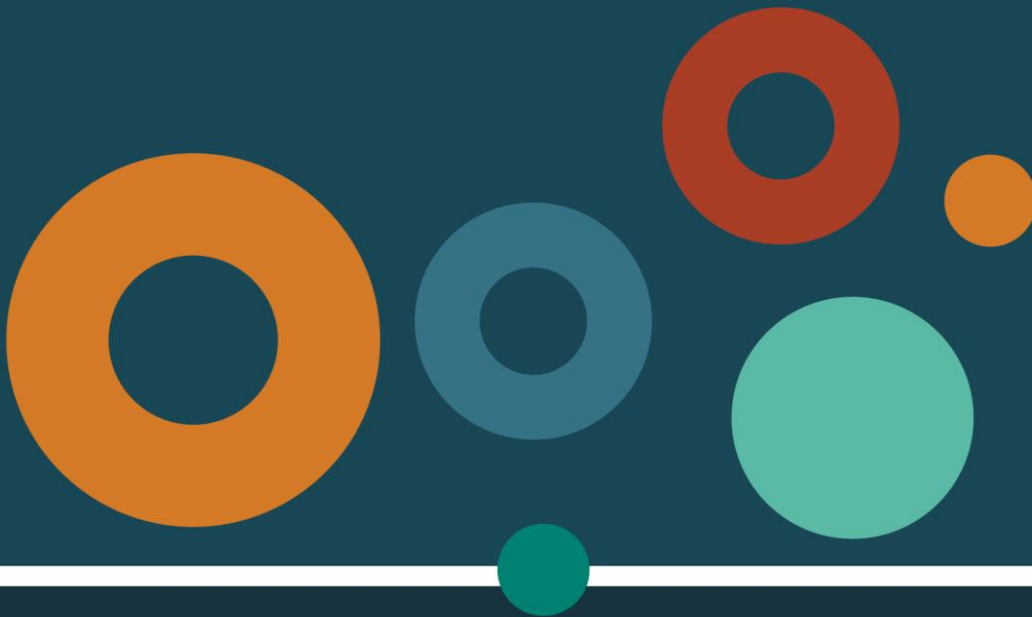


Rural Water Management Program

Implementation of the Independent Audit of Queensland Non-Urban Water Measurement and Compliance Government Response

Performance Review Report
September 2019



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Summary

The Department of Natural Resources, Mines and Energy (DNRME) established the Rural Water Management Program (RWMP) to drive more transparent and sustainable rural water management across Queensland. The program is delivering better systems, policies and processes to give Queenslanders confidence that our water resources are being managed fairly and responsibly.

Establishing the RWMP was a necessary step for DNRME to lead and deliver the implementation of the Queensland Government's response to an Independent Audit of Queensland Non-Urban Water Measurement and Compliance (Independent Audit).

The Independent Audit was commissioned in August 2017 following intense media scrutiny of the management of non-urban water in the Murray-Darling Basin and subsequent allegations of water theft and corruption. The Queensland Government published a response to the recommendations of the Independent Audit in July 2018: the Independent Audit of Queensland Non-Urban Water Measurement and Compliance Government response (Government response).

This is the first performance review and implementation progress report. Its purpose is to demonstrate how DNRME is performing in delivering both the outcomes of the Independent Audit and the Queensland Government's response, using best practice approaches to managing the implementation program. The report is presented in two parts, a performance review summary and an appendix that provides detailed progress updates on key actions undertaken.

A number of significant milestones have been achieved under the RWMP through strong partnerships with key stakeholders across the DNRME water business. These include:

- completion of a state-wide risk assessment based on water resource pressure in each catchment across Queensland
- the review of existing metering policy to inform the development of new policy proposals for both metering and other forms of measurement
- commencement of consultation on new measurement policy proposals
- the first ever temporary release of water from an infrastructure reserve for irrigation activities
- completion of a trial of an online portal supplying water accounting data to entitlement holders
- development of an internal water management framework to support water governance, roles and responsibilities clarity and identification of strategic DNRME priorities
- development and publishing of an enhanced compliance framework
- release of Australia's first accredited water plans for the Murray-Darling Basin catchments
- incorporating measures within new or replacement statutory water plans to set specific timeframes for metering and measurement based on identified water resource risks and the desire for water trading markets within catchments
- the development of implementation plans along-side the development of water plans to identify implementation tasks, assign roles and responsibilities and set timeframes for delivery to facilitate the implementation of new water plans
- development of draft standard and methodology for overland flow measurement

- introduction of more effective project delivery oversight and best practice program management.

A specific recommendation in the Independent Audit identified the need for performance reviews to be implemented and conducted separately from operational and compliance activities. DNRME aims to be a best practice regulator of non-urban water. Regular performance reviews provide the opportunity to demonstrate how DNRME is achieving key actions towards performance excellence and assure the community that non-urban water is being managed fairly and sustainably.

Implementing the government response provides the basis for DNRME to develop and implement an assurance framework to measure and report on its regulatory performance. Refinement of this framework over the coming months will enable future performance reports to focus more explicitly on outcomes.

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1 Introduction

The Department of Natural Resources, Mines and Energy (DNRME) is responsible for sustainably managing water resources across Queensland using a framework that encompasses long-term equitable and transparent water planning and the development and implementation of water management policies and regulations. The *Water Act 2000* provides the legislative basis for DNRME's regulatory functions and responsibilities.

Recently, the regulation of non-urban water has been subject to increasing scrutiny as a result of media coverage and long-term drought. This has resulted in a number of independent reviews, audits and commitments by the Queensland Government to respond to recommendations arising from these activities. This is mirrored at the federal level and by other states. The introduction of a regulatory assurance framework by DNRME and publication of an annual performance review is a commitment arising from the Independent Audit. It also provides a reporting mechanism to help assure community confidence in the management of water resources across Queensland.

Regulators must aim to be high performers that follow best practice. Regulatory agencies are provided with significant powers under legislation and it is reasonable to expect that the use of these powers is consistent, transparent and fair. Regulatory decision making and the exercising of powers must adequately consider risk and occur within the context of established policies, procedures and criteria.

To retain the confidence of the community, regulators must be able to demonstrate that they operate within their powers, they have developed and follow procedural requirements that support good decision making, and that regulatory effort is focussed on areas of highest risk. The regulatory assurance framework is focussed on reviewing and reporting on DNRME's performance as a regulator and provides the mechanism for DNRME to demonstrate how it is working towards and achieving performance excellence.

This report is the first annual review to be published and it is specifically focussed on how DNRME has performed in responding to the Independent Audit and how this has contributed to improving the management of water resources in Queensland. It focuses on the establishment of the framework and progress with implementing the government's response to the Independent Audit. In future reporting years, the performance review will examine water resource management and regulatory progress at the water plan level across Queensland.

1.1 Background

Our water supply is a precious resource for all Queenslanders. We all share responsibility for using it fairly and equitably and protecting it for future generations.

In July 2017, the ABC's *Four Corners* program aired an episode about water in the Barwon-Darling titled *Pumped: Who is benefitting from the billions spent on the Murray-Darling?*. The episode raised a number of issues relating to water management and compliance including allegations of water theft in the Murray-Darling Basin. The airing of this episode and media around the subsequent Menindee fish kills, prompted action by the Australian and Queensland Governments and all the Murray-Darling Basin states.

In August 2017, the Queensland Government commissioned the Independent Audit of Queensland Non-Urban Water Measurement and Compliance (Independent Audit).

