



Queensland
Government

Department of Regional Development,
Manufacturing and Water



Rural Water Futures

Progress report 2022-23

Acknowledgement of Traditional Owners

We respectfully acknowledge the Aboriginal and Torres Strait Islander peoples as the Traditional Owners and Custodians of this Country – the lands and seas on which we meet, live, learn, work and play. We acknowledge those of the past, the Ancestors whose strength has nurtured this land and its people, and we recognise their connection to land, sea and community. We pay our respects to them, their culture and to their Elders past and present.

This publication has been compiled by Rural Water Futures of Water Resource Management, Department of Regional development Manufacturing and water.

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This report documents Rural Water Futures achievements from 1 July 2022 to 30 June 2023 and demonstrates how we are implementing the Queensland Government’s response to the Independent Audit of non-urban water measurement and compliance.

About the program

Rural Water Futures is changing the way Queensland water resources are managed, measured and reported.

The program is delivering a comprehensive and integrated body of work to position Queensland as a digitally enabled, modern and responsive regulator of the state’s valuable water resources.

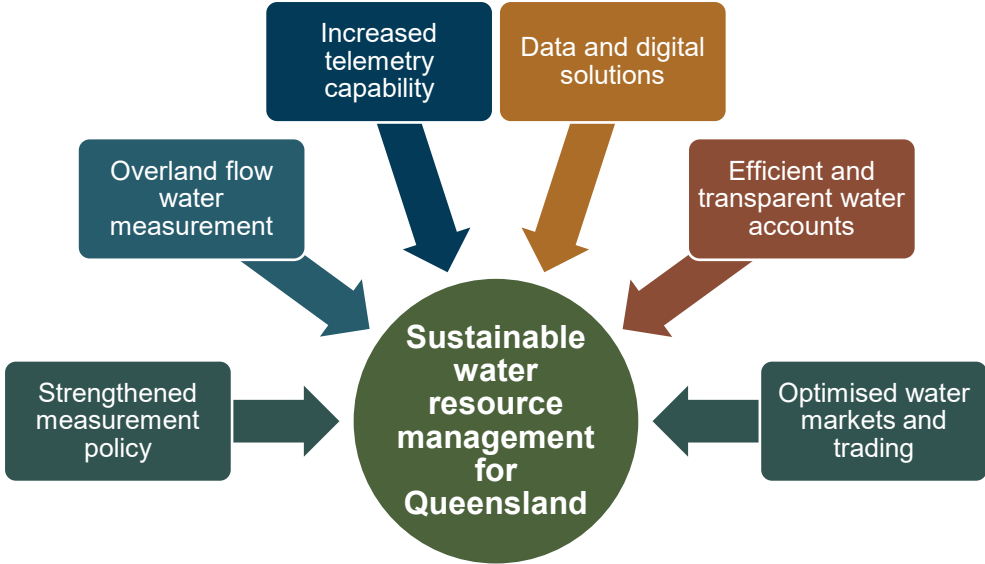
Using new technologies, forward-thinking policy and strengthened regulation, the projects and initiatives that make up Rural Water Futures take a holistic approach to measuring and managing the 6.9 million megalitres of water that are allocated for use in our regions.

Our initiatives are stimulating economic development by helping to unlock the potential of our regional areas.

We are strengthening Queensland’s non-urban water management through:

- improved measurement of all types of water use, including individual entitlement holders, dam operators and the Queensland Government’s own networks
- transforming access to information through new digital channels to deliver timely, transparent and responsive water information and improved services to our customers and the community
- an improved water market so that water trading can create social and economic benefits for our communities.

Figure 1: What Rural Water Futures is delivering



Our funding partners

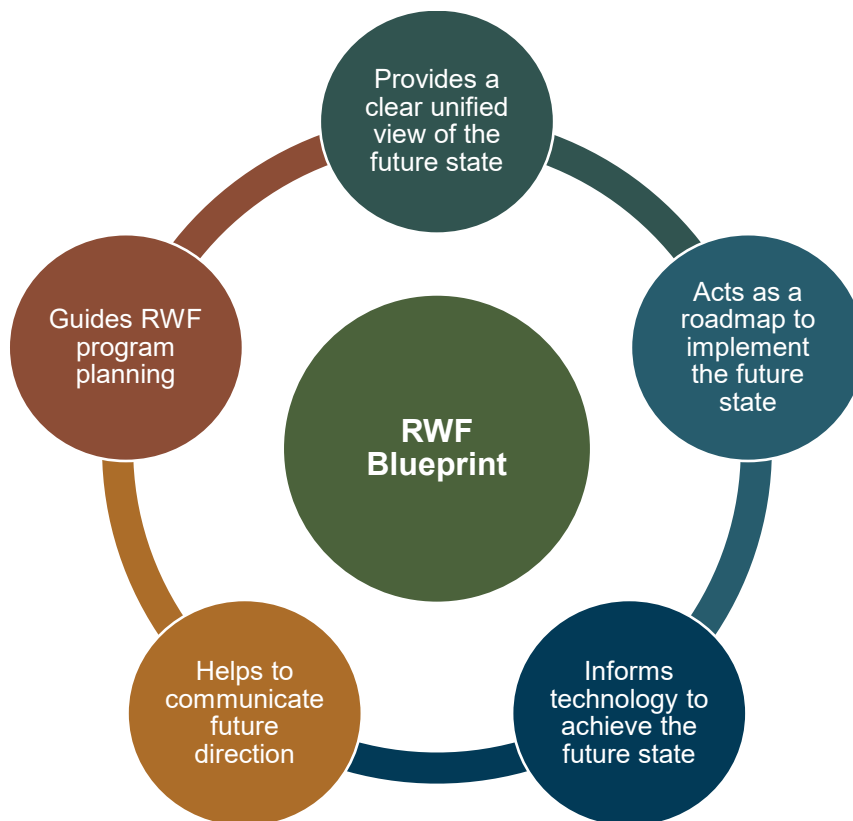
Rural Water Futures program delivery is supported by \$23.7 million Australian Government funding:

- \$11.2 million as part of the Australian Government's Hydrometric Networks and Remote Sensing (HNRS) Program enabling the department to develop technical and digital capabilities to improve measurement, monitoring, reporting and transparency of water information.
- \$12.5 million under the Murray-Darling Basin Communities Investment Package to support projects to build water measurement and data collection capacity and improve access to water information in the Murray-Darling Basin.

