



Rural Water Futures Performance Report 2021-22

Confidence in managing Queensland's non-urban water resources

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This report documents Rural Water Futures achievements from 1 September 2021 to 30 June 2022.

The report showcases how we are using our Performance Excellence Framework to measure our progress and demonstrate how we are performing in our role as a non-urban water resource manager.

It also demonstrates how we are implementing the Queensland Government's response to the Independent audit of non-urban water measurement and compliance.

Rural Water Futures

Rural Water Futures is driving more transparent and sustainable rural water management across the state.

The program is delivering better systems, policies and processes to give Queenslanders confidence that our water resources are being managed fairly and responsibly.

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

The program is strengthening our 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



Our vision

Transforming how we deliver sustainable water management for the people of Queensland focusing on fairness, transparency and accountability

Our objectives

- Deliver **enhanced customer service channels** and levels of service to water customers
- **Improve community confidence** and trust in Queensland's management of rural water resources
- Provide water customers with **access to high quality and near real time water data** and information
- **Optimise water trading** and management of water resources to stimulate economic development in regional areas across Queensland
- **Deliver Queensland Government commitments** to the Independent Audit of non-urban Water Measurement and Compliance and the Murray-Darling Basin Water Compliance Compact
- Implement **innovative and consistent ways of working** to improve staff experience and satisfaction
- Build the department's capacity as a **contemporary and responsive manager** of rural water resources

regulatory clarity + strengthened measurement + enhanced regulation & compliance + transformed water information systems and processes + optimised water markets



timely high quality data + visible & consistent decision-making



fairness + transparency + accountability



sustainable management + community confidence

Program drivers and outcomes that deliver community confidence

About the program

Rural Water Futures has secured Australian Government funding to support program delivery:

- \$10.2M 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.
- \$12.5M 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.

These funds complement the Queensland Government's pre-existing program funding.

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.



Australian Government

About the program

Queensland and Australian Government funding



Rural Water Futures Program

Frameworks, policies and standards

- Regulatory & policy framework for measurement
- Overland flow measurement
- Compliance and performance excellence framework
- Future water accounting framework
- Information management and governance framework

Improved processes, data, technology and telemetry

- Optimised water markets
- Improved licensing process
- Cross-border measurement and monitoring
- Operationalising remote sensing & spatial compliance
- Increased sensory and monitoring
- Assurance and accuracy testing
- Telemetry subsidy
- Telemetry trial
- WaterIQ app for water users
- WaterIQ customer portal
- WaterIQ manager
- Data exchange and platform

High level projects and activities being delivered 2021-2023

Our Year In Review

Performance Excellence

Rural Water Futures Program Highlights

Our stakeholder relationships play a key role in the work that we do. Understanding what, when and how information is best communicated is key to stellar performance

The work we deliver must be meaningful, have purpose and add value

Effective stakeholder engagement is driving the success of the Rural Water Futures program

Why we report on performance

Our performance report allows us to share with our stakeholders and the community how we are performing in meeting our organisational objectives.

We strive to create public value that meets the needs of Queenslanders is fundamental to our role as public servants. We aim for continuous improvement so that we can extend beyond simply meeting obligations..

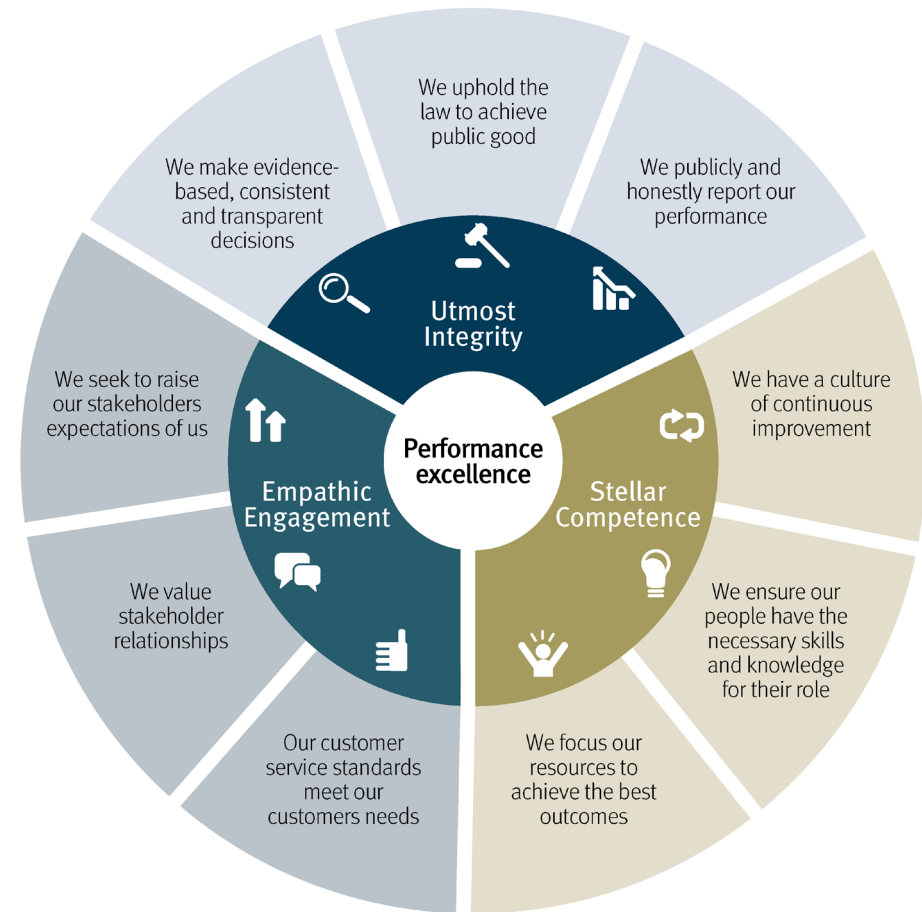
Each year we build on our performance excellence framework so that we can better understand how we perform as an organisation now and where we aspire to be.