1.1.2 Murray-Darling Basin Water Compliance Review

On 30 July 2017 the Australian Government requested that the Murray-Darling Basin Authority (MDBA) take action to assess the legislative, policy and practical implementation of compliance in water management across the Murray-Darling Basin. The MDBA and an Independent Panel conducted a Basin-wide review and released the Murray-Darling Basin Water Compliance Review¹ (the Review) in November 2017. The Review noted there were significant variations between regulatory agencies within the Basin states in:

- the maturity of a culture of compliance
- the level of resourcing, particularly in consideration of the geographical spread and varying sizes of entitlements
- the degree of transparency that provides community confidence that the compliance system is doing its job
- the comprehensiveness and clarity of the policy framework
- the challenges posed by compliance.

It was noted that Queensland had the least experience of all the Basin states with developing a compliance culture, having only adopted the MDB Cap on Diversions² in 2010, which is much later than other Basin states. The Review asserted that there are low levels of compliance resourcing, difficulty obtaining accurate data to support compliance due to patchy metering, a lack of real-time data and accurate water accounts, and opportunities to improve compliance culture. It also identified a “notable lack” of transparency, which is necessary for community confidence in the compliance system and to ensure that water agencies are working effectively.

In response to the Review, the Murray-Darling Basin Authority developed the Murray-Darling Compliance Compact³ (the Compact) in consultation with each Basin state. The Compact aims to ensure adherence to the rules that support fair and transparent water use and management in the Murray-Darling Basin. The Compact was endorsed by the Council of Australian Governments (COAG) in December 2018.

The Queensland Government reports annually on progress in meeting its obligations under the Compact and this information forms part of the annual report published by the MDBA.

¹ <https://www.mdba.gov.au/sites/default/files/pubs/MDB-Compliance-Review-Final-Report.pdf>

² The Cap on Diversions was intended to prevent further growth in water take by capping surface water diversions to a specified point in time.

³ <https://www.mdba.gov.au/sites/default/files/Basin-Compliance-Compact-180702-D18-31184.pdf>

1.1.3 Independent Audit of Queensland Non-Urban Water Measurement and Compliance

On 14 August 2017, the Honourable Dr Anthony Lynham, Minister for Natural Resources, Mines and Energy, announced an independent review into rural water metering across Queensland. The purpose of the audit was to undertake a strategic review of Queensland's current non-urban water measurement and metering framework including the regulatory arrangements which support water measurement and compliance.

An independent panel was formed in October 2017 to conduct an audit and provide advice and options for consideration by DNRME and Minister Lynham. The panel consisted of water industry experts with a diversity and depth of experience spanning water supply services, the rural and agriculture sector, legal, academia and local government. Its members were:

- Tim Waldron (Chair)
- Ian Johnson
- Professor Poh-Ling Tan.

The panel delivered their final report⁴ in March 2018. The report made a series of recommendations, all of which are detailed in Appendix 1. The broad report findings noted:

- the excellent work being done in developing and establishing water plans for Queensland
- a series of deficiencies in existing arrangements for measuring the take of water from supplemented and unsupplemented⁵ waters and from overland flows
- an absence of appropriate water accounting and management control systems
- a deteriorating situation in relation to water metering and measurement including a lack of staff in technical and operational areas
- a weak enforcement and compliance culture leading to ineffective water management
- that opportunities exist to tap into new technology to support real-time reporting of the take of water.

In July 2018, the Independent Audit of Queensland non-urban water measurement and compliance Queensland Government response⁶ (Government response) was published.

⁴ https://www.dnrme.qld.gov.au/_data/assets/pdf_file/0010/1396756/independent-audit-water.pdf

⁵ Supplemented water is water that is managed under a resource operations licence whereby water is typically stored in a dam and later released to customers via channels, pipelines or using natural watercourses. Unsupplemented water is water that is not managed under a resource operations licence and is typically natural water flows.

⁶ https://www.dnrme.qld.gov.au/_data/assets/pdf_file/0006/1396761/queensland-response-independent-audit.pdf

The Government response outlines how the recommendations of the audit will be actioned and sparked the creation of DNRME's Rural Water Management Program (RWMP) to ensure the delivery of these commitments.

2 Rural Water Management Program

2.1 The role of the Rural Water Management Program

The RWMP was formed in July 2018 and is responsible for delivering transformational change to ensure community confidence in the management of non-urban water in Queensland. The RWMP is focussed on a number of key drivers that support fairness, transparency, accountability and sustainable water management as outlined in Figure 1.

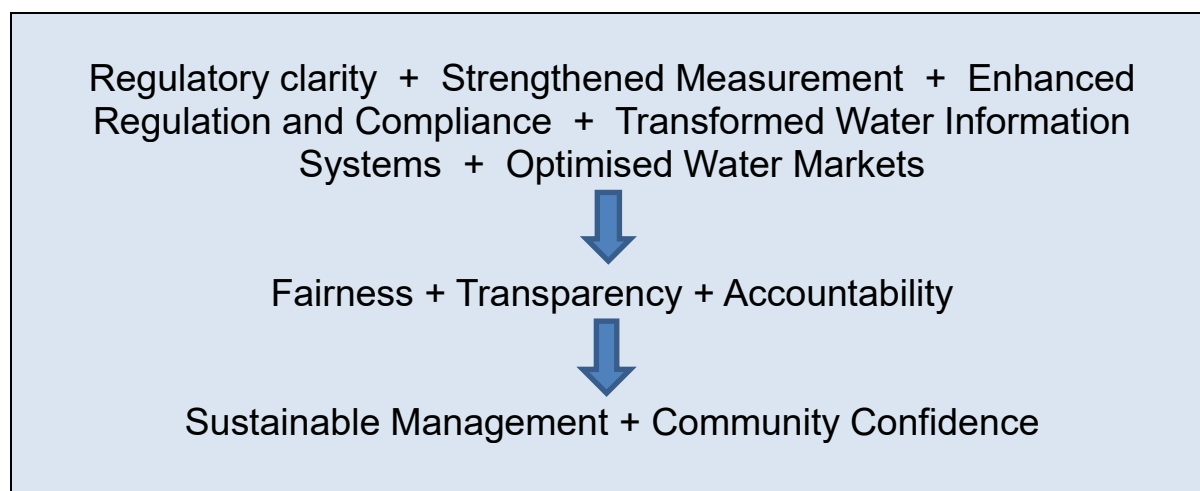


Figure 1: Drivers and outcomes that deliver community confidence in non-urban water management

The delivery of the Government response is being driven through the implementation of a number of strategic change projects. These projects aim to transform the water business and address the findings of the Independent Audit. The RWMP supports the delivery of these projects through its governance, project management, and reporting. The RWMP is a whole-of-DNRME water business project aimed at creating a modern water resource management framework for the benefit of all Queenslanders.

2.2 Best practice program management

Significant achievements have been delivered under the RWMP in its first year of operation including the review of the metering policy, Queensland's first-ever temporary release of water from an infrastructure reserve for irrigation activities, completion of a trial of an online portal supplying water accounting data to entitlement holders and developing the water management framework. As the project implementation progressed it became clear that:

- many deliverables across projects were becoming highly interdependent
- there was uncertainty about when projects were completed and when and if project outcomes would continue as business as usual
- new activities were emerging that had not been identified in the original project plans.

To address these implementation challenges, the RWMP has applied best practice approaches to program and project management.

The RWMP has established a clear vision as detailed in Figure 2, new governance arrangements and reference groups, renewed project plans with full visibility of the timing and nature of the deliverables for all projects.

