

## Water Legislation Amendment Bill 2022

**Submission No:** 3  
**Submitted by:** Inspector-General of Water Compliance  
**Publication:**  
**Attachments:**  
**Submitter Comments:**



Australian Government

Inspector-  
General of  
Water  
Compliance

Ref: IG22-0153

Committee Secretary  
State Development and Regional Industries Committee  
Parliament House  
George Street  
Brisbane QLD 4000

[SDRIC@parliament.qld.gov.au](mailto:SDRIC@parliament.qld.gov.au)

10 November 2022

Dear State Development and Regional Industries Committee,

**Submission into inquiry into the Water Legislation Amendment Bill 2022**

Thank you for your invitation to make a submission into your inquiry into the *Water Legislation Amendment Bill 2022* (Bill).

As you may be aware, the Bill will have implications for the management of water resources in the Queensland region of the Murray-Darling Basin and the management of any water resources of other Basin States which have a significant connection to these water resources as identified in the relevant water resource plans of Queensland. The Bill also has implications for the performance of the Inspector-General of Water Compliance's functions under the *Water Act 2007* (Cth).

The Inspector-General welcomes the Bill and congratulates Queensland on this move to strengthen the metering of water taken, particularly where that water is taken from Murray-Darling Basin water resources. This is a significant step towards ensuring the measurement of water take data is timely and applies to all relevant take, and includes a step-change in data accuracy.

The Bill provides for a broad regulation making power that creates uncertainty around the effect on the management of Basin resources collectively by State and Commonwealth Governments in the national interest. The Inspector-General therefore suggests providing assurance in the use of this power where it affects metering take from Basin water resources.

Please find attached the Inspector-General's submission into your inquiry.

Yours sincerely,

  
Daniel Blacker  
Acting Inspector-General of Water Compliance



Australian Government



Inspector-  
General of  
Water  
Compliance

# Submission to Inquiry into the Water Legislation Amendment Bill 2022 (Qld)

10 November 2022



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# Introduction

## **Submission by the Inspector-General of Water Compliance to the Queensland State Development and Regional Industries Committee. This submission relates to the Water Legislation Amendment Bill 2022 (QLD).**

On 12 October 2022, the Minister for Regional Development and Manufacturing and Minister for Water introduced the Water Legislation Amendment Bill 2022 (the Bill) into the Queensland Parliament. The Bill was referred to the State Development and Regional Industries Committee for detailed consideration.

The stated primary objective of the Bill is to amend the Water Act 2000 (QLD) to establish a regulatory framework for implementing Queensland's strengthened policy for measuring the take of non-urban water.

The Inspector-General of Water Compliance welcomes the opportunity to make this submission to the State Development and Regional Industries Committee.

## About the Inspector-General of Water Compliance

The *Water Act 2007* (Cth) sets out a national framework to enable the Commonwealth, in conjunction with the Basin States, to manage Murray-Darling Basin water resources in the national interest, give effect to relevant international agreements and promote the sustainable use and management of Basin water resources. The *Water Act 2007* (Cth) enables the *Basin Plan 2012* (Cth) (the Basin Plan) and water resource plans that, collectively, provide for the integrated management of the Basin water resources by the Commonwealth and Basin States.

A new role of Inspector-General of Water Compliance for the Murray-Darling Basin was established in the *Water Act 2007* (Cth) on 5 August 2021. The Inspector-General's functions set out in that Act are to:

- Monitor and oversee Commonwealth agencies performance of functions and exercise of powers under the Act, Basin Plan and water resource plans
- Monitor and oversee Basin States performance of their obligations in managing Basin water resources under the Act, Basin Plan and water resource plans
- Monitor and oversee of the implementation of the commitments in certain intergovernmental agreements by Commonwealth agencies and Basin States
- Engage with the Australian community in relation to the management of Basin water resources
- Investigate and enforce compliance with the Act, Basin Plan and water resource plans and conduct inquiries into the matters the Inspector-General oversees.

## About the Murray-Darling Basin

The Murray-Darling Basin is a one million square kilometre area in the south east of Australia, covering 14 percent of Australia's land area and home to 2.3 million people. The Basin covers 75 percent of New South Wales, more than 50 percent of Victoria, 15 percent of Queensland, 8 percent of South Australia and all of the Australian Capital Territory. The Basin is one interconnected system of rivers made up of 22 different catchments (see Figure 1).

