

December 2021

## Information to assist DQPs

*This fact sheet answers the most frequently asked questions (FAQs) by DQPs.*

The FAQ supplements other information about the NSW non-urban water metering framework available on the NSW Department of Planning, Industry and Environment website at [www.water.dpie.nsw.gov.au](http://www.water.dpie.nsw.gov.au). Please note that these FAQs will be continually updated to provide the latest information.

### Metering thresholds and installation

#### Does a duly qualified person need to be physically present to install a meter?

Yes, DQPs must either physically install the metering equipment themselves or supervise the installation of the metering equipment on-site.

#### How do the metering requirements apply to gravity-fed pipes without pumps?

Gravity-fed pipes will require a meter with tamper-evident seals and a local intelligence device (LID) by the appropriate regional rollout date for the water supply work.

#### Can a duly qualified person validate their own work?

Yes. However, if a DQP is validating their own metering equipment, they must indicate in the validation certificate that they own the metering equipment.

#### If there are multiple water users taking water from one work (for example, a well), which metering threshold will apply?

If multiple water users are taking water from the same work, and that one work meets the threshold, then the obligation to meet the metering requirements will rest with the approval holder.

#### Which part of a surface water pump determines the size of a work?

The diameter of the pump outlet is the size used to determine the metering requirements for that work. The size of the pump listed on the statement of approval is the size used to determine whether the authority holder meets the metering threshold. If there is no size stated on the works approval, the work must be metered and will require telemetry.

If the pump size is incorrect, or not stated, water users can amend the work approval to record the correct size by visiting the [WaterNSW](http://WaterNSW) website at [www.waternsw.com.au/amendapproval](http://www.waternsw.com.au/amendapproval).

#### Do customers of irrigation corporations have to comply with the metering rules?

Metering requirements apply to irrigation corporations at the intakes and offtakes, but not to the individual customers within the corporation's area of operations.

## Accuracy Testing

### What if there is no water to test meters?

The Natural Resources Access Regulator (NRAR) has published its compliance approach to metering regulations and expects water users to make arrangements ahead of their rollout date to make their equipment compliant. NRAR will require water users to be able to show they have made every effort to comply with the new requirements.

For more information on NRAR's compliance approach see the [Metering Regulations-NRAR Compliance Approach](#) fact sheet available on their website at [www.nrar.nsw.gov.au](http://www.nrar.nsw.gov.au).

### Do I have to flow test the meter every time I change its battery?

No, in-situ volumetric accuracy testing (or simulation testing) is only required to be undertaken by a DQP every 5 years for closed conduit meters and every 12 months for open channel meters. In circumstances where the metrological performance of a meter is considered to have been affected by maintenance performed, a re-validation is required.

### Can a DQP access meter data on-site for maintenance purposes?

Yes, DQPs are allowed to read meter data on-site for maintenance purposes.

### Where can I find more information about accuracy testing methods?

The work undertaken by Manly Hydraulics Laboratory to identify appropriate and practicable methodologies to demonstrate the accuracy of existing meters is now complete. A best practice guide for duly qualified persons performing in-situ accuracy testing on non-urban water meters in NSW is available for DQPs via the [Irrigation Australia website](#) at [www.irrigationaustralia.com.au/documents/item/1116](http://www.irrigationaustralia.com.au/documents/item/1116).

## Meters

### Can water users with surface water pumps over 1,200 mm comply with the metering requirements?

Yes. There are now pattern-approved meters for up to 1,800 mm pumps. DQP's are encouraged to check the flow rates specified in meter Pattern Approval Certificates prior to purchasing metering equipment to ensure the intended flow rates at site are aligned with the pattern-approval operating conditions.

### What will happen to existing non-pattern-approved meters?

Water users can keep non-pattern-approved meters installed before 1 April 2019 if:

- the metering equipment has been validated by a DQP in accordance with AS4747 prior to their regional roll out date, and
- they have a copy of a certificate from the meter manufacturer confirming the accuracy of the meter did not exceed  $\pm 2.5\%$

or,

- the meter is checked in-situ by a DQP and it is determined that the maximum error does not exceed  $\pm 5\%$ .