Investment from the Australian Government complements state government funding for the Rural Water Futures program.

This year, supported by Australian Government funding, we have developed the Rural Water Futures Blueprint to provide a guiding light and a roadmap to shape the future state of the rural water business.

Figure 2: How we are using the Rural Water Futures Blueprint



Australian Government

The Queensland Department of Regional Development, Manufacturing and Water (DRDMW) gratefully acknowledges the Australian Government's financial contribution to the Rural Water Futures Program through the Murray-Darling Basin Authority and the Murray-Darling Basin Communities Investment Package, delivered under the Murray-Darling Basin Plan by the Queensland DRDMW, through funding from the Australian Government Department of Climate Change, Energy, the Environment and Water.

Our vision, objectives and benefits

Vision for the business



Transforming how we deliver sustainable water management for the people of Queensland focussing on equity, transparency and accountability in all that we do

Objectives



Future water security and economic growth for Queenslanders



Community and customer empowerment and trust



Future water security and economic growth for Queenslanders



Integrated, equitable access to quality water data



Sustainable, consistent and fair water resource management and regulation for Queensland

Benefits

Increased and efficient trading and investment

Improved customer experiences and increased self-service

More informed, simplified water planning processes

More productive and efficient workforce decision making

More preventative and proactive compliance (early interventions)

Greater customer awareness and self-regulation (breach reduction)

Increased data quality, timeliness and availability

Increased data exchange and collections from partners/devices

What we are delivering

Figure 3: Rural Water Futures program delivery 2021-24



Our performance journey

Each year, we build on our performance excellence framework so we can better understand how we perform as an organisation now and where we aspire to be.

Last year, we focussed on understanding stakeholder perceptions and expectations. This year, we continued to build our framework by exploring ways to better track, understand and explain how the work we do creates public value.

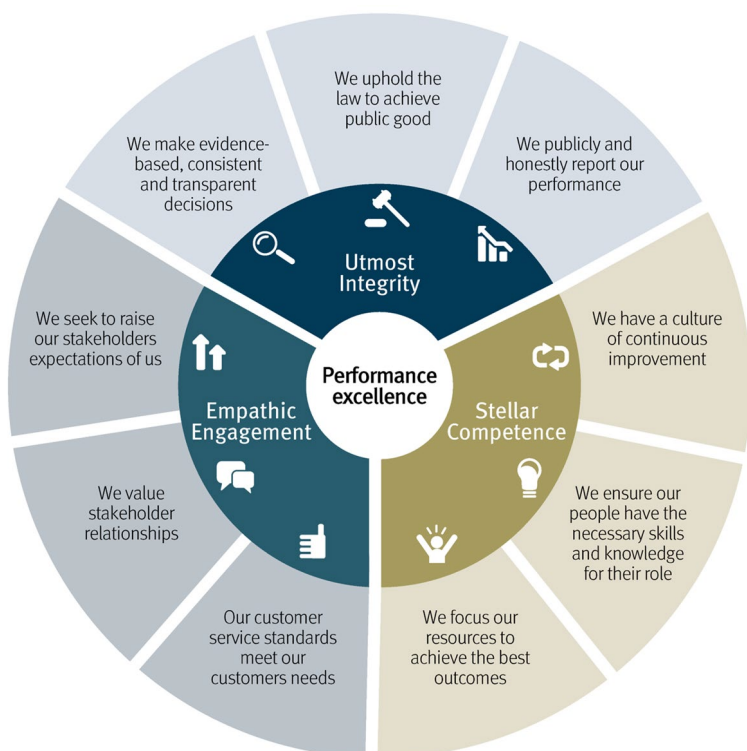
We have added a performance logic model to our toolkit to help us better demonstrate our impact as a non-urban water resource manager. A logic model links resources of a project to the required activities, outputs, and expected outcomes (in the short and longer term). It describes how change can occur and the expected outcomes for stakeholders and the community. The model will help to tell our performance story by enabling us to:

- articulate the outcomes we seek to achieve through our work and identify how our stakeholders and the community may be impacted
- create a clear connection between the objectives of our work and our departmental vision and objectives
- evaluate our achievements, share lessons learnt and promote continuous improvement.

Over the next 12 months, we will test the performance logic model by applying it to our business planning.

This is an exciting step to better understand and share our story on how we are striving for excellence.

Figure 4: Attributes and focus areas of our non-urban water resource management performance excellence



When we do our job well, we create public value by managing non-urban water resources effectively, supporting economic activity, demonstrating sound financial and service delivery performance, and achieving high levels of stakeholder and public satisfaction and trust.

Achieving performance excellence is a long-term commitment and we continue to use our knowledge, skills, and learnings to deliver outcomes that are meaningful, have purpose and add value for the people of Queensland.

Robust compliance

Being a best practice regulator relies on being adaptive to the changing environment, harnessing opportunities (such as advancements in technology, accessing new information) and understanding and targeting risks. DRDMW is committed to continuous improvement and we continue to strengthen and adapt our compliance approach as we deliver across the Rural Water Futures program.

Highlights 2022-23

- We have embedded our [Water Resource Management Regulatory Strategy 2022-2024](#). This strategy sets out our approach for the delivery of our regulatory functions and activities including our compliance and enforcement pathway.
- Systems improvement for management of Water Act 2000 compliance was undertaken to upgrade our existing compliance case management system.
- We have continued to build our capability in intelligence tools, such as remote sensing, and improved data insights and analytics to support compliance monitoring and decision making. This was delivered under the Enhanced Measurement Project.
- An improved blended learning Authorised Officer training program to support officer safety, understanding of powers and decision making was delivered.
- Dedicated compliance teams across the state were formed to better align our work to government and legislative commitments and support an improved compliance culture. These teams are supported by a central strategic compliance, intelligence and investigations team. This includes specialist investigators to support state-wide complex and serious compliance matters, including prosecution.
- This year, 10 compliance documents were developed or updated. This included a new operational policy to strengthen compliance public reporting.
- Increased presence on social media to demonstrate our regulatory role, as well as new branding to support identification in field-based activities.

