

Frequently Asked Questions

South Australia's Metering Framework

| | |
|--|----|
| METERING - GENERAL | 3 |
| Do I need to meter? | 3 |
| Do all new and replacement meters have to comply with the South Australian Licensed Water Use Meter Specification? | 3 |
| What metering requirements apply to my meter? | 3 |
| What is the definition of a meter installed post 1 July 2019? | 4 |
| What will happen if I don't comply with the relevant metering requirements? | 4 |
| METERS INSTALLED POST 1 JULY 2019 | 5 |
| What requirements apply to meters installed post 1 July 2019? | 5 |
| Can I break or replace the seals on my meter (installed post 1 July 2019)? | 6 |
| What are the National Metering Standards? | 6 |
| What do the National Metering Standards mean? | 6 |
| Why are the National Metering Standards being introduced? | 7 |
| Are the other States required to comply with the National Metering Standards? | 8 |
| Will other requirements apply to new and replacement meters (in addition to the National Metering Standards)? | 8 |
| What is a pattern approved meter? | 8 |
| Where can I find a list of pattern approved meters? | 8 |
| Why can I only install a pattern approved meter? | 9 |
| Are there any other provisions that apply to the type of meter I choose? | 9 |
| Are there any exemptions to the requirement to install a pattern approved meter? | 9 |
| What is the process for a meter to be pattern approved? | 9 |
| What if I can't access a pattern approved meter? | 10 |
| What is validation? | 10 |
| When do I need to validate my meter and installation? | 10 |
| Can I install my own meter? | 11 |
| What requirements are considered when locating and installing meters? | 11 |
| Who does validations? | 12 |
| Will there be enough validators? | 12 |
| What if I can't access a certified person to validate my meter installation? | 12 |
| I am a certified person – where do I access security seals? | 13 |



| | |
|--|-----------|
| What about seals that have already been installed on meters between 1 July 2019 and 1 December 2019? | 13 |
| What about seals for meters installed pre 1 July 2019? | 13 |
| Can I break the security seals on meters installed post 1 July 2019? | 13 |
| Who is responsible for ensuring the accuracy of the validation certificate? | 14 |
| What are the new maintenance requirements under the National Metering Standards? | 14 |
| What is testing of a meter? | 15 |
| When do I need to test my meter? | 15 |
| What if I cannot access a certified person to perform maintenance? | 16 |
| What if I cannot access a testing laboratory? | 16 |
| What other State-wide maintenance requirements apply to meters installed post 1 July 2019? | 16 |
| EXISTING METERS (INSTALLED BEFORE 1 JULY 2019) | 17 |
| Does my existing meter need to comply with the new metering requirements? | 17 |
| What requirements does my existing meter need to comply with? | 17 |
| What happens if I break the security seals (on meters installed pre 1 July 2019)? | 19 |
| Do I need to seal my meter installed pre 1 July 2019? | 19 |
| When do I need to replace my meter? | 19 |

METERING - GENERAL

Do I need to meter?

South Australia has a default position that all licensed water use must be metered. This position is documented in the [South Australian Licensed Water Use Meter Policy](#) (the Meter Policy).

In certain low risk circumstances exemptions have been granted to the metering requirement. This might occur, for example, where water is used for stock and domestic purposes, or you are not currently using your dam, bore or watercourse extraction pump and the Department for Environment and Water (DEW) is satisfied that water is not able to be taken. These low risk circumstances are outlined in meter implementation plans for each prescribed water resource area. These plans can be found on the DEW's website [here](#).

If you have been granted an exemption from metering, the exemption still applies regardless of the introduction of the National Metering Standards.

Do all new and replacement meters have to comply with the South Australian Licensed Water Use Meter Specification?

Any meters that are used for licensed purposes must comply with the Specifications. This includes any meter that is directly measuring water from a water source endorsed on a water licence as well as any meters used indirectly to calculate licensed water use (including meters that are used for the purposes of making an adjustment - i.e. for stock and domestic - to licensed water use).

Meters that are measuring 're-pumped' water (i.e. water that is taken from a bore and then stored in a turkey nest dam or a tank and is then used to measure the 're-pumped' water from the dam or tank) do not need to comply with the specifications, provided they are not used for calculating licensed water use and are only used for other water or farm management practices by the licensee. In addition, meters used in non-prescribed areas or for other unlicensed purposes do not need to comply with the new specifications.

What metering requirements apply to my meter?

From 1 July 2019, any new or replacement water meter used for licensed purposes must comply with the [National Metering Standards](#), for water meter selection, installation and maintenance, as well as the State-wide metering requirements. All requirements applying to new or replacement meters can be found [further down in this document](#).

