Sunwater 101

how we are delivering water for prosperity



sunwater

sunwater

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GLOSSARY

TERMS OF USE

Who we are and what we do

We are a team of dedicated and skilled professionals, who are working together every day to ensure we deliver value to our customers, and future customers, across regional Queensland.

We know how important water is to the livelihoods of our more than 5000 irrigation, industrial, commercial and urban customers, and to Queensland's overall economic well-being. Our purpose is clear at Sunwater – 'Delivering water for prosperity'.

We are responsible for providing around 40 per cent of all water used commercially in Queensland. That's more than 1300 gigalitres a year.

We do this by:

- making the most of the available water supply
- ensuring our infrastructure assets are operated and maintained efficiently, safely and in the best condition possible
- planning for and constructing upgraded and new infrastructure, and anticipating our customers' changing needs
- continuously improving the way we do things.

Caring for our health, safety and the environment is central to our business and we are focused on learning and continually improving the way we manage our associated risks and opportunities.

We each participate in a 'Switch on' Safety Leadership course which aims to enable a workforce that is 'switched on' to tasks and routines, role models safety as a core value, a belief that all incidents are preventable, and having courageous conversations and providing strategies to influence our own and others' safety attitudes.

Everything we do and say is guided by our three key values. At Sunwater, we:



VALUE PEOPLE

everyone matters, and we are committed to zero harm for all our people



WORK TOGETHER

we are our best when we work together as one Sunwater and with our customers front of mind



TAKE RESPONSIBILITY

we all have a part to play to deliver on our promises and challenge our thinking

For work tasks, we manage our individual exposures and suitability for the task through a **'SLAM' – Stop. Look. Assess. Manage.** Where a task is not considered safe, we each have the authority to stop that unsafe task.

S **STOP** consider the work involved

L **LOOK** for and identify the hazard

A **ASSESS** the risks

M **MANAGE** and develop risk controls

In relation to the safety of the public and wider community, we have a range of arrangements in place to provide for their safety on or near our assets, and to our communities. These are further discussed in our Community Safety section.

We are customer-centric, and we provide services where and when our customers need us, across three categories:

- **irrigation** – from sugar cane and cotton, to a wide range of horticulture, small to large-scale farming
- **industry** – mining and manufacturing companies, power stations, small industry, stock and domestic users
- **urban** – regional-based councils and communities.

We collect, move, treat, store and distribute water to our farmlands, industry and communities across regional Queensland using our extensive water infrastructure assets which include:

- 19 dams
- 65 weirs and barrages
- 595 kilometres of water channels
- 70 major pumping stations
- 1951 kilometres of pipeline
- 6 water treatment plants.

Our dams, weirs and barrages can store up to 6497 gigalitres of water. To provide some context, this is the equivalent volume to 13 Sydney Harbours. On average, each year we deliver more than 1300 gigalitres of water to our customers.

Our assets, valued at $13.7 billion, are spread across regional Queensland and are operated and maintained by our teams who live and work in local communities. With such a wide geographic area to service, our operations are divided into four regions: North, Central, Lower Burnett and Mary, and South, and 33 different locations. Our regional teams play a critical role and take great pride in delivering water to their communities and our customers.



Ownership and governance

Government Owned Corporation (GOC)

We are a Queensland Government Owned Corporation (GOC). We were established on 1 October 2000 under the *Government Owned Corporations Act 1993 (Qld) (GOC Act),* which is administered by Queensland Treasury.

We operate on a commercial basis as far as possible, consistent with the principles and framework described in our Constitution and the GOC Act.

We provide our water service under the *Water Act 2000* and are regulated by the *Water Supply (Safety and Reliability) Act 2008 (Qld).*

These two Acts are administered by the Queensland Department of Regional Development, Manufacturing and Water (DRDMW).

Water Act 2000

Queensland's water resource planning and management framework is established in the *Water Act 2000*. This includes:

The allocation of water resources (including surface and groundwater)	Water trading and market arrangements	Management of unallocated water reserves

We have two shareholding Ministers and two shareholding departments, that we engage with regularly.

Shareholding Ministers	Shareholding departments
Queensland Treasurer and Minister for Investment	Queensland Treasury – Shareholder and Structural Policy Division
Queensland Minister for Regional Development and Manufacturing and Minister for Water	Department of Regional Development, Manufacturing and Water (DRDMW)

We are governed by an independent Board of Directors, who are appointed by the Governor in Council in accordance with the GOC Act.

The GOC Act calls for us to submit both a Statement of Corporate Intent (SCI) and a five-year Corporate Plan to our shareholding Ministers annually. The SCI is a formal performance agreement between our Board of Directors and the shareholding Ministers. It sets out our financial and non-financial targets for the financial year. Each quarter we provide performance updates to demonstrate how we are tracking against our targets. We are required to comply with directions made by the shareholding Ministers, and this is reflected in the SCI.

Our Corporate Plan guides our business direction for the next five years. It sets out our purpose, the values that guide the way we do business, specific strategies, and the targets against which we will measure our performance at a corporate level.

Our corporate governance framework is underpinned by:

The Corporate Governance Guidelines for Government Owned Corporations (GOCs)	**Key policies** – such as the Sunwater Code of Conduct; Directors Code of Conduct; Corporate Governance Structure; Sunwater Limited Constitution	**Our values**

We foster an ethical and transparent culture and encourage anyone who considers they have witnessed a wrongdoing or have come across an activity or incident that could impact adversely on our business, to come forward and make a disclosure. Anyone who makes a public interest disclosure or Whistleblower Disclosure about or to Sunwater is provided protection under the *Public Interest Disclosure Act 2010* (Qld) and *Corporations Act 2001* (Cth).

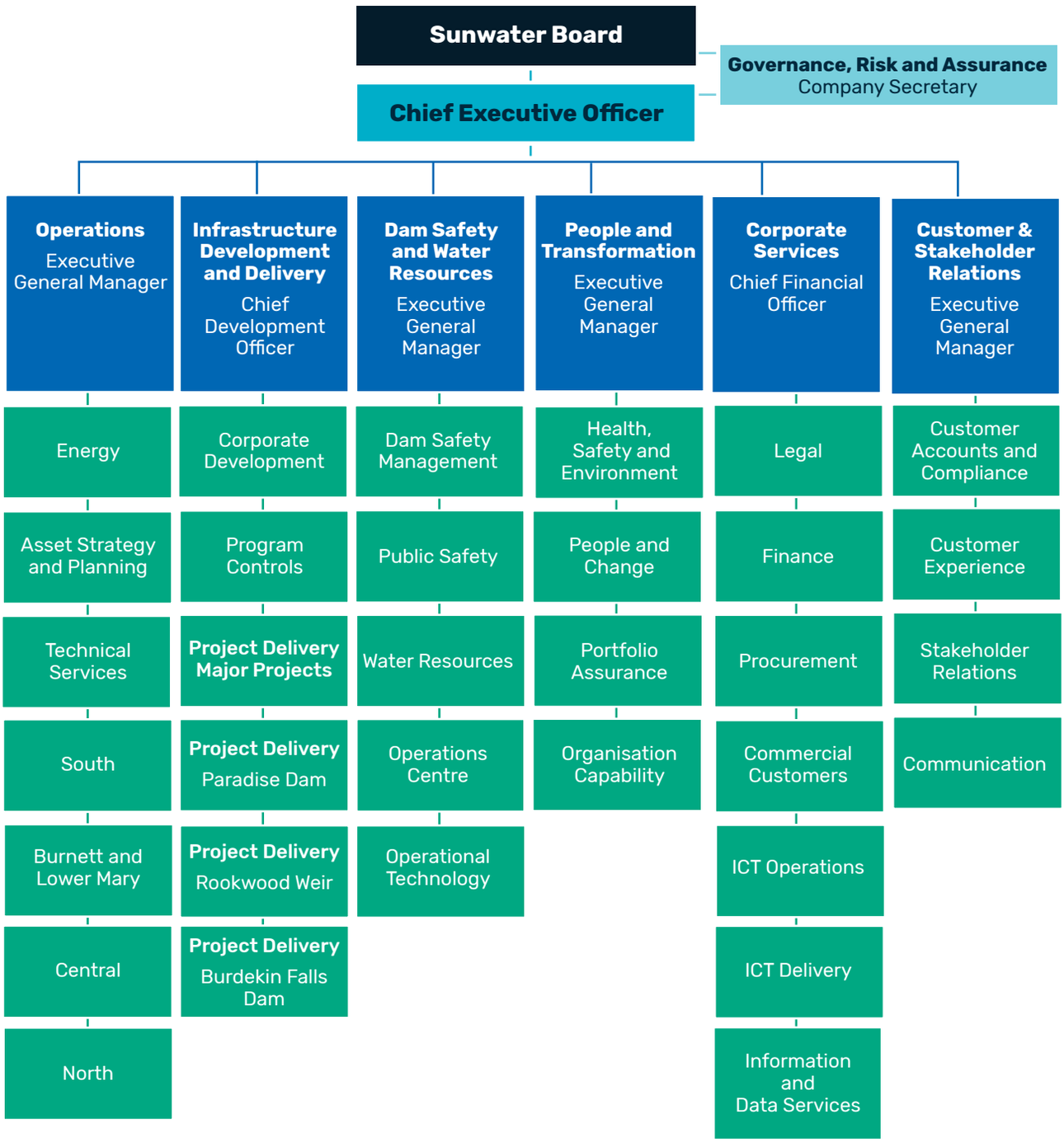
Our leadership

Our Chairman and Board members are appointed by the Governor in Council as non-executive directors and our Chief Executive Officer is appointed by the Board with prior written approval from our shareholding Ministers.

Office of the Chief Executive Officer	Our CEO works closely with the Board and executive leadership team to set our vision and strategy through the Corporate Plan and SCI.
Governance, risk and assurance	This small team of specialists manage enterprise-wide governance, risk, assurance and compliance, and reports directly to the Board.
Chief Financial Officer (CFO)	Our CFO leads our corporate services function, which includes the finance, legal, procurement, ICT and commercial customer teams. We are focused on continual improvement across these areas to enable our customer services to be as efficient as possible, while at this same time meeting best practice expectations around governance and technology.
Executive General Manager (EGM) Operations	Our EGM Operations oversees our on-the-ground operations, manages our infrastructure assets across four regions and is responsible for driving customer-oriented, efficient and safe operations that support regional Queensland's water needs.
Executive General Manage (EGM) People and Transformation	Our EGM People and Transformation provides strategic direction on best practice organisational people strategies that make sure we recruit well and develop our people and deliver organisational change necessary to deliver the best possible business outcomes.
Executive General Manager (EGM) Customer and Stakeholder Relations	Our EGM Customer and Stakeholder Relations oversees the efficient and customer-centric delivery of pricing, customer accounts, compliance and experience, as well as stakeholder management and communication strategies that build and enhance mutually beneficial relationships in an open, transparent way.
Executive General Manager (EGM) Resources and Dam Safety	Our EGM Water Resources and Dam Safety oversees our dam safety program, hydrology services and water technology systems to ensure we comply with dam safety legislation, have up-to-date water modelling and data on inflows and storage levels, have current emergency management plans and processes, and keep our people and communities well informed and safe.
Chief Development Officer (CDO) Infrastructure Development and Delivery	Our CDO Infrastructure Development and Delivery oversees the implementation of the business' growth and development strategies for new projects and the engineering, procurement and delivery of major infrastructure projects.