A key component of our performance involves connecting with our stakeholders through engagement activities - where we listen, learn and improve.

This report provides a transparent account of:

- our year in review
- impacts for change, and
- reflects on learnings.

Over time our reporting will mature as our framework for performance excellence grows.



Attributes and focus areas of our non-urban water resource management performance excellence framework

Our year in review – performance journey

This year we sought to understand stakeholders' perceptions and expectations of the work we do, while also internally working with our people to learn how our performance excellence framework could be implemented across our large organisation.

We interviewed our senior leaders about performance excellence and developed a program to embed performance excellence into our business.

This year we took the time to reflect on what we heard from our stakeholders and reassess our baseline maturity for measurement and data capture.

Learnings

Performance excellence can have a different meaning to each person. Getting the language right and understood upfront is important to building confidence for change. Keeping people informed through presentations and articles in newsletters on how we are embedding performance excellence have been key.

Insights from the interviews with senior leaders helped to identify where gaps may exist and guide the next steps to embed performance excellence. We learnt that:

- water resource management businesses are well positioned for change
- links to broader departmental objectives can be strengthened
- staff experience and expertise can be leveraged to embed lasting change
- existing measures can be translated from outputs to outcomes and impacts.

Our performance vision is to be recognised for excellence in sustainable water resource management, service, and performance

Our year in review - piloting our framework

This year we trialled our framework by measuring our stakeholder engagement performance. Three water business groups nominated projects and business activities as case studies to pilot the framework.

Each case study established a set of measures to determine the impact of our engagement activities. In general, we sought to understand – (1) do we engage and communicate in an effective way? (2) What do stakeholders expect of us? (3) Where can our performance be improved?

To answer these questions and seek a better understanding of our stakeholder’s experiences with us we conducted interviews and focus groups with senior leaders and stakeholders.

We learnt that some relationships are mature in nature and are working well, whereas others could be improved. The results and insights from the three case studies are shared below.

	Case study project/ activity	Description
1	Non-urban Telemetry Requirements	Determine the feasibility of implementing telemetry in the QMDB by testing a range of equipment, telemetry networks and telemetry service providers.
2	Rural Water Futures	Program designed to develop and implement initiatives and products that improve rural water management.
3	Announced Entitlements	Administering Announced Entitlements for Bowen Groundwater Management Area

Case study 1: Non-urban Telemetry requirements (1a)

Our stakeholders were key to the success of this project. Testing telemetry devices in remote sites was possible through the participation of stakeholders who allowed us access to their land.

The trial focussed on assessing device connectivity, accuracy, data transfer and management. An independent report analysing the trial devices and data analysis provided valuable information on the practicalities and challenges of implementing near real-time water use monitoring.

This information will be used to guide the development of legislation to support telemetry standards and system functionality. Any requirement for telemetry will not commence until this framework is in place and the recommendations of the independent report have been considered.

Trial participants have received a copy of the independent report. A summary of the findings and proposed activities for implementing next steps has been provided to staff.

Our ten-month trial sought to understand how we can successfully use telemetry on water meters to improve water resource management.

Data was collected from 47 devices installed across 11 remote sites in the Queensland Murray-Darling Basin (QMDB).

Performance outcome

We create an environment where there is an opportunity for staff and stakeholders to access information detailing significant policy decisions and implementation.

Impact measures

1. Staff and stakeholders can access trial outcomes and recommendations.
2. Policy decisions on telemetry requirements are made based on evidence.
3. There is a clear and transparent approach to implementing telemetry.

