

Non-urban water metering

This document answers frequently asked questions about the NSW Water Metering Framework, including its regulation and policy.

What is the non-urban metering framework?

The NSW non-urban metering reform is part of a broader commitment made by all state and territories of Australia in 2009 and the Government's long-term plan for better water management in NSW.

Introduced in 2018, the non-urban metering framework sets out clear rules around who needs a meter, the recording and reporting requirements, and the metering equipment standards required. This helps ensure water is being taken according to the rules, with everyone getting their fair share, especially in times of drought. Most water users do the right thing, and they want those who don't to be held accountable.

Despite these intentions, the implementation of the metering reforms faced significant delays. In response, the NSW Government initiated a review of the framework to accelerate the rollout of meters across the state.

What changes have been made to the Water Management (General) Regulation 2018 following the Review of the NSW non-urban metering framework?

As a result of the review, the [Water Management \(General\) Regulation 2018](#) has been amended to incorporate the recommendations outlined in the [report](#), which followed extensive community consultation.

The changes are designed to ensure water resources are measured and managed fairly across NSW, helping water users comply with their licence obligations.

How many water users are affected by the updated requirements?

High-risk works which account for approximately 83% of the total water entitlement in NSW, remain unaffected by these changes. This includes surface pumps with a diameter greater than 500mm and large-volume water users in inland NSW with licence entitlements of 100ML or more.

What has changed?

Nothing has changed if you have a surface water pump of 500 mm or greater in diameter anywhere in NSW or works nominated by total licence entitlement of 100 ML or greater in inland NSW - you need compliant metering equipment in place now, unless otherwise exempt.

For most other water users, the compliance deadlines have been extended.

In the coastal regions, large water users with licence entitlements ≥ 100 ML have until 1 December 2026 to comply with the rules (excluding surface water pumps ≥ 500 mm in diameter who should already be compliant).

Smaller water users across NSW with works nominated by total entitlements of >15 ML and <100 ML, (unless otherwise exempt) have until 1 December 2027 to comply or by the work approval renewal, whichever is later.

Water users with entitlements of 15 ML or less are not required to install a meter unless trading water allocations. However, recording and reporting water usage remains mandatory.

Do the rules ensure the majority of water take is accurately measured?

The updated rules are designed to ensure that 95% of licensed water use in NSW is accurately metered by December 2026 - achieving this target a decade ahead of the timeline under the previous regulation.

The changes reinforce the NSW government's commitment to meeting its obligations under the Murray-Darling Basin Compliance Compact.

In addition, the rules streamline compliance processes, particularly for smaller water users, reducing costs and enabling the use of appropriate measurement devices based on their risk profile.

Were the rules developed with landholder and primary producer consultation?

Yes, the rules were developed through an extensive and inclusive consultation involving all community members including landholders, primary producers, and industry representatives. This included webinars, surveys, and submissions to gather valuable insights and practical expertise. This feedback helped shape the rules that balance accurate water measurement with cost-effective compliance solutions tailored to the needs of NSW water users. All feedback gathered during the consultative process is available in the "What We Heard" report, which can be accessed on the website.

What are the new metering requirements?

The metering rules have been updated to better manage risk by considering both the size of the water works and the user's entitlement.

Table 1 outlines the three main categories of water users who must comply with the updated non-urban metering rules.

Table 1: Non-urban metering requirements

Works	Measurement requirements	Compliance date
All surface water pumps ≥ 500 mm	- AS4747 compliant meter - DQP validation - LID and telemetry	Must already be compliant
All works nominated by total entitlement ≥ 100 ML, unless otherwise exempt*	- AS4747 compliant meter - DQP validation - LID and telemetry	Inland water users must already be compliant Coastal water users need to comply by 1 December 2026
All works nominated by total entitlements of >15 and <100 ML, unless otherwise exempt*	- Pattern-approved meter - Mandatory take reporting <i>DQP validation and LID/telemetry optional</i>	Need to comply by 1 December 2027 or by renewal of work approval, whichever is later
Pumps and bores below the size-based thresholds Works nominated by total entitlement ≤ 15 ML (unless a surface water pump ≥ 500 mm)	- No meter mandated, but required if trading water - Mandatory take reporting	Not applicable
Works not taking licensed water (unintended, inactive) Works not nominated by licensed water entitlements	No meter mandated	Not applicable

*If there is only 1 bore or pump on the property: groundwater bores less than 200mm and surface water pumps less than 100mm are exempt.