Our organisation structure

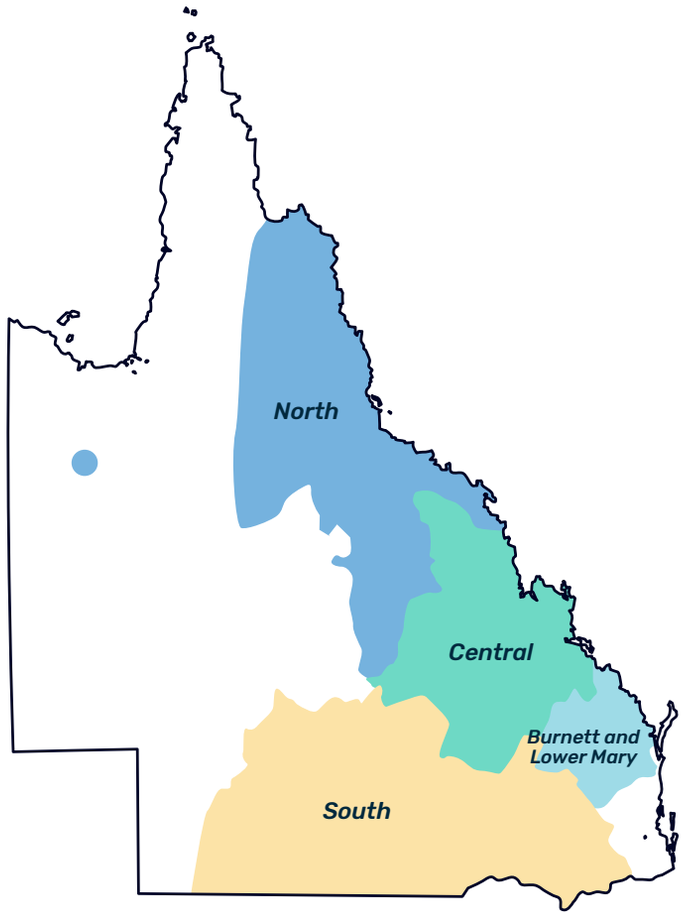
As of 1 July 2021

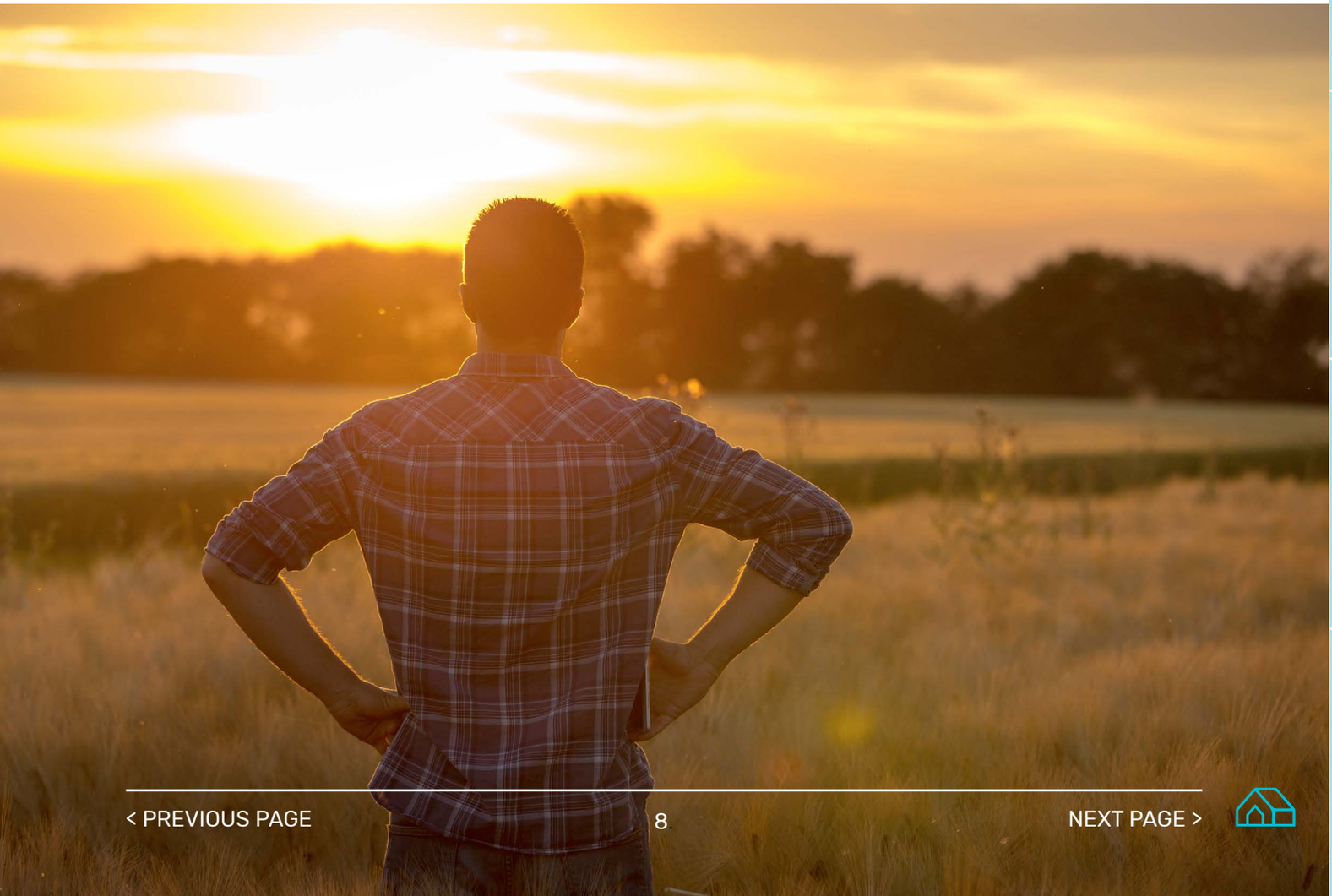


Our regions

Our water infrastructure is spread across regional Queensland to meet the needs of our customers.

The efficient operation and maintenance of our infrastructure is critical to ensuring a secure water supply. Our Operations business unit, which is our largest, reflects this geographic spread and operates across the four regions with each led by a General Manager.





Our strategic roadmap

Our long-term strategy is defined in our 10-year Corporate Strategic Plan. Every year, we review and refresh our strategic roadmap to sharpen our focus. This is reflected in our updated Corporate Plan, which sets out our five-year financial and business performance plans and key performance indicators.

Our four strategic goals address our challenges and guide us into the future. We are working with our people and customers to build a high-performing culture so we can safely deliver our services and achieve a positive experience. Through this, we will create a sustainable business based on efficient, commercially focused operations, and achieve our strategic goal of supportive stakeholders.

Our four strategic goals

A safe, high-performance culture	A sustainable business	Supportive stakeholders	Commercially focused operations
Our success will be measured by our employee engagement and safety metrics aiming to achieve zero harm with our people.	Our success will be measured by our return on assets and margin growth.	Our success will be measured by seeing an increase in our customer engagement and Customer Advocacy Score, as well as stakeholder engagement and feedback.	Our success will be measured through the delivery of our efficiency targets, by reducing the $/ML of water delivered and by striving to meet the performance measures that have been agreed with our shareholders.

We have three strategic work programs that underpin our strategic goals:

Focusing on water security and growth:	Delivering project excellence:	Simplifying and maturing our business systems:
Delivering effective regional water solutions and growth opportunities.	Paradise Dam Essential Works and Dam Improvement Project Burdekin Falls Raising and Dam Improvement Project Rookwood Weir.	Improving our efficiency and the experience of our customers and our people.

Each year, our people come together within their business units to reflect on the Corporate Plan and ensure their work programs are aligned with our strategic goals and work plans. This enables us to work together as One Sunwater and ensures everyone is clear on their goals and what is expected of them for the year ahead.

Strategic Work Programs

Working together to achieve our strategic goals as One Sunwater

Purpose	**Delivering water** for prosperity			
Four strategic goals	**A safe high-performance culture**	**A sustainable business**	**Supportive stakeholders**	**Commercially focused operations**
Measures	• Employee engagement • Zero harm	• Return on assets • Margin growth	• Customer engagement/ advocacy • Stakeholder engagement	• $/ML • kPIs achieved
Business as usual	**Delivering water** safely, for all our customers through a focus on efficient management of our resources.			
Strategic work programs (SWP)	SWP1 **Focusing on water security and growth**	SWP2 **Delivering project excellence**	SWP3 **Simplifying and maturing our business systems**	
... and establish capability and culture to support our people	Capability Opportunities We have identified a number of capability clusters based on our current capability in comparison to our desired purpose: • Customer experience • Planning and execution • Leadership • Analytics, insights and innovation.		Creating a One Sunwater Culture Accelerate our 'One Sunwater' journey through engaging all our people in our strategy, leveraging opportunities for change around innovation, learning and connection through the customer's lens.	

Our people

We value our customers and communities; work together with our colleagues; and take responsibility for the work we do.

Our people are the lifeblood of our organisation. Our water infrastructure is spread across regional Queensland from the lower Mary River north of Gympie, to Mareeba in far north Queensland, to north-west Queensland near Mt Isa and Cloncurry, and in the south west from Toowoomba to St George.

The majority of our operational workforce lives and works alongside our customers and their businesses, and have a strong understanding of their local communities, livelihoods and environments. A typical day often involves extensive travel, where we check in at the office in the morning and then are mostly on the road maintaining our assets and connecting with our customers. For many of us, our car is our office.

We are supported by a strong corporate team, mostly based in our head office in Brisbane, ensuring we have processes, systems and technology in place that enable us to meet our regulatory compliance requirements, manage relationships with our broad range of stakeholders, meet customer expectations, and deliver water for prosperity.

Our people have a diverse range of roles from civil, mechanical and electrical engineers and technicians, infrastructure operators, geologists, hydrologists, and environmental scientists, who plan, design, build and maintain our water infrastructure, to information technology, accounting, legal, human resource, customer and communication professionals.



Capabilities and services

We offer an end-to-end service for customers seeking bulk water infrastructure for industrial, mining, irrigation or urban use. Our capabilities range from assessing the feasibility of water delivery projects, to providing concept, detailed design and production services, through to the delivery of water where it's needed. We can also manage, operate and maintain these assets for our customers.

We encourage customers to come to us when a project is first planned to take advantage of potential synergies and savings during the project's life by sourcing all stages under one roof. Our in-house capabilities are provided by water industry experts who take a holistic approach to each project. Close integration of options analysis, design, planning, environmental and construction aspects of a project can reduce long-term costs without compromising the quality of the outcomes. We provide solutions which are cost efficient, reduce the need for asset maintenance, save energy and maintain infrastructure integrity.

We also can provide flexible funding arrangements for the design, supply and operation of water assets, including agreements to recoup costs over time through mutually beneficial commercial arrangements.