Case study 1: Non-urban Telemetry requirements (1b)

Stakeholder perceptions

Challenges experienced through the COVID-19 pandemic, along with rain and floods delayed the commencement of the telemetry trial. When restrictions eased and conditions improved, the trial proceeded quickly. Landowners were initially contacted by phone to seek their interest in participating. Information about the trial was provided by email and formal participation agreed in writing.

Trial participants felt the implementation process was rushed and additional information could have been provided at the outset. We responded by introducing regular progress updates.

The limitations of our departmental systems meant conversations throughout the trial mainly focussed on participant access to the data. Difficulties experienced in configuring devices and rectifying issues during flooding over the trial period also impacted access to data. During the trial participants expressed concerns about data security and privacy. Their feedback about data access and security has been invaluable, helping to shape our policy direction.

Following the trial, as well as a copy of the independent report, participants were provided a summary of the key findings and proposed next steps.

Post-trial interviews have commenced to seek further feedback and document learnings.

Participants confirmed that the benefits of being involved in the trial outweighed their concerns, highlighting the key benefit as the instant and remote access to their meter readings.

Performance outcome	Impact measures
We include stakeholders in the work that we do so that their positions and concerns can be incorporated.	1. Full disclosure of field trial is provided
	2. Open communication with trial participants
	3. There is a clear and transparent approach to implementing telemetry.

Case study 2: Rural Water Futures

We are excited to be at a stage in the Rural Water Futures program where we can share how the program is delivering public value to our stakeholders through numerous communication channels, and to test their effectiveness. Throughout the program we have communicated through public forums, emails, newsletters, media releases, the departmental website and informal meetings about the purpose of the program.

Trialling the performance excellence framework has given us a structure to seek input from our industry and learn about the impact we are making and how effective our communication and engagement has been. Feedback from the trial has already led to improvements being made in how we engage with our stakeholders.

Performance outcome	Impact measures
We actively and effectively engage with external stakeholders impacted by the Rural Water Futures program so that their positions and concerns can be incorporated in the design and delivery of the planned transformation initiatives and products.	1. Increase awareness about RWF, its objectives, deliverables & benefits to external stakeholders
	2. Support well-informed external communities by providing publicly accessible program information & avenues for public feedback
	3. Engage key stakeholders in a timely and effective way

Case study 2: Rural Water Futures

Learning from and responding to feedback from the Water Engagement Forum* (WEF)

We learnt that WEF members have a solid understanding of the overarching purpose of Rural Water Futures. They understand the program aims to improve non-urban water measurement, improve water markets, transform water information systems, enhance regulation and compliance. They are less confident in their understanding about what the program is delivering.

We are providing more in-depth information about the program at WEF meetings and through other communication channels where appropriate.

We are continuing to engage with WEF members to build their understanding about RWF projects and initiatives and how these fit in our broader departmental water resource management role.

We heard that WEF members typically access information about Rural Water Futures through WEF meetings or, for some, sub-groups. Whilst WEF meetings provide an excellent opportunity to share information about the program, it can be difficult for members to distinguish between RWF projects and other departmental programs and initiatives.

We learnt that WEF regards our engagement approach as transparent, inclusive and genuine, and they feel valued and listened to. However, there is an opportunity to be more proactive – to reach out on an informal, more regular basis to strengthen relationships. Members question whether their contribution translates into genuine influence or outcomes. Some would like channels for influence and policy making, not just communication and feedback.

WEF representatives are being invited to participate in user experience workshops and trials (e.g. WaterIQ; Telemetry) enabling them to contribute to the design of products that will impact them. This type of engagement will continue throughout the life of the program.

****The Water Engagement Forum comprises representatives from industry groups, peak bodies and community groups with an interest in the department's water portfolio. The forum provides targeted representative consultation and information sharing on government water business, policy and planning issues.***

Case study 3: Announced entitlements

Performance outcome	Impact measures
Decisions and advice are provided in a timely manner, clearly articulated, and justified.	1. Announced allocation decisions are made in a timely manner to support good customer service
	2. Department meets its statutory obligations regarding announced entitlements including consultation with the Bowen Water Advisor Group.
	3. Stakeholders are informed of the process and outcome

An announced entitlement or announced allocation decision limits the water that may be taken under a water licence or water allocation for a water year. Making decisions in a consultive and timely, manner and informing stakeholders, is key to maintaining effective relationships.

The department has maintained open communication channels with the Bowen Water Advisor Group (BWAG) for many years.

Announced allocation decisions occurred within a timely manner and as required, before the start of the water year. Prior to the decision the BWAG was consulted. The department discussed the proposed announced entitlements and considered any feedback from BWAG before their decision.