Do the revised requirements meet the Murray–Darling Basin Compliance Compact commitments?

The metering rollout is being accelerated to meet the Murray-Darling Basin Compliance Compact commitments. NSW manages the largest share of water licences and usage nationally, with over 70% of the Basin geographically located in the State. The revised requirements prioritise high-risk works to ensure resources are effectively targeted.

How are you ensuring the changes are successful?

Progress is being monitored, with priorities reviewed and updated annually based on performance and feedback. [Quarterly reports](#) are being published on our website for transparency. If progress is not on track and compliance rates don't improve, the NSW Government will assess the need for further actions or interventions.

General

What is the benefit of metering?

Water is a vital and finite resource. Metering enables the measurement and management of water use, ensuring fair distribution, particularly in times of low water availability.

Accurate and timely water use data plays a vital role in supporting critical functions such as sustainable resource management, regulatory compliance, and policy development. It enables essential tasks such as river model calibration, managing extractions within water sharing plan limits, and ensuring equitable and responsible water allocation.

What is the definition of a surface water pump?

A surface water pump is a water supply work authorised to extract water from a surface water source, such as a river.

What is the definition of a high-risk work?

A high-risk work refers to a surface water pump with a diameter of 500 mm or greater or works associated with a total entitlement of 100 ML or more. These works were among the first to be subject to metering requirements and no changes to the metering requirements for these works have been made.

What is the definition of an 'unintended' work?

This term refers to a work that does not extract licensed water from a water source but is authorised by an approval. It includes works that are yet to be constructed, internal reticulation

systems, those that cannot take licensed water (such as in-stream dams), abandoned works, or those used solely for taking water under basic landholder rights.

When referring to licence entitlement do you mean unit shares or ML per year?

The total licence entitlement is the total amount of water access licence share, usually measured in megalitres (ML) or unit shares (1 share = 1 ML), nominated by the nominated work.

Does the type of water use or licence influence the metering requirements?

No, the type of water use or licence does not affect the metering requirements, as they apply to works, not licences.

Floodplain harvesting licences are subject to a different measurement policy.

Why is it different for overland flow taken with an unregulated access licence. Any there any other exceptions?

The difference with overland flow lies in how the water is captured, which makes it harder to measure accurately using AS4747 compliant meters. There are no other exceptions.

Examples

Can I use a pattern-approved meter if I am temporarily pumping 114 ML from mobile pumps (remote sites) with multiple works with a diameter of 150 mm?

First, determine the size of the work, followed by the entitlement, to assess if any exemptions apply.

If the pump size exceeds the 100 mm threshold and the linked entitlement to the works is over 100 ML and, the works must comply with AS4747 standards and have a telemetry-enabled local intelligence device (LID) installed under the recommended rules.

- If the works are located inland, compliance is required immediately.
- If located on the coast, compliance is required by December 2026.

The fact that the pump is mobile or temporary does not affect the metering requirements.

Does the total licence entitlement connected to a work include all access licence categories, such as, high security, general security, supplementary, domestic and stock?

Yes, the total licence entitlement volume thresholds include all share components on your water access licences, such as high security, general security, supplementary, and domestic and stock licences.

For example, if a works approval has a 70 ML high security licence nominated and a 40 ML general security licence nominated, the combined 110 ML means compliance with AS4747 standard meters, including duly qualified person (DQP) validation and telemetry.

Are works nominated by zero-share water access licences exempt from metering if there's no other entitlement nominating the works?

If a work is not classified as high risk and is nominated by a zero-share water access licence (WAL), it is exempt from metering requirements as it falls under the 15 ML threshold.

However, if water allocations are traded into the zero-share WAL's account, the work must be metered in line with [Access Licence Dealing Principles](#) regardless of the volume traded.

I hold a 150 ML entitlement but only get an allocation of 50% so I fall below the 100 ML threshold. Does this mean I don't need a meter in reduced allocation years?

The rules are based on the total licence entitlement, not the sum of available water determinations (AWD). Since your entitlement exceeds 100 ML, you must install and maintain a meter, regardless of the allocation percentage each year.

Does the licence entitlement threshold apply cumulatively to all water access licences nominating a work or does it apply individually?

Yes, the licence entitlement thresholds apply to the total combined amount.

For example, if you have a work that is nominated by 2 WALs of 40 ML and one of 40-unit shares, then your combined total volume is 120 ML. This exceeds the 100 ML threshold, meaning the work requires a meter.