Our vision: Transforming how we deliver sustainable water management for the people of Queensland focussing on fairness, transparency and accountability in all that we do.

Transparent & publicly available water management, measurement & compliance information

Water policy and water plans support the demands for water trading to achieve economic, environmental & social benefits for all

Customers have access to up-to-date water availability information to make sound investment decisions

Delivering transparent and consistent regulation of water take, ensuring sustainability, fairness and equity for all

Our staff are empowered & supported to contribute to solutions, gain new skills and apply new work practices to help realise the RWMP outcomes

Figure 2: Rural Water Management Program Vision

Governance and project management arrangements are managed through the Rural Water Management Program Oversight Project and the Water Management Framework Project, while the broad focus areas for the RWMP and the projects delivering on these focus areas are:



Transparent water information

- Water Information Systems Transformation
- Water Markets and Trading



Strengthened metering

- Water Measurement Policy and Standards
- Overland Flow Measurement
- Queensland Murray-Darling Basin Improved Measurement for Large Entitlements
- Review of DNRME Hydrometric Networks



Appropriate regulatory frameworks

- Regulatory Enhancements
- Quality Assurance of ROL Holder Reporting on their Hydrometric Networks



Robust compliance that builds community confidence

- Implementing the NR Compliance Framework
- Non-urban Water Regulatory Assurance Framework

Specific detail regarding the progress of each of these projects and the actions being taken to implement the Government response can be found in Appendix 1.

3 Regulatory performance reporting

3.1 Establishing the regulatory assurance framework

Effective regulators commonly establish targets for and report against activities across the compliance spectrum, such as the implementation of education and support initiatives, inspections, audits, assessments, approvals and the use of enforcement tools. Often these targets are specified in compliance, operational or implementation plans and reporting provides a mechanism for regulators to demonstrate that they are ‘working hard’ and have met their targets. What is generally more difficult to report on is the ‘why’ and ‘how’ – why were the particular targets and activities chosen, why was the decision making appropriate and how these actions contribute to performance excellence.

Good regulatory performance is based on identifying and implementing best practice regulatory approaches and good decision making. Developing a regulatory assurance framework and key performance indicators supports regulators to identify the best practice framework they aspire to, assess the ‘why’ and ‘how’, and demonstrate consistency, transparency, fairness and continual improvement. Without this framework, it is difficult to assess and report on regulatory performance in a holistic way.

Measuring and publicly reporting regulatory performance assures everyone that regulators are administering legislation in an efficient, effective and transparent way. Regulatory assurance frameworks also support agencies to be less susceptible to changes in political agendas and priorities because performance is benchmarked and measured and benefits are documented.

Regulatory costs can come from the design of regulation and the way it is administered and these costs inevitably flow through to industry and the community. Efficiently administered regulatory assurance frameworks can improve the operation of businesses, markets and the economy and lead to fewer resource requirements for regulators. Effective regulators aim to manage risks, undertake their functions with the minimal impact necessary to achieve regulatory objectives and effect positive ongoing cultural change within their businesses. Setting a benchmark for high performance and assessing and reporting against that benchmark supports transparency.

This is the first DNRME annual performance review report for non-urban water. It’s an opportunity for DNRME to demonstrate how it is progressing in implementing the Government response and using best practice approaches to managing the implementation. However, over time, the annual performance review report will focus on *outcomes* rather

than simply reporting *outputs*. DNRME is developing a regulatory assurance framework that will support outcome-based performance reviews. It will set out regulatory performance goals and key indicators to enable ongoing assessment of DNRME's performance.

The framework will also set out audit and review requirements to ensure that it remains fit for purpose, and that the performance assessment maintains its independence from the activities being assessed.

4 Other non-urban water reporting

It is important to acknowledge DNRME also publishes or contributes to a number of published reports that provide an account of its progress and achievements in meeting statutory requirements or governmental agreements and commitments. Key relevant water reporting examples are outlined below.

4.1 Water plans

There are 23 water plans in place across Queensland. The *Water Act 2000* requires that the Minister prepare performance reports for each water plan to ensure that the implementation and effectiveness of each plan is regularly reviewed and evaluated. This follows an adaptive management cycle of planning, implementation, monitoring and reporting. The report is essentially a 'health check' on the performance of an individual water plan in achieving the plan outcomes and also identifies emerging risks to the resource.

The Water Regulation 2016 requires these reports to be prepared at five year intervals and address a range of matters relevant to the ongoing sustainable management of Queensland's water resources, including:

- whether the plan is advancing the sustainable management of water
- an assessment of the effectiveness of the implementation of the plan in achieving the plan's outcomes
- information on water use and authorisations in the plan area, including:
 - water entitlements
 - water taken or interfered with under statutory authorisations
- a summary of the findings of research and monitoring for the plan
- any identified risks to the plan's outcomes
- what amendments, if any, have been made to the plan since its commencement
- any non-compliance under a water entitlement or other authorisation in the plan area.

Once approved by the Minister, these reports are made publicly available on DNRME's website⁷.

⁷ <https://www.business.qld.gov.au/industries/mining-energy-water/water/catchments-planning/planning/monitoring-review>

4.2 Compliance planning

DNRME has historically published the compliance framework for natural resources. An annual natural resources compliance plan is also developed which includes compliance priorities for land, water and vegetation. This plan sets targets for water management compliance plans developed by each DNRME region. Consideration is being given to improving the availability of compliance information in the future, including compliance priorities.

There has been no public reporting against the annual compliance plans, however, compliance statistics and data are provided in other reports, such as the Compliance Compact and the Minister's statutory five-yearly water plan performance reports described in part 4.1 of this report.

The publicly available water plan reports outline any non-compliance in the plan area and any action taken by DNRME in relation to the non-compliance. The water plan reports also include an assessment of the risk that any non-compliance occurrences may pose to the effectiveness of the plan in achieving its outcomes.

4.3 Murray-Darling Basin Compliance Compact reporting

DNRME reports annually on its progress in implementing the Compliance Compact. Data, statistics and information sourced from compliance activities, water planning and implementation of the RWMP are used to compile this report. While there is some overlap between the Compliance Compact commitments and the Government response, the obligations for DNRME are much broader under the latter.

4.4 Other reporting

DNRME also provides information and data to demonstrate how Queensland is meeting a number of inter-governmental agreements and commitments. The information provided by DNRME is included in reports published by the collecting agencies. This includes reporting against the:

- Murray-Darling Basin Sustainable Diversion Limit
- National Partnership Agreement for implementing water reform in the Murray-Darling Basin
- Implementation of the Murray-Darling Basin Plan
- Basin Salinity Management Strategy
- Bureau of Meteorology National Water Account
- Bureau of Meteorology Water Market report
- Council of Australian Governments Trade Approval Service Standards
- Lake Eyre Basin Intergovernmental Agreement.

4.5 Relationships between different reporting

DNRME uses various inputs such as scientific data, consultation outcomes, compliance data, risk assessment outcomes and implementation activities to develop water plans, implementation plans and compliance plans, and to inform operational activities. In turn, the implementation of these plans and activities generates further data and information enabling DNRME to report on progress, contribute to the reporting outlined in this Section and to improve future planning.

The Minister's five-yearly water plan performance report is a key opportunity for DNRME to report on these inputs and activities and how they achieve sustainable management of water resources. The introduction of the regulatory assurance framework and annual performance review reports will provide an account of DNRME's regulatory performance, and will also provide a new focus area for inclusion in the Minister's five-yearly reports. The performance reporting will help to identify where regulatory performance is impacted by emerging risks or legislative or planning constraints. This in turn will enable timely consideration of these impacts before a full plan review is undertaken and ensure science is targeted towards areas of risk.