The BWAG was advised of the outcome once the decision was made and given the opportunity to provide feedback on what is working and what is not regarding the announced entitlement process.

We learnt through interviews with BWAG members that the consultation process works well and is understood. Members can provide feedback and feel heard.

Our year in review - highlights



A strengthened water measurement policy for the take of non-urban water was approved by government. The policy was informed by feedback from extensive consultation and engagement with peak bodies, industry groups and the community over three years with over 400 people attending meetings held across the state.



A trial of telemetry devices by water users conducted in the QMDB and independently assessed, is informing telemetry guidelines and development of our implementation approach.



The completion of our **Groundwater Monitoring Network review** and publication of objective risk-based criteria for the collection of groundwater data builds confidence in the data underpinning decisions on water availability and entitlements.



Continual **improvements to our compliance approach**, including investigating the use of satellite imagery and other technologies and data to support improved compliance outcomes and increased detection of non-compliance.



Development underway for three new **WaterIQ branded digital service channels** for internal and external users guided by extensive stakeholder research and engagement.



Comprehensive assessment of options for a **future water accounting framework**, including investigation of approaches in other jurisdictions.



The ongoing implementation of the **Queensland Water Markets Optimisation (QWMO) Action Plan** is delivering actions to maximise the value and availability of our water resources and continue enhancement of Queensland's water markets.

Our achievements this year – a closer look



How we are strengthening water measurement

Non-urban water measurement policy

Overland flow

Telemetry

Robust compliance

Enhanced regulatory framework

Enhanced measurement

Future water accounting framework

Groundwater monitoring network review

Accurate and timely water measurement benefits communities, businesses and the environment.

Water users who know how much they use can improve their water use efficiency and reduce their costs.

Knowing how much water is being used across the state allows government to make better decisions about the allocation of available resources.

Where we know water is underutilised, we can make it available to support businesses.

Accurate measurement can also help ensure water take complies with requirements put in place to manage environmental flows.

More accurate and timely information puts us in a better position to identify and respond to compliance breaches and reassures the community that water is being managed fairly and sustainably.

Non-urban water measurement policy

Creating a strengthened water measurement policy to improve the coverage and standard of water measurement across Queensland

Achievements 2021-22

- A strengthened water measurement policy for the take of non-urban water was completed and approved by government. This enables the progress of necessary regulatory changes in 2022-23.
- The policy was informed by feedback from extensive consultation and engagement with peak bodies, industry groups and the community over three years with over 400 people attending meetings held across the state.
- The final policy strikes a balance between the need to strengthen water measurement and minimise costs for water users – a key concern raised during consultation.
- 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.
- The updated [Queensland interim water meter standard for non-urban metering](#) aligns Queensland with national standards for non-urban metering and provides clarity and certainty for water users about water metering requirements for both new and existing meters. The updated standard also ensures that business as usual meter revalidations continue under strengthened requirements.

Better information on
water take



Assurance and confidence
in measurement



Inform water management
and compliance



Frequent and better data
for irrigators

Overland flow

Improve the accuracy of measuring and reporting the take of overland flow water

Achievements 2021-22

- A draft overland flow measurement framework was released for consultation.
- Engagement sessions were held with peak bodies, industry groups and water users in the relevant water plan areas of the Queensland Murray-Darling Basin providing the opportunity for stakeholders to gain a better understanding of the proposed new measurement approach and provide feedback.
- A pilot water balance calculator has been developed and will be further tested for use by water users in a field trial to ensure it meets their needs.

Benefits

- Stakeholder consultation provides an opportunity to improve understanding and gain support for the new measurement approach.
- The release of an information paper and early drafts of the framework supports meaningful conversations with affected water users, with feedback actively informing policy development.
- Opportunity to circle back to stakeholders to show how their feedback has been used to refine the framework.
- The water balance calculator will be an important support tool within the overland flow measurement framework to make it easier for water users to calculate their overland flow take.

Investigating options to transmit water meter data to the department

Achievements 2021-22

- A range of telemetry devices were trialled to test their ability to transmit data to the department from remote sites in the Queensland Murray-Darling Basin.
- The department has used an independent assessment of the trial to provide information for developing telemetry standards and guidelines and to help decide on the best implementation approach.
- Results from the trial are providing valuable evidence about the effectiveness of different telemetry devices and networks in transmitting water meter data to the department.
- A framework to establish a subsidy program for telemetry devices is under development. Eligible entitlement holders in the Queensland Murray-Darling basin can now register their interest and will be kept informed as the program develops.

Benefits

- Access to more accurate, near-real time data on water take
- Greater transparency of water take, especially where it is time or event-based
- Better information for monitoring compliance and identifying those taking more than their fair share.