Water users, or a DQP on their behalf, must provide evidence that these requirements have been met. Water users must also confirm that the metering equipment is fitted with a LID and tamper-evident seals.

### There are no pattern-approved meters for open channels. How can water users with those works comply?

Metering equipment for open channels does not need to be pattern-approved if:

- before the metering equipment is installed, the proposed design of the installation is certified by a DQP as compliant with the relevant international or Australian standard,

and

- the metering equipment is validated and in-situ volumetrically accuracy tested at least every 12 months.

Authority holders with open channel systems must be compliant by their regional rollout date.

### How frequently does the Murray-Darling Basin Authority update the pattern-approval list?

The MDBA updates the pattern-approval list as soon as any relevant new information is available. You can download the most recent update from [MDBA compliance publications](http://www.mdba.gov.au/compliance-publications), [www.mdba.gov.au/compliance-publications](http://www.mdba.gov.au/compliance-publications)

### Can a single meter be used to measure water taken through multiple works?

There is flexibility under the metering rules for a single meter to be used to measure water taken through multiple works, for example by 'manifolding' multiple pumps into a single pipe, provided:

- the meter is installed and validated consistently with AS4747
- the meter measures the flow of water taken by each work
- it is possible to account for water taken from different access licenses
- the work satisfies any approval conditions.

### Can a meter be installed away from the work?

There is flexibility under the metering rules to install a meter away from the work, provided:

- the meter is installed and validated consistently with AS4747
- the meter measures the flow of water taken by the work in question
- the works satisfies any approval conditions

### What constitutes repair or maintenance versus replacement of a meter, for the purposes of the requirement that all meters installed on or after 1 April 2019 need to be pattern-approved?

The department's view is that as long as the meter's serial number does not change, other components can be replaced as part of routine maintenance or one-off repair without constituting a replacement of the meter

Importantly, this means that:

- water users who use a non-pattern approved meter installed before 1 April 2019 under new metering rules will not be able to replace the meter under warranty (like for like). A new pattern-approved meter would need to be installed if the existing, non-pattern-approved meter needed replacement.
- meters can be moved and re-installed or modified if needed to comply with AS4747, without constituting a replacement.

### How do I know if a work is a pump, gravity-fed site or other work?

The work approval is the source of truth in determining whether a work is a pump or another work. It is important that water users check what is authorised on their [work approval](#) at [www.watarnsw.com.au/approvals](http://www.watarnsw.com.au/approvals).

### How does a water user seek an exemption from the metering rules?

Authority holders may make an application for an exemption from the metering rules under clause 233 of the Regulation. An exemption may only be granted when it is not possible for water taken using the work to be measured by metering equipment that meets the metering requirements and specifications

For an application form and guidance about the process for seeking an exemption please email [regulatory.implementation@dpie.nsw.gov.au](mailto:regulatory.implementation@dpie.nsw.gov.au).

### Can a portable pump be compliant with the non-urban metering rules?

Yes, provided the portable pump takes water under a single water access license and from a single water source, and the meter is installed in accordance with AS4747. The department has published a technical note on metering portable pumps for DQPs as a guide for installation.

## Tamper-evident seals

### What is classified as tampering?

Under the *Water Management Act 2000*, a person may be found guilty of an offence if they interfere with, damage, destroy or disconnect any metering equipment that has been installed in connection with a water management work. Additionally, a person may interfere with metering equipment by unsealing any sealed component, blocking any part of the equipment, attaching a device that may affect the operation of the equipment, or disconnecting the equipment from its power source.

A higher offence may apply if the tampering is intentional or reckless.

### Where can you get tamper-evident seals?

The NSW Government has appointed Irrigation Australia Limited (IAL) as the approved provider of all [tamper-evident seals](#) under the metering rules and has published guidelines on the use of tamper-evident seals at [www.irrigationaustralia.com.au/documents/item/1067](http://www.irrigationaustralia.com.au/documents/item/1067).

Only current DQPs can purchase seals and each certified person will need to log in to the [IAL website](#) at [www.irrigationaustralia.com.au](http://www.irrigationaustralia.com.au), using their membership credentials before a purchase can be made.