5 Good news stories and outcomes

5.1 Queensland is leading the way in water planning

Although the Independent Audit was positive in its feedback about Queensland's water planning process, DNRME continues to improve its delivery of plans and provide better support for the implementation of those plans – an area that the Independent Audit recommended for some focus. The following examples describe these improvements.

With the release of water plans for the Border Rivers and Moonie and Condamine and Balonne catchments in 2019, Queensland has now delivered new water plans for all Queensland Murray-Darling Basin catchments, informed by new science and strong engagement with local and Aboriginal communities.

Queensland had the first accredited water resource plan in the Basin through the finalisation of the Warrego, Paroo, Bulloo and Nebine water plan in 2018. Two further water plans, the Border Rivers and Moonie and the Condamine and Balonne, were accredited by the Commonwealth on 24 September 2019, making Queensland the first Murray-Darling Basin state to have all its Basin water plans accredited.

Also during 2019, the Cape York Water Plan was finalised. In an Australian first, the responsibility for 485,000 megalitres of water will be handed to Traditional Owners on Cape York to allocate and manage; protecting the environment while supporting local communities and bringing with it cultural and employment opportunities. This innovative policy position followed extensive on-country consultation with Traditional Owners where it became clear very early in the consultation that being involved in decision-making about the use of water of their country was of high importance.

The Cape York water plan, and Queensland's two new Basin plans, are supported by implementation plans that identify tasks, assign roles and responsibilities and set timeframes

to facilitate the implementation of water plan provisions. Creating stronger links between the water plan and its implementation aligns with the RWMP goals.

These new water plans also connect to RWMP objectives through clearer guidance on metering. The plans incorporate measures that set specific timeframes for metering and measurement based on identified water resource risks and the desire for water trading markets within catchments.

These improvements set new benchmarks for any new or replacement water plans in Queensland.

5.2 Water plan evaluations

Over the last 12 months, 12 statutory Minister's reports have been prepared that assess the performance of water plans for the Baffle, Barron, Boyne, Burdekin, Burnett, Cooper, Fitzroy, Georgina and Diamantina, Mary, Pioneer Valley, Wet Tropics and Whitsunday areas. In the case of the Burdekin, Baffle and Cooper water plan reports, the evaluations and risk assessments that underpin them were key resources for the Minister in deciding to extend the expiry date for those plans following a period of public consultation.

Since late 2018, there are statutory requirements under the Water Act for water plans to consider the effects of climate change to water resources. The 12 Minister's water plan reports assessed 'risk' in the context of climate change for the first time ever.

To assess climate change risk DNRME partnered with the Department of Environment and Science, as the state's lead agency on hydrologic modelling, to determine if there has been a significant change in the recent climate that affects the plan's ability to provide consumptive and non-consumptive water use for the remaining life of the plan. This work also included projecting forward in time to assess the future impacts of potential climate change on water security and environmental flows using relevant climate change models.

The diagrams in Figure 3 are an output from that assessment which shows the monthly rainfall projections for a specific plan area in 2030 based on a carbon an emission scenario. The historical rainfall is shown in the black bar with the projected change in rainfall for 2030 in the red bar. The shading is essentially a sensitivity analysis, showing spreading of results, using different climate change models.

The incorporation of climate change assessment into the five-yearly reporting is a great example of the risk assessment framework's ability to adapt to new science and new legislative requirements that affect the sustainable management of water resources in Queensland.

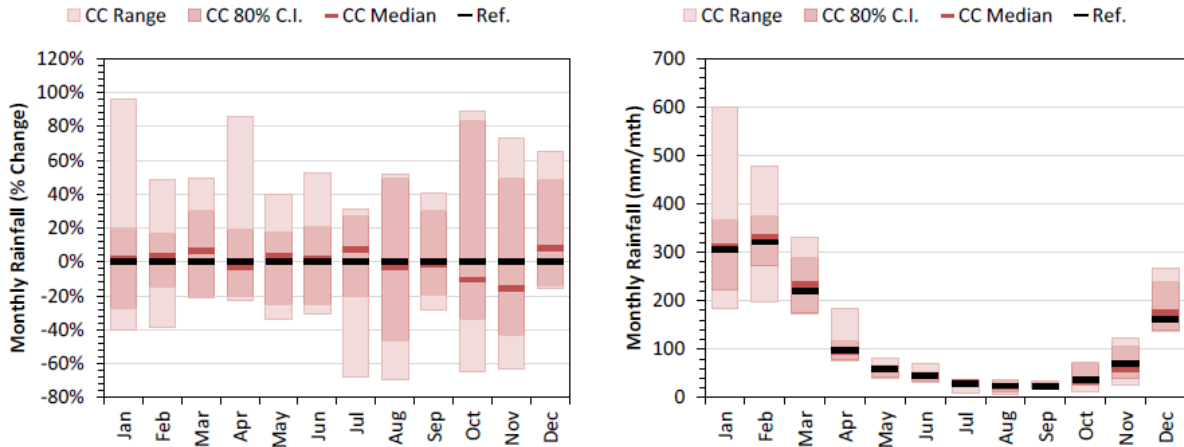


Figure 3 – Sample of monthly rainfall projections derived through climate change assessments

DNRME will complete the rest of the climate change assessments for the remaining 11 water plan areas in Queensland over the next 12 months.

Further, DNRME will work with the Department of Environment and Science to develop an agreed methodology to assess climate change in the hydrologic models used to assist in the development of policies for new and replacement water plans. This will ensure Queensland has a consistent and repeatable assessment approach for identifying the potential implications of climate change on water security, environmental flows, cultural values and socioeconomic interests.

5.3 Risk assessments to support decision making and regulatory practice

Risk is a critical consideration for regulators. A robust risk assessment framework is a powerful tool to help DNRME to understand current and emerging threats to water resources across the state and plan appropriately, while also focussing regulatory effort and decision-making.

For a number of years, risk considerations have been embedded in the process for the development of the Minister’s five-yearly water plan performance reports as outlined in section 4.1 of this report, and a risk management framework underpins the Natural Resources Compliance Plan.

One of the Government’s response commitments was to ‘implement a documented, formalised and systematic catchment risk assessment process and apply the outcomes to decision-making on water measurement and monitoring’. Details regarding progress on this commitment are provided in Appendix 1, however the significance of this work to measurement, planning and compliance and the links between managing risk and regulatory performance lends itself to a more robust discussion in this report.

The advantages of using a risk based approach include:

- providing a documented, consistent and transparent way of prioritising work, including plan amendments and reviews, compliance monitoring activities and enforcement and other regulatory decision making
- ensuring important issues are identified and dealt with in a timely manner enabling risks to be tracked and the success of management intervention to be assessed over time
- ensuring each part of the water business is working on common goals that are contributing to 'whole cycle' water management.

In turn, all of these activities support efficient and effective regulatory practice and can positively impact performance.

To fully implement the Government response and embed risk assessment into business as usual, DNRME will continue to develop a broader risk management framework to ensure we plan for and are responsive to emerging rural water management issues. This work will further guide the development of methodology to be used for prioritisation of measurement and compliance, including the role of the risk assessment in the prioritisation.

Communication materials and documentation that explain the methodology used to prioritise measurement and compliance will provide stakeholders and the public with information about how the Government has decided to invest its resources to implement the RWMP from a risk perspective.