Meters installed prior to 1 July 2019 do not need to comply with the National Metering Standards however must continue to comply with standard State-wide requirements. All requirements applying to meters installed pre 1 July 2019 can be found [further down in this document](#).

All requirements applying to meters installed pre and post 1 July 2019 are outlined in the South Australian Licensed Water Use Meter Specification (the [Meter Specification](#)). The Meter Specification incorporates the applicable provisions from the National Metering Standards to enable customers to access all requirements in one location.

The Meter Specification constitutes an 'approved specification' under the [Landscape South Australia \(Water Management\) Regulations 2020](#) (the Regulations), together with the National Metering Standards (AS4747). The Meter Specification covers the requirements for the vast majority of meters and scenarios in South Australia and acts as a single document for customers to refer to when determining the requirements that apply to these meters. Where further information or technical detail is required (i.e. meter requirements for atypical scenarios), the National Metering Standards can also be referenced and used by DEW to determine metering requirements.

What is the definition of a meter installed post 1 July 2019?

A new or replacement meter is defined as any meter that has been installed on or after 1 July 2019, including both brand new and second hand meters.

A meter relocated by a water management instrument holder¹ for use on another source/land parcel that belongs to that water management instrument holder is not considered to be a new or replacement meter and therefore must only comply with the sections of the Meter Specification which relate to meters installed pre 1 July 2019. If the meter is acquired or used by another water management instrument holder, then it is considered to be a new or replacement meter and must comply with the requirements for meters installed post 1 July 2019.

What will happen if I don't comply with the relevant metering requirements?

In accordance with the Regulations, if you are required to install a meter (for example, by way of a licence condition), the meter and installation must comply with the Meter Policy and the Meter Specification. As such, all water management instrument holders installing a new or replacement meter are obligated to comply with the National Metering Standards.

DEW will continue to conduct compliance checks of licensed water use, including checks of meters and their installations to ensure compliance with relevant metering requirements. If it is found that your meter and/or its installation is not compliant with the Meter Policy or Meter Specifications, you will be directed to comply within a reasonable timeframe.

Compliance actions may apply in accordance with the Regulations, if you do not comply with a direction in relation to metering. These actions include, but are not limited to, an expiation fee of \$250, a maximum

¹ A water management instrument holder is an individual(s) and/or business(es) that holds either a water licence, water resource works approval or other authorisation to take water under the *Landscape South Australia Act 2019*.

penalty of \$5000 or, when non-compliance persists, the department may enter the land and take the necessary action for compliance with any costs attributed to the water management instrument holder.

METERS INSTALLED POST 1 JULY 2019

What requirements apply to meters installed post 1 July 2019?

Meters installed post 1 July 2019 must comply with all sections of the Meter Specification and the National Metering Standards. The additional requirements are summarised below:

- **Meter selection** – meters must be [pattern approved](#) and fit for purpose² as per section 1 of the Meter Specification.
- **Meter location** – must be safe and accessible and comply with requirements of section 2 of the Meter Specification.
- **Meter installation** – must be installed in accordance with the pattern approval certificate as per section 3 of the Meter Specification.
- **Meter validation** – must be [validated post-installation](#) as per section 4 of the Meter Specification.
- **Meter maintenance** – this includes:
 - National maintenance requirements, including validations whenever there is a change to a feature of the meter or the installation or a seal is broken, the use of a certified person for maintenance; and [testing](#) when required to determine meter accuracy (further information on the national maintenance requirements can be found [here](#)).
 - State-wide maintenance requirements including annual and 5-yearly inspections of the meter site and a fault notification and fixing process whereby faults are fixed within 28 days - see section 5 of the Meter Specification for a full list of maintenance requirements (further information on the State-wide maintenance requirements can be found [here](#)).
 - Importantly, only persons authorised under the Meter Specification can break and replace seals. For further information on the breaking and replacement of seals, see question [below](#).
- **Notifications** – You are required to notify DEW with meter readings, at the intervals specified on your instrument (such as a condition of your licence or your water resource works approval). In addition, you are required to notify DEW when you install, validate, repair, replace or test your meter, as well as when you suspect that there is a fault with your meter and when you have undertaken your 5-yearly inspection. For further information, refer to section 6 and 7 of the Meter Specification.

² The meter is suited to the intended purpose, installation configuration and operating conditions.

Can I break or replace the seals on my meter (installed post 1 July 2019)?

Only persons authorised under the Meter Specification can break and replace seals.

If maintenance or work is required that would require breaking of the pipework security seals (located on pipework or meter flanges), then a certified person³ must be engaged to break and replace the seals. If any pipework security seals (located on pipework or meter flanges) need to be broken, for a legitimate reason, by a water management instrument holder under direction by DEW (i.e. to remove the meter for testing), then the water management instrument holder must first obtain approval from DEW before breaking the seals. Whenever pipework seals are replaced, they must be replaced by a certified person⁴.

