



12 August 2019

Ms Emma Solomon
Director
Water Renewal Taskforce – Metering
Department of Property, Industry and Environment – Water
water.reform@industry.nsw.gov.au

Lodged Electronically

Re: Submission draft Water Management Amendment (Metering) Regulation 2019

Dear Ms Soloman,

This document has been developed by the Gwydir Valley Irrigators Association (GVIA) on behalf of its members as a formal submission for consideration by the NSW Government during their consultation on the draft Water Management Amendment (Metering) Regulation 2019.

This document aims to represent the concerns, views and experiences of our members, not as individuals but as a local industry. Each member reserves the right to express their own opinion and is entitled to make their own submission.

Every member of the GVIA is also a member of the NSW Irrigators Council and as such we endorse their submission unless clearly outlined otherwise.

The GVIA represents more than 450 water entitlement holders in the Gwydir Valley, centred around the town of Moree in North-West New South Wales. Our mission is to build a secure future for its members, the environment and the Gwydir Valley community through irrigated agriculture.

We have a result broken this submission into two sections; feedback regarding implementation issues with the regulation and the draft regulation itself.

A summary of recommendations include:

1. Recommendation for individuals to seek 'Ministerial exemption for interim/transitional status' to meet mandatory metering requirements in exceptional circumstances i.e. with zero water allocation.
2. Recommendation to amend roll-out date for meters requiring government approved data loggers and telemetry to begin from 1 December 2020.
3. Recommendation to provide communication addressing these above listed on-going concerns with the implementation of the existing regulations.
4. Recommendation to align reporting timelines with billing quarters and water year.

5. Recommendation to include a requirement to re-instate and record any broken seals by the listed authorised persons.

Implementation concerns and recommendations:

As explained during the metering roadshow in Moree, most of our members are required to have compliant water meters by the first roll-out date on 1 December 2019 with remaining water users on the 1 December 2020.

Our major concern is the ability of our members and water users across the state to meet their obligations by this first roll-out date. The reasons are three-fold;

1. Ongoing drought conditions means that wet-testing of new meters, or flow testing of existing meters cannot be undertaken by our members.
2. Inability of the NSW Government to provide additional information to support accuracy testing methodologies; and
3. Inability of the NSW Government to finalise telemetry requirements, which means that not one water user can have a compliant meter at the time of writing this submission.

However, it is the third issue which is most concerning considering it was clearly articulated during consultation on the regulations that the timeframes were aspirational¹ and there was a lack of information regarding the telemetry implementation requirements² (that was later developed without consultation with industry) and now, it is government delays that has rendered the policy unimplementable at this point in time.

This policy development approach aimed to meet unrealistic timeframes has been an ongoing issue throughout the development and implementation of the Metering Regulations whereby, lack of detail is provided up-front and later developed, that subtly changes the obligations of water users. This approach affects consultation, undermines policy development outcomes by trickle feeding stakeholders information and endangers stakeholder support. The level of frustration felt by water users at this point of the reform process, still months out from the first major roll-out date, demonstrates that this approach is wearing-thin with stakeholders and that the NSW Government must establish realistic and achievable outcomes going forward.

Water availability:

Currently, there is less than 2,000 megalitres of general security allocation for irrigators in Copeton Dam (our headwater storage). Irrigators have not had a general security allocation or supplementary access since the 2017/2018 water year, with most unregulated users not having had water since then either.

As a result, there is almost no capacity to wet-test any newly installed AS4747 pattern approved meters or current meters that have been previously installed and are manufacturer tested, as both options require testing as per the newly developed Validation Certificate required to be utilised by the regulations. For current meters, an alternative option to accuracy test the meter in-situ also requires water to assess flow rates.

¹ Pg.3, 12: GVIA Submission to NSW Government on Draft NSW Water Management (General) Amendment (Metering) Regulation 2018

² Pg. 15: GVIA Submission to NSW Government on Draft NSW Water Management (General) Amendment (Metering) Regulation 2018

Removing the requirement for flow testing on the Validation Certificate, is one approach to amending the requirements due to lack of water. This approach relies on the installation specifics being correct to assume accuracy but does not provide a solution to those seeking an in-situ accuracy test.

Recommendation for individuals to seek 'Ministerial exemption for interim/transitional status' to meet mandatory metering requirements in exceptional circumstances i.e. with zero water allocation.