Water in the Basin is managed to sustain the river system and maintain water quality. This management means that water is safe and can continue to support local communities, businesses and industries, Australian agriculture, and unique ecosystems.

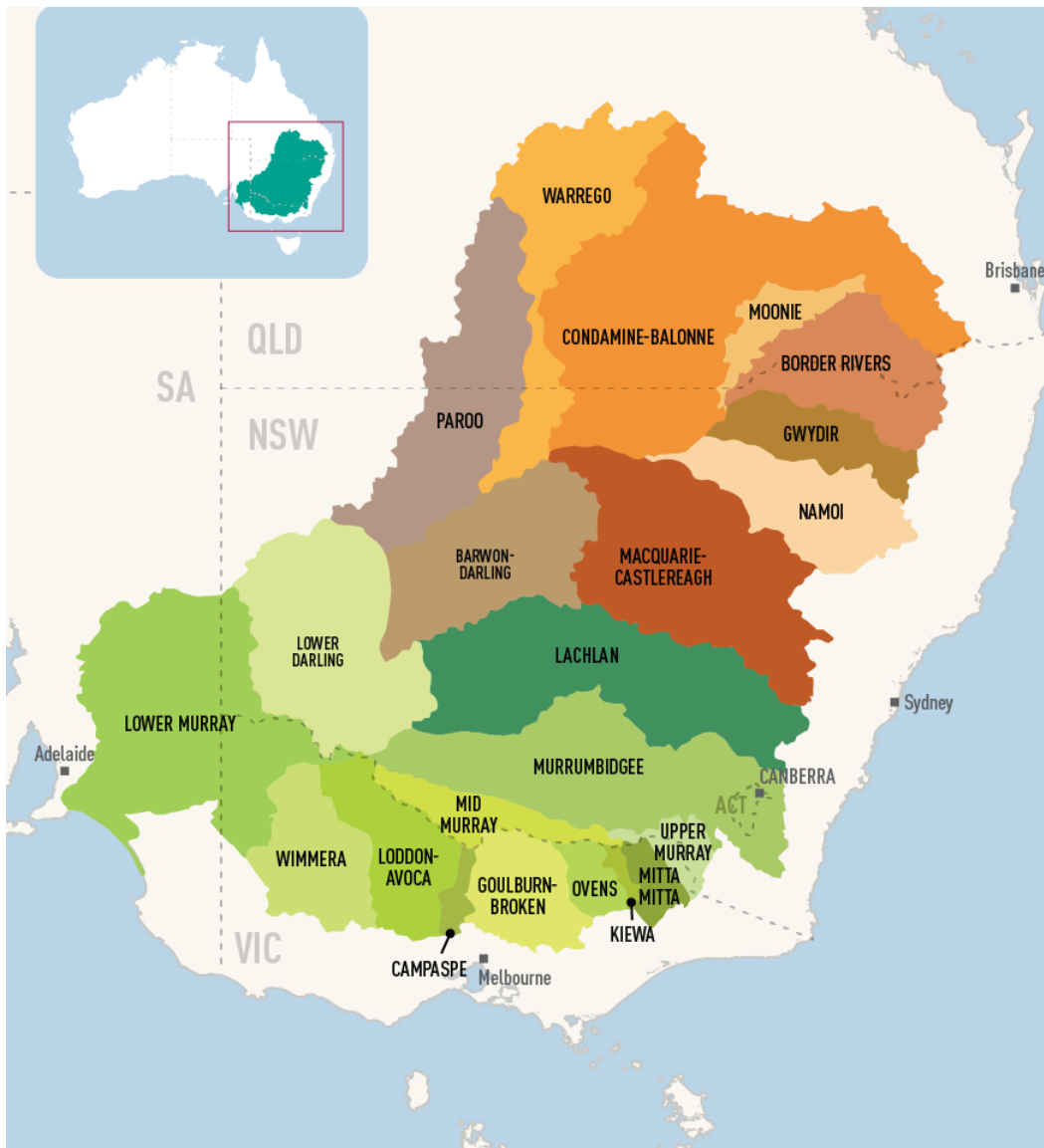
## Water Legislation Amendment Bill 2022 (Qld)

The Bill amends the *Water Act 2000* (QLD), the *Water Supply (Safety and Reliability) Act 2008* (QLD), and the *South-East Queensland Water (Distribution and Retail Restructuring Act) 2009* (QLD). The Bill is intended to deliver the following policy objectives:

- Increase the coverage and standard of metering for the direct measurement of non-urban water take
- Provide for farm scale measurement of overland flow water take
- Receive timely and accurate data on water take
- Ensure fit for purpose compliance and enforcement for measurement of water take.