Rural Water Futures initiatives are strengthening compliance through strengthened measurement policy, regulatory changes, better access to quality data and utilising new technologies to increase and diversify our monitoring tools.

Impacts of the work we are doing

- improved community confidence and trust in Queensland's role as the state's water regulator
- effective administration of water related legislation by being a modern, best practice regulator
- increased understanding and presence of the DRDMW's regulatory role across a range of platforms and communications
- fit for purpose and effective use of technology, data and intelligence to inform the compliance program and continue to improve regulatory capability.

To stay across how DRDMW is undertaking its regulatory role and the outcomes we are achieving as a regulator go to: <https://www.rdmw.qld.gov.au/water/regulatory-role>

Our year in review – program highlights



Public release of a **strengthened water measurement policy and implementation plan** for the take of non-urban water



Water user trials of the WaterIQ app and WaterIQ customer portal in the QMDB with feedback informing future release



The **Water Legislation Amendment Bill 2022** providing for a strengthened measurement framework progressing through the parliamentary process



Release of the **WaterIQ manager** portal for staff enabling more effective and efficient ways of working



Telemetry market research and stakeholder engagement informing technical guidelines for telemetry devices and pathway to telemetry implementation in the Queensland-Murray Darling Basin



Development of a **proposed model to achieve our objectives for improved water accounting** in preparation for stakeholder consultation



Progression of phased **overland flow measurement program** towards full volumetric measurement, including the development of tools and guidelines and targeted engagement to refine the implementation framework



Continued implementation of the **Queensland Water Optimisation (QWMO) Action Plan** to maximise the value and availability of our water resources and continue enhancement of Queensland's water markets



Implementation of a suite of activities utilising **emerging technologies to enhance measurement and facilitate transparent, accessible water information** in collaboration with our partners across the Northern Basin



Development of the **Rural Water Futures Blueprint** to provide a roadmap to shape the future state of the rural water business



Analysis of our existing **water management system** to determine the approach to improve services and move to a new digital platform



Undertaken several proof of concepts to determine the right **technical data platform** to support near real-time and reliable information to be shared with our partners, water users and the community

Our achievements – a closer look

How we are strengthening water measurement

Strengthened water measurement framework

Overland flow measurement

Telemetry

Enhanced measurement

Cross border measurement and monitoring

Operationalising remote sensing and compliance

Future water accounting framework

WaterIQ

Water management system and data platform

Optimised water markets



How we are strengthening water measurement

Strengthened water measurement framework

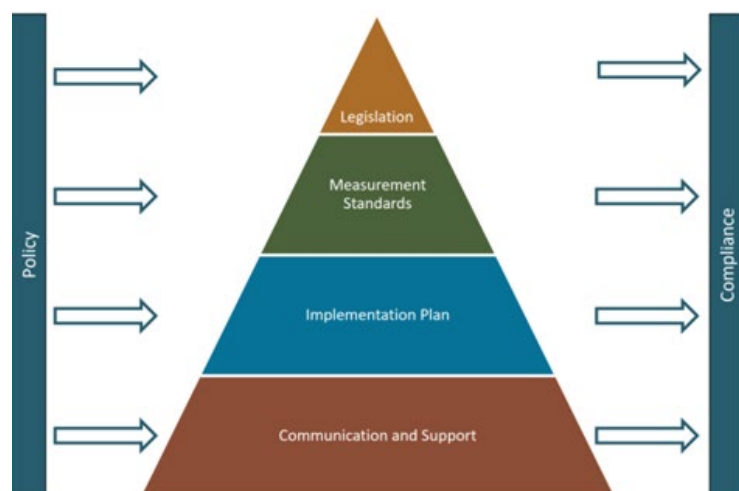
We are delivering a contemporary water measurement framework that reflects community and stakeholder expectations.

This year, our focus has been on taking steps to establish a clear and transparent regulatory framework to implement Queensland's strengthened non-urban water measurement policy.

Implementation of the policy will improve the way water take is measured and reported across the state. Better information on water take enables us to sustainably manage our precious water resources.

Our non-urban water measurement framework helps us to explain each of the elements needed to effectively measure non-urban water extraction in Queensland to our stakeholders.

Figure 5: Queensland's non-urban water measurement framework



Our strengthened water measurement policy supports regulatory changes to enable more efficient and defensible compliance action.

Achievements 2022–23

- Queensland's non-urban water measurement policy was finalised and published.
- An implementation plan for the strengthened policy was published, outlining the steps being taken to give effect to the policy, including the scheduled timeframes for new metering and meter revalidations
- A consultation report was published to identify, acknowledge, and respond to the feedback received on the development of the strengthened policy.
- Proposed legislative amendments to provide for a strengthened water measurement framework were introduced to the Queensland Parliament in the Water Legislation Amendment Bill 2022.
- Amendments to the Water Regulation 2016 are in development, informed by feedback from DRDMW's Water Engagement Forum.
- The Water Regulation 2016 was amended on 1 December 2022 to:
 - include new metered entitlement areas in the Water Plan (Cape York) 2019 and Water Plan (Burdekin Basin) 2007
 - streamline seasonal assignments and other minor amendments.

Engagement

Targeted engagement with peak bodies and industry bodies in the QMDB to finalise the policy and refine proposed amendments to the Water Act and Water Regulation to support implementation of the policy was a key focus this year.

Comprising 16 peak body and industry groups, our Water Engagement Forum continues to be a key engagement mechanism for the department.

Implementation

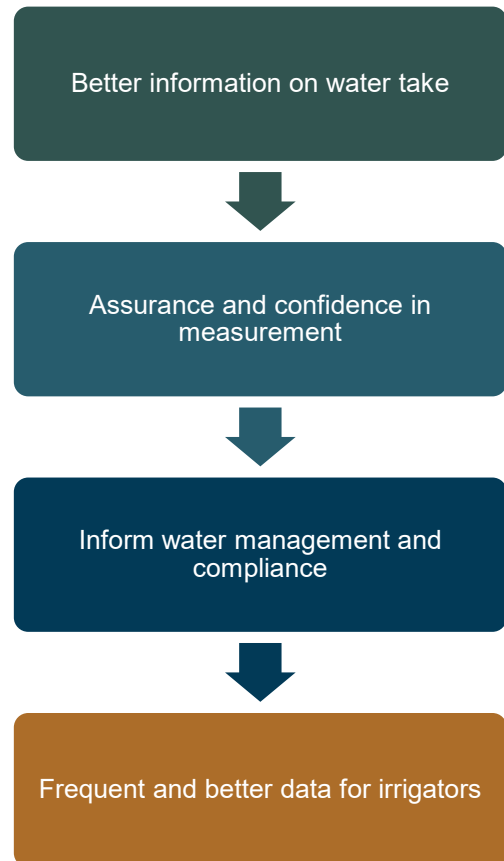
Implementation of the non-urban measurement policy is critical to ensuring water take in the QMDB catchments is accurately measured.