Meter seals (or manufacturers security seals which connect the meter register to the meter body) cannot be broken by a non-authorised person (i.e. an entitlement holder) under any circumstances. If these seals are broken by someone not authorised under the Meter Specification (i.e. a water management instrument holder or someone unknown), testing (or validation if an electronic meter) is required. These seals can only be replaced by a certified person or the testing facility (if broken as part of testing). Investigation may also be carried out by DEW to determine if meter tampering has occurred.

Notification of the maintenance work and any new seal numbers must be provided to DEW.

What are the National Metering Standards?

The National Metering Standards are outlined in the technical specification *Australian Standard – Meters for Non-urban Water Supply AS4747*⁵. The National Metering Standards are also outlined in a policy document titled [National Framework for Non-urban Water Metering Policy Paper](#), which outlines the requirements in written, non-technical form.

The National Metering Standards aim to achieve confidence in meter accuracy. Specifically, they aim to achieve an acceptable level of confidence that on-site measurement performance of meters is within maximum permissible limits of error of plus or minus five per cent. What do the National Metering Standards mean?

The key national metering requirements for new and replacement meters installed post 1 July 2019 are:

³ Or if they are not qualified to perform the maintenance work then a representative of the meter manufacturer must be used who can also break and replace the seals under the Specifications

⁴ Or a trained person (someone working under direct supervision of a certified person) or if the representative of the meter manufacturer performed the work, then by the representative of the meter manufacturer.

⁵ AS4747 is an Australian Standard prepared by Standards Australia, a non-Government organisation. At this stage, Australian Standards are not publically available without purchase and are unable to be publically distributed. As such DEW cannot provide customers with a copy. AS4747 may be accessed, however, at the State Library and other selected libraries.

- Meters must be [pattern approved](#);
- Meters must be installed in accordance with the pattern approval certificate;
- Meters must be [validated](#) post-installation by a certified person; and
- Meters must be maintained in accordance with the National Metering Standards. This includes:
 - Using a certified person to perform certain maintenance work where accuracy of the meter may be affected or seals are broken;
 - Using a certified person to validate the meter installation if installations are changed or affected by maintenance, or where seals are broken; and
 - Testing of a meter where it is necessary to do so to confirm meter accuracy.

A certified person is someone with the relevant certification to be a meter installer or validator from Irrigation Australia. You can access a list of certified meter installers and validators on [Irrigation Australia's](#) website.

The effect of these maintenance requirements are that only a certified person can perform maintenance where any seals are broken (including meter seals such as the manufacturer's security seal as well as pipework seals) and where components of the meter that may affect meter accuracy are accessed. There may also be some instances where a certified person is not qualified to perform the maintenance work, in which case, a representative of the meter manufacturer (i.e. technician) may be used. Seals must be replaced and a validation performed following maintenance (where seals are broken) by a certified person.

If it is assessed that the accuracy of the meter may have been affected by maintenance or if the meter seals are broken by someone not authorised (i.e. a water management instrument holder or an unknown person), then testing to confirm meter accuracy is required. The exception to this is where meter seals are broken by someone not authorised on an electronic meter where, instead of testing being required, a validation is required. However, if at the time of the validation a certified person deems that testing of a meter is required, then testing must be undertaken.

It should be noted that other State-wide requirements also apply to new and replacement meters. Further information on the State-wide requirements applying to new and replacement meters can be found [above in this document](#).

Why are the National Metering Standards being introduced?

The introduction of the National Metering Standards will achieve improved and continuing confidence in meter performance and water accounting. It will ensure new meters are accurate, tamper-proof and maintained to provide ongoing accuracy and ensure new and replacement meters are consistent with the National Metering Standards.

The National Metering Standards are being introduced because each State, including South Australia, previously agreed to implement nationally consistent metering requirements, as part of the [National Water Initiative](#) and the [National Framework for non-urban water metering](#).

More recently in 2018, through the [Murray-Darling Basin Compliance Compact](#), South Australia committed to requiring that all new and replacement meters installed after 1 July 2019 be compliant with the National Metering Standards. The Murray-Darling Basin Compliance Compact is an agreement between Basin States and the Murray-Darling Basin Authority to, amongst other things, achieve consistency in metering and compliance.

Are the other States required to comply with the National Metering Standards?

Yes. Other States have already introduced or are progressing towards introducing requirements consistent with the National Metering Standards.

Will other requirements apply to new and replacement meters (in addition to the National Metering Standards)?