Under the Bill, the relevant Minister will have the power to issue regulations relating to the accuracy requirements for measuring water take, including water taken from Basin resources. The intention of this power is to provide for more flexibility to reflect the challenges associated with measuring different types of water take.

Figure 1: Catchments in the Basin



Source: MDBA

## Context for the Inspector-General's response

The Inspector-General welcomes the Queensland Government's strengthened non-urban water take measurement framework. The following sets out relevant context for the Inspector-General's feedback on the Bill.

### Queensland Non-urban Water Measurement Policy

The Inspector-General and officials from the office of the Inspector-General of Water Compliance have been consulted in the development of the policy underpinning the Bill. Of particular interest to the Inspector-General is ensuring that water take in the Basin is metered, where it is feasible to be metered; water take data is obtained within a time to minimise negative consequences for the sustainable management of water and other resources<sup>1</sup> and allows action in the event of non-compliance to be effective; and water take data is accurate.

<sup>1</sup> In line with the objectives of the *Water Act 2000* (QLD)



## Importance of accurate measurement of water for the Basin

Under the *Water Act 2007* (Cth), water taken from Basin water resources is accounted annually. This is then compared with the extraction limit (called the 'sustainable diversion limit') associated with the relevant resource area. The Inspector-General uses this to determine whether the water take is compliant with the limit or not, which is then recorded in a register by the Murray-Darling Basin Authority.

This means the trends in water take are tracked over time, allowing relevant governments to take action to address instances of overextraction, and leading to sustainable levels of extraction over the long term. This allows water to be managed equitably for all water users across the Basin.

Timely and accurate data around water take is essential for this water accounting and for water compliance regulators to enforce relevant laws and rules. It is only with compliance with water laws and rules across the Basin, that the framework established by the Water Act works effectively.

In addition, as Queensland contains catchments that affect downstream surface water supply in the Basin, water accounting provided for those catchments informs estimations of availability of water in downstream catchments. This means inaccuracies and errors in Queensland water take measurements may have implications for the accuracy of New South Wales, Victorian and South Australian accounts.

Further, any inaccuracy and errors in Queensland's Basin groundwater take measurements may have broader implications as well. Relevantly, where those resources have a significant connection to Queensland's Basin groundwater resources, accurate measurement of water take is necessary for the management and sustainable use of water resources in the other Basin States. Such interconnectivities are identified in relevant water resource plans of Queensland.

## Queensland Government commitments for metering of water take

The intergovernmental agreements mentioned in the introduction section includes, among others, the *Murray-Darling Basin Compliance Compact* (the Compact). The Compact was entered into by all Basin Governments, including Queensland, in June 2018. Section 3 of the Compact relates to metering and measurement. Along with the other commitments in the Compact, the Inspector-General is responsible for overseeing performance against commitments entered into by Basin Governments with respect to non-urban water meters.

The Queensland Government commitments under the Compact includes:

- The effective measurement of non-urban water users' diversions (metering take), and of the water resources themselves (hydrometrics and models)
- All meters should comply with the national standard (AS 4747) and:
  - All new and replacement meters must comply with AS 4747 including pattern approval and verification, by no later than June 2025
  - Before June 2025, all new and replacement meters must comply with AS 4747 where available or, where not available, be verified to an accuracy of  $\pm 5$  percent
  - Highest risk take must be accurately metered by December 2019, with identification of what is highest risk to be included in a metering policy<sup>2</sup>
- All take via water allocations must be metered by June 2025 with any exemptions justified

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<sup>2</sup> Noting that Queensland reserved the right in the Compact to publish alternative dates for accurate metering and telemetry of high risk take in their metering policy.

- Telemetry should be used to improve the timeliness and efficiency of capturing and reporting water take data for compliance, and flag possible breaches of water management rules for immediate investigation
  - Establish a program to progressively automate reporting of water take, regardless of how it is measured, by no later than 2025 with any exemptions justified
  - High risk take must be telemetered by December 2019, with any exemptions published.

The Inspector-General recognises that the Bill implements a number of the above commitments and, as such, supports the work done to strengthen the regulatory arrangements applying to metering non-urban water take in Queensland. In particular the Inspector-General congratulates Queensland on establishing arrangements relating to telemetry and measurement plans for overland flow in its Bill. These are all significant steps forward for water management in Queensland and consequently the Basin.