To ensure successful implementation, DRDMW is proactively engaging with QMDB water entitlement holders through several channels including face-to-face sessions, letters and phone calls to support them to comply with meter revalidation requirements. The department is also engaging with Irrigation Australia and certified meter installers to facilitate service provision.

The suite of measurement projects and activities we are delivering significantly contributes to Queensland meeting its obligations under the Murray-Darling Basin Compliance Compact.

We are creating a strengthened water measurement policy to improve the coverage and standard of water measurement across Queensland.

Figure 6: Benefits of strengthened measurement



Overland flow measurement

Queensland is transforming the management of overland flow water. We're doing this through a phased measurement program including licencing activities, water level measurement and detailed plans to deliver full volumetric measurement.

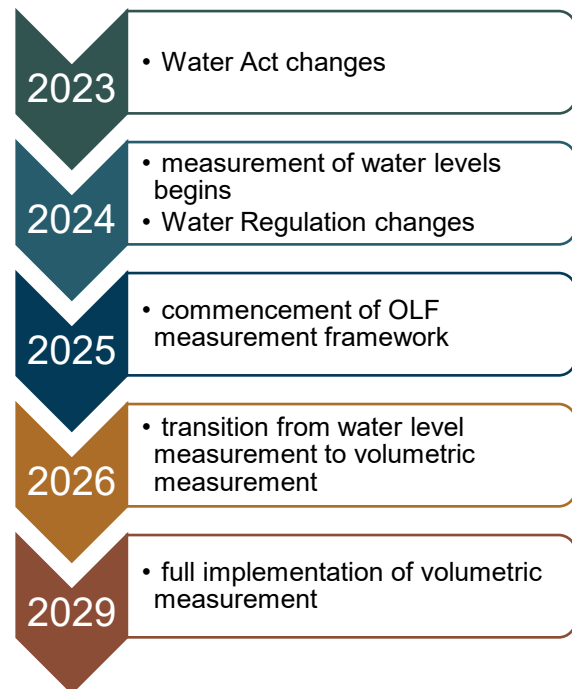
Achievements 2022–23

- An initial analysis of water entitlements to identify barriers to the implementation of volumetric measurement and enable water users who prepare overland flow measurement systems to defend their water take as compliant was completed.
- A proof-of-concept water balance calculator was developed to be tested by water users to inform future system build. The water balance calculator will make it easier for water users to calculate their overland flow take.
- The legislative framework for volumetric overland flow measurement being progressed through parliament will create the environment for consistent, robust and repeatable measurement.
- Targeted engagement about the practical application of phase 1 of the overland flow water level measurement framework has built stakeholder understanding and gained support for the new measurement approach.
- Advanced drafts of phase 2 volumetric overland flow water measurement standard and measurement plan preparation guidelines were developed by industry experts. Water user feedback is ensuring the standard and guidelines support practical and feasible outcomes.
- Targeted engagement with industry representatives about how their feedback is being used to refine the overland flow water measurement framework and implementation approach has been undertaken.

As part of strengthening non-urban water measurement, the department is working on several initiatives to improve the measurement of overland flow water take. The initial focus is the Queensland Murray-Darling Basin (QMDB) where the Queensland Government has committed to improve the measurement of all forms of water take by 2025.

Improved measurement of overland flow will provide transparency and information to support future planning activities across the Basin.

Figure 7: Overland flow measurement project timeline



Telemetry

Improving the coverage, timeliness and accuracy of data on water take will enable the department to be a more effective regulator and manager of water. Telemetry is one mechanism to deliver this outcome, particularly in high-risk areas where water pressure is at its highest.

Achievements 2022–23

- Market research to better understand telemetry devices, software capabilities and how commercially available products could integrate into departmental data systems was completed.
- A set of guidelines that telemetry devices must meet to be compliant has been developed. The guidelines also establish transmission pathways through a third-party service provider.
- A framework to enable funding to subsidise telemetry devices in the QMDB was finalised. This has included systems development, and the production of supporting tools and communication materials.

What's next

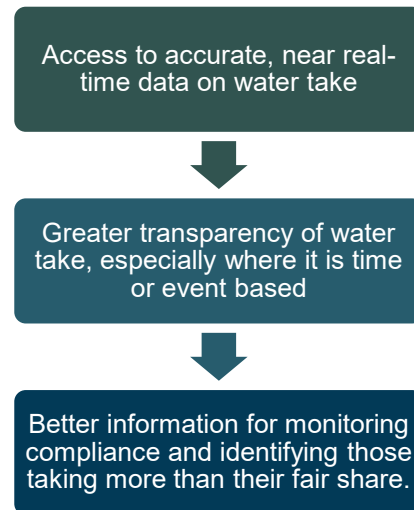
The department is contracting a delivery partner to provide an end-to-end service for the installation of compliant telemetry devices in targeted areas in the QMDB and systems development work to securely transmit aggregated data daily to DRDMW.

Standards for telemetry devices and information collection and transmission to the department will be developed to support implementation of strengthened water measurement.

As part of the move towards strengthened water measurement, telemetry devices will be required on surface water meters across the Murray-Darling Basin.

This commitment is part of the Murray-Darling Basin Compliance Compact, and will be supported by strengthened measurement policy, and new standards to guide water users in the selection and installation of their telemetry systems.

Figure 8: Benefits of telemetry



Enhanced measurement

Cross border measurement and monitoring

Increasing and diversifying our monitoring tools supports targeted compliance and improved water management outcomes.