This ensures that the total water taken through the work is accurately measured, reflecting the actual take potential, not just individual WALs.

Coastal water users

When will you communicate the rules to coastal water users?

Education and awareness campaigns specifically designed for coastal water users are in development and will begin in the first half of 2025. These initiatives will incorporate a number of engagement methods including webinars, roadshows, newsletters, and fact sheets.

I am a coastal water user with more than 100 ML of licence entitlement. What metering equipment do I need and who can install it?

Yes, if you are a coastal water user with a licence entitlement of 100 ML or more, the new regulation requires the installation of a pattern-approved AS4747 compliant meter, validated by a duly

qualified person (DQP), along with telemetry. You will need to have this equipment installed by 1 December 2026. If you have a surface water pump of 500 mm or large, it needs to be compliant now regardless of entitlement size.

Costs of metering

Is there any government funding for water users?

There are a range of NSW and Australian Government programs that can help water users manage the impact of purchasing metering equipment:

- The [Telemetry Uplift Program](#) funded by the Australian Government offers fully funded telemetry devices and installation for groundwater users in the Murray-darling Basin with over 100 ML in entitlement.
- The Australian Government's [capital asset and expense deductions rules](#) allow primary producers to immediately deduct the cost of water facilities that are primarily and principally for the purpose of conserving or conveying water.
- The [NSW Drought Infrastructure Fund](#) provides loans to meet the costs of carrying out capital works, including metering, that benefit the long-term profitability of businesses.
- The Australian Government's [On Farm Connectivity Program](#) provides rebates to farmers implementing connected machinery and sensor technology. Round 3 will open for applications later in 2025, with grant funding to be delivered in 2025-26. To receive updates or more information please email OFCP@infrastructure.gov.au.

Has the cost to water users been assessed by the department?

The department engaged an independent consultant to model the capital and operational costs to water users as part of the review process. The final report will be published on the website when it is available.

I have already invested heavily in metering equipment am I going to have to pay more?

No, if you already have compliant metering equipment you will not need to pay more. The updated rules are designed to make compliance with the rules quicker and easier.

Trading water allocation

What are my metering requirements if I trade water allocation and I am under the entitlement and or size thresholds?

If you trade water and fall under the licence entitlement or work size thresholds, you still need to meet metering requirements. The [Access Licence Dealings Principles Order 2004](#) requires both the

buyer and seller to have a meter installed before trade can occur. This applies even if the work would normally be exempt from metering based on size or entitlement.

Does the total entitlement volume used to determine metering requirements include allocation temporarily traded in?

No. Any work involved in water allocation trading must comply with the Access Licence Dealings Principles Order 2004 regardless of any metering exemption. This means a meter must be installed, even if the work would otherwise be exempt based on entitlement of work size.

If I have a water access licence of 80 ML, and then trade in an additional 21 ML of water allocation to finish my crop, would I need a meter?

Yes, the existing Access Licence Dealings Principles Order 2004 prohibits allocation trades unless both the buyer and the seller are metered.

Water users with >15 ML entitlement

What are the requirements for smaller users with works nominated by more than 15 ML but less than 100 ML of total licence entitlement.

All works nominated by total licence entitlements over 15 ML but below 100 ML, (unless otherwise exempt) will be required to install a pattern-approved meter and report their water take. DQP validation and telemetry is optional for this group. These requirements must be met by 1 December 2027 or by the date for renewal of the work approval, whichever is later.

Low volume threshold

Why is the low volume threshold set below 15 ML?

The 15 ML threshold ensures that 95% of water take is measured under the new metering rules. This standard, reflects a low-risk level for water take. It helps distinguish small, low-risk works, ensuring metering requirements match the scale of water use.

Will a work that falls below the size-based exemption thresholds be exempt based on size regardless of the share component?

Yes, a work that falls below the work size-based threshold is exempt, regardless of the share component as the risk is associated with the work's capacity.

If the work size is above the size threshold but nominated by less than 15 unit shares, does the work still need a meter?

First, determine the size of the work, followed by the entitlement, to assess if any exemptions apply.

A work exceeding the size threshold is subject to metering requirements, but if it is nominated by less than 15 ML entitlement, it qualifies for the low-volume exemption - unless it is a surface water pump with a diameter of 500 mm or greater.

The low-volume licence exemption and the work size exemption operate independently; therefore, both must be considered when determining if metering is required.