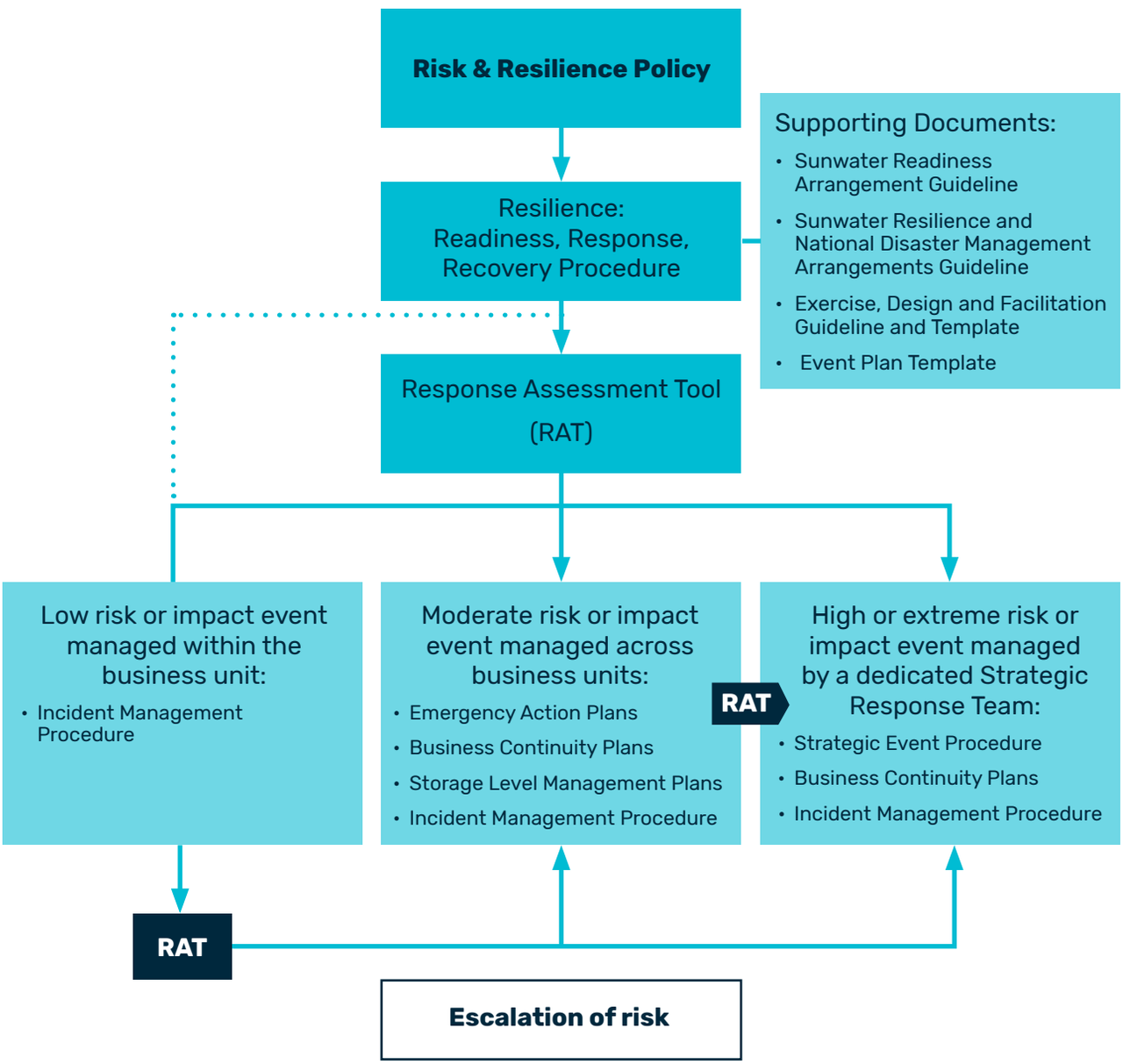
Our Capability Statement provides more detail.

Business resilience

Our approach to business resilience is described in the Sunwater Resilience Framework.

It supports our organisation to respond, adapt, survive, and prosper in a changing environment, including how we respond to an event which may pose a threat or opportunity to the organisation. The organisation has a three-tiered response approach. Low risk or impact events, or incidents impacting one business unit, are managed by the relevant line leader or manager; moderate risk/impact events or impacting across business units are facilitated by the relevant general manager; and high or extreme risk or impact events are managed by our Strategic Response Team (SRT). The SRT is made up of senior leaders with broad business knowledge and wide-ranging skills sets and experience.

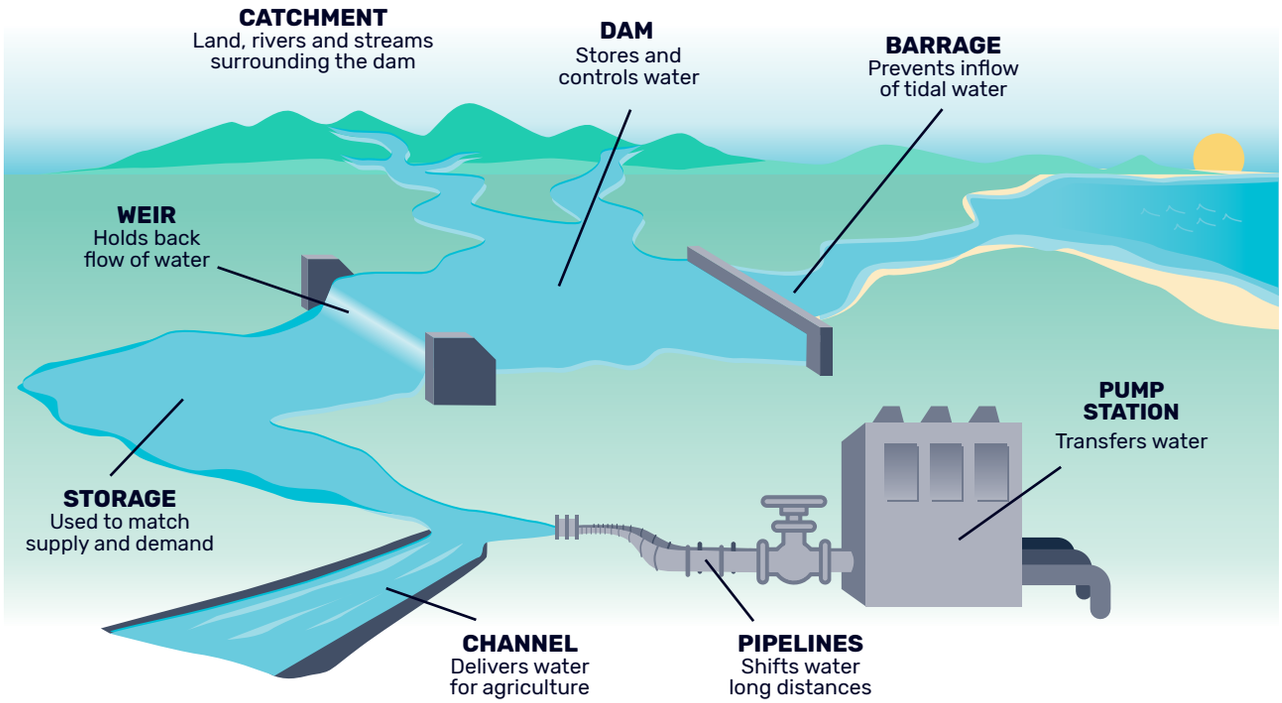
BUSINESS RESILIENCE FRAMEWORK



Operations

Our water infrastructure

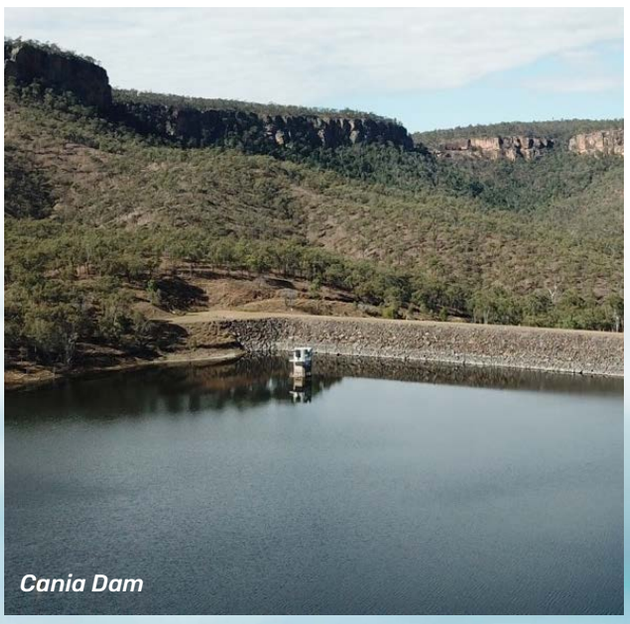
We have a wide range of infrastructure that enables us to deliver water to our customers. They each play a different and important role in the water supply chain.



Dams

A dam is a large wall constructed across a valley to collect rainfall and runoff from a catchment, or to raise the level of water already stored within a catchment area. As opposed to weirs, dams usually store water above and outside of the banks of the water course.

Our dams are designed to hold and supply water to customers for irrigation, to keep industry operating and to provide drinking water. They are not designed to mitigate downstream flooding, however, they do provide some flood attenuation benefit which happens when the rate of water released from a dam is less than the water flowing into the dam from the catchment and rainfall.


Cania Dam


Coolmunda Dam

We operate gated and ungated dams:

- ungated dams use a spillway and outlet to release water downstream. When inflows result in the water level rising above the full supply level, excess water will naturally flow over the spillway and continue into the downstream rivers. We cannot control how much water flows over the spillway.
- gated dams have spillway gates which are positioned in the dam wall and will progressively open as the dam level rises and close as the dam level reduces. Gates can be opened manually or automatically by a winch or hydraulic system or a float system. If inflows result in the water level rising above the full supply level, we will make controlled releases to protect the safety of the dam.

Water can flow out of a dam in several ways – over a spillway, through an outlet or spillway gates, or from an outlet structure, depending on the dam's design.

More information about our dams can be found here.

Weirs and barrages

We own and manage 65 weirs and barrages across regional Queensland.

A weir is a structure built across a river or a creek to regulate the water flow. It holds back the flow of water so it can be stored and released downstream when it's needed. As opposed to dams, weirs usually store water within the banks of the water course.

A barrage is a structure constructed across a watercourse to prevent the inflow of tidal water. A barrage is a physical barrier between salt and freshwater. Barrages are generally made of concrete and steel sheet piling and can include outlet works and a fishway.

The difference between a dam and a weir is that weirs are generally smaller in size. Generally, a dam holds significantly more water than a weir. Dams are built across a large river valley to form deep water storage, while weirs are built across a river or creek. The ponded area of a weir stays within the banks of the river system. The ponded area of a dam will encroach beyond the banks of the river system and create a lake.

More information about our weirs and barrages can be found here.


Mary River Barrage

Pipelines and channels

Irrigation channels are utilised to transport irrigation water from a water source to the areas to be irrigated. They can be lined with concrete, clay, or a flexible membrane to prevent seepage and erosion. Water enters channels from a variety of mechanisms, such as pumps, gates and storages. The sides of water channels are often very steep. Generally, once water enters a channel system, it flows along the system by gravity with the level controlled by regulating gates and structures. There are pipes under water in channels that cannot be seen from the surface.





A pipeline is a series of pipes connected over long distances which help shift and deliver manageable, reliable and consistent water supply for industrial, mining, irrigation and urban use.

More information about pipelines and channels can be found here.

Storages – balancing and offstream

A balancing storage is a storage within a water distribution system or a pipeline that is used to balance inflows and outflows of water.

An offstream storage is generally constructed from earth and rockfill outside the bed and banks of the water courses and used to store water by pumping from the adjacent water course.

More information about storages can be found here.



Tom Fenwich pump station

Pump stations

A pump station is used to lift water from one location to another which then often allows the water to move on demand through a distribution system.

Spillways

All dams have spillways that are designed to spill excess water into the downstream river. When a dam fills to its designed storage level (also known as full supply level), water flows over the spillway into the river below.

Dam outlets

A dam outlet is a structure in the side of the dam wall that is used to manually release water into the downstream river. Dam outlets are designed to release volumes of water to match the downstream demand for purposes such as irrigation, stock water, fishway operation and environmental flows. They are not utilised to pass inflows when rivers or creeks are flooding but are used to deliver water for customers and for the environment to maintain a healthy river system.