Achievements 2022–23

- Partnered with 48 landholders to improve accessibility of rainfall data in remote locations without cellular coverage.
- Trialled a telemetry device designed and manufactured by a Queensland technology company to evaluate an emerging satellite telemetry network.
- Leveraged industry expert supplier to capture updated light detection and ranging (LiDAR).
- Deployed three lower-cost alternative measurement solutions to test the design and performance of the instrument, telemetry, and data quality of water level data.
- Partnered with Uniquet to develop a computer processed flow measurement solution in near real-time, utilising emerging camera and data transmission technologies.
- Developed relationships with local industry and research sector to pilot new equipment.
- Progressed dashboard automating manual water management calculation.

This year we have collaborated with our partners across the Northern Basin, saving costs, and sharing data on service delivery initiatives.

Water management in the Queensland Murray-Darling Basin (QMDB) is challenged by operating in remote locations.

West of Toowoomba, the inland rivers flow across sparsely populated semi-arid plains and large remote geographical areas spanning over 250,000 square kilometres. We are testing water measurement equipment to enhance its operation in this harsh environment.

Local water officers can better respond to natural flow events with improved access to river systems data.

Project outcomes

- Published daily rainfall data from remote locations at 48 sites in the Northern Murray-Darling Basin on the DRDMW Water Monitoring Information Portal.
- Improved access to data and information to support water resource management by evaluating low-cost measurement devices to supplement the hydrometric network.
- Re-used existing corporate data systems to activate new stream flow calculations, reducing routine manual calculation time.
- Updated 5,000 square kilometres of Digital Elevation Models now available on the Queensland Globe.
- Positioned DRDMW to leverage ongoing research and advancements in water measurement and analytics.
- Strengthened collaborative relationships with the Bureau of Meteorology, regional partners, landholders and other government authorities.

Operationalising remote sensing and compliance

Increased use of emerging intelligence from remote sensing and data analytics is informing and enabling a proactive compliance approach.

Achievements 2022–23

- Collaborated through industry partnerships to continue planning to build satellite image analysis detecting changes in water bodies in remote locations.
- Progressed evaluation of remote sensing technologies and business case use to support water management and compliance outcomes.
- Identified value in using data insights and analytics to inform proactive compliance effort and action.

Benefits of our enhanced measurement initiatives

- Enable higher levels of situational awareness for water stakeholders with increased data coverage and more timely delivery.
- Underpin regional agility to respond to identified monitoring gaps quickly and efficiently.
- Facilitate “complete picture” decision making by providing data connections between spatial data and corporate data.
- Open future possibilities for a more cost-effective method for certification of farm storages.
- Transparent information sharing enhancing public confidence in regulation.

What's next

We are planning to operationalise concepts for remote sensing to identify changes in water bodies using satellite images, meter read insights and faulty meter read analytics.

Future water accounting framework

Water accounting is a core function of DRDMW's role as a regulator that underpins many water management functions, operations and services. It ensures water users can access their share in accordance with water entitlements, the rules for water sharing and trading, and water plan requirements.

The water accounting framework under the Water Act 2000 involves processes for:

- determining the permitted take of water
- measuring the water taken
- reconciling water taken against what is authorised and permitted to be taken against water entitlements and other authorisations under the Water Act.

This year we have developed a proposed model to achieve our objectives for improved water accounting.

Rural Water Futures is reforming the water accounting framework to deliver benefits to water users, the community and DRDMW as the regulator. A conceptual model has been developed for improving water accounting to start a conversation with water users for how current challenges and limitations can be addressed.

The key elements of the conceptual model are:

- reconciling water take against permitted take at the point of extraction
- introducing water user and water entitlement holder facing water accounts to provide access to their current available water balances
- providing on-line transactional functionality via water accounts for access to, and take of, available water, including temporary water trading.

Benefits

For water users

- access to accurate and timely water data.
- transparent water availability via water user facing water accounts.
- ability and increased flexibility to self-manage.
- clear and accountable responsibility for take of water to support their social licence.
- easier temporary trading results in improved water markets.

For the community

- more economic opportunities through unlocking the value of water.
- easier access to water information to influence decisions to directly benefit their community.

For the department

- systemised and automated water accounting processes across the state enabling improved compliance and reporting.
- enhanced productivity of operational business processes.
- more efficient operation of water markets.

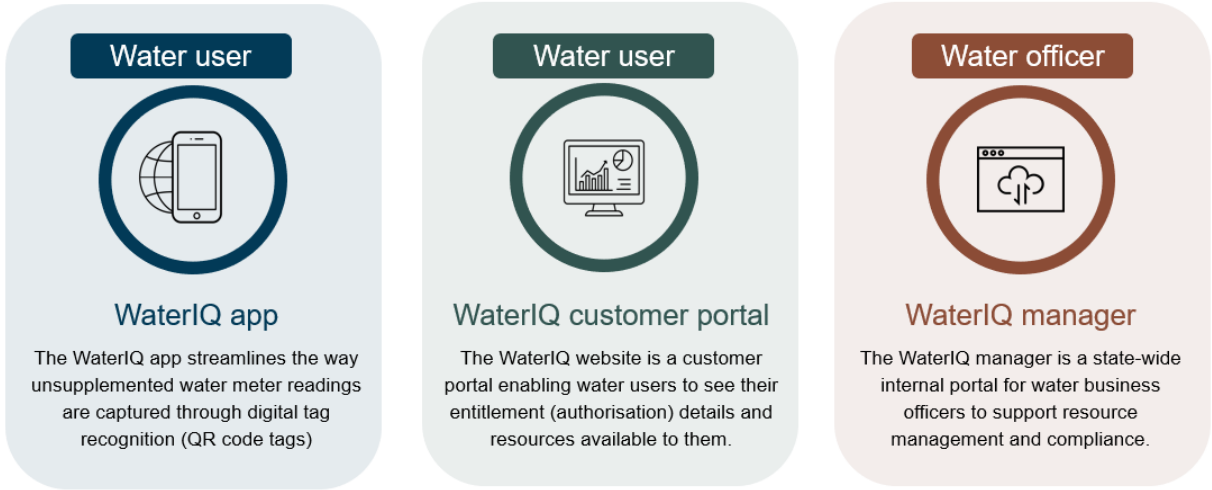
Building on initial engagement with the Water Engagement Forum in July, and pending government approval, DRDMW will consult more broadly with stakeholders on proposed improvements to our water accounting framework.