Yes. The new metering requirements only relate to meter selection, meter validations and meter maintenance. Some additional provisions that apply to both existing meters as well as new and replacement meters, under the Regulations and the Meter Specification. These provisions include requirements relating to meter location, meter installation, meter servicing, meter reading and the provision of information to this Department. Further detail on these requirements can be found [above in this document](#).

What is a pattern approved meter?

Pattern approval is the process where the National Measurement Institute (NMI) of Australia examines and tests the design of a meter against the published national standard to ensure it meets certain technical requirements and retains its accuracy over a range of environmental and operating conditions. The published national standard is [NMI M 10 Meters Intended for the Metering of Water in Full Flowing Pipes](#).

Approval, if granted, applies to a particular type (pattern) of meter that has been successfully tested and verified to be accurate if installed and operated within the range of parameters that were determined for that particular pattern during testing.

Where can I find a list of pattern approved meters?

A list of pattern approved meters and meters being considered for pattern approval can be found [here \(scroll to bottom of webpage\)](#). This list is updated by the Murray-Darling Basin Authority as soon as any relevant information is available (i.e. a new meter is pattern-approved).

This list also shows 'provisionally approved' meters. While that is a positive indication that final approval may be granted, there is no guarantee. These meters will not be accepted as 'pattern approved' until they

receive their full approval and will therefore be deemed non-compliant. The list of pattern approved meters will continue to grow as further certifications are sought and granted.

Why can I only install a pattern approved meter?

Pattern approved meters have been tested to ensure they operate accurately under a range of environmental and operating conditions and meet strict metrological and technical requirements. This provides confidence in meter accuracy and consistency across Australia.

Are there any other provisions that apply to the type of meter I choose?

You must ensure that the meter you select is fit for purpose and therefore suited to the intended purpose, installation configuration and operating conditions (i.e. is able to cope with turbidity, iron chelates/sulphites, sand or other water quality issues and is suitable for the flow rate of the pump and the installation conditions/configuration).

Are there any exemptions to the requirement to install a pattern approved meter?

All new and replacement meters must be pattern approved. The only exemption that may be considered to this requirement is only in exceptional and limited circumstances, where there is a site-specific issue and there are no suitable pattern approved meters or metering systems available on the market, and is subject to approval by the Department. Further, if evidence is provided, to the satisfaction of the Department (through proof of purchase for example) that the meter was purchased prior to 1 July 2019, then it may be approved for installation.

If this is the case, the meter or the metering system must comply with the meter selection requirements of the previous *South Australian Licensed Water Use Meter Specification*, found in Appendix B of the current Meter Specification. This includes that a meter must be accompanied by a Manufacturer's Certificate of Accuracy verifying that the meter has been laboratory tested to meet an accuracy requirement of plus or minus 2.5 per cent. Alternatively, a calibration report may be provided which demonstrates that the meter operates within an accuracy range of plus or minus 2.5 per cent, provided this is issued by a National Association of Testing Authorities (NATA) accredited facility (contact DEW for further information on approved testing facilities). Please note that you are required to comply with all other meter location, installation, validation, maintenance etc. provisions of the current (not the previous) Meter Specifications.

If you plan to use a non-pattern approved meter, you may be required to furnish evidence from a suitably qualified person that it is necessary and you should make contact with DEW prior to purchasing your metering system to seek an exemption from the pattern approval requirement.

What is the process for a meter to be pattern approved?

A meter manufacturer determines whether or not a meter should undergo testing by the National Measurement Institute of Australia to obtain pattern approval, and the meter manufacturer pays for the testing.

Pattern approval is the process where the National Measurement Institute (NMI) of Australia examines the design of a meter against the published national standard to ensure it meets certain technical requirements and retains its accuracy over a range of environmental and operating conditions. The published national standard is [*NMI M 10 Meters Intended for the Metering of Water in Full Flowing Pipes*](#).

What if I can't access a pattern approved meter?

To encourage access to pattern-approved meters, DEW have written to meter manufacturers and retailers to inform them that any meters installed after 1 July 2019 must be pattern approved.

If you are unable to reasonably readily access a pattern approved meter through a meter retailer (or any other means) in your local region, you are required to notify DEW to seek an extension of time. An extension can be requested via the [Meter Notification Form](#) or by directly contacting the appropriate water licensing office. You may be required to furnish evidence that you undertook reasonable steps to obtain a pattern approved meter as soon as practicable (evidence may include an order/invoice for a meter or evidence of planned installation date).

What is validation?

A validation is an inspection of a meter and installation to ensure the meter is pattern approved, laboratory verified and correctly installed. It also involves checking the lead in/lead out pipework, checking software to ensure the meter is correctly calibrated and for errors and checking that the meter is maintained to an acceptable state of repair, which provides an acceptable level of confidence in meter accuracy. Lastly, a validation also includes the installation of security seals on both the meter and the pipework – these seals must be an approved seal with a unique identifying number.