6 Implementing the Government response to the Independent Audit

The progress reporting against the Government response has been aligned to the focus areas from the Independent Audit. These focus areas and a description of the recommendations are provided below.

Governance related recommendations aim to ensure that appropriate governance is in place to oversee compliance, decision making is based on risk, consistent and supported by appropriate systems.

Compliance actions and culture recommendations are internally focussed to ensure DNRME:

- has an appropriate, fit-for-purpose legislative framework
- records and retains evidence of non-compliance and manages compliance cases in a timely manner
- has appropriately trained staff engaged in compliance activities
- ensures its leaders are accountable for their performance in managing compliance.

Transparency recommendations focus on ensuring that water use, water management and compliance information are publicly available, including annual compliance reporting and releasing information to support water markets.

Measurement policy recommendations focus on ensuring the appropriate technical standards are applied to metering of supplemented and supplemented water take.

Information systems and reporting recommendations identify the need for investment in information systems to support water management and compliance.

Meter ownership recommendations set timeframes for DNRME to review and decide on an appropriate meter ownership model.

Water plans and Water Regulation 2016 recommendations are focussed on improving consistency across water plans and ensuring the implementation approach is regularly reviewed and fit for purpose.

Measurement of overland flow and water harvesting recommendations outline an approach to reliably and accurately measure overland flows.

For a description of implementation actions refer to Appendix 1.

Appendix 1 – Detailed implementation review

Governance

Independent Audit recommendations	Government response	Progress update
<p>1. A Compliance Management and Review Group is established to review and report regularly to senior management on the:</p> <ol style="list-style-type: none"> a. Implementation of a formalised management system to manage and monitor the water metering and measurement activities including compliance and new or changed obligations arising from legislation and Intergovernmental Agreements. b. Implementation of a documented, formalised and systematic approach to water compliance to apply across all regions to ensure a consistent and robust conduct of investigations and compliance actions. <p>The Group must allow performance assessment to be conducted separately from operational activities to provide oversight and consistency across the state.</p> <p>An independent audit must be conducted within two years of all water measurement and compliance programs including the performance of the Compliance Management and Review Group.</p>	<p>Accepted in principle</p> <ul style="list-style-type: none"> • The Queensland Government has recently established a new Water Markets and Supply Division in DNRME to improve the transparency of water management, allocation and use. The new division will provide greater separation between operational and compliance responsibilities in DNRME and provide a regulatory framework assurance role. • The Queensland Government will publish an annual review of water regulatory activities, governance and achievements and set regulatory strategies for the coming business year, with the first review published in mid-2019. <p>As part of delivering the Queensland Government’s response, DNRME will develop and implement a formalised management framework and associated governance arrangements for its rural water management water business by December 2018. This framework will include assurance and audit processes.</p>	<p>Regulatory assurance</p> <p>The Rural Water Management Program (RWMP) was established in July 2018 under the Water Markets and Supply Division. Further organisational changes within DNRME in June 2019 resulted in the Water Markets and Supply Division and the Natural Resources Division reporting through to one Deputy-Director General.</p> <p>The RWMP is responsible for ensuring the implementation of the Government response, including regulatory assurance. The RWMP is a separate unit from the water businesses responsible for water management compliance and operations, however the organisational changes have strengthened the water business as there is a single point of responsibility for both the transformational aspects being delivered by the RWMP and their implementation through Divisional Support and the Regions.</p> <p>Annual review</p> <p>One of the functions of the RWMP is to develop and implement a regulatory assurance framework to enable DNRME to measure and report against their performance as a regulatory agency. The framework will define what a high performing regulator ‘looks like’ for non-urban water management by DNRME. Key performance indicators will then be developed to enable the measurement of performance against this</p>

		<p>definition. A performance review report will be published in September each year.</p> <p>This report is the first of these reviews to be published and is focussed on providing an account of progress against the independent audit. Future review reports will continue to provide an account of this progress and will focus on measuring regulatory performance against the established key performance indicators and also provide recommendations for regulatory performance focus areas for the coming year.</p> <p>Water Management Framework</p> <p>The DNRME Water Management Framework, including governance arrangements, a high level overview of Departmental water activities and detailed roles and responsibilities of each DNRME water business was published in December 2018. The Water Management Framework is currently being reviewed to incorporate a clearer view and description of DNRME's strategic water priorities.</p>
<p>2. The future role and structure of the Natural Resource Compliance Committee (NRCC) should be reviewed in light of the revised governance and management arrangements</p>	<p>Accepted</p> <p>DNRME will review the role and structure of the NRCC as part of its development of a formalised management framework and associated governance arrangements.</p>	<p>The Natural Resource Compliance Committee has been replaced with the Compliance Review Group (CRG) and Major Investigation Group (MIG). Under this group there is an increasing focus on regulatory outcomes and increased executive oversight of performance.</p> <p>The CRG leads the implementation of the Natural Resources Compliance Framework and ensures compliance focus and activities are strategic, aligned to risk, consistent, transparent, accountable and adequately resourced.</p> <p>The MIG is responsible for overseeing the timely management of major compliance investigations, key milestones and investigation strategy.</p>

<p>3. Implement a documented, formalised and systematic catchment risk assessment process and apply the outcomes to decision-making on water measurement and monitoring. The risk assessment process must be consistent with any relevant intergovernmental agreements and the community and stakeholders must be consulted in undertaking these risk assessments</p>	<p>Accepted</p> <ul style="list-style-type: none"> As part of managing the water planning framework for the Queensland Government, DNRME currently undertakes detailed risk assessments as part of its water planning processes with community and stakeholder consultation an integral component of the planning process. Based on the pressure on the water resource in each catchment, DNRME will undertake a state-wide risk assessment of its water measurement (including metering) and monitoring activities by October 2018. Future compliance and metering activities will focus on highest priorities identified. <p>In future, water plans will consider on a risk basis appropriate metering and measurement priorities as they are developed or updated.</p>	<p>A state wide risk assessment based on pressure on the water resource in each Queensland catchment was completed in October 2018. The risk assessment included both supplemented and unsupplemented water. The risk assessment is documented in a formalised and systematic way that can be revisited and updated as required.</p> <p>A sub-catchment risk assessment was developed to provide more detailed information to support risk based decision making.</p> <p>The risk assessment information has been used to support preliminary work to establish metering implementation timeframes in the QMDB. The risk assessment outcomes will be used to develop a State-wide metering implementation plan, once a final measurement policy has been determined (see Recommendation 5).</p> <p>Recently developed water plans have included specific timeframes for metering and measurement based on resource pressure risks.</p>
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Compliance actions and culture