WaterIQ

Our WaterIQ service channels are central to the digital capability we are establishing to provide better access to high quality water data and enable more visible and consistent decisions about water management.

We are delivering our three WaterIQ channels in a number of releases to improve functionality over time, in response to customer feedback and priorities.

Figure 9: WaterIQ channels



The WaterIQ app and customer portal are designed to simplify the way information on unsupplemented water usage is captured and provided to water users.

Water user trials of the app and customer portal commenced in August 2022, involving around 24 water users in the QMDB.

We are expanding our trial areas later this year to enable more comprehensive customer feedback.

The WaterIQ app streamlines unsupplemented water meter reads through digital tag recognition (e.g. QR code tags attached to a meter) to submit and validate an image of a meter dial. It provides a simple way for water users to receive notifications and submit regular unsupplemented water meter readings in the field using their phone.

New releases of the WaterIQ app this year enable:

- access to additional information including historical meter reading records and water usage between meter readings
- notifications to confirm the submission of a meter read and reported issues, such as a faulty meter.

The first release of the customer portal allowed water users to see their authorisation details and link to water trading information.

Further releases of the customer portal this year enable meter readings to be submitted by computer or iPad, and notifications to confirm the submission of a meter read and reported issues, such as a faulty meter.

The WaterIQ app and customer portal support self-compliance with prompts for meter readings and the ability to report faulty meters.

WaterIQ manager is a state-wide internal portal for water officers to support resource management and compliance.

It is the main engine room that services the WaterIQ app and customer portal providing end-to-end support for these external facing channels.

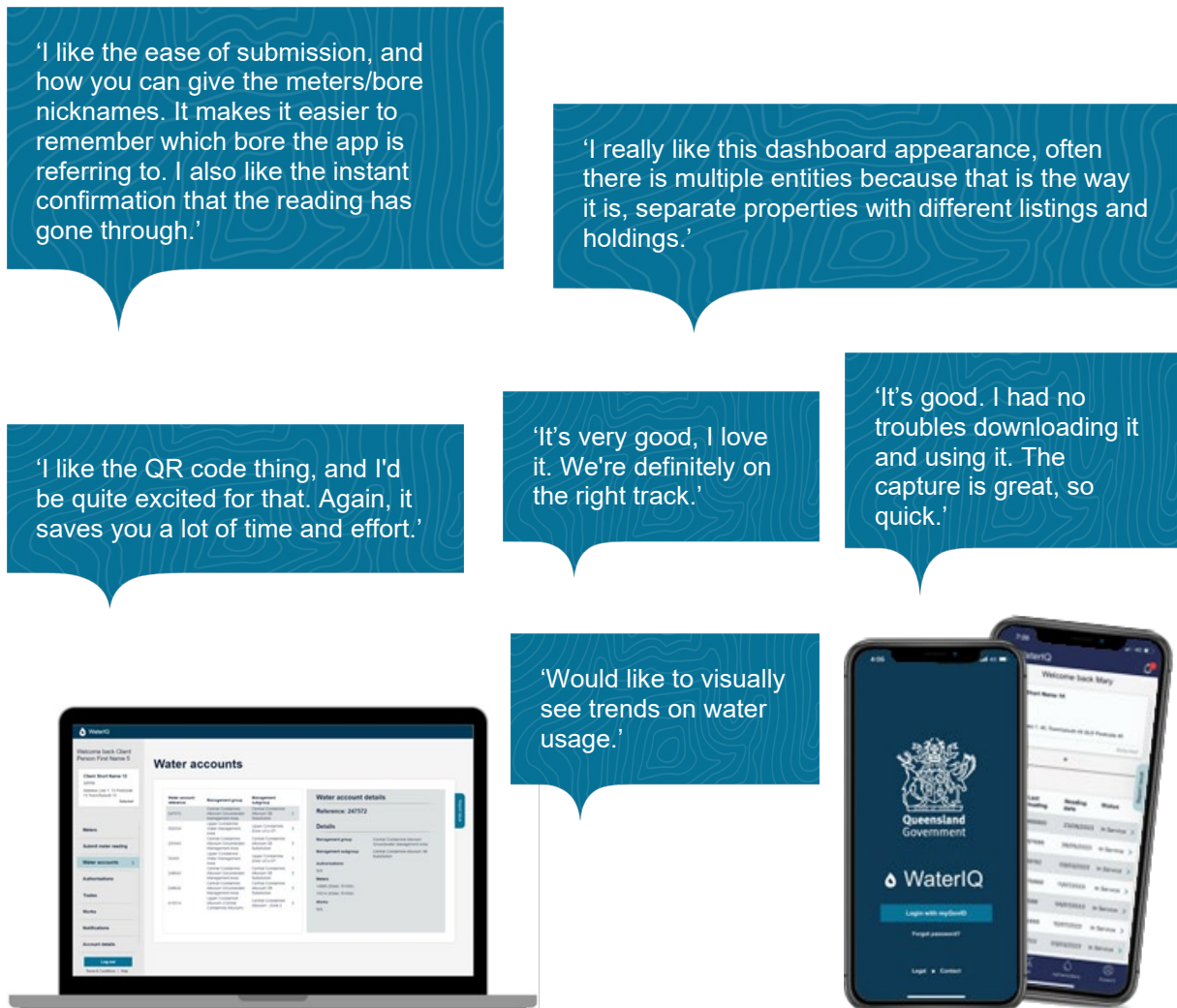
This year, new releases of WaterIQ manager have enabled water officers to access and manage information more effectively to track jobs, enquiries and applications across the state.

More timely access to information is supporting more efficient and consistent decision-making and empowering staff to adopt new ways of working to support best practice regulation.

We're extending WaterIQ manager functionality to support broader access for DRDMW staff in coming months.

A customer centric focus and simplified user experience is driving the development of our WaterIQ products. We have engaged water users in user experience design sessions with prototypes to get their feedback on design, layout, navigation and functionality. Their input has informed the simple and intuitive interface of the app and customer portal.

