

We also acknowledge the support of the Queensland Farmers' Federation during consultation.

BACKGROUND

The Rural Water Futures program is transforming and strengthening the ways Queensland's water resources are managed, measured and reported. It was launched in 2018 to deliver on the Queensland Government's commitments in response to the findings of the independent audit of Queensland non-urban water measurement and compliance (independent audit).

Strengthening non-urban water measurement is an important component of the Queensland Government's response to the independent audit which found that:

- a significant number of meters do not meet national standards;
- existing meter validation and maintenance processes are flawed;
- meter reading is done infrequently, resulting in a lack of available information; and
- metering is implemented inconsistently across the state.

In response to the independent audit, a review of the state's non-urban water metering policy was conducted by the department in 2018.

[Proposals for strengthening non-urban water measurement](#) were developed based on the findings of the review.

Another initiative being delivered under Rural Water Futures is the overland flow measurement program that seeks to improve the way the take of overland flow water is measured across the Queensland Murray-Darling Basin (QMDB).

The overland flow measurement program is part of a broader collaboration with the Australian Government and other Basin state governments to improve compliance and enforcement practices across the Murray-Darling Basin.

The measurement and monitoring of overland flow water is critical to obtain a full picture of water use in the QMDB. The volumes involved can be significant and in areas where the pressure on the water resource is high, measuring and monitoring this take becomes more important to support sustainable water resource management and planning.

In September 2021, the proposed overland flow measurement framework was made available for consultation with affected water users and stakeholders.

STATE-WIDE CONSULTATION PROCESS

The state-wide consultation process ran for 14 weeks to allow industry and the community sufficient time to respond to the policy proposals.

All together 22 stakeholder meetings were held in 15 locations across the state with over 400 people taking part.

In addition to this, 21,000 letters were sent to water entitlement holders inviting their feedback.

We heard from a diverse range of stakeholders including:

- peak bodies
- industry bodies
- water entitlement holders
- irrigators
- canegrowers
- graziers
- local government
- the community.

More than half the submissions we received were from irrigators.

Feedback about the consultation process

While many people appreciated the opportunity to provide feedback, some were disappointed with the consultation timing and process. It was suggested that:

- the consultation process was not broadly publicised;
- there were little details around data loggers, telemetry and use of data in the consultation paper; and
- there was insufficient time to consider the policy proposals and submit a response.

A significant number of people asked to be consulted again before the policy was finalised.

After considering the feedback, we recognised there was additional work to do on some issues to further develop the policy proposals. In August 2020, we wrote to all submitters to inform them about this work and that we would be seeking opportunities for ongoing stakeholder engagement.



WHAT WE HEARD AND HOW WE RESPONDED

In the written submissions and at the stakeholder meetings, we heard:

- strong support for better accountability for using water;
- broad acceptance that water measurement is key to fairer and more accountable water use; and
- significant support for taking a risk-based approach to water measurement.

Industry bodies, water entitlement holders and community members also raised concerns about:

- the costs associated with the proposed metering requirements;
- where meters should be required;
- the application and scope of telemetry and data loggers;
- transitional arrangements for existing meters;
- inconsistencies in metering arrangements for supplemented and unsupplemented water; and
- timeframes for implementation.

Given the extensive feedback through consultation, we are unable to include and address all the specific concerns raised about individual circumstances in this report. However, every submission has been considered and has helped to shape our policy approach for metering volumetric water entitlements:

- adopting a staged risk-based approach to implementing new metering requirements by prioritising implementation in areas where the water resource is at the highest risk;
- the use of thresholds and exemptions to ensure small volume, low risk take is not subject to unnecessary metering;
- introducing requirements and standards for existing, new and replacement meters that assure an acceptable level of confidence in meter performance;
- requiring telemetry in areas where the water resource is at higher risk or where there is evidence on non-compliance with entitlements;
- ensuring there is greater consistency in metering standards for both supplemented and unsupplemented water take; and
- ensuring the department can access a wide range of compliance and enforcement tools that effectively deter people who do not follow the rules.