A validation must be performed by a certified person who has obtained the relevant certification from Irrigation Australia. A list of certified persons can be found on Irrigation Australia's website [here](#).

A certified person is required to fill out a validation certificate form and provide it to the water management instrument holder. Once a meter has been validated, you must advise DEW within 14 days through the [Meter Notification Form](#).

When do I need to validate my meter and installation?

For meters installed post 1 July 2019, you are required to validate your meter (and it's installation) when:

- A new or replacement meter is installed;

- If pipework security seals are broken. This may occur, for example, during maintenance or whenever a feature of the meter or its installation is altered or changed that may affect meter accuracy. This would include where the meter or a feature of the installation that would cause flow disturbance and measurement error (i.e. elbow bends, valves, filters, sieves within the necessary lengths of straight pipework) is installed or altered; and
- If meter seals are broken on an electronic meter (if meter seals are broken on a mechanical meter, the only way to confidently determine if meter accuracy has been affected is if testing is undertaken).

The meter and its installation is required to be revalidated within 28 days of installation or work triggering validation.

DEW may also require validations to occur in other instances, as part of random auditing for high risk meter installations (i.e. where there are water quality issues and internal checks of the pipework etc. are required) or as part of targeted compliance programs.

Validations may also be required or directed for meters installed pre 1 July 2019, as part of targeted compliance programs (i.e. for high risk meter installations) or to check that these meters are compliant with the Meter Specifications.

Can I install my own meter?

Yes. A water management instrument holder, a non-certified person or a certified person may install a water meter.

However, following installation, you are required to engage a certified person to validate your meter installation. A certified person is someone who has obtained the relevant certification to be a meter installer and validator from Irrigation Australia. A list of certified persons can be found on Irrigation Australia's website [here](#).

Given the requirement to use a certified person to validate your meter following installation, you may choose to use a certified person to both install and validate your meter at the same time.

It is important that you install your meter correctly in accordance with the pattern approval certificate and the relevant provisions of the Meter Specification. It should be noted that if the meter has not been installed correctly and a certified person conducts a validation post-installation, and it is not approved for use, the installation may need to be re-done or rectified, and the validation process repeated a second time. This may result in additional costs to you.

What requirements are considered when locating and installing meters?

The meter must be installed in accordance with the requirements of the relevant pattern approval certificate and must consider the location and installation requirements in the Meter Specification. The pattern

approval certificate outlines the installation requirements, including the required lengths of pipework up and downstream of the meter – these vary from meter to meter. The pattern approval certificates can be found by searching the individual meter at <https://www.industry.gov.au/data-and-publications/certificates-of-approval/14-utility>.

Who does validations?

A certified person who has obtained the relevant certification to be a meter installer or validator from Irrigation Australia is required to perform validations of new and replacement meters. A list of certified persons can be found on Irrigation Australia's website [here](#).

You are expected to engage your own privately certified person to perform the post-installation validations or any subsequent re-validations. A list of certified persons can be found on Irrigation Australia's website [here](#).

DEW officers will not be performing these validations and will only be undertaking compliance checks of validations or validations in their role as a regulator. These checks are to ensure meters and their installations are compliant with the Meter Policy and Meter Specification, including that meters installed post 1 July 2019 are pattern approved, fit for purpose, installed correctly and sealed.

Will there be enough validators?

A list of validators can be found on Irrigation Australia's website [here](#).

Meter retailers and irrigation suppliers were informed that the new metering requirements will be introduced on 1 July 2019, to provide opportunity for additional certifications to be sought and granted and the website will be updated as additional certifications are granted.

Only new and replacement meters installed after 1 July 2019 are required to be validated post-installation or re-validated if installations are changed or affected by maintenance. It is expected that demand for validators initially will therefore be low, providing opportunity for the industry to be trained and certified to meet demand.

What if I can't access a certified person to validate my meter installation?

You are expected to make all reasonable attempts to access a certified person to validate your meter installation.

It is acknowledged that there may be some very remote areas where it is not physically possible to access a certified person to perform validations. If this is the case, you may continue to take water in the interim and you must contact DEW to discuss alternative arrangements.

You may be requested to provide evidence that you made all reasonable attempts to engage a certified person to perform the validation.

I am a certified person – where do I access security seals?

From 1 December 2019, an 'approved seal' under the specification is a security seal badged with the South Australian Government logo and a unique identifying number and must be purchased through Irrigation Australia Limited. These seals must be used on any new and replacement meter and can be purchased through a login function at the following website <https://www.irrigationaustralia.com.au/products/store>. These seals can only be distributed to current certified persons and the seal numbers and who they have been distributed to are recorded in a database to provide a tracking function and to enable compliance checking.