Figure 10: Customer feedback on the WaterIQ app and customer portal



Water management systems and data storage

Modern, centralised data storage and management systems are being developed to capture and integrate water use and monitoring information from across the state. This will enhance our water modelling capacity and ensure we have the right information at our fingertips to inform the department's water planning and allocation decision making.

Water Management System (WMS) Strategy

This year we have assessed the current state of our Water Management System and developed a roadmap towards a viable future state.

Our strategy framework includes an options analysis and makes a recommendation for a preferred approach.

We have also developed a WMS data migration strategy and data cleansing strategy to enable more consistent reporting and better compliance with data protection and privacy legislation and policies.

This work sets the foundations for the migration of data to our future state data model.

Future data platform

We are developing a scalable data platform to support current and future data needs. This year we have:

- designed and built the required environment to facilitate the data platform proof of concepts.
- commenced our approach to market to procure ICT services to implement a future data platform.
- demonstrated the suitability of an enterprise-level data platform that provides the technical capability to support the RWF program's future state as well as broader departmental and Commonwealth water initiatives.

Benefits

These initiatives deliver benefits for our customers, the community and the department:

- improved trust and confidence in DRDMW's role as a regulator to manage the state's water resources sustainably and equitably.
- improved customer confidence in water use information.
- increased customer self-service reporting and capability.
- improved productivity through access to timely data and information for compliance officers resulting in improved compliance outcomes.
- improved monitoring capability through integration and access to near real-time monitoring and spatial tools.

Optimised water markets

Improving the operation and effectiveness of Queensland's water markets is a key Rural Water Futures objective. We are taking steps to improve the function of Queensland's water markets through the Queensland Water Markets Optimisation (QWMO) Action Plan and by contributing to, and implementing, national water market reform initiatives and drivers.

QWMO Action Plan achievements 2022–23:

- supported delivery of the Sunwater Supplemented Water Bulletin Board to better connect potential water buyers and sellers in the schemes they manage.
- continued development of a Water Availability Portal to enable water users access to water markets information for better trading opportunities.
- improved the collection of water trading price information from water users.

Water Market Reform Roadmap

Murray-Darling Basin (MDB) states and the Commonwealth are collaborating to improve the operation of the MDB water markets through shared implementation of the recommendations of the Water Market Reform: Final Roadmap released by the Commonwealth in October 2022.

DRDMW is currently assessing the applicability and impact of the report's recommendations with a view to informing how the recommendations can be implemented to improve the operation and effectiveness of the water markets in the QMDB and where relevant, statewide.

Efficient water markets help get the most out of our water resources and water supply infrastructure now and into the future by improving visibility of water market activity, stimulating local economic development and facilitating the connection of potential water buyers and sellers.

Benefits

For water users:

- better business planning and decisions using more up to date, publicly available water market information.
- more active temporary water trading market.
- more efficient and effective operation of the water market.

For the community:

- the economic benefit potential of the uptake of underutilised available water is realised.

For the department

- improved water trading business processes.
- supports the sustainable management of water resources.

Implementing the government's response to the independent audit

Rural Water Futures has continued to deliver the government's response to the independent audit of Queensland non-urban water measurement and compliance.

Actions in response to 12 of the 15 recommendations arising from the independent audit have been completed. The remaining three recommendations relating to transparent water information, management and information systems and overland flow measurement will continue to be progressed and reported on as part of Rural Water Futures program reporting.

Queensland is continuing to meet its commitments under the Murray-Darling Basin Compliance Compact.

The compact seeks to restore public confidence in water resource management by increasing transparency and accountability of surface and groundwater management and regulation across the basin.

Key actions that meet these commitments are being delivered through the Rural Water Futures Program.



Attachment 1 Queensland government's response actions to the Independent Audit on Measurement and Compliance

Table 1.1: Details, status and progress of each of the independent audit recommendations as of 30 June 2023

Government's response actions	Actions completed in the last reporting period	Status	Additional information
Rec 1: Implement a management framework to achieve state-wide consistency in water measurement and robust compliance actions. The framework must incorporate mechanisms for oversight, assurance and auditing of departmental processes.		Completed	
Rec 2: Review the role and structure of the Natural Resource Compliance Committee to ensure governance arrangements align with the revised management framework.		Completed	
Rec 3: Implement a formalised and systematic risk assessment process for Queensland catchments and apply the outcomes to decision making on water measurement and monitoring.		Completed	
Rec 4: Establish a stronger culture of compliance and enforcement within the department by introducing compliance and performance targets, finalisation of compliance policies, procedures and guidelines which include proactive inspections/audits and support and training for staff.		Completed	

Government's response actions	Actions completed in the last reporting period	Status	Additional information
<p>Rec 5: Strengthen compliance arrangements by raising awareness of entitlements holders' rights, measurement obligations and penalties for noncompliance. In addition, require Resource Operations Licence (ROL) holders to undertake proactive management of compliance.</p>	<ul style="list-style-type: none"> A strengthened water measurement policy for the take of non-urban water was published on the DRDMW website. (The policy forms part of Queensland's strengthened measurement framework that includes legislation that sets measurement requirements for water users to meet, updated standards with clear technical requirements, a plan outlining priorities and timeframes for implementation and communication and support tools to help water users understand their measurement responsibilities.) Ongoing program of developing, and publishing a risk based, intelligence led Annual Compliance Plan program (2022-2023 completed) and reporting on performance to increase awareness of compliance priorities, expectations, and performance. Increased presence on social media platforms, website and direct engagement with regulated community and stakeholders on the department's role as the State's water regulator. This communication has included specific information to help inform entitlement holders of their measurement obligations, upcoming due dates, and reporting requirements. 	Completed	<p>Raising awareness of entitlement holder rights and obligations is an ongoing activity and DRDMW will continue to make information available through a range of channels. DRDMW is continuing to strengthen compliance through actions such as:</p> <ul style="list-style-type: none"> Implementing legislative and regulatory changes to enhance water metering rules and arrangements to give effect to the strengthened measurement policy. Continuing to work with ROL holders regarding water take compliance and referral of any excess use matters to the department for consideration. Ensuring new meter validations and revalidation of existing meters occurs in accordance with Water Regulation requirements.