History of metering policy, implementation and support

What we heard	Our response
<p>Inconsistency over time about metering policy and requirements, departmental support and compliance was a theme that emerged through the consultation.</p> <p>Water entitlement holders were concerned that the policy will keep changing over time creating uncertainty. They requested better engagement, support and information to understand and meet their obligations.</p> <p>Improved compliance and education were supported, although some thought the current rules and laws were adequate.</p>	<p>The department is working to improve the way we deliver our water management and regulatory responsibilities and engage and communicate with our stakeholders and customers.</p> <p>We will ensure the implementation of strengthened measurement is transparent and that we report on progress. To support this, we will publish implementation plans and other supporting information to ensure that requirements and timeframes can be easily understood.</p> <p>We are also establishing a framework for measuring and publicly reporting on our performance in managing non-urban water resources. We will be seeking stakeholder view on our performance and will report annually on our progress.</p> <p>Having this information in the public domain will help provide confidence that our water resources are being managed fairly and sustainably.</p>

Costs associated with the proposed metering requirements

Extracts from consultation submissions:

The Queensland Government should not move beyond the requirements of Australian Standard AS4747.

Stable metering requirements [are supported] over time with the continued use of non-pattern approved meters but without onerous additional validation and accuracy testing requirements being applied.

The current market supply and affordability of large pump size (>600mm) pattern approved meters is limited so the continued use of non-pattern approved meters is supported but without onerous additional validation and accuracy testing requirements being applied.

An effective and cost-effective water metering, management and compliance framework, and as such the acceptance of AS4747 metering for units 600mm and less.

What we heard	Our response
<p>While there was broad support for metering to improve accountability, transparency and fairness, significant concern about the cost of meters to water users was expressed.</p> <p>Costs associated with pattern approved meters, data loggers, telemetry, as well as additional costs relating to meter installation, maintenance and performance testing were concerns raised in submissions and at stakeholder meetings.</p> <p>Key issues raised about metering costs:</p> <ul style="list-style-type: none"> ▪ small-scale low-income farms can't recover metering costs ▪ the level of expense given the few times meters are used during drought. 	<p>Metering costs and cost mitigation</p> <p>We have carefully considered the feedback provided on metering costs and this will guide our approach for developing our policy.</p> <p>We acknowledge the significant concerns, especially for small-scale irrigators. We also understand that costs for large operators can be substantial.</p> <p>As a manager and regulator of the resource we also have to consider our responsibilities in ensuring that Queensland's water resources are managed fairly and sustainably and that we can hold people to account when they do not follow the rules.</p> <p>Effective metering is essential to managing water fairly and sustainably and ensures that there is appropriate accountability for access to precious water resources.</p>

What we heard

- high costs for certified meter installers and validators
- electronic meters are three times the cost of mechanical meters and have additional maintenance costs in flood affected areas
- high cost of meters for multiple works
- high costs for telemetry with little perceived benefit
- telemetry cost for small operators would not be economically viable
- data loggers may be damaged during floods, and regular replacement costs may not be sustainable for the water user
- unless data loggers are actively used, they will add cost for no benefits.

Some submissions suggested cost mitigation options such as:

- a risk-based approach whereby water resources at risk and areas where water theft is known to be common are metered
- metering requirements be subject to a cost benefit analysis
- a scheme to subsidise metering costs
- a rebate for meters recently installed that don't meet proposed requirements
- bulk purchase of meters with industry replaces broken meters through a government funded system to ensure all compliance is met within a suitable time frame
- government to pay for all metering costs.

Our response

Acknowledging that metering is an existing cost to water users, we aim to minimise the financial impacts of any new metering requirements and set clear timeframes for when costs will be imposed.