The use of a particular seal type assists the Department with compliance and enables nationally compliant meters installed post 1 July 2019 to be easily identified (as different rules apply to meters installed pre and post 1 July 2019 and these seals do not need to be applied to meters installed pre 1 July 2019). As a certified person, you are responsible for recording the seal numbers on the validation certificate at the time of validation.

What about seals that have already been installed on meters between 1 July 2019 and 1 December 2019?

Provided they are a seal that is capable of clearly showing whether the meter facility has been tampered with, dismantled or subject to post-validation alternations, and includes a unique identifying number, these can remain on meter installations with no need to change them.

However, if the application of meter seals was delayed pending arrival of the South Australian Government seals, the South Australian Government seals should be applied as soon as possible to nationally compliant meters.

What about seals for meters installed pre 1 July 2019?

Meters installed pre 1 July 2019 do not need to be sealed with the South Australian Government seals acquired through Irrigation Australia. If seals are already in place on a meter installed pre 1 July 2019, these can remain in place with no need to change them. If seals are replaced on these meters, any seal type can be used. Existing seal stocks can continue to be used to replace seals on meters installed pre 1 July 2019 or on meters that do not record water for licensed purposes.

Can I break the security seals on meters installed post 1 July 2019?

Only persons authorised under the Meter Specification can break and replace seals.

In relation to any pipework security seals (located on pipework or meter flanges) that are present, if maintenance or work is required that would require breaking of these seals, then a certified person must be engaged and they will break and replace the seals. If any pipework security seals (located on pipework or meter flanges) need to be broken for a legitimate reason under direction by DEW by the water management

instrument holder (i.e. to remove the meter for testing), then the water management instrument holder must first seek the approval of DEW before breaking the seals. Whenever pipework seals are replaced, they must be replaced by a certified person.

In relation to meter seals (or manufacturers security seals which connect the meter register to the meter body), these cannot be removed by a non-authorised person (i.e. a water management instrument holder) under any circumstances. If these are broken by someone not authorised under the Meter Specification (i.e. a water management instrument holder or someone not known), testing (or validation if an electronic meter) is required. These can only be replaced by a certified person or the testing facility (if broken as part of testing). Investigation may also be carried out by DEW to determine if meter tampering has occurred.

Notification of the maintenance work and any new seal numbers must be provided to DEW.

Who is responsible for ensuring the accuracy of the validation certificate?

It is the responsibility of the water management instrument holder to ensure the meter remains accurate and to comply with a direction to validate a meter installation. This responsibility extends to the accuracy of any validation certificates provided.

It should be noted that Certification is also bound by a Code of Conduct to ensure the ongoing integrity, knowledge and compliance with industry standards. In addition, there is a complaints procedure should there be any complaints regarding work carried out by a certified person. Further information can be found [here](#).

What are the new maintenance requirements under the National Metering Standards?

The new maintenance requirements are that meters must be maintained in accordance with the National Metering Standards by:

- Using a certified person to perform certain maintenance work where accuracy of the meter may be affected or seals are broken;
- Using a certified person to 'validate' the meter installation if installations are changed or affected by maintenance or seals are broken; and
- Testing of a meter where it is necessary to do so to confirm meter accuracy.

The effect of these maintenance requirements are that only a certified person can perform maintenance where any seals are broken (including meter seals such as the manufacturer's security seal as well as pipework seals) and where components of the meter that may affect meter accuracy are accessed. There may also be some instances where a certified person is not qualified to perform the maintenance work, in which case, a representative of the meter manufacturer (i.e. technician) may be used.

A validation must be performed and seals replaced following maintenance by a certified person.

If it is assessed that the accuracy of the meter may have been affected by maintenance or if the meter seals are broken by someone not authorised (i.e. an entitlement holder or if unknown), then testing to confirm meter accuracy is required. The exception to this is where meter seals are broken by someone not authorised on an electronic meter where, instead of testing being required, a validation is required. However, if at the time of the validation a certified person deems that testing of a meter is required, then testing must be undertaken.

Lastly, these maintenance provisions mean that if a seal is broken or the installation of a meter is changed or affected by maintenance and this change will affect, or potentially affect, the accuracy of the meter, that a certified person performs a validation of the meter installation (and replaces the seals).

It should be noted that other State-wide requirements also apply to new and replacement meters. Further information on the State-wide requirements applying to new and replacement meters can be found within this document [here](#).

What is testing of a meter?