Goodger Balancing Storage

Water data

Water data is critical to our operations. This information contributes to our:

- calculation of annual announced allocations
- water releases to meet customer orders
- our environmental releases
- controlled releases from our gated dams during significant inflows from weather events
- emergency management.

Terms used to provide water data include:

Term	Measurement	Description
Full supply level (FSL)	**metres AHD** (elevation in metres with respect to the Australian Height Datum – a term generally equal to elevation above median sea level)	The level of the water surface of the dam when the water storage is at maximum operating level and the dam is not affected by flood
Full supply volume (FSV)	**megalitres (ML)**	The volume of water in the storage at its maximum operating level and the dam is not affected by flood
Current volume	**megalitres (ML)**	The real-time volume of water in the storage
Current capacity	**percentage**	The real-time storage level measured as a percentage of the full supply volume

Water supply schemes

Our water supply schemes (WSS) are the systems we use to collect, move, store and distribute water to our customers.

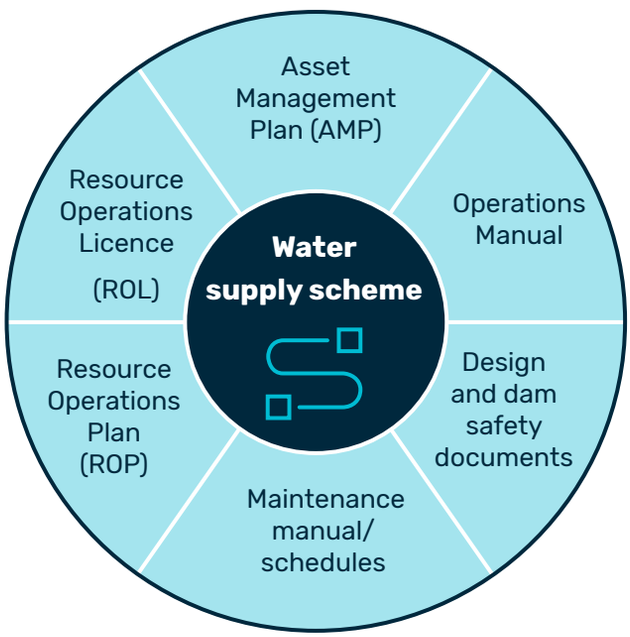
Each of our schemes is unique in terms of its assets, climate, environment, customer profiles and related water requirements. A scheme uses a fit-for-purpose combination of assets such as dams, barrages, storages, channels and pipelines to supply water to farmlands, communities and industry.

We hold resource operating licences (ROL) for 23 schemes in Queensland, which are issued by the Department of Regional Development, Manufacturing and Water (DRDMW). Each ROL sets out details about scheme's water infrastructure.

The rules for operating a scheme's assets and supplying water are set out in the scheme's resource operations plan (ROP) and operations manual.

The manual provides the rules for:

- operating infrastructure associated with the scheme
- water sharing rules and seasonal water assignment (temporary trade) rules.



Sunwater Water Supply Schemes
Regional Boundaries

sunwater

SCALE 1:4,000,000 (Before Reduction A3)

0 25 50 100 150 200 250 km

LEGEND

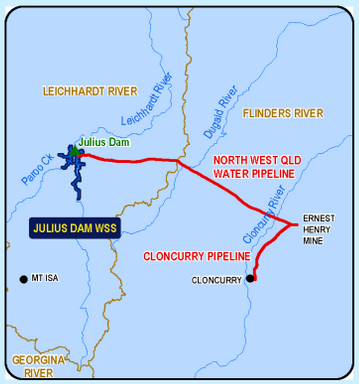
- Sunwater Barrages
- Sunwater Weirs
- Sunwater Dams
- Major Rivers
- Sunwater Owned Pipelines
- Sunwater Regulated Stream
- Sunwater Channel Systems
- River Basins with Name

BRISBANE Sunwater Head Office

TOWNSVILLE Sunwater Regional Offices

Region Boundaries

- Burnett and Lower Mary
- Central
- North
- South



INSET 'A'

FOR DETAILS OF JULIUS DAM WSS SEE INSET 'A'

DRAWING NO: 249614 C

Local management arrangements

Since 2012, we have worked with DRDMW and customers throughout Queensland to transition some irrigation schemes to local management arrangements (LMA). Under these arrangements, irrigators own and operate the schemes from which they access their water. There are four schemes that now operate under a LMA and these are outlined below.

St George

From 1 July 2018, Mallawa Irrigation took over ownership and management of the scheme. Sunwater continues to manage the bulk assets, including the dam.

Nogoa Mackenzie (Emerald)

From 1 July 2019, Fairbairn Irrigation Network Pty Ltd took over ownership and management of scheme. Sunwater continues to own and manage the bulk assets in the scheme, including Fairbairn Dam and the four Nogoa and Mackenzie river weirs.

Dawson Valley

From 1 October 2018, Theodore Water took over ownership and management of the scheme. Sunwater continues to manage the bulk assets, including the Dawson River Weirs.

Eton Channel

On 31 March 2020, the Eton Channel Scheme in the Pioneer Valley near Mackay also transitioned to LMA. Sunwater continues to own and manage the scheme's bulk water assets, including Kinchant Dam.



Operating our schemes

Our Operations team owns and manages our water infrastructure assets and delivers water to our customers. We provide these services across 24 water supply schemes, four irrigation channel schemes and 18 pipelines.

We operate across a vast area of regional Queensland within four distinct geographical regions: North Region; Central Region; Burnett and Lower Mary Region; South Region.

Our assets are listed by region below:

Asset / scheme	Number	North Region	Central Region	Burnett & Lower Mary Region	South Region
Dams	19	Burdekin Falls Julius Peter Faust Tinaroo Falls	Callide, Eungella Fairbairn, Kinchant Kroombit, Teemburra	Wuruma Bjelke-Petersen Boondooma Cania, Fred Haigh Paradise	Coolmunda E J Beardmore Leslie Glenlyon Dam (owned by Border Rivers Commission)
Off-stream storages	2		Moura Gattonvale		
Weirs	61	Blue Valley Bruce Clare Collins Dulbil Giru Gorge Granite Creek Leafgold Solanum Val Bird	Bedford, Bingegang Bowen River Callide Weir, Dumbleton Eden Bann, Glebe Gyranda Anabranch Marian, Mirani, Moura Neville Hewitt Anabranch Orange Creek Anabranch Rookwood Weir (Managibei Gamu) Selma, Stag Creek Tartrus Theodore Anabranch	Avis, Bazley Bucca Claude Wharton Joe Sippel John Goleby Jones, Kirar Monto, Mulgildie Ned Churchward Silverleaf Youlambie Anabranch Youlambie	Allan Tannock Ben Dor Cecil Plains Chinchilla, Greenup Jack Taylor Lemon Tree Melrose Weir Nangwee Neil Turner Talgai, Wando Whetstone Yarramalong
Barrages	4			Ben Anderson Kolan, Mary River Tinana	
Water supply schemes	24	Burdekin Haughton Julius Dam Mareeba Dimbulah Proserpine River	Bowen Broken Rivers Callide Valley Dawson Valley Eton Lower Fitzroy Nogoa Mackenzie Pioneer River	Barker Barambah Boyne River and Tarong Bundaberg Lower Mary River Three Moon Creek Upper Burnett	Chinchilla Weir Cunnamulla Macintyre Brook Maranoa River St George Upper Condamine Border Rivers (with DRDMW as ROL holder)
Irrigation channel schemes	4 (595 km)	Burdekin Haughton Mareeba Dimbulah		Bundaberg Lower Mary River	
Pipelines	18 (1,951 km)	Cloncurry North West	Burdekin Moranbah Awoonga Callide Blackwater Collinsville, Eungella EWP Eastern Extension EWP Southern Extension Palmtree Creek Stag Creek Stanwell	Redgate Diversion Upper Redgate Diversion Tarong Teddington	Kenya to Chinchilla Woleebee Creek to Glebe weir
Water treatment plants	6	Burdekin Falls Dam Clare Township Mutchilba Township	Eungella Dam Fairbairn Dam		Glenlyon Dam (owned by Border Rivers Commission)
Sewage treatment plants	3	Burdekin Falls Dam	Eungella Dam (for toilet block) Fairbairn Dam		Glenlyon Dam (owned by Border Rivers Commission)

Managing our assets

Our goal is to manage our assets in a sustainable and commercially focused manner, safeguard their integrity and ensure optimal service value to our customers, in alignment with our corporate goals. We aim for best practice and fit-for-purpose asset management and we undertake risk-based decision making that balances risk, costs and asset performance. We have established several asset management objectives to enable us to deliver on our goal.

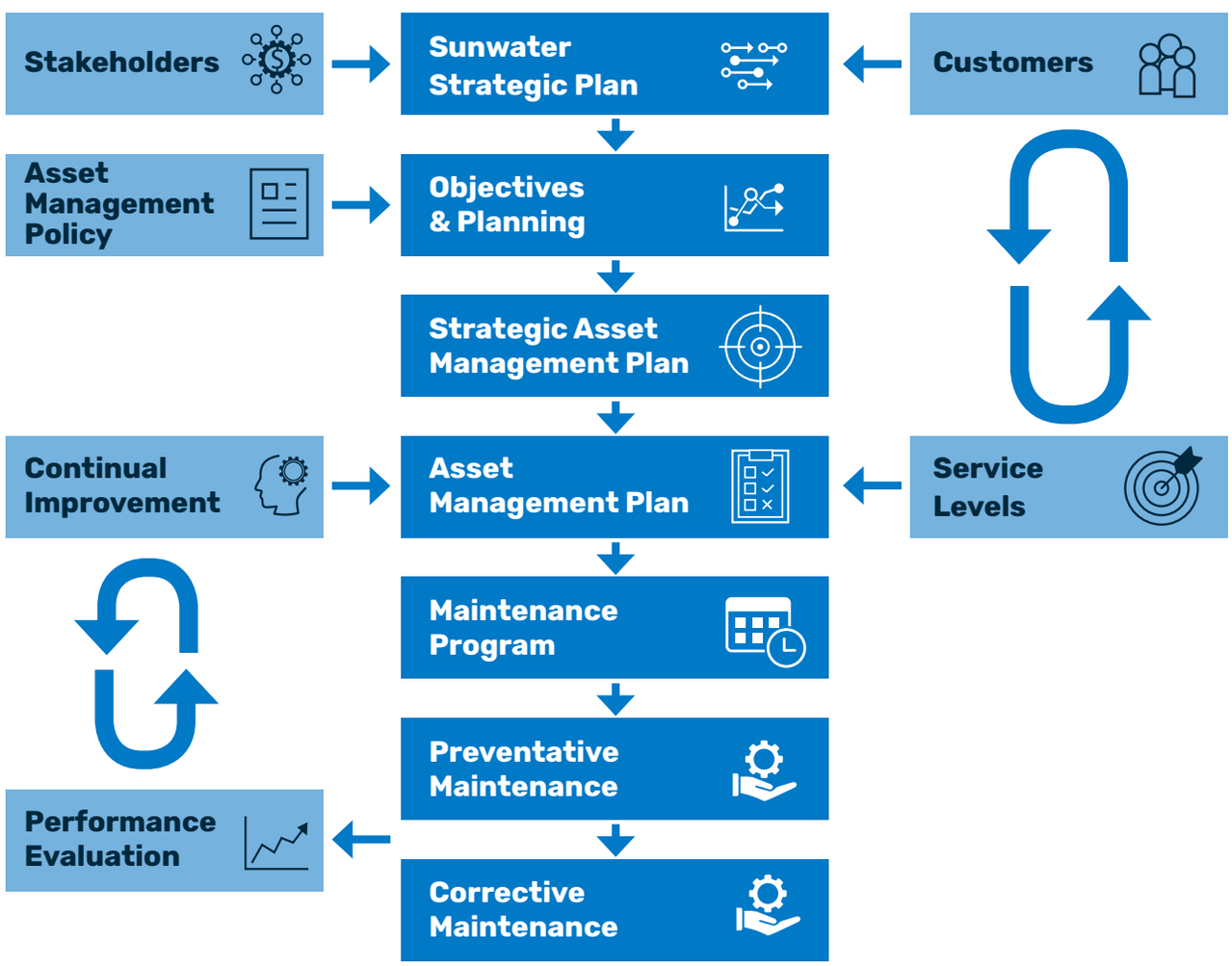
Asset data is a key enabler to achieving our asset management objectives. We are investing in a new work management system (SAP), mobility solution and business intelligence reporting which will provide the opportunity to improve our data driven decision making and provide a greater insight to asset performance, condition and refurbishment and replacement planning.