The balance of cost and benefit underpins our policy approach, the application of standards and our approach to implementation.

For example:

- allowing adequate time for implementation where possible to ensure future costs can be considered within water users' overall business expenses
- using risk to guide the application of telemetry, which would be a new cost to water users
- setting standards to enable existing meters to be retained in service
- using thresholds to ensure small volume, low risk take is not unnecessarily metered.

In recent times the number of available pattern approved meters has grown, increasing choice for water users.

We are working with the Australian Government to encourage meter manufacturers to seek pattern approval for their meters.

We are also looking at other arrangements to minimise any new costs associated with the policy.

Ownership arrangements

No change is proposed to the existing ownership arrangements.

Metering standards

What we heard	Our response
<p>We received substantial feedback about metering standards and the issues that may impact water users' ability to meet these.</p> <p>While there is general support for pattern approved meters, the appropriateness of AS4747 as a benchmark for metering was questioned.</p> <p>Some saw that the proposals exceeded AS4747, whereas others felt AS4747 was not an appropriate standard for Queensland conditions.</p> <p>Many water users were concerned that they have recently upgraded their meters to be compliant with the current legislation, and that their meters would not be valid under the new proposal, resulting in more costs to them. It was thought that being new meters these would have an appropriate degree of measurement accuracy.</p> <p>Market availability of pattern-approved meters, especially those suitable for larger pipes was raised.</p> <p>Revalidation and maintenance reporting</p> <p>There was general support for the proposed process to require validation by an appropriately certified person, use of tamper proof seals for all meters. Simplification of the revalidation process was also suggested.</p> <p>There was concern that the performance of electronic meters will be comprised in remote areas where communications networks are unreliable.</p> <p>It was suggested that:</p> <ul style="list-style-type: none"> ▪ a risk-based approach to validation be taken based on frequency of water use, the location of take and volumes of water take and the size of the works; ▪ self-assessment and online validation be explored to streamline the process. 	<p>Metering standards</p> <p>The metering policy needs to consider requirements for new, replacement and existing meters and set standards to ensure these meters continue to perform as intended over their lifetime.</p> <p>We have updated the metering standard to set requirements for meter performance. These requirements, when met, enable:</p> <ul style="list-style-type: none"> ▪ existing meters to remain in service ▪ the use of metering systems suited to larger metering installations. <p>The standards for new meters include a requirement to install a pattern-approved meter up for applicable pipe configurations up to 600mm.</p> <p>The updated metering standard also sets requirements for storage meters.</p> <p>It is intended that standards for meters taking supplemented water will align over time.</p> <p>Revalidation and maintenance reporting</p> <p>Revalidation is a periodic assessment of metering installations by a certified meter installer to ensure that these installations continue to meet required standards.</p> <p>Timeframes for revalidation are currently set in Schedule 11 of the <i>Water Regulation 2016</i>. These timeframes will not change significantly.</p> <p>The updated metering standard sets out a clearer more robust approach to validation and revalidation to provide the necessary assurance that a meter is performing as intended.</p> <p>The standard clarifies the maintenance requirements that will be confirmed at revalidation have also been clarified. It is anticipated that water users currently undertake maintenance activities to ensure their meter remains in working condition. The updates to the maintenance requirements in the metering standard provide clear expectations.</p>

Industry readiness

Industry readiness to support the measurement policy and the availability of qualified people to install, maintain and validate meters in a timely manner was raised in a number of submissions.

The limited availability of qualified service providers (validators, installers, meter repair and maintenance) in close proximity to where service is required, especially in remote areas was of concern.

It was also felt that a limited number of meter validators may monopolise the market and artificially inflate meter validation costs.

Workplace health and safety risks for untrained personnel undertaking meter installations (heavy lifting, excavation, welding and electrical installations) were also mentioned.

We regularly engage with Irrigation Australia Ltd (IAL), the national irrigation industry and training body, to ensure we have a good understanding of their capacity to deliver the necessary training to support the expansion of metering across the state.