The most reliable and repeatable method of testing the accuracy of a meter that is currently established and available is laboratory testing. Laboratory testing is to occur in accordance with [National Measurement Institute of Australia's](#) procedures to ensure the meter operates within the maximum permissible limits of error and complies with the pattern approval certificate.

In accordance with the National Metering Standards, the testing must be undertaken by a person appointed as a verifying authority under the *National Measurement Act 1960*.

In South Australia, the [Australian Flow Management Group \(AFMG\)](#) carry out laboratory testing of water meters as a verifying authority. They are located at the University of South Australia's Mawson Lakes campus.

In accordance with the National Metering Standards, if you have a meter that is removed from service and tested in a laboratory it must operate within the maximum permissible limits of error of plus or minus 4 per cent. If it is within this accuracy range, it may be placed back into service and continue to be used for licensed purposes. However, if it is outside of this accuracy range (and cannot be repaired otherwise), the meter must be replaced.

The 4 per cent accuracy rating allows for age and possible wear of an in-service meter.

When do I need to test my meter?

Testing of a meter may be directed where:

- Meter security seals are broken by a person not authorised under the Meter Specifications (i.e. by the licence holder or an unknown person) where the meter is a mechanical meter (note that

where the meter is an electronic meter, validations can be performed in place of testing where meter seals are broken);

- If it is reasonably suspected that the meter is not operating within acceptable accuracy limits or properly; or
- Maintenance activities that affect meter accuracy are performed by someone not authorised under the Specifications.

These testing requirements are also part of existing State-wide requirements and therefore apply to both meters installed pre and post 1 July 2019.

What if I cannot access a certified person to perform maintenance?

You are expected to make all reasonable attempts to access a certified person (or where relevant, a representative of the meter manufacturer) to perform maintenance.

It is acknowledged that there may be some very remote areas where it is not physically possible to access a certified person to perform maintenance. If this is the case, you must contact DEW to discuss alternative arrangements.

You may be requested to provide evidence that you made all reasonable attempts to engage a certified person to perform the maintenance.

What if I cannot access a testing laboratory?

It is acknowledged that there is currently only [one testing laboratory](#) in South Australia that is a verifying authority under National Measurement Institute legislation, which is located at the University of South Australia Mawson Lakes campus.

As demand increases, it is hoped that further testing facilities become available to service this requirement locally.

Until then, it is expected that if laboratory testing is necessary, that the meter is shipped to the Mawson Lakes testing facility (or equivalent). Prior to using an alternative testing facility, you must request to use this facility with DEW.

What other State-wide maintenance requirements apply to meters installed post 1 July 2019?

Meters installed post 1 July 2019 must also comply with the following State-wide maintenance requirements:

- **Annual inspections** to ensure the site remains safe and accessible, that the meter appears to be in working order and that any seals are intact. This is to occur at the time of the July meter read and confirmation that the check has occurred will be required on the online meter read form;
- **5-yearly inspections** to ensure the entire meter facility remains compliant, has integrity, there is no apparent damage, faults etc. and to identify and perform any maintenance/servicing on the meter. If seals are broken or work is undertaken that may affect meter accuracy, a competent person must perform the work. Confirmation that the 5-yearly inspection has occurred must be provided through a completed checklist (available on the DEW website and example shown in Appendix A1 of the Specifications) that is accompanied by photographs of the meter installation and seals to demonstrate compliance. An entitlement holder may complete the checklist and inspection but if work is required that involves breaking of seals, a certified person must be engaged; and
- **Fix faults** within 28 days (and notify DEW within 48 hours of becoming aware of the fault)⁶.

EXISTING METERS (INSTALLED BEFORE 1 JULY 2019)

Does my existing meter need to comply with the new metering requirements?

No, only new and replacement meters installed after 1 July 2019 must comply with the National Metering Standards. Any meter installed before July 2019 is exempt from (and therefore does not need to comply with) these requirements.

It should be noted, however, that meter testing (which is part of the National Metering Standards) is already part of existing State-wide processes and DEW may direct that a validation occur by a certified person on an existing meter to check that existing meter installations are compliant.

The reason meters installed pre 1 July 2019 are exempt from the National Metering Standards is because they are 'grandfathered' under the [National Framework for non-urban water metering](#). It should be noted that an end date for the grandfathering arrangements is currently under consideration at the national level, at which time ALL meters will be required to be compliant with the National Metering Standards and upgraded.

What requirements does my existing meter need to comply with?

Your existing meter (i.e. installed prior to 1 July 2019) must comply with the Meter Policy and Meter Specification. As these meters are already installed, the relevant requirements from the Meter Specification relate to post-installation requirements including meter maintenance (section 5 of the Meter Specification),

⁶ The annual inspections and fixing of faults processes aim to provide a mechanism to fulfil a standing requirement (in licence conditions and in the Specifications) to ensure the meter is not defective and the site is accessible.

notification to DEW (section 6 of the Meter Specification) and meter reading (section 7 of the Meter Specification). The meter selection, location and installation requirements can be referred to for compliance purposes in Appendix B of the Meter Specification.