Robust compliance

Delivering a robust approach to water compliance

Achievements 2021-22

- Continual improvements to compliance approach, including enhancing the use of satellite imagery and other technologies and data to support improved compliance outcomes and increase detection of non-compliance. Improved fit for purpose training material and internal case management reporting.
- Developed a new Water Resource Management Regulatory Strategy 2022-2024 (published in July 2022) outlining our regulatory approach. The strategy informs and educates the community about what they can expect from us and how we understand our regulatory role.
- Continual improvements in the Annual Compliance Plan (ACP) each year, and public reporting of compliance activities and actions.

Benefits

- Consistency in approach and delivery of regulatory activities and actions state-wide
- Increased transparency and clarity in compliance response
- Contemporary training that builds our regulatory capability across the business
- Shared understanding of the department's role as the regulator
- Data driven insights to target effort, including education to encourage compliant behaviour.

Robust compliance

Encouraging metered entitlement holders to provide meter readings on time

As part of the monitoring requirements, metered entitlement holders are required to provide a meter reading of their water take in defined periods throughout the water year.

To support compliant behaviours and reduce the amount of non-supplied or late readings, we have proactively made changes to internal processes. This was to ensure water users understand their obligations to provide a reading and the importance of providing a read on time. The changes were supported through the findings of a behavioural insights research project drawing on water users input and include:

- Changing the format and language used on meter reading notices, so obligations were clearer. This included information as to why meter readings were important
- Encouraging meter entitlement holders to update the way we contact them, shifting from traditional methods such as post to mobile or email so to improve the distribution of information directly to them
- Promoting use of the online portal to submit readings, rather than post to increase timely receipt
- Utilised text, email or phone to provide timely automated prompts closer to the due date, supporting receipt of meters reads and within the required timeframes

Evaluation of the approach to date is demonstrating a number of improvements:

- an increase of 20% to online submissions of meter reads, rather than other method, such as post
- each reminder sent prior to the due date increased the receipt of meter reading by 20%, reducing late or previous non-supplied readings.

See more about our compliance & enforcement activities: [Our role as a water regulator: compliance approach and principles | Department of Regional Development, Manufacturing and Water \(rdmw.qld.gov.au\)](#)

Enhanced regulatory framework

Enhancements to the regulatory framework to support the delivery of the Rural Water Futures program

Achievements 2021-2022

The Water Regulation 2016 was amended to streamline the annual process for indexing regulatory fees and related regulatory process.

Government approval of a strengthened non-urban water measurement policy enabled development of proposed regulatory changes to support implementation of the policy.

Streamlining the annual process for indexing regulatory fees means that yearly adjustments in line with Government's indexation rate is efficient and consistent. This makes arrangements more transparent and more easily understood for entitlement holders and the business.

Government approval of the non-urban water measurement policy supports regulatory changes that aim to support more efficient and defensible compliance action.

Enhanced measurement

Evaluating low-cost direct measurement devices and piloting the use of remote sensing products

Benefits

Cross Border Measurement and Monitoring

- Scoped new and emerging water measurement technologies to measure water balances in remote locations
- In the next phase, the technology will be deployed to learn the best ways to operationalise the new concepts

Operationalising Remote Sensing and Spatial Compliance

- Scoped current capability and emerging technologies to monitor water movement in remote locations
- Work underway to learn the most practical methods to monitor sites applying remote sensing analytics
- In the next phase, the concepts will be expanded to explore new operational working methods

The new and emerging operational water measurement and remote sensing tools being piloted are lower cost, longer life and extend the scale and reach of non-urban water measurement throughout the state, enabling:

- Improved safety in remote locations for frontline staff
- Improved capability to access sites and collect information remotely during wet conditions
- Better value for money
- Emerging analytics for compliance officers, entitlement holders and the community
- Transparent information sharing enhancing public confidence in regulation

Future Water Accounting Framework

Reviewing the regulatory water accounting process to deliver improvements to the water management framework under the Water Act 2000

Project Benefits

Achievements 2021-2022

- documented our regulatory framework and accounting current state
- undertook an assessment of conceptual frameworks for an improved water accounting framework, including investigation of approaches in other jurisdictions

For water users

- transparent water availability via water user facing water accounts
- access to accurate & timely water data
- easier to trade water
- ability to self manage and opportunities to grow economic activity
- clear and accountable responsibility for take of water, supporting their social licence

For the department

- streamlined accounting processes
- more efficient operation of water market
- support for compliance action - clear accountability
- support for more effective resource management

Groundwater monitoring network review

Review the groundwater monitoring network to ensure it provides timely and reliable data to support water resource planning and management

Achievements 2021-2022

The Groundwater Monitoring Network review was completed, and the methodology and recommendations were published on the Water Monitoring Information Portal in February 2022.