Size-based thresholds and wells

What are the size-based exemptions for groundwater bores and surface water pumps?

If there is only one groundwater bore or surface water pump on a property, bores under 200 mm and pumps under 100 mm are exempt from metering requirements.

What are the rules for multiple pumps and/or bores?

For properties with multiple pumps or bores, size-based exemptions apply as follows:

Surface water pumps:

- 2 pumps: max diameter 74 mm
- 3 pumps: max diameter 49 mm
- 4 pumps: max diameter 39 mm

Groundwater bores:

- 2 bores: max diameter 159 mm
- 3 bores: max diameter 129 mm
- 4 bores: max diameter 119 mm

For simplicity, first check the work size thresholds. If exceeded, then check your total entitlement.

If the total entitlement is under 15 ML, the user is exempt from metering. If the entitlement is between 15 ML and 100 ML, pattern-approved meters are required but without telemetry or a DQP installation. For entitlements over 100 ML, a fully compliant AS4747 meter with LID and telemetry must be installed by a DQP.

Note: No exemption applies for works over 500 mm.

Can wells be eligible for the same size-based threshold exemptions as bores? For example, most wells are over 200 mm diameter yet may only have a small pump under 50 mm discharge.

Under the *Water Management Act 2000*, both wells and spearpoints are classified as bores. This means they are currently eligible for the same size-based threshold exemptions as groundwater bores.

The review acknowledged concerns that groundwater works like wells or spearpoints, which may not typically be thought of as bores, might not meet the criteria for existing size-based exemptions. However, no changes to the definitions for size-based exemptions were recommended.

A new low-volume threshold now applies to low-risk works, including wells and spearpoints. Water users with wells may qualify for an exemption if the works nominate cumulative licenced entitlements of less than 15 ML. All works with cumulative entitlements between 15 ML to 100 ML are eligible to install lower cost metering. This includes a pattern approved meter with optional DQP and telemetry requirements.

At-risk groundwater sources

What is an at-risk groundwater source? Are groundwater sources at risk?

Previously, Schedule 9 of the regulation listed 53 groundwater sources considered at risk of breaching their Long Term Annual Average Extraction Limit (LTAAEL). These water sources were deemed at risk because they are over-allocated or their level of licence entitlement and account management rules could lead to a breach – even though many of them were not close to exceeding their limits. Additionally, water sharing plans included mechanisms to bring extractions back in line with the LTAAEL if a breach occurred.

Applying the same criteria to surface and coastal groundwater sources would have greatly increased the number of ‘at-risk’ designations, leading to unnecessary metering costs for smaller users. The Non-Urban Metering Review recommended focusing metering efforts on high-volume water take, as smaller users collectively account for only 1 – 2% of total entitlements in these groundwater sources.

What are the updated metering rules in groundwater sources?

Bores with a diameter under 200 mm in the 53 previously ‘at-risk’ groundwater sources listed in the Regulation are no longer required to install an AS4747 meter. Instead, these water users are now required to record and report their water take. Existing meters may still be used for recording and reporting purposes.

Previously, all groundwater users required to install an AS4747 meter did not need telemetry. However, now bores with a diameter of 200 mm or more and a cumulative entitlement exceeding 100 ML, must install an AS4747 meter with a local intelligence device (LID) and telemetry.

Why have you removed the requirement for smaller water users to install metering equipment?

The 'at-risk' classification was removed from the regulation to prevent unnecessary metering costs for smaller water users, who collectively account for only 1 – 2% of total entitlements in these groundwater sources. This change allows metering efforts to focus on higher-volume water take, where it will have the most significant impact.

The department is in the process of gathering more accurate data on both metered and non-metered water take. Once this data is available, the department may consider developing new criteria for identifying at-risk surface water and groundwater sources. If new criteria are introduced, all water supply works in those water sources will be required to install meters, with no exemptions.

Telemetry

What is the benefit of telemetry in groundwater sources?

Telemetry plays a crucial role in groundwater management, particularly in the Murray-Darling Basin, where it is required for high-risk extractions under the Murray-Darling Compliance Compact.

Groundwater sources, like surface water sources in this region, face pressures from climate change, population growth, and economic demands, making real-time monitoring essential.

Telemetry provides accurate, consistent, and timely data, allowing both water users and agencies to track water take efficiently. It helps water users optimise their water use while reducing the need for manual reporting.

Groundwater users with bores greater than 200 mm in diameter and a cumulative entitlement of 100 ML or more must now install an AS4747 meter with LID and telemetry.