We are implementing improvements to our asset management system with a fit-for-purpose alignment to the ISO55001 asset management standard. This international standard specifies the requirements for establishing, implementing, maintaining, and improving an asset management system.

Our asset management system is based on:

- value—achieving organisational objectives and stakeholder expectations
- alignment—clear connectivity between our strategic plan and asset management activities
- leadership—visible senior leadership and commitment that inspires good asset management, crossing traditional boundaries and functions
- assurance—monitoring and auditing to confirm assets, systems and processes are operating as expected.

Our Asset Management System



Each scheme's asset management plan aims to address present and future demands on the scheme's assets. Our asset management program is wide ranging and includes:



We undertake scheme-based asset risk assessments so we can prioritise expenditure for our asset management program and categorise assets into maintenance strategies and the replacement schedule.

We also undertake safety and environmental risk assessments at any time when a hazard has been identified or following the implementation of risk mitigation measures. More information about managing environmental risks is described in the Environment section of this document.

Our Dam Improvement Program forms part of our asset management strategy. It considers the age and remaining life of the infrastructure, assesses our dams against current design standards and guidelines and takes into account the latest hydrology and rainfall patterns and downstream development, including population growth. Our infrastructure is also assessed to comply with the Queensland dam safety guidelines and requirements. More information is available on this under the Managing public safety section of this document.

Operational activities

Much of a scheme's operations activity involves collecting, recording, processing, and reporting information related to water supplies, the environment and safety.

Instrumentation used to record storage water level, dam water pressure, and seepage and deformation is inspected on a daily basis, along with physical inspections of the dam. Any unusual observations are escalated to our dam safety team.

Some of the typical tasks that are undertaken by our scheme operations teams include:

Assessing the water levels in the storages

Assessing water orders on hand and anticipated weather conditions and determining the necessary release schedules and settings

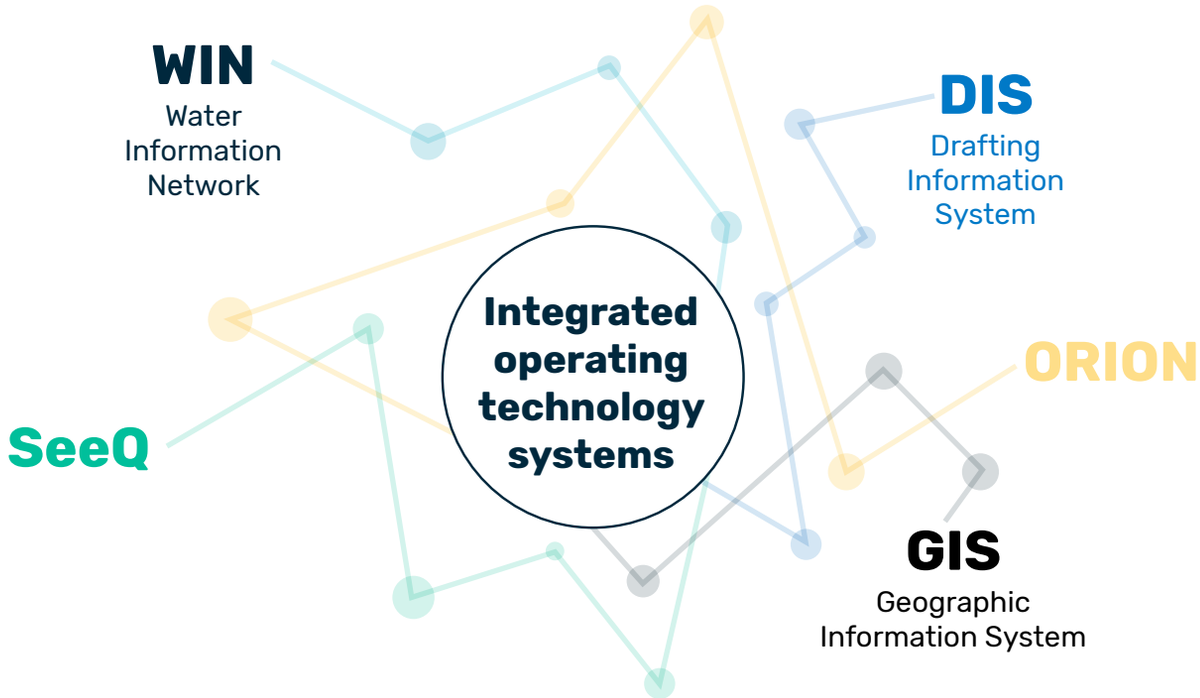
Releasing water to fill water orders, replenish downstream storages or meet environmental requirements

Monitoring flows and levels in locations to maintain awareness of possible stream rises that may impact the system

Visually checking channel levels and the main off-takes

Adjusting gates

Undertaking **maintenance activities**



Supporting technology

We use the latest technology to monitor our infrastructure, provide valuable data and automate water delivery. Our SCADA computer system enables us to visualise, monitor and control aspects of our operations by sending and receiving signals from equipment such as pumps, valves and other devices used to trigger or read instruments. It also provides alarms and alerts which if urgent can be dialled out to our operators' phones.

Industrial pipelines require a high degree of automation; irrigation systems have a mixture of automated and manual control; while dams, weirs and river systems are managed with limited automation and they are monitored at key sites.

Data from our field operations is collected and stored through our Historian system for real-time reporting and analysis. Our SeeQ reporting platform is used to visualise process and assess related real-time data from the SCADA and other operations monitoring networks. It allows users to create reports and dashboards which can be shared with the business. Our Wonderware Alarms Analyser product connects to our SCADA systems and is used to analyse and troubleshoot the health of alarms across our SCADA networks.

We use a number of computerised integrated systems to store and process data, manage the resulting information, and facilitate reporting. Examples are:

- ORION for managing customer contact details, water allocations, water meter readings, seasonal transfers, supply interruptions, and results of water quality measurements and blue-green algae monitoring
- Water Information Network (WIN) for managing stream gauging, storage level, and rainfall data
- Geographic Information System (GIS) to manage the spatial records of Sunwater's water supply assets
- Drafting Information System (DIS) to search and view drawings of Sunwater's water supply assets.

Energy strategy

Electricity used for pumping water is a significant cost to us and our customers. We are committed to finding efficiencies and minimising the impact of energy prices for our customers and this is why we have implemented a whole of business energy strategy. It includes:

- a water efficiency strategy and plan comprising:
  - improving irrigation channel water use efficiency through measures such as channel lining, channel control automation and metering upgrades
  - modelling and water ordering management measures to give us strategic oversight of river operations
- an energy efficiency strategy and plan involving working closely with customers to maximise efficient water delivery and availability wherever possible and reducing power usage
- annual reviews to ensure the best available electricity tariffs
- investigating ways to reduce pumping volumes, where appropriate, and installing small solar schemes to offset electricity costs
- conducting energy audits
- introducing renewable energy options, where value proved
- investigating increased channel capacity, automation and balancing storages to lower the overall pumping costs and respond to the changing customer needs
- low water storage management, efficiency projects.

As part of our commitment to minimising costs and optimising value to our WSS customers, we undertake energy audits to identify efficiency opportunities across identified schemes. We share the outcomes of these audits with our customers as part of our customer engagement strategy.

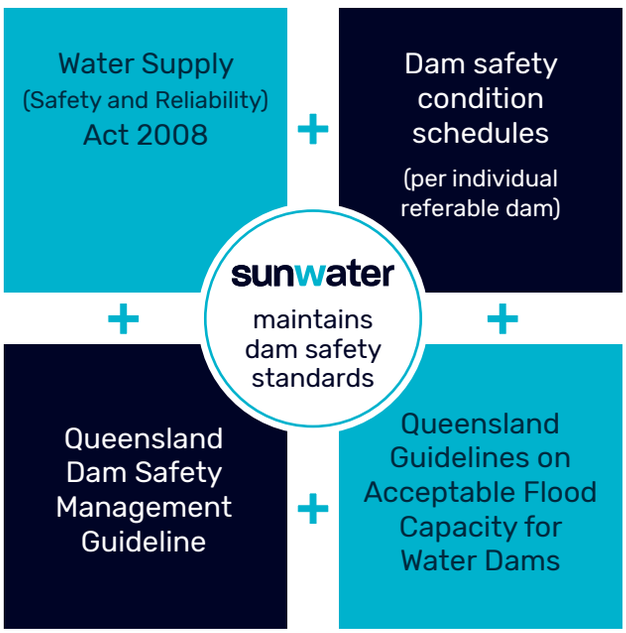


Community safety

As the owner of 19 referable* dams, 61 weirs, four barrages and two balancing storages in Queensland, their associated safety responsibilities rest with us. Keeping our customers, communities and our people informed of safety risks and prioritising dam safety improvements is our highest priority.


Peter Faust Dam

We are required to maintain dam safety standards in accordance with the:



Queensland dam safety is regulated by the Department of Regional Development, Manufacturing and Water (DRDMW). We refer to their leader responsible for dam safety as the Dam Safety Regulator, or Regulator.

Specific regulatory requirements for dam safety that we must meet include:

- failure impact assessments to determine whether storages are referable or not
- where referable, a series of requirements as defined by the dam safety condition schedule issued by the Regulator for each dam.

It defines specific actions and responsibilities for dams, which include:

- regular surveillance, inspection and review of instrumentation.
- maintenance of a data book of relevant information for the dam including hydrology, geological information, design, construction and maintenance records
- annual detailed inspection and reporting
- comprehensive inspections and reporting on a five-year frequency
- a dam safety review conducted on a 20-year frequency.

A dam, or storage, is considered referable* under the Water Supply Act if:

- a failure impact assessment was required for the dam (as defined in the Act)
- the assessment found the dam has a failure impact rating
- the assessment has been accepted by the chief executive administering the Water Supply Act.

Dam failure is defined in the Queensland Dam Safety Management Guidelines as 'the physical collapse of all or part of a dam, or the uncontrolled release of any of its contents'. A dam is given a failure impact rating if the failure impact assessment identifies that two or more persons would be at risk if the dam was to fail.

Dam safety management

Our dam safety management program manages risks related to our referable dams and demonstrates to the Regulator that we have discharged our obligations under the Act. Its objectives are to:

- manage, operate, maintain and improve our dams in order to manage community safety and continuously reduce dam safety risk
- comply with Queensland legislation, obligations and regulatory frameworks and guidelines relevant to managing dam safety
- seek to understand, assess and act to address dam safety risks in a timely manner
- seek to ensure that life safety risks are below the limit of tolerability as soon as reasonably practical
- progressively reduce (in priority order) the public safety, third party and business risks resulting from our dams
- aspire to the achievement of the ALARP principle for each dam as soon as reasonably practical.