Our preferred approach is for individuals impacted to seek a Ministerial exemption (or an additional exemption be included in S.230 of the *Water Management (General) Amendment (Metering) Regulation (2019)* to allow for a 'interim/transitional status' for mandatory metering requirements based on lack of water availability for six-months to 12-months. This approach ensures that water users must provide evidence of installation requirements as per the current Validation Certificate but that a Duly Qualified Person (DQP) may deem the site non-compliant, due to inability to undertake a wet-test or an accuracy test. This specific exemption circumstance for transitional non-compliance could be added to the options in *Part E on the Validation Certificate* or *Part E on the Certificate of Accuracy for Existing Meter (not pattern approved)*. Amendment of the above certificates to allow for the development of a work plan (to meet the transitional exemption requirements), that outlines that within the next six-month period the required steps will be undertaken to achieve compliance.

This benefit of this approach is to also acknowledge that industry and DQP's, are still waiting for guidance on how to accuracy test meters in-situ. We appreciate that approaches are being prepared with expert guidance from Irrigation Australia Limited and the Many Hydraulics Laboratory but there will be many sites around the state that due to changing requirements, a lack of paperwork or evidence exists on previous installations to confidently allow a DQP to sign-off these sites as part validation requirements. These sites must then be accuracy tested. Utilising an exemption in this manner, addresses the issue of lack of water availability for both circumstances.

This approach, is also consistent with the *Water Management Act 2000*, in particular s 233 (1) and (2) whereby the Department through delegated Ministerial Authority can issue a Ministerial Exemption in extenuating circumstances whereby conditional "transitional" status can be applied provided there is a suitable works Plan of Action provided consistent with s 233 (3). This arrangement can also be revoked again by Minister or delegated Ministerial Authority.

Whilst this approach maybe more costly for some water users to implement, due to multiple site visits, it ensures consistency with the legislation whilst maintaining the regulation roll-out dates for meters and provides a consistent approach for all impacted water users to provide due evidence of effort and outline a work plan to achieve full-compliance.

This approach also negates the need for the Natural Resources Access Regulator's (NRAR) voluntarily 'pathway to compliance register' and the need for discretion by the regulator, if an event provided water users the opportunity to access water allocations after the first roll-out date.

[Telemetry and data logging:](#)

At the time of writing this submission, there are no endorsed data logger or telemetry devices that meet the NSW Government's new requirements.

Telemetry is an additional 'value adding' option to the Australian Standard and does not affect the accuracy of a meter or whether it is tamper-proof and recording systematically.

For this reason, we encouraged the NSW Government to consider overarching objective of the metering reform to ensure that improved measurement enables better resource management³ and that telemetry the purpose and intent on adding telemetry should be more clearly articulated⁴ to include this purpose, as not to detract away from the key reforms of metering accuracy. To-date the purpose of telemetry is unclear other than to provide NRAR a single, easily accessible (remotely) source of data, in addition to data logged information. Any other benefits have not been considered in the development of the new requirements.

We also clearly outlined that greater clarity around the telemetry requirements were needed at the time of the regulations initiated⁴ and now, whilst some information is known like a single Data Acquisition Service (DAS) must be utilised, 109 days until the first roll-out date there still remains significant aspects like endorsed devices that remain unknown and is a failure of the NSW Government.

This has been an ongoing issue throughout the development and implementation of the regulations whereby, lack of detail is provided up-front and later developed, which subtly changes the obligations of water users. This trickle feeding approach limits good consultation outcomes, undermines policy development outcomes and endangers stakeholder support. The changing requirements for telemetry developed since the regulations took affect (communicated via a website upload in April 2019) exemplify this. Noting it was given in principle support for telemetry was given provided it was to add benefit to water users, government and the community³. Its implementation should therefore, be a win-win but given that approximately 20% of water users in our region already have telemetry and it is unclear if they will continue to have access to their data in the same timeliness and format that they have now, is a significant concern.

Recommendation to amend roll-out date for meters requiring government approved data loggers and telemetry to begin from 1 December 2020.

As a result, we recommend that it is time for the NSW Government to accept they are culpable in undermining the ability of water users to meet their obligations and that the telemetry roll-out date should be extended to align with the second roll-out date of 1 December 2020.

This will bring the vast majority of 'higher risk' water users on-line at the same time. Importantly this approach more time to:

- Test and secure more device options, other than the limited suite being investigated now;
- Address redundancy issues with existing telemetry users;
- Address data accessibility issues including timeliness and format; and
- Enhance data integration opportunities with existing farm management software and government systems, like Water NSW's Water Accounting system; and
- Assess the cost implications of the single Data Acquisition Service (DAS) model, which were not previously consulted on.