Government's response actions	Actions completed in the last reporting period	Status	Additional information
<p>Rec 6: Provide more transparent information relating to water resource management, water use and compliance, including publication of state-wide catchment level compliance objectives and management strategies.</p>	<ul style="list-style-type: none"> WaterIQ app and customer portal trialled by QMDB water users and improvements to functionality made with further releases. WaterIQ manager portal for staff operational statewide with further releases planned to improve access and functionality. Foundational work to support the development of a future data platform. Development of a data and information governance strategy to set the foundations for the migration of data to our future state data model. Developed a proposed conceptual model to achieve our objectives for improved water accounting and commenced initial stakeholder engagement. Deployment of newly identified technologies to measure water balances in remote locations and enable a proactive compliance approach. Continued to increase and diversify our monitoring tools to support targeted compliance and improved water management outcomes. Ongoing program of developing and publishing a risk based, intelligence led Annual Compliance Plan program (2022–2023 completed) and reporting on performance to increase awareness of compliance priorities, expectations, and performance. Increased presence on social media platforms, DRDMW website and direct engagement with regulated community and stakeholders on the department's role as the State's water regulator. This communication has included specific information to help inform entitlement holders of their measurement obligations, upcoming due dates, and reporting requirements. 	<p>Ongoing activities to be reported on as part of Rural Water Futures Program Reporting</p>	<p>The provision of water information and systems capabilities to present and manage water information will be an ongoing activity and will be further delivered through the Rural Water Futures program including:</p> <ul style="list-style-type: none"> Expansion of WaterIQ app and customer portal trials informing functionality improvements to be made available through further releases. Extending functionality of WaterIQ manager portal to support broader access for DRDMW staff. Continued development of our future data platform. Data cleansing and other activities to support data migration to new data platform. Preparation for broader stakeholder engagement on proposed improvements to water accounting framework. Continued testing of alternative measurement equipment for further water level data collection and evaluation. Operationalise concepts for remote sensing to identify changes in water bodies using satellite images; and increased use of data insight tools, such as meter read and faulty meter data analytics.
<p>Rec 7: Strengthen measurement policy for supplemented and unsupplemented water extractions, which maintains consistency with AS 4747 and includes a comprehensive validation, maintenance and assurance regime.</p>	<ul style="list-style-type: none"> A strengthened water measurement policy for the take of non-urban water and implementation plan were published on the DRDMW website. 	<p>Completed</p>	<p>DRDMW is now implementing the strengthened policy including progressing legislative and regulatory changes to enhance Queensland's water measurement framework.</p>

Government's response actions	Actions completed in the last reporting period	Status	Additional information
Rec 8 Introduce a stronger meter validation and maintenance oversight by amending existing government measurement policy.	<ul style="list-style-type: none"> Strengthened meter validation and maintenance requirements have been included in the <i>Queensland interim water meter standard for non-urban metering</i> and are operational. 	Completed	
Rec 9: Incorporate provisions in the strengthened measurement policy to require the upkeep of fully working meters, systematic record keeping for maintenance and meter audits, validation of meters in accordance with the Qld meter standard and inclusion of the standard in quality management systems.	<ul style="list-style-type: none"> The strengthened non-urban water measurement policy for the take of non-urban water incorporating the provisions to address this recommendation was published on the DRDMW website. 	Completed	
Rec 10: Investigate the metering of entitlements across Queensland and develop an action plan for installation of meters on measurable entitlements.	<ul style="list-style-type: none"> The strengthened non-urban water measurement policy published on the DRDMW website. An implementation plan identifying timeframes for when meters are required has been published on the DRDMW website and will continue to be delivered and updated over time. 	Completed	
Rec 11: Invest additional resourcing in management systems and information systems to deliver sustainable metering and compliance arrangements to support Queensland's water management framework state-wide.	<p>DRDMW has invested resourcing to enhance and develop information systems capabilities including:</p> <ul style="list-style-type: none"> Continued development and refinement of WaterIQ service delivery channels. Deployment of newly identified technologies to measure water balances in remote locations. Assessment of remote sensing analytics to develop site monitoring methodology. Develop departmental work practices and procedures to support adoption of new tools approved for implementation. 	Ongoing activities to be reported on as part of Rural Water Futures Program Reporting	<p>Further investment will continue to enhance water information and systems capabilities through the Rural Water Futures program including:</p> <ul style="list-style-type: none"> Continued development and refinement of WaterIQ service delivery channels. Continued assessment of emerging technologies to measure water balances in remote locations. Operationalise concepts for remote sensing to identify changes in water bodies using satellite images, meter read insights and faulty meter read analytics. Continued development of our future data platform. Data cleansing and other activities to support data migration to new data platform. Subsidised telemetry rollout in the QMDB to improve metering information.

Government's response actions	Actions completed in the last reporting period	Status	Additional information
<p>Rec 12: Review resourcing requirements and costings for the development of programs to implement the recommendations of the Independent Audit.</p>		Completed	
<p>Rec 13: In consultation with stakeholder and industry, assess the most effective meter ownership model, including consideration of third-party provider options.</p>		Completed	
<p>Rec 14: Provide greater consistency and improved transparency across various water planning and regulatory instruments including adoption of enhanced risk assessment processes for all future water plans and introduction of publicly available ROL holder compliance reports.</p>		Completed	
<p>Rec 15: Improve the reliability and accuracy of water harvesting and overland flow measurement and monitoring with introduction of an overland flow measurement standard and risk-based overland flow measurement program.</p>	<ul style="list-style-type: none"> • Initial analysis of water entitlements to identify barriers to the implementation of volumetric measurement. • Proof-of-concept water balance calculator developed. • Targeted engagement about the practical application of phase 1 of the overland flow water level measurement. • Advanced drafts of phase 2 volumetric overland flow water measurement standard and measurement plan preparation guidelines developed. • Targeted engagement with industry representatives. • Proof-of-concept water balance calculator to be tested by water users to inform future system build. • The strengthened non-urban water measurement policy including overland flow provisions published on the DRDMW website. 	Ongoing activities to be reported on as part of Rural Water Futures Program Reporting	Amendments to the <i>Water Act 2000</i> to establish the head of power for volumetric overland flow measurement have been completed. Operational requirements to support implementation will be progressed through a future Water Regulation amendment.

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