The ALARP (as low as reasonably practicable) principle states that risks, lower than the limit of tolerability, are tolerable only if risk reduction is impracticable or if its cost is grossly disproportionate to the improvement gained.

For each of our referable dams, the Queensland Government issues a condition schedule that defines specific actions and responsibilities for dams, which include regular surveillance, annual inspections, detailed five-year inspections and 20-year design reviews.

We regularly monitor our dams by physically inspecting the structure and reading instruments that record water storage levels and water pressure within the dam and foundations. Each referable dam is surveyed annually using defined points to determine whether any movement has occurred. Our dam-specific emergency action plans (EAPs) have defined trigger levels for various observations and/or changes in data which may require escalation.



Callide Dam

For each referable dam, we complete a comprehensive risk assessment (CRA), which is a staged process of systematically reviewing dam data, updating models and conducting a quantitative risk assessment on each dam. The CRAs are completed on a rolling cycle, typically every five years.

Each individual dam CRA then feeds into our overarching portfolio risk assessment. This evaluates the CRAs to determine the priority of projects for our Dam Improvement Program (DIP). The DIP is described in the Infrastructure Development and Delivery section of this document.

A CRA includes:

- an update of hydrology models
- a summary of geological information at the dam
- a review of the 'as built' information from when the dam was constructed, including foundations, concrete strength and durability
- consideration of possible failure modes, with each then assessed for likelihood
- modelling of the potential impacts for those failure modes based on downstream communities in terms of societal risk and economic impact.

Dam improvement projects are assigned a ranking number (from 1 for the highest priority project), based on priority class (1-9), life safety risk, cost benefit or a business decision. For larger improvement projects, several options are typically developed for consideration, and a preferred option ultimately selected.

These prioritised projects are then considered and approved by the Sunwater Board, following completion of an appropriate business case commensurate with the capital cost of the project. Project delivery is covered in the Infrastructure Development and Delivery section of this document.

1. **Condition schedule for each dam**
2. **Comprehensive Risk Assessment (CRA) for each dam**
3. **Portfolio risk assessment (PRA) process**
4. **Prioritised projects list**
5. **Project business cases**
6. **Sunwater Board approval**
7. **Dam Improvement Program (DIP)**



Emergency management

Sunwater, the Bureau of Meteorology, Local Disaster Management Groups and government agencies all play a role in managing flood and dam emergencies in our state. Our focus throughout extreme weather events is to:

- ensure our dams are managed safely, in accordance with our emergency action plans (EAP)
- communicate effectively with local authorities and residents about dam outflows.

We have an EAP in place for each of our referable storages, that is, those where two or more people would be placed in danger if the dam was to fail. The plans are used to identify and manage dam risks and hazards, such as a flood or earthquake, and to guide our actions to minimise risks to the residents downstream of a dam.

Our EAPs are approved by the Queensland Government and enable us work together with local government and local disaster management groups (LDMG).

Emergency Action Plans (EAPs)



Coordinate an emergency response

Enact disaster management plans

Provide evacuation information when required

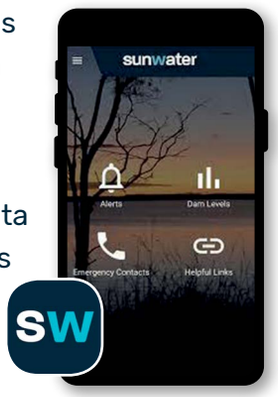
The EAP is used once an emergency condition which could endanger the integrity of a Sunwater dam is identified. The EAP procedures provide warning to disaster management groups, local councils and emergency agencies in order to protect downstream communities. The plan also details specific actions to be taken for various scenarios and the responsibilities of our people during activation of an EAP.

When we notify a council and LDMG of a dam risk or hazard, the LDMG is responsible for emergency management aspects, including managing evacuations, coordinating disaster response, and deploying resources and recovery. Our role is to send notifications and emergency warning triggers to downstream residents who are likely to be impacted by a dam emergency.

We undertake regular training to test our ability to enact EAP's, regularly engage with LDMGs and at-risk residents downstream of dams and deliver community education campaigns.

We have developed the Sunwater app which provides the latest dam information and alerts. It is an easy-to-use tool that helps us keep the local community informed about our dam operations, especially during heavy rain and floods. It features:

- latest dam storage levels
- alerts on Sunwater dam outflows
- recreation area and operational updates
- current water quality data
- customised notifications and emails
- emergency services contacts.



Operations Centre

Our Operations Centre (OC) monitors daily weather and streamflow conditions to assess hydrological conditions around our assets. The OC is the central facility responsible for activating the EAP in the event of an emergency. In the event of a potential significant flood event at one of our assets, the OC notifies our Strategic Response Team (SRT). Further information about the SRT is in the Who we are and what we do section of this document.

The OC has a standard operating procedure which covers staffing, procedures, roles, responsibilities and actions of the OC room including:

- decision making criteria
- activation levels
- reporting and communication
- supporting information
- roles and responsibilities
- strategic response.

Safety of our non-referable storages, that is those storages where less than two people would be placed in danger if the storage was to fail, is managed through our asset management plans.

Managing public safety

When it comes to public safety around our assets, we take a strategic approach by:

- managing and reducing risk
- communicating, engaging and raising awareness and vigilance
- responding to events or incidents
- providing assurance.

Public safety hazards and organisational controls are defined in our public safety functional risk register. A public safety assessment (hazard and risk) is completed and maintained for each of our water supply schemes. Asset specific information is included in the relevant scheme's operations and maintenance manual. Relevant assets also have a storage level management plan and a linked digital storage level management tool in our DamWatch platform.

This approach is underpinned by our public safety communication strategy, which is discussed in the Customer and Stakeholder Engagement section of this document.



Water planning

The Queensland Government owns all rights to Queensland's water resources, similar to mineral, petroleum and gas resources.

The *Water Act 2000* provides the framework for sustainably managing Queensland's water resources and establishing a system for:

- planning, allocation and use of water
- allocation of quarry material and riverine protection
- effective operation of water providers such as Sunwater.


Cania Dam

Planning hierarchy

Water Plans are developed under the Water Act and they set the strategies and targets to sustainably manage and allocate water to water users at the catchment level. Environmental, economic, social, hydrologic and cultural assessments play an important role in determining the amount of water available, so the water can be shared sustainably. The available water can be granted through water entitlements including tradeable water allocations, and a certain amount of water is reserved as unallocated water.

Water plans are listed here.

The Water Management Protocol implements the water plan strategies, declares unallocated water volumes reserved for particular purposes and provides permanent water trading rules for Sunwater's and the Department of Regional Development, Manufacturing and Water's (DRDMW) customers.

Each of our 23 water supply schemes is granted a Resource Operations Licence (ROL) by DRDMW. It requires us to comply with each scheme's operations manual.

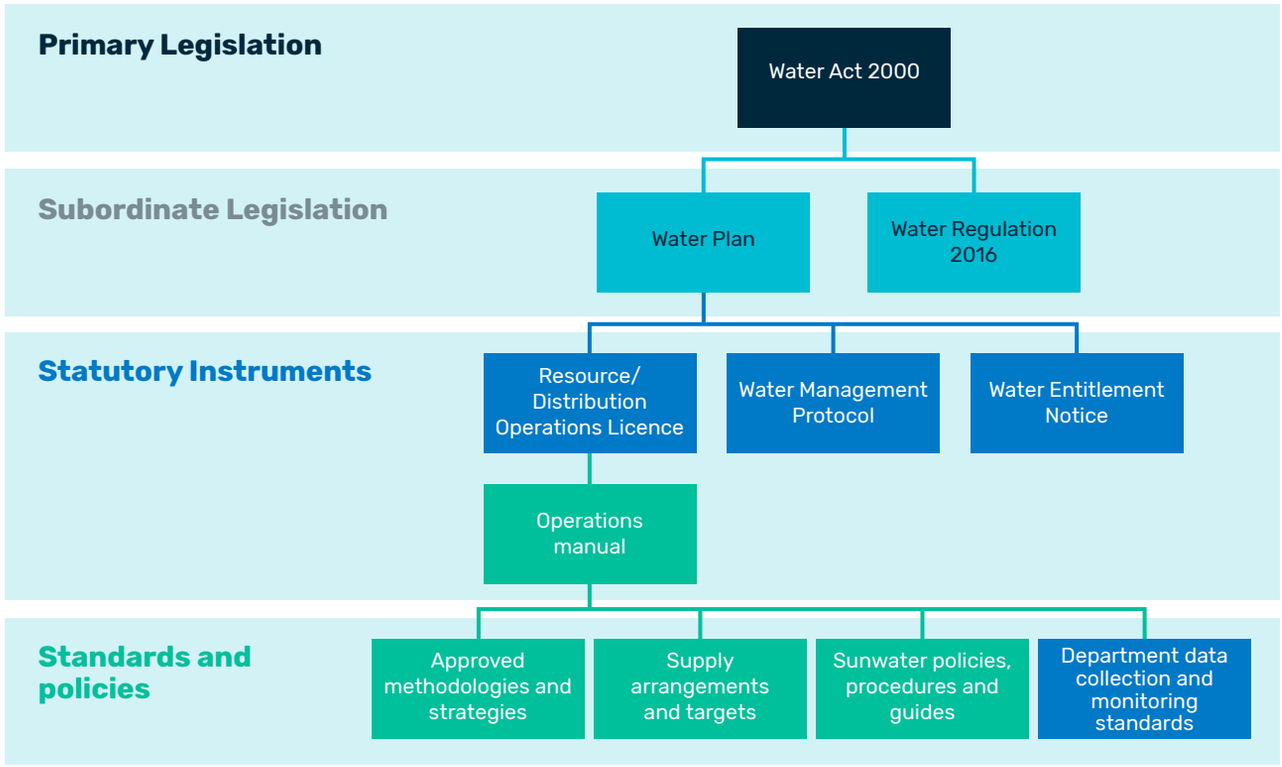
The ROL:

- allows us to take or interfere with the flow of water in order to operate our dams and weirs
- allows us to use streams to distribute water to our customers
- sets out rules about environmental releases and all monitoring and reporting obligations required of us.

These rules are designed to meet the *Water Allocation Security and Environmental Flow Objectives* stated in the Water Plans.

The Distribution Operations Licence is designed for local management entities. It allows them to take or interfere with the flow of water in order to operate their infrastructure. Some examples of these entities are: Mallawa Irrigation, Fairbairn Irrigation Network, Burdekin Water Board, Eton Irrigation and Pioneer Water Board. More information on local management arrangements is described in the Operations and Asset Management section of this document.

Regulatory hierarchy



Water sharing

Each water supply scheme (WSS) has an operations manual that sets out the water sharing rules for the scheme.

Water sharing rules may include announced allocations or continuous sharing and the rules are used to calculate how the available volume in a scheme is shared between customers.

A water allocation is a volume of water that entitles our customer to a percentage of that water, based on the available water in the scheme dams, weirs or barrages. Water allocations have a separate title, or 'property right', like a land title. It can be bought and sold on the water trading market.

There are two types of allocations:

- supplemented – water managed by Sunwater with our dams supplementing natural streamflow to supply customers
- unsupplemented – water managed by DRDMW and only accessed if available through natural streamflow.

The percentage of water allocation available to our customers can be as high as 100 per cent or as low as 0 per cent, depending on the water level in our storages.