³ Pg. 11 GVIA Submission to NSW Government on draft Water Renewal Action Plan: Metering April 2018

⁴ Pg 15: GVIA Submission to NSW Government on Draft NSW Water Management (General) Amendment (Metering) Regulation 2018

It is also critical that water users maintain their data ownership. Given that the source of truth is the data logger, the parameters for data acquisition should be flexible to enable water users access information within current arrangements.

Extending the telemetry timeline does not detract away from the accuracy of meters or the fact these meters are securing recording data via existing data loggers with tamper evident seals. Therefore, this minor extension is a practical solution that will deliver and enduring and achievable outcomes.

Natural Resources Access Regulator Register (NRAR) - Pathway to Compliance

The pathway to compliance register does not provide water users the certainty to access available water allocations when their meter maybe non-compliant. Whereas, as per our recommendation above, interim or transitional status will mean water users will be legally entitled to access water if and when, it becomes available during the period of transition.

NRAR may prepare their own register of water users but we will not be encouraging our members to voluntarily submit.

We expect NRAR to undertake site audits and compliance reviews, as well as investigations following complaints as per their normal business and therefore, do not see the benefit in establishing a separate approach if it provides no further legal certainty to water users.

A non-exhaustive list of other concerns includes:

- Discretion – this approach relied entirely on discretion by the regulator and therefore, does not provide legal certainty for any water user.
- Confidentiality of data – while NRAR indicated that the register will have utmost confidentiality to protect the privacy of water users the collation and reporting of information contained within this register is highly sensitive and without context, is likely to be misinterpreted/misrepresented.
- Evidence requirements - further information is required about the types of information which may demonstrate a reasonable attempt to comply.

Outstanding implementation issues:

Further to our recommendations above and following on from our correspondence on barriers to compliance and the metering roadshow⁵, the following issues remain outstanding:

- Guidance on methodologies for in situ testing of accuracy.
- Alternative approaches for larger than 1200mm pipe diameters whereby there are not an AS4747 pattern approved meter(s).
- Meter supply and options in 600mm-1,200mm diameter categories when there remains limited meter choice.
- Guidance on suitable documentation to support validation of pre-1 April 2019 installations via examples.
- Clarification on installation requirements for non-pattern approved meters.
- Legal right of a water user to access water allocations with a non-compliant water meter.
- Total number of compliant water meter sites in NSW.
- Frequency and timeliness of access of telemetry data via the DAS to the water user in particular right to maintain your data accessibility.

⁵ GVIA email of Implementation Roadblocks dated 3 June 2019

- Procedures to accessing Federal Government funding to implement the metering framework and if it includes service costs (for DQP) as well as device and installation costs.

Recommendation to provide communication addressing these above listed on-going concerns with the implementation of the existing regulations.

Feedback on draft Water Management Amendment (Metering) Regulation 2019

Inactive works: s. 232

We support the inclusion of groundwater works to be included as inactive works subject to application and approvals.

Reporting requirements: s.244 and s.250

The proposed regulation amendments do not provide clarity on the on-going arrangements for water users to record data without data logging or telemetry (or when it is not working). This is predominately because of touted changes to logbooks and a lack of understanding what constitutes “*an approved form and manner*” for reporting water take. Whilst in-principle we believe the changes reasonable (although we suggest alignment of the timeframes with billing periods of quarterly is more appropriate) without being able to review the form and therefore any additional requirements included on that form, we cannot make a fully informed feedback.

Recommendation to align reporting timelines with billing quarters and water year.

We recommend reconsideration of the timeframes to be quarterly, rather than monthly with an option to request further at-risk water users to have a more regular reporting period. This aligns with billing periods and recognises that most high-risk water users have telemetry anyway.

We also note the use of annual reports and suggest that a water year period is used rather than calendar year, as this is the normal approach for water accounting.

Schedule 8 Metering equipment

While GVIA does not have any issues with the omission of “by a duly qualified person” from clause 2(1), provided that the requirement for a DQP to *validate* the meter remains to ensure integrity and confidence in the accuracy of the meters can be maintained. We note that this may create additional costs in validating a site, if the DQP did not install the device and should be used with caution.

Schedule 8, clause 5 (2) (d) and (e)

While the GVIA appreciates the intent of this amendment, to allow for a single supplier of seals and to identifier who can break such seals and the timely reporting of these identifier numbers. A responding clause must be included to ensure that any broken seal is replaced immediately. For example, if an authorised officer enters a site and breaks the seal for whatever purpose but doesn’t replace it and record the new seal number appropriately, a Water NSW meter reader may access a site thereafter and enact action against the water user for breaking the seals.