### Do tamper-evident seals need to have a seal number?

Yes. Each tamper-evident seal has a unique number. DQPs validating metering equipment need to record the seal numbers on the validation form via the DQP Portal.

### What can I do to avoid triggering the need for a full re-validation if I remove a tamper-evident seal when I perform routine maintenance?

You need to update the new security seals numbers in the [DQP Portal](#). This record will then be incorporated into the security seal register maintained by WaterNSW.

### What measures are in place to stop someone from cutting off a tamper-evident seal and replacing it with another one?

Under the metering requirements, the number of the tamper-evident seal must be recorded by a DQP on the metering equipment's validation form. This record will be incorporated into a register that the department will use to check seal numbers.

Meter tampering is an offence under the *Water Management Act 2000*.

A DQP must notify NRAR if they know or reasonably suspect that any metering equipment they are installing or are carrying out work on has been tampered with.

It is an offence under the *Water Management Act 2000* for a DQP to fail to notify in these circumstances.

You can contact NRAR on 1800 633 362 during business hours or use NRAR's online reporting form at [www.nrar.nsw.gov.au](http://www.nrar.nsw.gov.au).

## The DQP Portal

### What is the DQP Portal?

The [DQP Portal](#) is a secure website that can be used on a computer, laptop, tablet, or smartphone. It is the starting and ongoing entry point for DQPs to assist the water user to:

- register intent to order and install a new or replacement LID
- notify completion of configuration, installation, and testing of the LID
- generate the validation certificate to notify the water user, and, on behalf of the water user, notify the department, NRAR, and WaterNSW, that the telemetered meter installation is compliant.

The DQP Portal is maintained and supported by WaterNSW - <https://dqp.waternsw.com.au/>.

### When does the water user need to provide the report to keep an existing meter to the department?

A water user who wishes to keep their existing metering equipment must provide the report to the department before their relevant rollout date.

The report must attach one of the following supporting certificates:

- If the metering equipment is pattern-approved, a copy of a validation certificate provided by a duly qualified person

or

- If the metering equipment is not pattern-approved, a copy of:
  - the manufacturer's certificate showing the equipment is  $\pm 2.5$  % in the factory and a copy of the existing validation provided by a DQPor
  - the 'Non-urban water meter-certificate of accuracy for existing meter (not pattern-approved)' provided by a DQP, certifying the maximum permissible error of the equipment does not exceed  $\pm 5$  % in the field.

### What should DQPs do with their existing records, including validation forms issued prior to 1 April 2019?

The department recommends that DQPs keep copies of validation forms and any other historical information about metering works. Industry bodies such as Irrigation Australia Limited and the Australian Hydrographers Association may also require DQPs to keep records.

This information will be relevant for re-validating existing meters and bringing them into the framework through the transitional arrangements.

### When do forms completed by a DQP need to be provided to the customer?

A DQP must provide the validation form within 7 days of carrying out the validation.

### How will another DQP know if a meter has failed a validation?

The department recognises that accessing historical validation certificates can help DQPs perform their functions.

The department encourages DQPs to ask water users for a copy of their previous validation certificates before going on site.

The department is considering options for making these certificates available to DQPs while protecting the privacy of water users.

## Faulty metering equipment

### What happens if metering equipment stops working?

All water users must report faulty metering equipment within 24 hours to WaterNSW - using their online Section 91I form [Section 91i form](#) , available at [www.waternsw.com.au/s91i](http://www.waternsw.com.au/s91i).

An offence applies for failing to report faulty metering equipment within 24 hours. Metering equipment includes telemetry.

### If a meter fails and it is not being used, does the water user still need to notify the department, or can they wait until they want to take water?

Water users must notify WaterNSW within 24 hours of becoming aware that a meter is not working properly or has stopped working, even if they are not taking water.

## Telemetry

### Where can I find out more information on the telemetry requirements?

All surface water works, except for pumps below 200 mm, need to be fitted with an accurate meter and a LID that meets the technical requirements under NSW's metering rules.

A LID is a device, such as a telemetry-enabled data logger or other telemetry-capable field solution that is able to connect to a water meter and transmit metering data to government via telemetry.