We are also supporting IAL in their activities to ensure the ongoing competency of certified meter installers.

Application and scope of telemetry and data loggers

Extracts from consultation submissions:

While we are supportive of telemetry there may be some areas where take is so intermittent the installation of telemetry and its ongoing maintenance and operational costs would simply fail the “Effective and Cost-Effective” test.

Telemetry may not deliver an additional financial benefit to many water users and, more generally, is not beneficial where there is no risk of overuse in a catchment, when it is impractical (poor telecommunications coverage), unaffordable for the lower level of water use involved or is unreliable.

What we heard	Our response
<p>The benefits and viability of telemetry were challenged by industry and individual water users.</p> <p>While a blanket approach to implementing telemetry across the state was not supported, a risk-based approach was supported particularly in areas where water is over allocated and resources have to be more tightly managed.</p> <p>Thresholds/exclusions</p> <p>Telemetry was seen as beneficial for larger irrigators only and cost prohibitive for allocations less than 20 megalitres (ML).</p> <p>Some submitters supported different commercially viable thresholds for telemetry, ranging from 10ML up to 500ML or for pumping installations with a 200mm suction or more.</p> <p>Telemetry was not seen as beneficial for:</p> <ul style="list-style-type: none">▪ water take for stock and domestic use▪ water take that is not time critical▪ small operations, and wind or solar pumping▪ areas where allowed water use does not significantly impact the water resource.	<p>Connectivity and technology are vital to managing business processes to increase efficiency and business outputs. Many water users currently utilise telemetry to enhance their business activities and profitability.</p> <p>Telemetry can benefit water users by allowing them to track and better manage their usage and identify losses early.</p> <p>As a regulator, we must improve the timeliness and information we receive about water take to ensure we fairly and sustainably manage water resources and can respond to non-compliance quickly, particularly in catchments where there is a high risk to the resource.</p> <p>Our experience in managing the departmental hydrographic network suggests that telemetry costs are reducing as demand increases and technology advances.</p> <p>To better understand the use of telemetry on water meters we are undertaking a trial to:</p> <ul style="list-style-type: none">▪ identify cost effective, accurate telemetry devices▪ identify effective transmission options and costs. <p>We are also considering data from previous water metering telemetry trials undertaken by industry bodies and other agencies.</p> <p>The information from this work will help us to determine where telemetry should be implemented and what the</p>

What we heard

Storage, access to and use of water use data

While improved transparency and accountability that water resources are being managed fairly and sustainably is broadly supported, strong concerns around privacy and security of water users' personal details were raised.

The following responses were common:

- the privacy of the individual's data must be protected
- security from data hacking, misuse and misrepresentation of data must be ensured
- the entitlement holder must be able to access their raw data and the departments register of their account
- there should not be a public register showing individual entitlement holders' extractions
- the public should have access to the data on a zone, catchment or GMA basis only.

Water users also wanted to be consulted further about:

- how the department will use the data
- who will have access (many do not support third-party access)
- what information will be made publicly available (to allay privacy and security concerns).

The department's ability to effectively use the data collected was also questioned.

Remote area access to appropriate devices and satellite and digital networks; and limited data logger performance in remote locations were also significant concerns.

Our response

alternative requirements will be in areas where telemetry may not be required.

This may include options such as increasing the number of meter reads and requiring additional evidence to verify the read is correct; or the use of technology such as water apps to provide water use data.

For supplemented schemes, the need for and use of data loggers and telemetry is to be determined by the water service providers.

Transitional arrangements for existing meters

Extracts from consultation submissions:

The transitional arrangements strike a reasonable balance between improved accuracy and minimising costs. Our members would expect any compliance focus to be initially on the performance of the water meter, rather than strict compliance with the required Australian Standard.

It is recommended [the department] re-examines transitional provisions and options to minimise the time and financial requirements on existing meter owners.