Consultation with a range of stakeholders incorporated a range of risk assessment criteria into the methodology.

The recommendations allow a focus on monitoring of Very High and High risk groundwater units based on development and use, groundwater system responses, demand for new water, long term storage behaviour, compliance issues and contamination risks.



Objective risk-based criteria and collection of groundwater data under an ISO 9001:2015 quality management system builds confidence in the data underpinning decisions on water availability and entitlements.

When fully implemented, a net increase of 116 sites monitored by loggers and telemetry will provide near-real time data to the Water Monitoring Information Portal and a net saving of over 2,600 manual readings per year.

The benefits of optimised water markets

Optimising the value and availability of our water resources and infrastructure is key to unlocking Queensland's regional economic development into the future.

Queensland Water Markets Optimisation (QWMO)

The QWMO Action Plan is a set of coordinated actions to improve the function of Queensland's water markets that deliver economic benefits while protecting our rivers and streams

Achievements 2021-2022

- collaboration with Sunwater and Seqwater to publish data on the price, location and volume of temporary trades for supplemented water
- temporary trade data included on the Business Queensland webpage for unsupplemented water
- collaboration and engagement with Sunwater to develop and implement a bulletin board to better connect potential water buyers and sellers in the schemes they manage
- market research into water investor needs to identify improvement opportunities for the Water Investor Hotline
- development underway for a Water Availability Portal to enable water users to access water markets information for better trading opportunities

Benefits

Efficient water markets will help get the most out of our water resources and water supply infrastructure now and into the future.

- enhanced water market activity leading to improved water utilisation and accompanying economic and social benefits across Queensland
- stimulate local economic development through increased utilisation of existing infrastructure and water resources
- increase water market activity and the utilisation of water resources by facilitating the connection of potential water buyers and sellers.

How information and systems are changing

Water IQ

Announced allocations

Foundation project

We are focused on delivering timely, accessible and responsive water information and services to our customers.

We are working with our stakeholders to develop innovative information, communication and technology strategies and solutions, to enable our customers to easily access water information and services.

WaterIQ

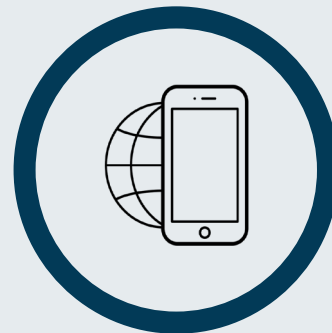
Develop contemporary digital service channels to support water resource management and compliance and improve customer access to information about their entitlements to support on-farm management

Our three new WaterIQ service channels will be delivered in four releases over two years.

Functionality will continue to be developed and incorporated in each new release in response to customer feedback and priorities.

The first release of the water app and customer portal will be trialled by water users in trial areas for up to 12 months prior to inform decisions around broader release across the state.

Water user



WaterIQ app

The WaterIQ app streamlines the way unsupplemented water meter readings are captured through digital tag recognition (QR code tags)

Water user



WaterIQ customer portal

The WaterIQ customer portal enables water users to see their entitlement (authorisation) details and resources available to them.

Water officer



WaterIQ manager

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

Our WaterIQ 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.

WaterIQ (continued)

Achievements 2021-2022

- Extensive stakeholder research and engagement to develop the first release of our new digital service channels:
 - statewide stakeholder research to understand water user requirements
 - design workshops with water users to develop a prototype to inform the design of the WaterIQ app and customer portal
 - trial water user group established in Central Condamine Alluvium for the WaterIQ app
 - trial water user group established in Border Rivers Alluvium for the WaterIQ customer portal
 - Delivery partner appointed and commenced development of WaterIQ products
- Enable the water business to access data from existing platforms via the cloud and reuse it in innovative ways via WaterIQ products

Project benefits

Improved customer and staff experience through contemporary digital service channels

For water users

- accurate verifiable meter readings using a simple automated process
- notifications received through a digital channel
- monthly meter readings will assist with the forecast of water availability
- single portfolio view to access personalised information
- improved access to information to support water use efficiency

For the department

- state-wide internal portal & 'one-stop-shop' for staff to access water information
- immediate access to information to support efficient and effective decision making
- track jobs, applications and events within teams and regions across the state
- staff empowered to adopt new ways of working to support best practice regulation

Improved resource allocation and announcements

Establish more efficient processes to determine and publish resource announcements

Achievements 2021-2022

- Application Programming Interfaces (APIs) prepared to allow selected information to be taken from the data lake to the Business Queensland website
- Internal processes to publish announcements streamlined