All water allocation holders within a WSS enter into a supply contract with us before registration occurs at the titles office and before water can be used. The contract is for a nominal volume of water (that is, the volume of water at 100 per cent allocation available.)

Customers can apply to DRDMW to change their water allocations and the rules for doing so are set out in the Water Management Protocol.

Types of announced allocations

There are two main types of announced allocations (AAs) – high priority and medium priority. The priority group indicates the reliability of the water allocation and the frequency with which water can be supplied in full.

The 'priority' of water allocation is important in the water sharing rules of a water supply scheme. The rules tell us how the available water will be shared between each of the water allocation priority groups throughout the water year.



Peter Faust Dam

High priority (HP) water allocations are the most reliable water allocation and are typically used for town water supply, industrial use—including mining and power generation—and for high-value cropping. Our HP water allocation holders can access water more frequently and with fewer restrictions than holders with medium priority water.

During extended dry periods, HP water allocations are the last group to have limited access (below 100 per cent allocation). HP water allocation holders pay higher fees and charges than those with medium priority water allocations so they can have more reliable access.

Medium priority (MP) water allocations generally have lower reliability than high priority water allocations and are mainly used for agriculture. This means during drier conditions, and when storage levels are low, these water allocations are the first to be limited (below 100 per cent allocation). MP water allocation holders pay lower fees than those with high priority water allocation holders.

In most schemes, the lower cost and greater nominal volumes associated with MP water allocations means they are better suited for agriculture. However, some agricultural enterprises may choose to buy additional (limited) volumes of HP water to mitigate risk, for example, to sustain permanent crops, such as fruit trees, in times of water scarcity.

Announced allocations

A water year is generally, but not always, July to June. Each year on 1 July, we announce available water allocations for the water year for the majority of our schemes. The Eton and Dawson Valley Water Supply Schemes have different announcement dates to suit their water demands.

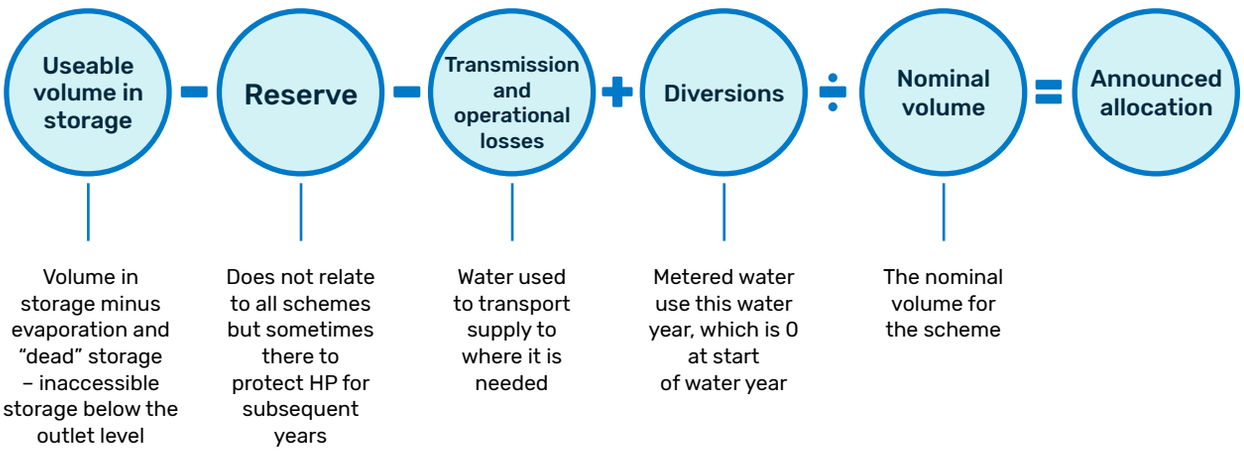
- An AA is always calculated at the start of the water year for each type of water allocation (HP and MP).
- If an AA is 100 percent, it will not be reassessed until the start of the next water year.
- Customers are allocated a percentage of their water entitlement based on available water in the WSS.
- If the AA is less than 100 percent at the start of the water year, it will be reassessed on a monthly or quarterly basis, depending on the scheme.
- The percentage of water available for use may increase if dams or weirs receive significant inflows.
- Following significant inflows, each scheme's situation is considered on an individual basis to determine any increase to AA. An AA cannot be reduced over the period of the water year, only increased. Our customers regularly engage with us to discuss their AA.

We confirm each scheme's AA for HP and MP after the start of the water year and notify our customers by email and/or SMS and on their scheme's page on our website in the Announced Allocations section.

The detail of each scheme's AA calculation is provided in the scheme's operations manual. The calculation process involves many variables. These include inflows to dams and weirs, climatic and environmental conditions, customer water use, operational release requirements to supply and legislation compliance considerations.

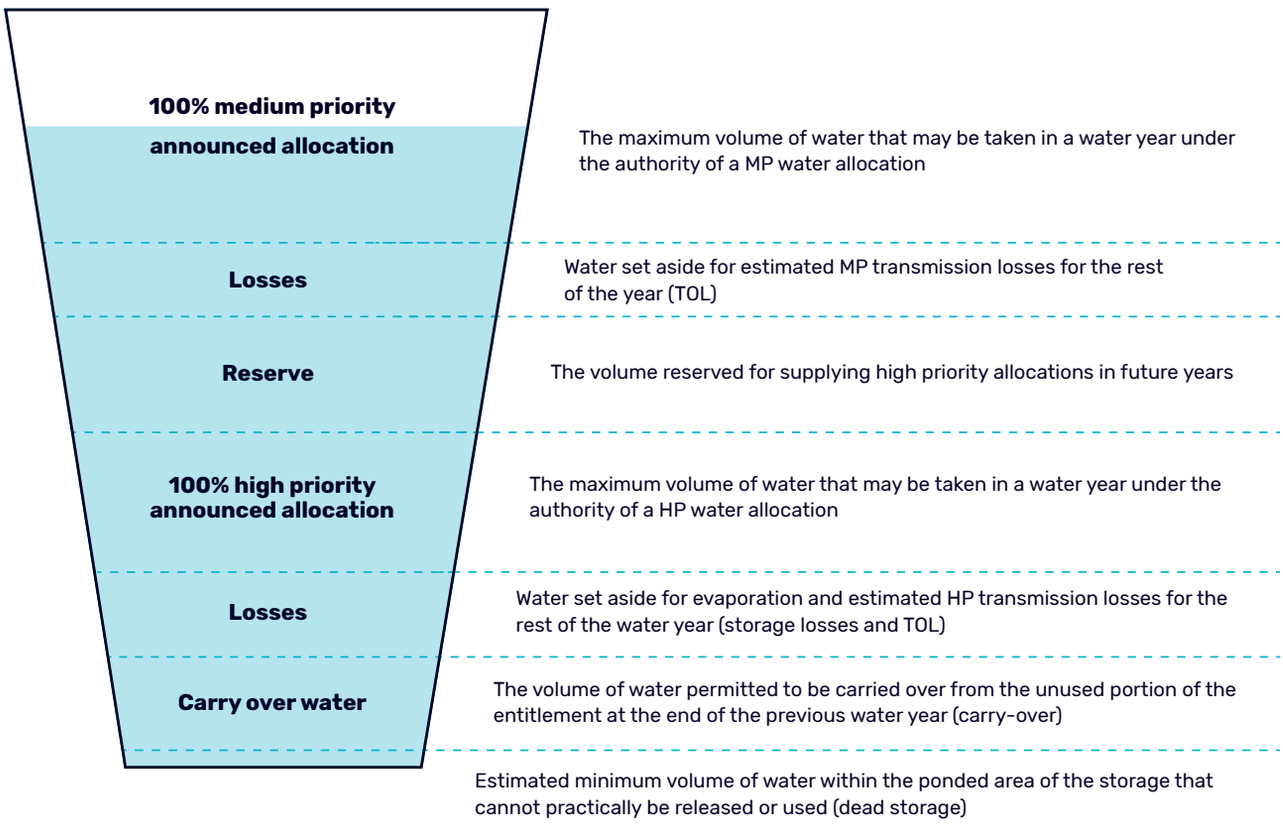
The process is different for each scheme but broadly the AA is a calculation based on:

Announced allocation calculation



Example of start of water year announced allocation

High priority 100%, medium priority 50%.



Continuous sharing

Continuous sharing is an alternative system for sharing water and managing water accounts. It's used in our St George and Macintyre Brook water supply schemes. Unlike the announced allocation system, our continuous sharing customers do not rely on our announcements of available water. Under continuous sharing, our customers' accounts are managed individually and on a daily basis where an individual share of scheme inflows, a deduction of a share of evaporation and seepage losses, and an account of their daily water usage is maintained.

At the end of the water year, the remaining water in a customer's account is simply carried across into the new water year. These customers generally find it a more responsive system, providing greater flexibility in managing their water use. Continuous sharing schemes require significant input and support from our customer team.



St George scheme

Water trading

All of our schemes provide a temporary or permanent trading framework. Temporary trading is administered by Sunwater in line with the rules stated in the scheme's operations manual. Permanent trading is administered by DRDMW, in line with the rules in the Water Management Protocol. In some of our schemes, we own water allocations which we may make available for trade. We are guided by our Water Trading Code of Conduct and undertake our activities in an equitable and transparent way.

We use an online trading platform, Water Exchange, for all temporary and permanent water trading activity, and the platform is available for public use. Trading activities are confidential, however we are progressively working toward making the pricing and trade volumes data publicly available to help inform customers of market activity and investment decisions.

Types of trading include:

- purchase or transfer of ownership of a water allocation title, similar to the sale of land title transfer types
- trading water from a water account for the remainder of a water year (temporary trading)
- whole water allocation lease for a defined period of time, similar to a lease of land
- subdivided or amalgamated water allocations through a Dealing Certificate issued by DRDMW
- converting allocations from medium priority to high priority and vice versa, dependant on the scheme rules.

Water ordering and account management

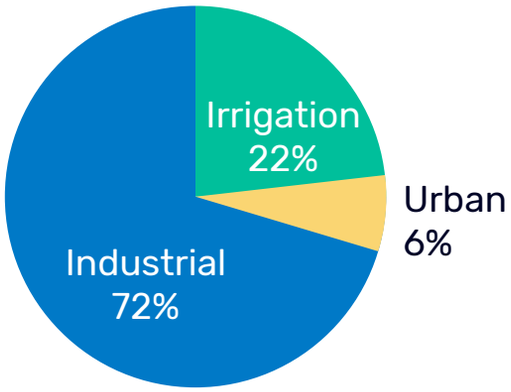
Our water ordering system helps us deliver water to our customers in an efficient and timely way, enabling them to plan and manage their water use. Before taking any water, we ask customers to place a water order so that we can release sufficient water and minimise losses. Our customers place their orders online or call the customer team.

We proactively work with our customers to encourage greater uptake and compliance with water ordering, particularly in several schemes, to minimise water losses. Each quarter we undertake meter reading and validate the data collected to identify any anomalies, which are then investigated. We conduct regular surveillance of our water supply schemes to monitor usage and ordering compliance.

To enable customers to proactively manage their water account, we send them an email or SMS when 80 percent of their available water has been used.

Water pricing

Our water revenue is received from our three key customer segments:



We have two types of pricing:

Regulated pricing

Prices set by the Queensland Government that we are directed to charge under section 999 of the *Water Act 2000*.

These prices typically relate to irrigation services we provide and are generally based on government policy and recommendations from the Queensland Competition Authority (QCA), following an independent review of our costs and pricing practices.