What we heard	Our response
<p>Keeping existing functional meters in operation for as long as possible is a priority for many water users. It was argued that due to the drought many meters have been idle for substantial periods and therefore have not experienced the wear and tear of normal use.</p> <p>It was suggested that 'end of life' for meters should therefore be determined on the volume of flow through the meter, rather than how old they are.</p> <p>Feedback indicated that information about the proposed transitional arrangements was inadequate and that clear guidelines are needed.</p> <p>Key issues raised:</p> <ul style="list-style-type: none"> ▪ meters that are still accurate at the end of their life should not need to be replaced ▪ the proposed transitional arrangements do not really improve the balance of meter accuracy and minimising costs for existing meter owners ▪ the transitional arrangements do not balance the volume of water used against cost of installation, with cost of metering have a greater impact on those that use water infrequently • most existing meters are not compatible with data loggers and would need replacing to meet new standards. <p>It was also suggested that:</p> <ul style="list-style-type: none"> • installation of meters should be completed before telemetry is introduced • in-situ field testing of metering equipment needs to be part of transitional arrangements • a catchment-by-catchment approach should be taken • the existing manual reporting approach should be maintained to ensure reporting continuity. 	<p>The recent update to the metering standard enables existing meters which demonstrate an acceptable level of performance to remain in service.</p> <p>The updated standard provides a list of meters that have the necessary manufacturers test certificate. Where these meters are also capable of data output, installed correctly and maintained they can remain in service.</p> <p>It has been a requirement of the Departmental metering standard and earlier meter specifications back to 2005 that meters are capable of data output.</p> <p>This means that water users will only have to install new meters when existing meters break or no longer measure effectively, or where very old meters are not capable of data output. Any new meters are then required to meet the standard requirements for new meters. There will be minimal changes to this standard under the proposed policy, however, the requirement to use a pattern approved meter for new and replacement installations will be reviewed periodically as more pattern approved meters become available in larger sizes.</p>

Who will need a meter

Extract from consultation submission:

Meter installations are very costly and in this paper the government is proposing to substantially increase the cost of metering installations that is unrealistic and cost prohibitive to most non-urban businesses. Where the water supply is unsupplemented the local water user group should determine the thresholds and/or limits for the requirement for a meter based on the material impact that the specific allocations, licences or entitlements have on the total water take of the catchment area.

What we heard	Our response
<p>Given the variation in entitlements, meter ownership arrangements and scale of operation across the state, some people were uncertain about how their own circumstances may be impacted by the proposals relating to who will need a meter.</p> <p>The metering of non-volumetric entitlements was questioned, as was the cost-benefit of metering entitlements of smaller/low volume water users.</p> <p>The development of thresholds using a risk-based approach to determine where meters should be required was generally supported.</p> <p>It was suggested that thresholds and exclusions for local catchments be developed in collaboration with stakeholders at a catchment or basin level.</p> <p>Strong support for stock and domestic users and non-volumetric entitlements to be exempt from metering was shared across most stakeholder groups.</p> <p>Many of the suggested exclusions were specific to an individual catchment or water plan area rather than an absolute exclusion to apply to all users.</p> <p>Diverse views about thresholds were offered. Some suggested that there shouldn't be any thresholds and that all users should be metered.</p> <p>Others suggested thresholds ranging from 1ML up to 100ML.</p> <p>A small number of submissions suggested a threshold apply to small or non-commercial users such as hobby farmers. The concept of a small user is relative to individual risk profiles of catchments, rather than a one size fits all threshold or exclusion applying across the state.</p>	<p>We have assessed the option to apply a threshold under which metering will not be required, and metering exemptions for certain activities.</p> <p>Where metering is not required, further work will be undertaken to establish requirements for these water users to account for their water take. For example, we are exploring alternative forms of measurement such as remote sensing.</p> <p>The scheduling of new metering will be detailed in a publicly available implementation plan to ensure water users have clear visibility of the timeframes by which they will need to comply.</p>

Timeframes for implementation

Extract from consultation submission:

The severe drought conditions will make it difficult or impossible for some entitlement holders to meet the proposed new obligations by the current deadline, a source of potential additional mental stress. With no water to take, overuse is not an issue! [The department] should consider options to manage this including reviewing the NSW Government's approach.