Project Benefits

- stakeholders provided with timely information about water entitlements to maximise opportunities to access the resource
- improved notifications to support compliance
- reduced administrative burden for water businesses and the department
- increased transparency and confidence for water users

Foundation project

This project will establish consistent and sustainable data management and business processes to support enhanced digital capability and services

Achievements 2021-2022

- Initiatives contributing to the development of a contemporary data platform and simplified data model
 - data model to support the design, development and testing of WaterIQ products
 - data audit including off-system information assets
 - data glossary to support the delivery of WaterIQ products
 - information management and process governance frameworks to provide the foundation for data stewardship and the structure for implementing efficient state-wide processes under development
- Published temporary water trading data to the Business Queensland website, and improved the process for publishing resource allocation announcements

Benefits

These initiatives contribute to the development of a contemporary data platform and simplified data model

The department manages its data to provide more transparency and better services to water entitlement holders, infrastructure operators, investors and other customers and stakeholders.

This builds trust and confidence in the department's role as a regulator to manage the state's water resources sustainably and fairly.

Mapping our projects to our success factors

Success factors	Measurement Policy	OLF	Telemetry	Announced Allocations	Enhanced Regulatory Framework	Enhanced Measurement Project	Robust Compliance	FWAF	Groundwater monitoring Network	Foundation Project	Improved licensing process	Optimised Water Markets	Water IQ
A water measurement policy is finalised, and implementation is underway	✓	✓			✓				✓				
Robust water accounting processes are implemented		✓						✓					
Efficient & defensible compliance action is undertaken using numerous tools.	✓	✓			✓	✓	✓						
Community confidence is restored in existing & future data.	✓	✓	✓	✓		✓	✓			✓			✓
Systems & tools are in place that support business as usual processes and allow us to proactively manage our water resources in “real time.”	✓	✓	✓	✓		✓	✓		✓				✓
Efficient & consistent processes are in place to manage entitlements	✓	✓	✓		✓		✓				✓		
Water resource management information is transparently published.				✓		✓			✓	✓		✓	
Trading is optimised in suitable locations, using efficient processes.												✓	
Simple to interpret legislation is available to support the business.	✓	✓			✓								
Water plans are simplified so they can be systematised and consistently applied.								✓					

Implementing the government's response to the independent audit

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

The program is addressing all 15 recommendations arising from the independent audit.

Eight have been completed and the remaining seven have been substantially progressed.

Attachment 1 outlines the status and progress against each of the recommendations.

Queensland is also 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 progress status June 2022

Government's response actions	Actions completed in the last reporting period	In progress	Status
Governance			
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

Government's response actions	Actions completed in the last reporting period	In progress	Status
<p>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.</p>			Completed
Compliance actions and culture			
<p>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</p>	<ul style="list-style-type: none"> • Since 2018 the department has continued to build its capability as a regulator in terms of compliance and enforcement. • The Machinery of Government changes led to the opportunity to develop a new Water Resource Management Regulatory Strategy 2022-2024 outlining our regulatory approach. The strategy informs and educates the community about what they can expect from us and how we understand our regulatory role. • Improvements to compliance approach, including investigating the use of satellite imagery and other technologies and data to support improved compliance outcomes and increase detection of non-compliance. Improved fit for purpose training material and internal case management reporting. • Continual improvement in developing the Annual Compliance Plan (ACP) each year, and public reporting of compliance activities and actions. 	<ul style="list-style-type: none"> • Continual improvements to strengthen our compliance approach including planning and reporting activities will be made as part of normal business operations. • Ongoing improvements to support improved compliance outcomes and increase detection of potential non-compliance through the use of satellite imagery and other technologies are being evaluated and introduced where fit-for-purpose as part of the Rural Water Futures program. 	Completed

Government's response actions	Actions completed in the last reporting period	In progress	Status
<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 completed and approved by government. 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. • A state-wide non-urban water measurement policy implementation plan approved by government • Updates to the <i>Queensland interim water meter standard for non-urban metering</i> align Queensland with national standards for non-urban metering and provide clarity and certainty for water users about water metering requirements for both new and existing meters. The updated standard also ensures that business as usual meter revalidations continue under strengthened requirements. 	<ul style="list-style-type: none"> • Implementation underway including legislative and regulatory changes to enhance water metering rules and arrangements to give effect to the strengthened policy 	<p>Significantly progressed</p>