Independent Audit recommendations	Government response	Progress update
<p>4. The leadership of DNRME establish a stronger culture towards compliance enforcement and empower the organisation to achieve the compliance objectives through:</p> <ol style="list-style-type: none"> a. ensuring that the Compliance Management and Review Group has adequate levels of well-trained regional staff to complete the activities required in the compliance plan b. having compliance targets included in the performance plans of responsible officers c. establishing systems to ensure that the standard of evidence meets judiciary scrutiny d. implementing action plans to address the timely closure of compliance cases e. placing a greater focus on ensuring that the recording and monitoring of compliance cases are maintained in a timely, consistent and accurate basis f. ensuring a compliance officer who is familiar with the region makes regular on ground inspections/audits. 	<p>Accepted in principle</p> <ul style="list-style-type: none"> • As a priority, DNRME is already building on existing systems and processes to deliver a robust approach to water plan implementation and compliance that is consistent with other natural resource operational activities undertaken by DNRME. This will include finalising compliance policies, procedures and guidelines to support compliance activity. Government Responses to Recommendation 1 will also support delivery against this recommendation by providing enhanced leadership and focus on compliance activities within DNRME. 	<p>The Natural Resources compliance framework 2019 – 2022 and draft Natural Resources compliance plan 2019 have been developed.</p> <p>The framework guides how we consistently and professionally deliver compliance, and includes seven guiding principles for how we undertake our regulatory functions. These principles will be embedded in how we operate across all of our compliance activities – from education through to enforcement action.</p> <p>The annual compliance plan sets out our compliance approach for this financial year, detailing the agreed compliance focus areas and priority activities for each of our business areas. This plan is developed across the business, working together to define our proactive program.</p> <p>The compliance framework and plan are supported by internal guidelines, policies and templates that</p> <ul style="list-style-type: none"> • outline the risk based approach to compliance • guide compliance responses and decision making. <p>The department has internal technical training programs in place and under development to support water and compliance staff to undertake their roles. Training programs use a blended learning approach which combines online, face to face and experiential learning. Programs</p>

		<p>currently in place include the Water Technical Capability program and the Authorised Officer program.</p> <p>See also progress against recommendation 2.</p>
<p>5. Steps are taken to address the following elements of the compliance arrangements:</p> <ol style="list-style-type: none"> a. Develop a strategy to educate and raise awareness of entitlement holder’s rights and obligations and the penalties associated with any breaches, and send stronger deterrence messages to the community. b. Review the penalties and sanctions available for breaches to ensure that adequate deterrence is achieved. c. Review the statute of limitations period to ensure the time frame is appropriate and allows sufficient time to complete all the steps required to prepare cases i.e. complete investigations, gather facts/evidence and prepare briefs. d. Place an obligation on the resource operations licence (ROL) holder to report any take above entitlement and provide details of recurring non-compliance to allow prosecution. Require ROL holders to undertake pro-active management of compliance against volumetric limits. e. Prohibit water users from forward drawing on water accounts that are overdrawn at the end of the water year. 	<p>Recommendations 5a–d accepted in principle</p> <ul style="list-style-type: none"> • By July 2018, the Queensland Government will review existing legislation and policies and identify enhancements in relation to its water compliance arrangements. • By February 2019, DNRME, as the lead agency with responsibility for water measurement and metering, will review its metering policy and, where necessary, provide recommendations to Government for improved measurement and metering arrangements. • DNRME will also further develop a comprehensive entitlement holder education and awareness program to improve understanding of existing and any new regulatory requirements. <p>Recommendation 5e is not accepted.</p> <p>Queensland’s strong water planning framework accommodates the ‘boom–bust’ cycle of water availability in river systems that may cease to flow for years at a time. Some water plans may specify multi-year accounting.</p> <p>This water management approach enables certain water users to take more than the annual volume of their water entitlement in an individual year. Under multi-year accounting, this is offset by an</p>	<p>Regulatory enhancements</p> <p>In February 2019, amendments to the Water Regulation 2016 took effect to enhance compliance arrangements and responsibilities. These include:</p> <ul style="list-style-type: none"> • requiring entitlement holders to report faulty meters • providing the department powers to suspend or cancel the appointment of an authorised meter validator • prohibiting an authorised meter validator from validating a meter for their own water entitlement • enabling a new validation certificate to be required where false or misleading information was provided or the certificate was issued by an unauthorised person • shortening the timeframe from when a meter cessation notice is issued to when a meter stops being approved to 20 business days (from 60 business days) <p>In May 2019, amendments to the <i>Water Act 2000</i> took effect to strengthen and clarify compliance and enforcement provisions for water users in meeting their obligations under a water entitlement. The key changes included:</p> <ul style="list-style-type: none"> • amendments to clarify joint and several liability for an offence where there is more than one person listed on a water

	<p>equivalent reduction of water access in the subsequent water years.</p> <p>This flexibility for water users is rigorously tested in developing the water plan. The risks are explored and examined through public engagement, submission and hydrologic model testing, and managed through defined water sharing rules.</p>	<p>entitlement, or where multiple entitlement holders share a water meter</p> <ul style="list-style-type: none"> • new offences for taking water in excess volume or rate of take • a new penalty for non-compliance with a compliance notice. <p>Metering policy review</p> <p>DNRME completed a review of the existing metering policy in February 2019. Recommendations for new measurement policy proposals were considered by Government in July 2019 and consultation on these proposals commenced on 9 September 2019. Consultation will close on 29 November 2019.</p> <p>A measurement policy is planned to be finalised following consideration of outcomes of consultation. The development of this policy will consider the appropriateness of existing offences and obligations within the <i>Water Act 2000</i>.</p> <p>Education and awareness</p> <p>A Statewide metering implementation plan will be finalised by mid-2020. An education package will be developed to support entitlement holders to understand their obligations and timeframes.</p>
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Transparency

Independent Audit recommendations	Government response	Progress update
<p>6. More information relating to water resource management, water use and compliance is made public by DNRME to improve transparency. This should include the development and publication of state-wide and catchment-level compliance objectives and management strategies aligned with risks and issues. In particular:</p> <ol style="list-style-type: none"> DNRME makes an accountable commitment to achieving its compliance objectives and targets in its corporate plan. DNRME to report annually on performance. DNRME publishes its compliance plan or guidelines on how it manages and enforces compliance (Natural Resources Compliance Response Guidelines, (May 2017)). DNRME makes available to each water user their water entitlement, water used to date and any restrictions on taking water. DNRME releases information on a catchment basis on water availability, water use and water traded, to increase transparency and information available to the community and stakeholders. DNRME develops a holistic water balance for Queensland that is suitable for reporting all water in Queensland and its 	<p>Accepted in principle</p> <ul style="list-style-type: none"> The Queensland Government will improve its public reporting on compliance planning, objectives and targets. The Queensland Government will review existing systems to identify information needs and enhancements that can deliver increased transparency of water information for the community and entitlement holders and a platform for enhanced water sales and trading. As part of this commitment, in March 2018, DNRME released a trial version of its new water dashboard for two water management areas to provide water users with information on their entitlements, water availability and their usage. In addition, and by December 2018, DNRME will also release an online tool to help the community identify available water throughout Queensland. Also see recommendation 1. DNRME has identified that recommendation 6e is contingent on the outcomes of system reviews and the development of any enhanced water accounting systems. 	<p>Public compliance reporting</p> <p>DNRME has published its Natural Resources Compliance Framework. This framework guides how DNRME consistently and professionally delivers compliance across the natural resources business, underpinning core principles for an effective Natural Resources regulator and building a compliance culture. It also provides the context under which a compliance plan is developed.</p> <p>Online tool</p> <p>The Water Entitlement Viewer (WEV) was released in January 2019 and the Natural Resources Inventory for Queensland in March 2019 to provide greater access to water entitlements and availability of information in Queensland. The WEV is an interactive mapping tool that allows searches of and displays information on:</p> <ul style="list-style-type: none"> supplemented and unsupplemented surface and groundwater water allocations water licences unallocated water reserve volumes <p>The viewer is updated quarterly.</p>

<p>regions and for separately water managed areas.</p>		<p>Water dashboard</p> <p>A water dashboard initiative trial was developed for two water management areas (WMAs). The dashboard provides greater timeliness of information for the water entitlement holders in those two WMAs through 24/7 access to information on their entitlements, live notifications, enabling usage of SMS and email and notification of pumping opportunities when volumetric limits are reached. This trial has provided valuable information for consideration in developing a broader water accounting system. See also progress against recommendation 11.</p>
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Metering policy

