

Non-urban Water Metering in Northern Victoria

Annual Implementation Report 2021



Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.



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Water meters play a vital role in managing Victoria's water entitlements and monitoring compliance with the *Water Act 1989* and water resource plans under the Basin Plan.

This report fulfils Victoria's commitment under Basin Compliance Compact action 3.7 to report annually on progress implementing non-urban water metering. All Basin states and the Australian Government have committed to a Basin Compliance Compact (the Compact), which was endorsed by the Council of Australian Governments in December 2018.

Victoria's policy on non-urban water metering was revised in March 2020 to align with the requirements of the Murray-Basin Compliance Compact. Water corporations with rural customers completed metering action plans demonstrating how they will comply with this policy and continued to provide high quality metering services. These actions completed Victoria's metering commitments under the Basin Compliance Compact.

In 2019/2020 the Commonwealth Minister for Water accredited Victoria's water resource plans, which demonstrate how Victoria meets its obligations under the Basin Plan in each of its five water resource plan areas, including requirements for rural water metering and accounting.

Victoria's Non-Urban Water Metering Policy

The purpose of the Policy is to provide assurance that water taken under entitlements is accurately and comprehensively metered, considering risks to water resources and the relative costs and benefits of metering, so that water users and the community can be confident about Victoria's water resource management and accounting.

The Policy states that:

- all new or upgraded extraction sites are to be metered with an AS4747 compliant meter and meters on existing extraction sites are to be replaced at the end of their operational life with an AS4747 compliant meter;
- this metering requirement can be varied by the water corporation in circumstances where the risks are manageable; costs are disproportionate to benefits; or the site requires hydrometric monitoring standards to be applied;
- water corporations must read meters on operational service points based on risk with a minimum standard of at least once a year on low volume or low risk customers, and at least two times per year for surface water winter-fill

licences and more frequently on high risk meters;

- meters that comply with neither an interim/contemporary standard nor AS4747 should be replaced by June 2025. In doing so water corporations should consider the circumstances the Policy provides for varying metering requirements; and
- metered water take is to be telemetered by June 2025, based on the water corporation's assessment of the full range of costs and benefits including benefits of stronger compliance. Water corporations may retain manual meter reading where telemetry is not viable (e.g. in valleys with poor reception or difficult sites), or an alternative technology can be applied.

Water corporations are required to prepare, implement and maintain metering action plans that will detail how each water corporation meets the requirements in the Policy, providing clarity about metering, maintenance and data requirements in their respective jurisdictions.

Non-urban water metering systems and assets

Victorian water corporations have been early adopters of non-urban water metering and are national leaders in telemetry and automated control systems. In 2020-21 95 per cent of water taken via customer service points was metered, with 87 per cent of total take occurring through meters that meet the ± 5 per cent target accuracy set by the National Framework for Non-Urban Metering. The majority of total take was telemetered (70 per cent).

About 85 per cent¹ of meters in Victoria were installed before 2014. As the National Measurement Institute approved the first meter for full flowing pipes as complying with the AS4747 standard (pattern-approved) in 2014 and no open channel meters are pattern-approved as at September 2021, only 20 per cent of take is via fully AS4747 compliant meters.

The proportion of take measured through AS4747 compliant meters will increase over time. DELWP and water corporations are working to drive the uptake of more AS4747 meters and telemetry. All water corporations have recently updated their metering action plans that set out plans on when and where new meters and telemetry will be installed, non-compliant meters will be replaced and reporting of water take will be automated by 30 June 2025.

¹ Excludes small meters ≤ 50 mm in diameter

Metering and compliance 2020-21

Measure	Northern Victoria	State-wide
Proportion of water take via customer service points that are metered	96%	95%
Proportion of total water take measured to $\pm 5\%$ via AS4747 compliant or contemporary meter ²	87%	87%
Proportion of total water take via AS4747 compliant meter	20%	20%
Proportion of total take telemetered	71%	70%
Number of meters	62,385	68,184
Number of telemetered meters	28,291	30,570
Number of manual meter reads and additional inspections (2020/21)	73,227	75,227

The Victorian Government has a zero-tolerance approach to unauthorised take. As well as accurate meters, other important components of metering that enable effective compliance and enforcement are:

- meters are read, inspected and maintained by water corporation staff
- 70% of customers' take is telemetered which means water corporations receive data electronically at a close to real time frequency which can be used by water corporations to more regularly monitor and enforce compliance with entitlement conditions
- bulk water measurement facilitates accounting and has a high level of public disclosure via published annual water accounts and water

corporation annual reports that are tabled in parliament

- automated control systems in many modernised irrigation districts give water corporations accurate information about deliveries and losses, and prevent people from ordering more water than they are authorised to take.

Non-urban water metering priorities in 2021-22

DELWP and water corporations will continue to implement actions from the state policy and metering action plans, including:

- DELWP will continue to review the Guidelines for the Development of Bulk Entitlement Metering Programs, to ensure they reflect contemporary practices and remain fit for purpose
- Water corporations will assess the costs and benefits of installing telemetry on meters that are still being read manually and update their metering action plans
- DELWP and water corporations will review the Victorian Non-Urban Water Meter Policy and associated meter action plan guidelines to consider outcomes from a Commonwealth investigation into the Metrological Assurance Framework (MAF) for Non-Urban Water Meters
- DELWP and water corporations to continuously improve data systems and reporting capability
- Metering coordinators from water corporations with rural customers will share information on meter and telemetry performance, implementing the policy, and improving metering practice.

Glossary

AS4747-compliant meter – a water meter that has been either pattern approved or verified in compliance with the processes and procedures outlined in AS4747 – Meters for Non-Urban Water Supply (Standards Australia, 2013).

Bulk water meter – a meter for measuring the flow under the approved bulk entitlement metering program.

Interim or Contemporary standard — is a standard under which an installed water meter is likely to meet the $\pm 5\%$ accuracy range and which has a manufacturer's certificate of accuracy of $\pm 2.5\%$ and has been installed to manufacturer's specifications.

Telemetry - involves automatically recording data and sending it electronically from the meter to another place for monitoring and analysis.

2. $\pm 5\%$ is the target accuracy set via the National Framework for Non-Urban Metering (2009)