The State-wide maintenance requirements relating to meters installed pre 1 July 2019 include:

- **Periodic inspections** including –
 - **Annual inspections** to ensure the site remains safe and accessible, that the meter appears to be in working order and that any seals are intact. This is to occur at the time of the July meter read and confirmation that the check has occurred will be required on the online meter read form;
 - **5-yearly inspections** to ensure the entire meter facility remains compliant, has integrity, there is no apparent damage, faults etc. and to identify and perform any maintenance/servicing on the meter. If seals are broken or work is undertaken that may affect meter accuracy, a competent person must perform the work. Confirmation that the 5-yearly inspection has occurred must be provided through a completed checklist (available on the DEW website and shown in Appendix A2 of the Meter Specifications) that is accompanied by photographs of the meter installation and seals to demonstrate compliance. An entitlement holder may complete the inspection and checklist but if work is required that involves breaking of seals, a competent person must be engaged;
- **Fix faults** within 28 days (and notify DEW within 48 hours of becoming aware of the fault)⁷;
- **Use of competent persons for maintenance work** - any work that requires seals to be broken or which may affect meter accuracy must be performed by a competent person – someone who is employed in the meter or irrigation industry who is suitably qualified to maintain or repair meters; and
- **Meter accuracy testing** if meter is suspected to be operating inaccurately or if meter security seals (connect the meter register to the meter body) are broken by the entitlement holder.

Importantly, only persons authorised under the Meter Specification can break and replace seals. For further information on the breaking and replacement of seals on meters installed pre 1 July 2019, see [here](#).

Notifications – You are required to notify DEW with meter readings, at the intervals specified on your instrument (such as a condition of your licence or your water resource works approval). In addition, you are required to notify DEW when you install, validate, repair, replace or test your meter, as well as when you suspect that there is a fault with your meter and when you have undertaken your 5-yearly inspection. For further information, refer to section 6 and 7 of the Meter Specification.

⁷ The annual inspections and fixing of faults processes aim to provide a mechanism to fulfil a standing requirement (in licence conditions and in the Specifications) to ensure the meter is not defective and the site is accessible.

What happens if I break the security seals (on meters installed pre 1 July 2019)?

Only persons authorised under the Meter Specification can break and replace seals.

In relation to any pipework security seals (located on pipework or meter flanges) that are present, if maintenance or work is required that would require breaking of these seals, then a competent person (someone employed in the irrigation or meter industry and who is suitably qualified to maintain meters) must be engaged and they will break and replace the seals. If any pipework security seals (located on pipework or meter flanges) need to be broken for a legitimate reason under direction by DEW by the water management instrument holder (i.e. to remove the meter for testing), then the water management instrument holder must first obtain approval from DEW before breaking the seals. Whenever pipework seals are replaced, they must be replaced by a competent person.

In relation to meter seals (or manufacturers security seals which connect the meter register to the meter body), these cannot be removed by a non-authorised person (i.e. a water management instrument holder) under any circumstances. If these are broken by someone not authorised under the Meter Specification (i.e. a water management instrument holder or someone not known), testing (or validation if an electronic meter) is required. These can only be replaced by a competent person or the testing facility (if broken as part of testing). Investigation may also be carried out by DEW to determine if meter tampering has occurred.

Notification of the maintenance work and any new seal numbers must be provided to DEW.

Do I need to seal my meter installed pre 1 July 2019?

You must install seals on your meter installation if directed to do so by DEW. Further, DEW may elect to install seals on your meter installation as part of compliance programs.

Any seal type can be used to seal a meter installed pre 1 July 2019 – a South Australian Government badged seal purchased through Irrigation Australia does not need to be used.

Where seals have been installed (by either DEW or otherwise) on a meter installation pre 1 July 2019 and they are broken to perform maintenance (or for any other purpose), they must be replaced by a competent person (i.e. who is performing the maintenance work).

When do I need to replace my meter?

You, as the water entitlement holder, may make the decision to replace your meter at any time. However, it should be noted that it is your responsibility, as a water entitlement holder with a metering requirement, to ensure your meter operates effectively at all times. This is a requirement of the conditions on your water licence and of the Meter Policy and Meter Specification.

There may also be instances where DEW direct that a meter be replaced, such as if the type of meter installed does not comply with the relevant provisions that apply to existing meters (installed prior to 1 July 2019) in the Meter Policy and Meter Specification or if the meter is no longer accurate.