Independent Audit recommendations	Government response	Progress update
<p>7. Introduce a metering policy for supplemented and unsupplemented water extractions, which includes a stronger validation, verification and maintenance oversight regime and an assessment system to ensure the meter chosen and installed is fit for purpose. It should be consistent with the principles of AS4747 and allow a transition period for grandfathering arrangements of the existing meter fleet.</p>	<p>Accepted</p> <ul style="list-style-type: none"> • DNRME already has a metering policy which is consistent with AS4747. DNRME will focus resources on implementing this policy in high-risk areas. • DNRME will review its existing metering policy by February 2019 to ensure it delivers a comprehensive validation, maintenance and assurance regime, consistent with Australian Standard 4747. 	<p>Amendments to existing metering standard</p> <p>Amendments were also made to the existing meter standard to ensure that any new or replacement metering works would be of a suitable standard to transition to any new policy framework aligned with national standards (AS4747) and to provide a specification for data recording and storage devices for meters (data loggers). Key industry bodies were consulted on these changes and the updated requirements commenced on 1 August 2019.</p> <p>This activity was particularly important to support the South Region DNRME officers to ensure that Government commitments from the compliance compact could be met.</p> <p>Policy metering standards</p> <p>DNRME has reviewed its existing metering policy and has developed new policy proposals for consultation (refer recommendation 5). The policy proposals for meters include stronger alignment of metering standards to AS4747 and a focus on ensuring ongoing meter accuracy through appropriate meter selection and installation, validation and maintenance requirements. Proposals have also been included to enable the transitioning of existing meters into any new policy and standards framework. Consultation with industry</p>

		stakeholders on the policy proposals will occur between September and November 2019.
<p>8. Specify and introduce a stronger meter validation and maintenance oversight regime which includes auditing of meters, DNRME validation and verification of meters.</p> <p>DNRME should engage the accredited meter validators directly to ensure consistent practices and remove any potential conflicts of interests. A prerequisite knowledge and experience of water meters, or appropriate training should be required for validators.</p>	<p>Accepted</p> <p>DNRME will include this recommendation as part of its review and proposed amendment of the existing metering policy for government consideration by February 2019.</p>	<p>DNRME will determine an appropriate meter auditing and compliance approach as part of finalisation of the new measurement policy.</p> <p>Under the existing regulatory requirements, meter validation of meters must be undertaken by Certified Meter Installers (CMIs). Irrigation Australia provides oversight of the competency and capability of CMI's.</p>
<p>9. The appropriate powers or policies should be provided to DNRME:</p> <ol style="list-style-type: none"> to compel the repair of a faulty water meter owned by the landholder (not working or inaccurate) to require ROL holders and meter-owners to keep systematic records of meter maintenance and of audits completed to introduce penalties/sanctions for validators providing certificates that are inconsistent with the Queensland meter standard to ensure that the application of the metering standard forms part of a quality management system. 	<p>Accepted</p> <p>DNRME will deliver on this recommendation as part of its review of its existing metering policy and through the actions it takes in response to reviewing compliance legislation and policies for government consideration (Responses to Recommendations 5, 7 and 8).</p>	<p>Implementation of this recommendation will occur through the development of the new measurement policy – refer to recommendations 5, 7 and 8.</p>
<p>10. DNRME investigate further to identify why a large number of entitlements are not metered. If any of the entitlements should</p>	<p>Accepted</p> <p>As per Recommendations 3, 7 and 8.</p>	<p>The review of the existing metering policy identified the current numbers of meters installed and options for increasing the coverage of meters. The measurement proposals have</p>

<p>be metered, an action plan should be established to have meters installed.</p>		<p>identified which entitlements would be metered and consultation will seek feedback on whether thresholds should be applied to metering requirements. The final policy will make clear which entitlements will be required to be metered and a state-wide implementation plan will identify the timeframes for when these entitlement holders will be required to install meters.</p>
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Information systems and resourcing

Independent Audit recommendations	Government response	Progress update
<p>11. DNRME invests additional resourcing in management systems, information systems and people to deliver sustainable metering and compliance arrangements to support Queensland’s water management framework state-wide. In particular:</p> <ol style="list-style-type: none"> Increase the investment in its staff with knowledge and skill capacity in water measurement and monitoring fields. Invest in fit-for-purpose information systems and technologies to provide a water accounting system for supplemented and unsupplemented water which stores the information required to manage and monitor; a compliance information reporting and management system [Review if the existing system (CIRaM) remains the most appropriate and efficient system]; and, remote-read technology and supporting systems to improve timeliness and accuracy of meter reading data. Review the existing hydrometric network and investigate alternative technologies that may be available to enhance the network, such as satellite imagery and drones. Review the ownership of groundwater and stream measurement devices to transfer those gauges which are required for resource management or compliance 	<p>Recommendations 11a–d accepted in principle</p> <ul style="list-style-type: none"> DNRME will realign internal staff and resources to deliver on the recommendations. As per Recommendation 6, DNRME will consider the need for investment in water information and accounting systems once it has completed its review of its existing systems. DNRME is currently undertaking a state-wide review and audit of Queensland’s hydrometric network and the development of a risk-based program to implement corrective actions and ensure the state’s monitoring networks are fit for purpose. DNRME’s Water Monitoring Network is quality-assured to ISO 9001 and is widely recognised as best practice. Annual reviews will continue to assess the adequacy and scope of the network and innovation opportunities. By December 2019, DNRME will require Resource Operations Licence (ROL) holders to provide an independent report on the condition and quality of the hydrometric monitoring networks. <p>DNRME does not accept recommendation 11e.</p> <ul style="list-style-type: none"> DNRME has extensive processes in place to engage in best practice water science and policy including: 	<p>Internal staff and resource realignment</p> <p>Refer to Recommendation 1</p> <p>Investment in staff capability</p> <p>The department has developed water management and water monitoring technical curriculums which identify the range of skills needed in these business areas and guide the training needed. Internal technical training programs are in place and under development to support staff to undertake their roles. Training programs use a blended learning approach which combines online, face to face and experiential learning. The Water use and metering course includes five modules covering:</p> <ul style="list-style-type: none"> Legislation and policy of non-urban water meters The types of water meters used in non-urban environments How to read water meters How to audit water meter installations and water use for compliance. <p>Water information and accounting system</p> <p>A review of existing water information and accounting systems identified a number of areas for improvement. A proof of concept water accounting system has been developed to trial accounting processes for selected Queensland</p>

<p>purposes to DNRME from ROL holders. The remaining groundwater and stream measurement devices, which serve an operational role to ROL holders, would remain in ROL holder ownership and be managed to a standard determined by the ROL holder.</p> <p>e. Establish a scientific and technical committee with appropriate technical experts within and outside DNRME to focus on researching and advising on water measurement standards, policies and technologies. The committee would report to the senior DNRME officer responsible for water policy.</p>	<p>a. in Queensland via MOU partnership with Department of Environment and Science</p> <p>b. nationally via existing forums with MDBA, CSIRO and Standards Australia.</p>	<p>Murray-Darling Basin water management areas. This trial will be focussed on a number of groundwater areas where the recently finalised water plan sets new accounting standards. DNRME has also allocated internal funding to develop a detailed business case for DNRME consideration by mid-2020. A work program will be published after an investment decision has been made.</p> <p>Commonwealth funding DNRME is in discussions with the Commonwealth Government regarding funding for both hydrometric activities and water information system development.</p> <p>Hydrometric network audit The management of DNRME’s hydrometric network is conducted under a certified ISO quality management system. The hydrometric system is reviewed annually for operational purposes and every three to five years to ensure the networks continue to meet customer needs. A methodology is applied to each review and a review report with recommendations is tabled with the Water and Ecological Coordination Team to consider the recommendations and respond.</p> <p>QLD’s water monitoring quality management system is externally audited annually and undergoes a recertification audit every three years (or beforehand where Australian Standard 9001 is updated).</p>
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<p>12. DNRME should review the indicative resourcing requirements and costings for modelled scenarios provided in this report to produce more detailed financial assessments that can be used as a basis for development of investment programs for defined periods to implement the recommendations of the Audit.</p>	<p>Accepted in principle As per response to recommendation 7.</p>	