All other works that are captured by the metering rules need to be fitted with an accurate meter and a compliant LID.

More information on telemetry is available on the department's website at [www.water.dpie.nsw.gov.au](http://www.water.dpie.nsw.gov.au), on the 'what suppliers of metering equipment need to know' page.

### Can water users voluntarily use telemetry?

Groundwater works and surface water pumps less than 200mm do not require telemetry.

However water users can voluntarily connect meters for these works to the NSW Government's telemetry system.

The benefits of voluntarily connecting to telemetry include:

- avoiding monthly self-reporting requirements that apply to metered works without telemetry
- eligibility to receive a \$975 rebate under the NSW and Australian Government funded \$18 million telemetry rebate program
- access to water take information.

### Do works that don't need telemetry still need a LID?

Yes. All metered works need to be fitted with a LID. LIDs that are not used for telemetry must meet the relevant technical requirements, including having a secure physical port that allows authorised offices to download the data on the LID.

The Department's list of compatible LIDs identifies which LIDs are suitable for telemetry and which are suitable to not be used for telemetry.

### Can water users access their data via telemetry?

Water users will be able to access their data after it is uploaded to the data acquisition service (DAS). The data is uploaded at least once a day. For more information about using the DAS, visit [www.waternsw.com.au/metering](http://www.waternsw.com.au/metering) and click on the 'telemetry' heading.

### Who pays for the ongoing telemetry costs?

Water users are responsible for the costs associated with buying, installing, operating and maintaining all metering equipment, including the meter and LID.

Under the NSW Government's \$18 million telemetry rebate program, which is jointly funded by the NSW and Australian Governments, water users who connect to telemetry will automatically receive a \$975 rebate, paid as a credit on their water bill.

IPART has approved WaterNSW introducing new charges of \$226 per meter per year for water users with telemetry to recover the efficient costs to WaterNSW of providing services to water users with telemetry.

### How are the devices being tested for inclusion on the list of compatible devices?

The department has designed the DAS to be supportive of an open market.

The department encourages manufacturers to nominate solutions that meet the [Data Logging and Telemetry Specifications](#) so they can be bench tested and field tested for compatibility.

Solutions that are successfully tested, including LIDs, will be included in a publicly available list of [compatible devices](#).

### Will DQPs be able to test telemetry for the LIDs they want to install before going to site?

Yes, the DQP will have temporarily access to the water user dashboard to check the LID is connected to the DAS and transmitting data.

Note: once the site is registered in the DQP Portal, all site details will be locked, and the duly qualified person will not be able to edit these in the field.

### Can water users use third party telemetry systems to connect to the DAS?

The department recognises that many water users have already installed 'on farm' telemetry systems to help monitor and manage water use. However, the only telemetry system/data logging devices currently approved for use and connection to the DAS are the [compatible LIDs](#) available in the list of compatible devices on the department's website at [www.water.dpie.nsw.gov.au](http://www.water.dpie.nsw.gov.au) and following the links to 'what suppliers of metering equipment need to know' and then 'compatible LIDs for non-urban metering'.

### What are the correct scaling factors for a meter with a pulse output to a LID?

The pulse scaling factors should be determined by the meter, not the LID, and will depend on what LID is installed. DQP's are encouraged to contact the relevant meter manufacturers if they are unsure how to identify the meter scaling factor.

### What happens if a site is in a coverage blackspot and can't be connected to telemetry?

NRAR's compliance approach to metering recognises that some sites may not receive telemetry coverage.

In these cases, water users should be able to show they have received advice from relevant telecommunication providers or the department's online telemetry toolkit that, given the location of the water extraction infrastructure, there is no viable way of establishing connectivity for telemetry equipment associated with the installed pattern-approved meter and data logger.

### Are there requirements for the safe handling, transportation and disposal of LIDs with lithium-ION batteries?

DQPs must understand the risks involved with LID installation and maintenance tasks. Specific LID installation and testing information must be sought from the LID vendor and DQPs must follow any safety warnings.

Non-urban water meters and telemetry devices may contain lithium-ION batteries and handling, transportation and disposal must be in accordance with relevant laws, including dangerous goods legislation.