Recommendation to include a requirement to re-instate and record any broken seals by the listed authorised persons.

In closing, we consider that these changes are practical approach to enable the continued implementation of metering reform in NSW. We are committed to undertaking all steps to meet our obligations, provided we understand what they are. We cannot encourage the NSW Government to communicate their decisions on our key recommendations around managing compliance due to low water availability and the telemetry roll-out date, as soon as practically possible. Continued uncertainty in these areas will cause undue stress on water users due to no fault of their own.

Kind regards,

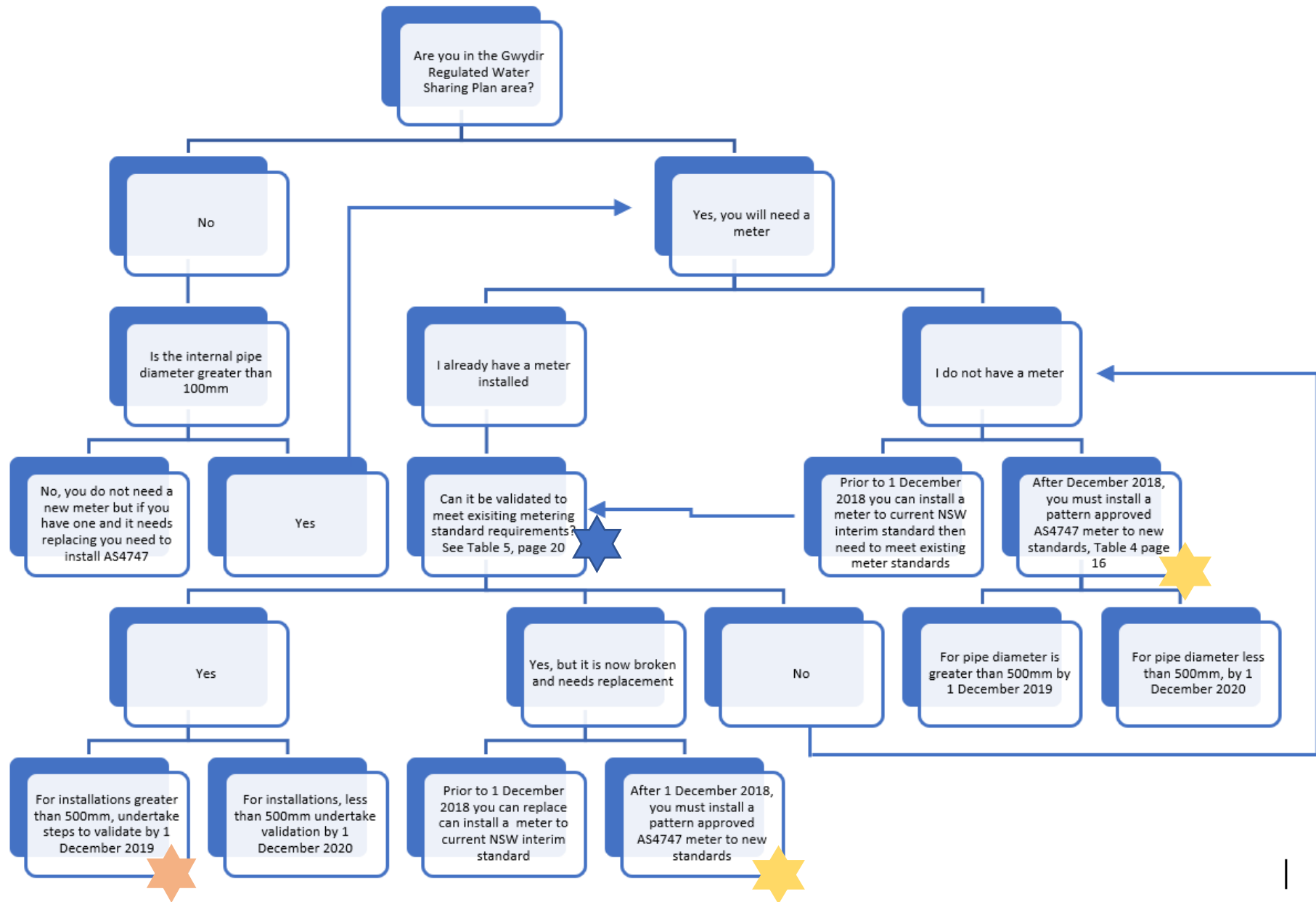


Zara Lowien
Executive Officer
Gwydir Valley Irrigators Association

Referenced documents not publicly available:

1. Roadblocks to compliance, correspondence to Emma Solomon.

Example of Metering Requirements for the Gwydir Valley.