Government's response actions	Actions completed in the last reporting period	In progress	Status
Transparency			
<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"> • Scoping and analysis of new and emerging water measurement technologies to identify several new technologies to measure water balances in on-farm storages and remote regions • Newly identified technologies that meet the state and Commonwealth's efficacy and costing requirements have been planned for proof of concept with pilots commencing in the project's next phase • Delivery partner appointed and development underway to deliver three new service delivery channels: • WaterIQ app to streamline the capture of water meter readings • Water IQ customer portal to enable water users to see their entitlement details and information about resource availability • WaterIQ manager – a statewide internal portal for water officers to support water resource management and compliance • Extensive stakeholder research and engagement to inform the development of the first release of the WaterIQ delivery channels • Comprehensive assessment of five options for a future water accounting framework and an external appraisal of preferred option 	<ul style="list-style-type: none"> • WaterIQ app trialled by water user group in the Central Condamine Alluvium and improvements to functionality made with further releases • WaterIQ customer portal trialled by water user group in the Border Rivers Alluvium and improvements to functionality made with further releases • First release of WaterIQ manager operational statewide and improvements to functionality introduced with further releases planned • Finalisation of information management and process governance frameworks to provide the foundation for data stewardship and the structure for implementing efficient state-wide processes under development • Proposal to develop detailed future water accounting policy framework • 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 	On track

Government's response actions	Actions completed in the last reporting period	In progress	Status
	<ul style="list-style-type: none"> Publication of the 2020-21 Compliance and enforcement actions in the Queensland Murray-Darling Basin catchments areas. 		
Metering Policy			
<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 was completed and approved by government. Updates to align the <i>Queensland interim water meter standard for non-urban metering</i> with national standards and provide clarity and certainty for water users about water metering requirements for both new and existing meters. The updated standard also ensures that business as usual meter revalidations continue under strengthened requirements. 	<ul style="list-style-type: none"> Legislative and regulatory changes to enhance water metering rules and arrangements to give effect to the strengthened policy 	Significantly progressed
<p>Rec 8 Introduce a stronger meter validation and maintenance oversight by amending existing government measurement policy</p>	<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

Government's response actions	Actions completed in the last reporting period	In progress	Status
<p>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 & inclusion of the standard in quality management systems</p>	<ul style="list-style-type: none"> The strengthened non-urban water measurement policy for the take of non-urban water approved by government incorporates the required provisions to address this recommendation 	<ul style="list-style-type: none"> Full implementation of this recommendation will occur through the implementation of the strengthened measurement policy once it is finalised. 	Significantly progressed
<p>Rec 10: Investigate the metering of entitlements across Queensland and develop and action plan for installation of meters on measurable entitlements</p>	<ul style="list-style-type: none"> Implementation plan to identify timeframes for when meters are required approved by government The strengthened non-urban water measurement policy approved by government provides clarity on entitlements to be metered 	<ul style="list-style-type: none"> Implementation plan operational and implementation underway 	Significantly progressed
Information systems and resourcing			
<p>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>	<ul style="list-style-type: none"> The completion of our Groundwater Monitoring Network review and publication of objective risk-based criteria for the collection of groundwater data builds confidence in the data underpinning decisions on water availability and entitlements Scoping and analysis of new and emerging water measurement technologies to identify several new technologies to measure water balances in on-farm storages and remote regions 	<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 	Significantly progressed

Government's response actions	Actions completed in the last reporting period	In progress	Status
	<ul style="list-style-type: none"> • Newly identified technologies that meet the state and Commonwealth's efficacy and costing requirements have been planned for proof of concept with pilots commencing in the project's next phase • Comprehensive assessment of five options for a future water accounting framework and an external appraisal of preferred option • Delivery partner appointed and development underway to deliver first release of three new WaterIQ service delivery channels for internal and external users 		
<p>Rec 12: Review resourcing requirements and costings for the development of programs to implement the recommendations of the Independent Audit.</p>	<ul style="list-style-type: none"> • Ongoing review of the program resourcing requirements, costings, priority investment programs and funding sources by the RWF Program Board now part of business as usual. 		Completed

Government's response actions	Actions completed in the last reporting period	In progress	Status
Meter ownership			
Rec 13: In consultation with stakeholder and industry, assess the most effective a meter ownership model, including consideration of third-party provider options.			Completed
Water plans and Water Regulation 2016			
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.			Completed
Measurement of overland flow and water harvesting			
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	<ul style="list-style-type: none"> • Draft overland flow measurement framework released for consultation • Stakeholder engagement sessions held with peak bodies, industry groups and water users in the relevant water plan areas of the Queensland Murray-Darling Basin. • A pilot water balance calculator was developed ready for further testing by water users in a field trial. 	<ul style="list-style-type: none"> • Overland Flow Measurement standards and guidance materials • Water balance calculator piloted by water users • Legislation changes to support the overland flow measurement framework 	On track

Government's response actions	Actions completed in the last reporting period	In progress	Status
	<ul style="list-style-type: none"> <li data-bbox="677 294 1403 388">• The Strengthened Non-urban water measurement policy including overland flow provisions approved by government 		

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