In addition to commitments in the Compact, along with all Australian governments, Queensland has committed to the *Metrological Assurance Framework 2*, a national framework setting out the rules and guidance for the use and regulation of non-urban water meters. Under the Framework, meters will be (except where exempted):

- Pattern approved by the National Measurement Institute, where available
- Certified as accurate by the manufacturer after manufacture and prior to being placed into service, with errors not exceeding  $\pm 2.5\%$  across the flow rate range
- Installed in compliance with the pattern approval certificate, relevant Australian standards and meter manufacturer's instructions
- Validated by a certified validator after installation and before water is taken through the meter, and is demonstrated to operate within the maximum permissible error rate of not more than  $\pm 5\%$  in-field conditions
- Maintained periodically in accordance with the pattern approval certificate, regulatory requirements and relevant Australian standards
- Periodically validated by a certified validator on an ongoing basis
- Audited on a regular basis by government agencies or independent auditors in accordance with compliance plans.

The Inspector-General considers the Bill is generally in line with this intention. The Inspector-General notes that the Bill implements the *Queensland Non-urban Water Measurement Policy*. Under this policy, the Queensland Government has set a 5 ML annual entitlement volume metering threshold, established telemetry requirements, and requires relevant water users to provide overland flow measurement plans from 2025. The Inspector-General recognises these are all significant steps forward for water management and compliance in Queensland.

However, as accuracy is one of the key requirements under the Framework, the Inspector-General would welcome assurance that all new and replacement non-urban water meters will be pattern approved, where available, by 1 July 2025, in line with Queensland's commitments under clause 3.2 of the Compact. The Inspector-General has concerns that Queensland's largest water users (with meters greater than 600mm size) in the Basin may not be required to have a pattern approved meter and the policy does not articulate a date for inclusion of these meters in its implementation strategy. The Inspector-General notes that this absence may also have consequences for the emerging meter supply market, where it could signal there is no need for large scale pattern approved meters to meet Queensland demand.

Since the Compact in 2018 signalled a renewed commitment of Basin states to AS4747 metering, there has been a growth in the pattern approved meter supply market. A list of available pattern approved non-urban water meters is available on the Department of Agriculture, Fisheries and Forestry's website at [Pattern Approved non-urban Water Meters \(agriculture.gov.au\)](http://Pattern Approved non-urban Water Meters (agriculture.gov.au)). Currently there are 16 available closed-conduit meters which are

compliant to AS4747 requirements, 9 of those meters are 600mm or over in size. There is now also one open channel meter available for use which is compliant to AS4747 requirements.

The Inspector-General has carried out research to identify barriers to metering compliance across the Basin. This research found that, whilst the supply, delivery, installation and validation of new meters is technically and logistically challenging, we are confident that the commercial market for non-urban water meters can meet the demand for all AS4747 metering requirements.

## **Metering standard and guideline**

The Inspector-General has the power to issue standards relating to measurement of water taken from Basin water resources (section 215VA of the *Water Act 2007* (Cth)). The Inspector-General also has the power to issue guidelines relating to Commonwealth agencies and Basin States performance of their obligations in the management of Basin resources under the Act, Basin Plan and water resource plans (section 215V of the *Water Act 2007* (Cth)).

Mr Des Pearson, in his 2021-22 [Review of Basin state compliance and enforcement frameworks](#)<sup>3</sup> for the Inspector-General, called for greater consistency in all areas of water compliance across the Basin, included metering and measurement. Mr Pearson noted considerable differences between states on fundamental aspects of metering such as when meters are required and to what standard. The Inspector-General considers addressing core issues around consistency in metering requirements would create a more level playing field and improve community trust and confidence that water was being managed to a high standard across the Basin, regardless of jurisdiction.

Accordingly, the Inspector-General intends to issue a metering standard and/ or a metering guideline using the powers under the Act. Together, the standard and/ or the guideline will give effect to the policy intention expressed by all Basin Governments in the Compact and *Metrological Assurance Framework 2*.

## **Application of metering standard and guideline**

Under the Act, standards and guidelines issued by the Inspector-General must be considered by Commonwealth agencies and Basin States when performing obligations in the management of Basin water resources. The Inspector-General may consider how a Commonwealth agency or Basin State has had regard to the metering standard and metering guideline when relevant to an audit or inquiry conducted under the Act.