What we heard	Our response
<p>Feedback throughout the consultation highlighted that financial stress through the drought will impact many water users' ability to meet the costs associated with the proposed new metering requirements.</p> <p>Many submissions spoke passionately about how any additional financial burden during the drought may also impact their health and well-being.</p> <p>Water users also wanted more information about timeframes for implementation including next steps and actions. Suggested timeframes for implementing new policy proposals varied, with 5 years being the most common timeframe suggested.</p> <p>Others felt that the policy proposals should be postponed and revisited at a later time.</p> <p>A need to consider equity as part of implementation, given the widespread nature of the proposals was identified. These considerations should be made at the catchment scale.</p>	<p>Sharing water fairly and sustainably will support drought resilience throughout the state.</p> <p>The department has undertaken a risk assessment of each catchment in Queensland based on water resource pressure.</p> <p>Water resource pressure is determined by considering factors such as</p> <ul style="list-style-type: none"> • the level of development in a catchment • water use, demand and allocation • history of overuse and compliance • end of system flows. <p>The more that these factors are impacted in a catchment the higher the water resource pressure risk is for that catchment.</p> <p>This work supports a staged risk-based approach to implementing new metering requirements by identifying priority areas for metering.</p> <p>Where a water plan sets timeframes for metering these will need to be adhered to.</p> <p>Industry bodies will be consulted about implementation timeframes and water users will be informed well in advance about how and when their metering requirements will change.</p> <p>The Queensland Murray-Darling Basin is the highest risk area of the State and will be prioritised to implement strengthened measurement. This will also ensure that we meet our commitments under the Murray-Darling Basin Compliance Compact.</p> <p>Implementation for supplemented schemes will be determined in consultation with water service providers taking into account the risk approach and future price path timeframes.</p>

The benefits of metering for managing drought

Metering not only enables the department to monitor water use and identify and address instances of overuse.

It also tells us overall how much of the resource is being used and what is available for use. Having better information about water use means we can make well-informed decisions about water resource allocations and more importantly, identify where water is underutilised and can be made available through trading opportunities for others to use. This will ensure we manage the resource sustainably while also supporting businesses to access water even during drought.

Having better water use information through metering can also support on-farm decision-making, helping to improve water use efficiency or to identify opportunities to buy or sell water to meet production needs or adapt to changing water availability. This can help businesses prepare for, manage through and recover from adverse conditions, like drought.

Water scarcity and increased demand for more limited resources during drought also increases public scrutiny on water users. Meters enable users to demonstrate they are using their allocation responsibly and within the rules.

TARGETED ENGAGEMENT PROCESS

Following consideration of stakeholder feedback on the draft policy proposals, many of the policy proposals were able to be significantly refined and presented for a final round of stakeholder feedback.

From September to December 2021, we undertook targeted stakeholder engagement on these refined policy proposals with peak industry bodies and irrigator groups in the Queensland Murray-Darling Basin (QMDB).

We focussed on the QMDB as this area has been assessed as the highest priority for implementing improved measurement. This also means that it will have stricter policy requirements and less lead time to implement them than other parts of the state.