Groundwater users with bores greater than 200 mm in diameter but cumulative entitlement between 15 ML and 100 ML can choose to install a local intelligence device and telemetry based on their needs.

Check if you are eligible for the [Telemetry Uplift Program](#).

What is the government doing to fix telemetry issues?

Two initiatives are underway to improve telemetry. The first focuses on creating detailed guides to assist water users and installers in selecting, installing, and configuring equipment that meets

government specifications. The second is a comprehensive expert review aimed at identifying systemic improvements to data logging, telemetry requirements, and related data systems.

What is the telemetry review?

The department's telemetry and data logging specifications are currently undergoing a mandatory 5-year independent review due for completion in June 2025. It aims to identify broader systemic improvements to ensure the integrity of telemetered data and explore potential support for third-party telemetry systems.

At the same time, the department is supporting duly qualified persons (DQPs) with resources and real-time outreach to enhance the success of telemetry installation.

Recording and reporting

What are the reporting requirements when no meter is required?

Water users who do not require a meter must record their water take within 24 hours of the event and submit an annual report to WaterNSW detailing the recorded water take. This process aligns with the current requirements under clause 250. For more detail on recording and reporting [visit WaterNSW](#).

However, works solely used to take water under basic landholder rights are exempt from these reporting requirements.

What are the metering, recording and reporting requirements if water is only taken for basic landholder rights (BLR) through an authorised work and no licensed water is taken?

Works used exclusively for BLR are exempt from metering, recording and reporting requirements. Once the new classification system for unintended works is implemented, these BLR works will be tagged in data systems accordingly, making them easily identifiable.

If a water user is not required to meter, what method will be used to estimate volume?

For water users who are not required to meter, the current recording and reporting requirements include reporting their take to WaterNSW annually. This includes using forms such as the cl.250 form and describing the method for estimating water take. WaterNSW uses this information to assess and validate reported volumes. This could include reviewing details such as pump hours, power usage, fuel usage, crop type and the area being irrigated.

What is the penalty not recording and reporting water take as required?

If water users fail to meet their recording and reporting requirements, the Natural Resources Access Regulator (NRAR) may take compliance action. This depends on the severity and nature of

the breach which can include warnings, fines, suspending or interrupting water supply and taking legal action in severe cases of non-compliance.

Compliance

Will the current rules still be enforced by NRAR?

All NSW water users with pumps 500 mm and above, and inland water users with total entitlements of 100 ML and above, should already be compliant, unless otherwise exempt.

The Natural Resources Access Regulator (NRAR) continues to monitor compliance and will take a firm but fair approach to those found to be in breach of the metering rules. NRAR will also continue to educate and support water users to comply with the rules, visiting properties across the state to ensure they understand their obligations.

Telemetry faults

What is considered a reasonable and timely period to repair and replace faulty telemetry equipment?

The rules for handling faulty telemetry equipment have been clarified to reduce the burden on approval holders and improve compliance.

Approval holders must now notify WaterNSW (via a Section 91i form) if their telemetry connection is lost for 72 hours or more. This clarifies the requirement for approval holders to notify WaterNSW when telemetry equipment is not functioning or operating properly.

It is important to note this 72 hours only applies for telemetry equipment. Your water take will still need to be recorded by your meter during this time. These requirements also apply to floodplain harvesting.

Meter installations and duly qualified persons

Do smaller volume water users need to 'register' their pattern-approved meters once self-installed?

Yes, smaller volume water users who can install a pattern-approved meter without a DQP, must provide their meter details and report their water take to WaterNSW. This will enable tracking of the state's progress towards meeting the objectives. The systems and reporting mechanisms to support this are currently being developed.

What is the revalidation period for meters?

The initial validation period is now 10 years for AS4747 compliant meters, with revalidation required every 5 years after that.

The maintenance process is currently being reviewed to ensure any volumetric testing required is risk-based.

How does the Government intend to retain DQPs once they have been trained?

DQPs are being supported through system enhancements, including DQP Portal upgrades, real-time in-field support, and simplified metering and telemetry guidelines and resources. These improvements aim to boost efficiency, ease workloads, and attract new DQPs to the industry.

Where can I find more information?

For more detailed information, including the amendments and the review, please visit our [website](#). If you have any questions about non-urban metering please contact Water Enquiries via email water.enquiries@dpie.nsw.gov.au or call 1300 081 047.