In practice, this means the metering standard and guideline, once issued, may need to be actively considered by the Queensland Minister for Water in making or varying a regulation for the purpose of the *Water Act 2000* (QLD), insofar as that relates to the management of Basin water resources. Further, the Inspector-General may consider how regard has been had to the metering standard and guideline in making or varying a regulation.

## **Water resource plans**

Water resource plans are developed by Basin States and accredited by the Commonwealth Minister for Water to give effect to the Basin Plan. These plans are underpinned by relevant state legislation and the methods and models adopted under the plan.

For Queensland:

- Under the Border Rivers-Moonie water resource plan, the standard for measuring take is the Australian Standard AS 4747: Meters for non-urban water supply (AS 4747)

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<sup>3</sup> <https://www.igwc.gov.au/sites/default/files/2022-08/compliance-enforcement-across-murray-darling-basin.pdf>  
Inspector-General of Water Compliance

- Under the Condamine-Balonne water resource plan, an approved meter within the definition of section 106 of the *Water Regulation 2016* (QLD) is required and the agreed standards for measuring take is AS 4747
- Under the Warrego-Paroo-Nebine water resource plan a fit-for-purpose approach is adopted due to the profile of water take in the region.

In August 2021, the Murray-Darling Basin Authority (the Inspector-General's predecessor for the compliance and enforcement functions) published its [audit report](#) on the protection of environmental water under the Warrego-Paroo-Nebine water resource plan<sup>4</sup>. This audit found that, while the Department of Regional Development, Manufacturing and Water had a thorough and well documented procedure to guide staff in calculating announced periods for overland flow harvesting, there were issues associated with the measurement of water taken through those periods.

Relevantly, the audit report noted instances where water allocation holders did not comply with their obligations, which highlighted the lack of an effective mechanism to monitor and enforce compliance with daily extraction limits, or more generally, to monitor extraction during a flow event. With respect to meters, the audit also found water allocation holders reported faulty meters, which demonstrated that the data collected from water allocation holders from those meters cannot be an accurate estimate of water extraction.

Accordingly, the audit report contained recommendations to achieve more effective monitoring of water allocation holder compliance, as well as improve the accuracy of water take data collected, including when extraction occurs through a faulty meter.

The Inspector-General is currently undertaking an audit of the Condamine-Balonne water resource plan. This audit focuses on the management of overland flow harvesting in the Lower Balonne catchment. The audit will assess the monitoring, measurement and management of flow events. The audit is not yet completed and will be made publicly available once completed.

## Commonwealth support for metering reform in Queensland

The Inspector-General notes that Commonwealth Government funding has been made available to the Queensland Government to improve water measurement and telemetry in the Northern Murray-Darling Basin so water users can more easily comply with requirements. Relevantly, \$12.5 million was made available in 2021 under the Northern Basin Metering Program to achieve better outcomes for water users, communities, and the environment through more accurate and timely water measurement<sup>5</sup>.

## Inspector-General response

The Inspector-General welcomes and supports the work of the Queensland Government to strengthen measuring water take.

The Inspector-General recognises the Bill applies to measurement of water taken from catchments outside of the Basin. However, in respect to water taken from Basin resources, the Inspector-General would welcome assurance around the accuracy requirements for metering take from Basin water resources and the exercise of the regulation-making powers having regard to Basin-related matters. These matters relevantly include:

1. The implications for the regulatory framework established under the *Water Act 2007* (Cth)

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<sup>4</sup> <https://www.mdba.gov.au/sites/default/files/pubs/warrego-paroo-nebine-water-resource-plan-compliance-audit.pdf>

<sup>5</sup> Media Release, Funding flows to the Northern Basin Metering Program in Queensland, the Hon Keith Pitt MP, Minister for Resources and Water & the Hon Glenn Butcher MP Queensland Minister for Water, 23 March 2022  
Inspector-General of Water Compliance

2. The implications for the accuracy of water accounting in the Basin and ability to effectively track whether water has been extracted from Basin resources sustainably over time
3. The risks arising for water accounting in the Basin, particularly where adopting an approach that reduces the level of accuracy from committed levels based on:
  - a. The proportion of water taken from Queensland's Basin water resources that is not accurately measured
  - b. The flow-on consequences for downstream catchment water accounts that are based on Queensland accounting
4. The commitment for all take via water allocation to be metered by June 2025 with limited and justified exemptions
5. Requirements for meter coverage and accuracy to reflect the level agreed in water resource plans.