Visit the NSW Environment Protection Authority for more information about [dangerous goods](https://www.epa.nsw.gov.au/your-environment/dangerous-goods) at [www.epa.nsw.gov.au/your-environment/dangerous-goods](https://www.epa.nsw.gov.au/your-environment/dangerous-goods).

### Can a water user use the communications port and/or pulse output from their meter for on-farm operational purposes?

Yes. Data from a single meter can be transmitted to the DAS through one port and to on-farm systems through an additional port, provided it meets the department's secondary port requirements. The additional port must be either pulse output or another interface that is locked so that configuration changes are restricted through the interface.

### Can a water user use a secondary communication device to transmit data for on-farm purposes?

Yes. A secondary telemetry device, modem, data logger or external display can be used provided they are connected to separate ports on the meter. The port can be either pulse or modbus, provided configuration changes are restricted through the interface.

### How can I ensure the write function is disabled in accordance with the department's requirements when connecting on-farm telemetry devices to a modbus port on a meter?

Any write function codes must not be available to anyone except the DQP. A firmware level block should be made on the port stopping any write function to the meter. Alternatively, a DQP who requires certain access for operational purposes and troubleshooting should ensure adequate password protections are in place and not share that information or retain any generic passwords.

### How can I ensure that the installation of a secondary telemetry unit won't compromise a meter and LID?

Provided ports are electrically isolated, any short circuit in the port should not affect the operation of the meter itself or the second port. It is the DQP's responsibility to ensure that communication ports are adequately protected and isolated as per the relevant Australian Standard and all the terminals will be labelled with safety message as per the voltage levels to guide users accessing the installation.

### A water user already has another telemetry device connected to a secondary port on their meter. Is this compliant with the NSW Non-urban metering framework?

Under the non-urban metering rules, metering equipment must have devices sufficient to limit access to, and prevent tampering with, the equipment. If the secondary port is not secured in a way that prevents it from being used, it does not satisfy this requirement.

### Should all unused ports on metering equipment be secured in accordance with the department's requirements?

Yes. All additional ports that are not in use should be physically isolated by a DQP using the approved security seals.

### Can 'multi-sensor' Mace meters connect to the DAS?

There is currently no LID that meets the NSW Government's data logging and telemetry specifications with programmable data logging capability to separately record and transmit data from more than one meter.

The department is continuing to explore options to allow a single LID to connect to multiple meters or meters with multiple sensors.

A Mace Series 3 Agriflo meter with multiple sensors can connect to the DAS by installing individual transmitters and LIDs for each sensor.

Under the NSW Government's telemetry rebate program, eligible water users will receive a \$975 rebate for each of these LIDs.

Importantly, because the MACE Series 3 meter is not pattern approved, it can be only be used under the non-urban metering rules if it was installed before 1 April 2019 and is shown to be accurate.

## Engagement and training

### Where can I get further training on telemetry requirements in NSW?

IAL provides an [online course](#) for DQPs to gain an understanding of how telemetry supports NSW Non-urban water metering policies, how the data is transmitted, compatible data-logging and telemetry solutions as well as about the responsibilities associated with the collection and transmission of data.

At the time of writing, around 162 meter installers have completed the course.

Further information can be found at [IAL website](#).

### Does IAL recognise prior learning for people who hold a construction industry white card?

IAL has advised the department that they do offer recognition of prior learning. Contact IAL at: [info@irrigation.org.au](mailto:info@irrigation.org.au) for more information.

### Does IAL remove listed certified meter installers (CMIs) from its website when their certification lapses?

Yes. The certification period for a CMI is 2 years. If a CMI is no longer offering metering related services, they can ask to be removed from the list and have their certification revoked before it lapses.

### What is the role of WaterNSW's customer field officers as part of the metering framework?

More information on the roles and responsibilities of the three water management agencies in NSW is available in the '[Roles of water management agencies in NSW](#)' fact sheet available from the department's website at [www.industry.nsw.gov.au/water/what-we-do/how-water-is-managed](http://www.industry.nsw.gov.au/water/what-we-do/how-water-is-managed).

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