Example of Metering Requirements for the Gwydir Valley.

Issues that remain:



1. Existing metering requirements: Clarification around the installation, validation and accuracy requirements for existing meters is required.
 - Validation and accuracy are two separate steps only one or the other is required, not both. These options are taken depending on the type of meter installed and how its been installed.
 - The policy or regulation does not preclude a non-pattern approved meter which is proven to be accuracy tested +/-5% from being transitioned until its first 5-year validation. At validation it may need to be modified to meet AS4747 installation requirements.
 - There is no requirement in our opinion for existing non-pattern approved meters as of 1 December 2019 or 2020 to be installed as per AS4747 requirements other than at its validation interval as the installation does not need to be validated.



1. Availability of meters that are pattern approved and their supply:
 - There remains limited meter choice in 600mm-1,200mm diameter with multiple pipes. Single cost of one Mace verses 3-4 individual pattern approved meters.
 - Mace pattern approval is pending and unsure if installation requirements remain the same as current manufacturers specification. DO installations prior to 1 April transition if installation specifications are altered and in situ accuracy is met.
 - No meters available in 1,200mm or greater.
 - Provisional approval – if installed, is this transitioned or grandfathered.



1. Validation: issues around availability of [approved certificates](#) (validation certificate only available in March/April) and whether previous paperwork is suffice for existing pattern approved meters or those that were validated and have manufacturers certificates. If these need to be re-validated, water supply will become an issue as well as accessibility of some meters. Can existing documentation be updated with missing components, being minor administrative requirements provided with secondary certificate.
2. Validation certificate needs to allow for an interim check of installation requirements with a pending flow verification. This may provide a step to show due effort with a lack of water.
3. Accuracy: Issues around determination of processes for in situ testing and water availability to undertake such testing. IAL believed to be providing advice.
4. Telemetry: Issues around approved data providers and technicians and existing works with telemetry, replacement of telemetry for new requirements is not efficient and transitioning must be available. Nothing in policy precluded a water user accessing their own data, but this must be in real time.

Example of Metering Requirements for the Gwydir Valley.

Assessment of installation requirements:

The Water Management (General) Amendment (Metering) Regulation 2018 in Schedule 8 2(1) states “Metering equipment must be installed, re-installed in accordance with AS4747 by a duly qualified person”. However, this is not qualified as with the open channel requirements (in (3)) if this applies to existing or meters required to be installed after 1 April 2019. It is therefore, creating confusion in transitioning meters that were installed prior to 1 April about the installation specifics, particularly when validation is not required if an accuracy test can be met. This statement should read as from 1 April 2019 all meter installations and reinstallations should meet AS4747.

For reference, AS4747 refers to the installation specifics on a range of matters including using the meter for its intended purpose and includes distance from obstructions and refers to the pattern approval requirements or the manufacturers specifications. MACE requirements are currently recommended to be eight pipe diameters from an obstruction or a “distance of at least six pipe diameters of straight pipe in front of it and at least two pipe diameters of straight pipe behind it”¹. Some existing meter installations would not meet this requirement for example, a 900mm pipe would need 5.4m in front of the sensor and 1.8m behind or a total of 7.2meters of pipe to meet the current manufacturers specifications.

However, later in the schedule of the Water Regulations, Clause 8 details the transitional arrangements for installations before 1 April 2019 that are assumed to refer to pattern approved meters, installed by duly qualified persons with the appropriate validation documentation.

Clause 9 details transitional arrangements for non-pattern approved meters that outlines that the metering equipment does not need to be pattern approved if it was installed prior to 1 April 2019. There are two clear options here for transition which are:

1. (2) which meets the validation requirements in Clause 8(1) plus has a a manufacturers certificate outlining the maximum permissible error did not exceeded +/-2.5% in manufacturers testing.
2. (3) that meter does not need to be either pattern approved or validated, if accuracy checks show that it is +/-5%.

The issue remains, do all meters need to meet AS4747 installation requirements or only those meters that are seeking to be validated? Noting that a meter does not need to be validated if it can demonstrate the accuracy requirements, until five years past the roll date.

¹ Installing a MACE XCi device – selecting a suitable location for a ultrasonic velocity sensor

https://macemeters.com/manuals/agriflo/Agriflo_XCi_Product_Manual.htm#mace_doppler_sensors/site_selection.htm?Highlight=distance%20from%20pump