Meter ownership

Independent Audit recommendations	Government response	Progress update
<p>13. A series of actions take place over the next 18 months to assist DNRME gather the required information to make a long-term decision on meter ownership:</p> <ul style="list-style-type: none"> a. Seek expressions of interest from third-party providers to explore the potential of a delivery option model, including to supply, maintain and read meters, and identify any necessary meter charges required under such a model. b. Within 18 months, start a review to compare the success of whether the stronger oversight has had desired impacts, against the merits of changing the meter ownership model with either the government or a third-party provider owning the meters and taking into account stakeholder views. c. Resolve the meter ownership model within 24 months. 	<p>Accepted in principle</p> <p>As per response to recommendation 7. Prior to government's consideration of DNRME's review of its existing metering policy (in February 2019) DNRME will undertake an assessment of the most effective delivery model, including the merits of a third-party provider option. Stakeholder and industry views will be sought as part of the review.</p>	<p>The review of the existing metering policy included a review of options for meter ownership under a new policy framework. The existing user pays model has been identified as the most appropriate, where the right to take water comes with certain obligations. This model also ensures that DNRME can focus on and resource its role as a regulator.</p>

Water plans and Water Regulation 2016

Independent Audit recommendations	Government response	Progress
<p>14. Ensure greater consistency across the various water planning and regulatory instruments and increase transparency by:</p> <ol style="list-style-type: none"> as part of reviews required under legislation, giving a greater focus to water plan operational rules and implementation plans to ensure rules and limits remain relevant and consistent with overall water management objectives and compliance outcomes. The community and stakeholders should be consulted about these reviews. conducting regular reviews of DNRME's decision framework for metering to ensure it remains relevant and appropriate. DNRME also investigates making metering programs more transparent by including them in the water management protocols for each catchment rather than the Water Regulation 2016. DNRME publicly releases the metering programs. including assessments for stock and domestic use in catchment-based risk assessments. If there is increased competition for water in an area which includes impacts of increased stock and domestic use, further controls on stock and domestic water use should be imposed. 	<p>Accepted in principle</p> <ul style="list-style-type: none"> Water plans have a life of 10 years and the Minister reports on their performance every five years. The regulatory framework provides for transparency and the opportunity for public submission. Risk assessments are undertaken as part of these processes. DNRME has already undertaken risk assessments of the stock and domestic pressures on water resources in the MDB and has: <ol style="list-style-type: none"> commissioned independent reviews in the Stanthorpe area introduced regulatory provisions to exclude the taking of stock and domestic groundwater supplies in key at-risk peri-urban areas. All future water plans will adopt the enhanced risk assessment processes to ensure they provide formalised and systematic assessments (Refer Recommendation 3). Regarding Recommendation 14f, DNRME and the Minister comply with the <i>Water Act 2000 (Qld)</i>, which contains detailed obligations and transparency provisions regarding changes, amendments and expiry of water plans. DNRME considers this as an area of strength for the Queensland water legislation. As per response to recommendations 6 and 7. 	<p>DNRME continues to improve its delivery of water plans and provide better support for the implementation of those plans</p> <p>Queensland had the first accredited water resource plan in the Basin through the finalisation of the Warrego, Paroo, Bulloo and Nebine water plans. Queensland has also delivered new water plans for all Queensland Murray-Darling Basin catchments and Cape York, informed by new science and unprecedented engagement with local and Aboriginal communities. In an Australian first, responsibility for 485,000 megalitres of water will be handed to Traditional Owners on the Cape York to allocate and manage, protecting the environment while supporting local communities and bringing with it cultural and employment opportunities.</p> <p>See recommendations 3, 6 and 7 and Section 5.1 of this report.</p>

<ul style="list-style-type: none"> d. completing the review of overland flow to ensure take is consistent with the relevant water plans. e. reviewing the time frames associated with the meter roll-out program and shorten the two-year time frame from when a decision is made to meter an area to when meters are actually installed. f. publicly releasing timely reports on the status of water plans and the decisions made (whether to rollover, amend or replace a plan). The community and stakeholders are consulted during this process and the performance assessments of water plans are publicly released. g. making ROL compliance with respect to environmental flow obligations transparent, with reports by ROL holders to be made publicly available. 		
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Measurement of overland flow and water harvesting

Independent Audit recommendations	Government response	Progress update
<p>15. The reliability and accuracy of water harvesting and overland flow measurement and monitoring is improved by:</p> <ol style="list-style-type: none"> a. adopting data logger and remote read technology b. establishing an overland flow measurement methodology for inclusion in the meter policy which extends to the Border Rivers and other parts of the state and takes into account the methodology for measurement of overland flow in the Lower Balonne. The technical and scientific committee (see recommendation 12) should develop the proposed methodology. DNRME should publicly release the overland flow assessment methods to the community and stakeholders c. reviewing the water licence conditions in the Queensland Murray–Darling Basin catchments against the sustainable diversion limits to identify if any conflicts arise, particularly in relation to carry-over rules and assess how best any conflicts can be resolved or managed. The community and stakeholders should be consulted during this process d. establishing a system to manage overland flow works authorisations including the 	<p>Accepted in principle</p> <ul style="list-style-type: none"> ● DNRME will develop an overland flow measurement standard and risk-based overland flow measurement program. The program will be informed by the existing Lower Balonne overland flow measurement trials, approaches used in other jurisdictions and the opportunities presented by emerging technologies. ● The draft Border Rivers and Moonie Water Plan proposes that large-volume overland flow water take is measured in high priority areas by 30 June 2020. ● As per response to recommendation 5, 7 and 8. 	<p>The overland flow measurement project will help improve how we measure the take of overland flow water across the Queensland Murray-Darling Basin (QMDB). The Border Rivers and Moonie Water Plans state that large volume overland flow water take is measurement in high priority areas by 31 December 2022.</p> <p>It is one of the initiatives of the Rural Water Management Program, which is helping drive more transparent and sustainable rural water management across the state. DNRME, with the assistance of an expert consultant, is developing a measurement standard and methodology to guide development of an overland flow measurement policy.</p> <p>Work is also being undertaken to develop a consultation strategy for the standard and methodology and determining the legislative framework needed to support overland flow measurement requirements.</p> <p>In the QMDB, measurement of overland flow storages is being implemented, consistent with Border Rivers and Moonie water plan measures, prior to the release of the improved overland flow measurement policy.</p>

<p>conversion of these authorisations to volumetric entitlements. DNRME publicly release the authorisation conversion information to the community and stakeholders. A risk-based audit program should involve site visits to confirm that all works are authorised</p> <p>e. implementing a fit-for-purpose water accounting system linked to information management systems that provides all the information required to perform the water measurement and monitoring of water harvesting and the take of overland flow.</p>		
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