We attended 14 meetings involving the following stakeholders:

- peak bodies
- industry bodies
- irrigators
- water entitlement holders
- water service providers

Engagement outlined how earlier feedback had been considered in refining policy proposals and provided additional information to stakeholders about ongoing technical work that DRDMW had been doing to support future policy implementation. Information provided included:

- a summary of issues raised and how that feedback has been considered;
- changes to the interim metering standard, where meters will be required, metering thresholds and exemptions, and how metering in water supply schemes will be improved into the future;
- measurement innovation initiatives, with a focus on telemetry - including how telemetry will be applied, how costs will be mitigated, and trial work being conducted to demonstrate the most effective technical requirements and telemetry equipment for successful implementation; and
- an outline of the policy implementation approach and schedule, including indicative timings and priorities for when water meters and/or telemetry would need to be installed.

Engagement also included the proposed framework for measuring overland flow water. A draft policy and standard for measuring overland flow water was provided to affected stakeholders for their feedback. Combining engagement on the refined policy proposals and the overland flow policy enabled feedback to be gathered to ensure overland flow measurement policy positions could be included in the final non-urban water measurement policy.

Stakeholder feedback on the refined policy proposals and the draft overland flow measurement framework was captured during meetings.

While there was no formal submission process from the targeted engagement, all stakeholders were able to make written submissions. Submissions were received from Agforce and the Queensland Farmers' Federation.

Stakeholder feedback

General feedback on policy proposals

Agforce and the Queensland Farmers' Federation indicated support for the department's policy positions both in meetings and in their written submissions.

QMDB irrigator groups and individuals in face-to-face meetings and on-farm visits indicated support for the department's policy positions.

Who will need a meter

There was good support for the policy to apply to volumetric entitlements.

There was good support for the application of a state-wide minimum measurement threshold of 5ML. It was acknowledged that this threshold would ensure that low-risk entitlements would not be subject to unnecessary metering requirements or undue costs.

Telemetry

The requirement for telemetry on surface water entitlements in the QMDB was supported.

The telemetry subsidy was welcomed as a way of supporting irrigators to meet the costs of telemetry requirements when they need to be implemented.

Stakeholders still had concerns about connectivity issues and the feasibility of telemetry in some situations.

Stakeholders were pleased that the department was running telemetry trials to identify practical solutions to address these issues.

Supplemented and unsupplemented take

There was support for aligning meter standards between meters used for taking unsupplemented water and meters used in water supply schemes for taking supplemented water.

Costs associated with proposed metering requirements

Meter costs remain a concern for irrigators.

Both Agforce and QFF continue to raise the issue that non-pattern approved meters can be just as accurate as pattern approved meters, with many non-pattern approved meters being less costly.

Transitional arrangements for existing meters

Irrigators supported the transitional arrangements for managing existing meters, for example where the department has confidence in the level of performance of an existing meter.

Irrigators also supported the pattern approval threshold being established at 600mm as this would help mitigate costs while still being able to improve the standard of meter performance over time.

Measurement of overland flow water

Irrigators and peak bodies generally supported the overland flow measurement framework.

They particularly supported measuring overland flow water using farm-scale measurement plans. There was also good support for the four types of measurement systems that were provided for water users to choose from, which would give them the flexibility to pick the system that best suited their water entitlement conditions and on-ground infrastructure.

Some concerns were raised about the practicality of using a system-based water balance calculation method for measuring overland flow take. Irrigators requested that a pilot version of this be trailed to help with fine tuning and education prior to policy implementation.

NEXT STEPS

Broader engagement outside of the QMDB will be scheduled based on implementation timeframes. This will enable a timely approach whereby stakeholders can be informed about and prepared for specific metering requirements in their area in the lead up to implementation. It will also allow learnings from the QMDB to be used.

In response to feedback about the proposed approach for measuring overland flow water, we are developing a pilot water balance calculator for consultation with stakeholders to improve understanding of and refine water balance calculation requirements. We are also intending to establish a measurement plan trial in the 2022–23 financial year. Together these activities will allow us to test and finalise overland flow measurement requirements and to use the results to develop technical standards and detailed user guidelines to support implementation.

Feedback from our consultation and engagement processes has helped us finalise Queensland's non-urban water measurement policy.