Unregulated pricing

We set these prices and they typically relate to non-irrigation services to our industrial and urban customers. There are some exceptions to this, such as Paradise Dam and Kirar Weir – Burnett Water Pty Ltd assets.



Irrigation customers

Irrigation water costs differ from scheme to scheme. It depends on the scheme's infrastructure, water storage volumes, relevant legislative and regulatory obligations, and the distance and way water is distributed.

There are generally two types of charges for irrigation.

Types of irrigation charges

Fixed tariffs (Part A and C)	Volumetric tariffs (Part B and D)
Fixed tariffs are charged quarterly or six-monthly in advance, according to the nominal volume of the water allocation held by the customer, regardless of the amount of water taken in the year.	Volumetric tariffs are charged per megalitre of water taken by the customer, measured at the water meter or 'offtake'.
Fixed tariffs are known as Part A tariffs in bulk water supply schemes and Part C tariffs in Sunwater's four distribution schemes.	Volumetric tariffs are also known as Part B tariffs in bulk water supply schemes and Part D tariffs in Sunwater's four distribution schemes.
Bulk water scheme customers pay Part A tariffs and distribution scheme customers pay Part A and Part C tariffs.	Bulk water scheme customers pay Part B tariffs and distribution scheme customers pay Part B and Part D tariffs.

Under local management arrangements (LMA), irrigators own and operate the distribution schemes from which they access their water. There are four distribution schemes that now operate under the LMA – St George (Mallawa Irrigation), Nogoa Mackenzie (Fairbairn Irrigation Network), Dawson Valley (Theodore Water) and Eton (Eton Irrigation).

Where the water distribution services are provided by another entity, we charge for bulk water supply through Part A and B tariffs, and the other entity charges the Part C and D tariffs set by them.

The Queensland Government periodically instructs the QCA to review our pricing practices for water supplied to irrigators (excluding those irrigators supplied from Kirar Weir in the Upper Burnett Water Supply Scheme and Paradise Dam in the Bundaberg Water Supply Scheme). This is because we are a monopoly service provider. Based on recommendations made by the QCA, the Queensland Government sets the prices of irrigation water supplied by us.

The QCA is guided by its regulatory pricing principles. These principles are intended to promote economic efficiency and take into account social equity matters.

As part of its periodic price review, the QCA recommends two sets of prices for each tariff group:

- a cost-reflective price
- a recommended price.

The recommended price reflects all factors the QCA is required to consider under the *Queensland Competition Authority Act 1997* and those identified in the price-period specific referral and direction notice, which is issued by our shareholding Ministers.

The government usually accepts the QCA's cost-reflective prices but may decide not to adopt the recommended prices. Instead, the government may set different prices—which are the ones irrigation customers pay—taking into account other policy considerations such as supporting the growth and development of Queensland's agricultural sector.

Revenue from customers in tariff groups with prices below cost-reflective levels does not cover our costs and a Community Service Obligation (a payment) may be provided by the government to us as compensation.

THE IRRIGATION PRICING PROCESS

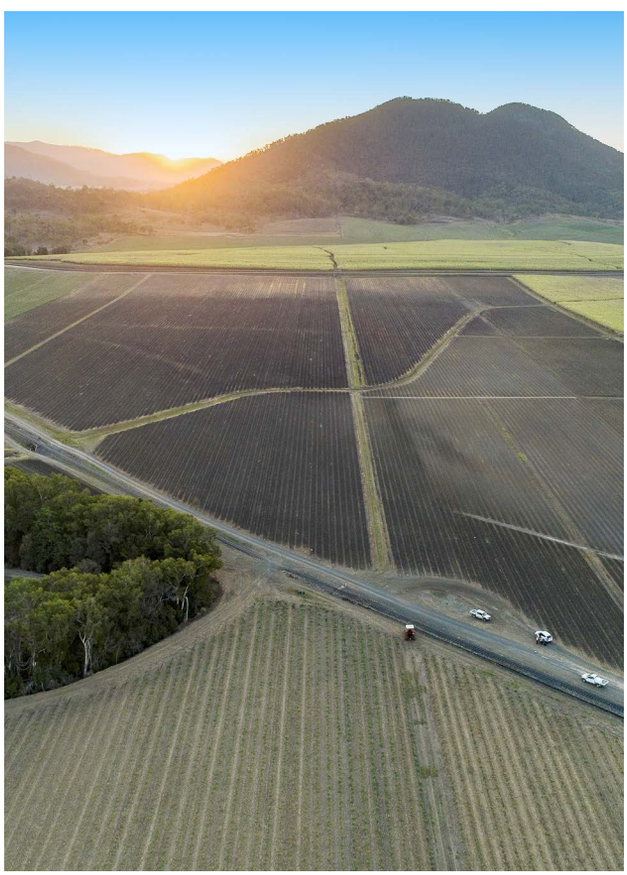


LEGEND

Queensland Government · Queensland Competition Authority · Sunwater · Customers

High priority water allocation holders pay higher charges than those with medium priority water allocations, as they are allocated a higher portion of the fixed costs.

Each year we release an updated fees and charges schedule for each water supply scheme. It covers details on those charges subject to the Rural Water Pricing Direction Notice and, in some schemes, those charges set by us. We also charge some scheme-specific and administrative costs. These are published on our website.



Industrial and urban customers

We supply water to around 150 industrial customers including mines, power stations and small industry, such as feedlots and piggeries, who generally have commercial contracts and pricing arrangements.
We also supply water to 21 of the 77 local governments in Queensland.

Customer and stakeholder engagement

Our customers are central to everything we do and we are continuously seeking to better understand their needs and improve our services.

Our customer commitment is our framework for how we work with our customers.

WE COMMIT TO:

- Treating you with fairness, courtesy and respect, whilst being reasonable and open with you
- Adding value through water solutions for today and tomorrow
- Meeting or exceeding service targets that have been set in consultation with customers
- Reporting annually on our performance
- Providing information on your account, water use and expected future water availability to support your business
- Working with you to schedule planned maintenance at reasonable times through customer consultation.

Our operational absolutes for customers

We will:

- listen to you, seek your feedback and communicate transparently
- commit to deliver on our agreed service and customer satisfaction
- be open to working together on sustainable and innovative solutions.

Service and performance plans

We aim to ensure that our customers are well informed and work closely with us to identify and work towards solutions that deliver real value. This is why we prepare an annual service and performance plan for each irrigation service contract area. The plans detail a range of proposed immediate and long-term improvement projects and provide a detailed breakdown of anticipated costs for review. They also compare our actual cost performance against previous forecast expenditure.



Customer support

We know many of our customers want to conduct their business at a time and place that is convenient to them and we have online platforms to make that easy for them. Our customers have an online account which is their one-stop hub for managing their water needs. They can easily place orders, enter meter readings, complete a temporary transfer, update their details and more. Our large customers have a relationship manager they can call. For our other customers, the Customer Support Team is available Monday to Friday, between 8:30am and 4:30pm (excluding public holidays).

Customer invoices are generally issued quarterly (except for Lower Fitzroy WSS which is issued half yearly and where contract terms and conditions provide for an alternative billing interval) with fixed charges billed in advance and water usage in arrears. A quarterly statement is generally issued which includes a water use graph, water usage summary, total available allocation water, allocation water usage, and remaining allocation water.

In the month prior to the end of the water year, we publish individual scheme newsletters on our website and we notify our customer by email and/or SMS when it is available.

To give our customers an indication of the water that may be available at the start of each new water year, we calculate the predicted start of water year announced allocations based on our storage forecast tool and according to the water sharing rules for the scheme. The storage forecast tool makes assumptions based on the expected volume of water in storage at the start of the water year, noting though that this volume may increase or decrease should there be significant inflows or change in customer water use patterns.

Customer engagement forums

We meet regularly with customers to understand their challenges and how our services can best support them. Through this consultation, we aim to deliver better outcomes for them, provide transparency about decisions that impact their businesses, and be more responsive to their needs.

We consult with our customers at state-wide level, through catchment-based groups and one on one. These groups evolve over time with the changing needs of our customers. They currently include:

- Irrigation Customer Reference Group (ICRG)
- Irrigation Advisory Committees (IAC)
- Customer Advisory Committees (CAC)
- Customer Advisory Board (CAB).

Irrigation Customer Reference Groups

The ICRG considers strategic matters that are relevant to all irrigation schemes to ensure reliable and efficient water delivery to irrigation customers. It provides a forum for our irrigation customers to discuss a wide range of issues with us including:

- the purpose and format of their Service and Performance Plans
- levels of service and customer reporting systems
- major changes, opportunities and challenges facing customers across water supply schemes
- feedback and advice on improved customer communication and education
- the design of non-routine expenditure programs
- water metering standards, improvements, reporting and compliance
- standard contract terms and conditions
- growth opportunities
- scheme modernisation and efficiency.

The membership and functioning of the ICRG is governed by an ICRG Terms of Reference.



Irrigation Advisory Committees

Most water supply schemes have an IAC. Its objectives are to:

- provide advice and recommendations to us regarding scheme operational issues
- represent the interests of the broader irrigator base regarding our ongoing operation of the scheme
- provide an opportunity for both us and our customers to raise and discuss matters of mutual interest in relation to customer relationships and management of the physical aspects of the scheme.

The membership and functioning of IACs are governed by an Irrigator Advisory Committee Charter.

Customer Advisory Committees

We continue to evolve with the changing needs of our customers and one way we do this is by reviewing how best we can engage with our customers. Setting up Customer Advisory Committees (CAC) is enabling us to provide customers and stakeholders with a diverse forum for collaborating and consulting with Sunwater on a range of strategic matters relating to infrastructure management, maintenance and innovation.

The primary purpose of the CAC is to:

- engage with customers to identify current and future water needs.
- provide a transparent view of Sunwater's operating environment and assets and how these influence our customer service
- build an understanding of our customer's businesses to ensure we consider their future plans as part of our strategic and operations planning.

The membership and functioning of Customer Advisory Committees are governed by a Terms of Reference.

Customer Advisory Board

The Lower Mary Customer Advisory Board (CAB) is helping us build a collaborative partnership with customers and stakeholders regarding the medium and longer-term strategic and sustainable management of the Lower Mary scheme.

The membership and functioning of the CAB is governed by the CAB Terms of Reference.

Customer experience initiatives

Each year we conduct a detailed customer survey which provides us with a customer satisfaction score. We use these results to track our performance and identify areas for improvement, as well as opportunities for innovation. We share the outcomes with our teams across the business and it informs our corporate planning process.

We have mapped out our end-to-end customers' journeys to provide us with a deeper understanding of their experiences. This has enabled us to identify pain points and identify opportunities for improvement.

Urban and industrial customers

We supply our urban and industrial customers across 31 bulk water and irrigation supply schemes and 14 pipelines. Our urban and industrial customers include local and regional councils, mines, power stations, processing plants and manufacturing plants, each with unique requirements. We assign relationship managers to our commercial customers and work closely with them to negotiate water supply and transportation agreements that meet their needs.

We also provide a range of other services to our industrial customers ranging from:

- assessing the feasibility of water delivery projects
- determining their water supply infrastructure requirements
- providing concept, detailed design and production services
- project managing construction
- managing, operating and maintaining their water infrastructure assets.

We encourage them to come to us when a project is first planned to take advantage of potential synergies and savings during the project's life by sourcing all stages under one roof.

Stakeholder engagement

In addition to our customers, we engage with stakeholders who are interested in, or impacted by either a Sunwater project, business decision or operation of an asset, or a combination of these. Our stakeholders include elected representatives, business groups, environmental groups, indigenous groups, government officers, downstream residents and peak bodies; and they often belong to more than one of these groups. Depending on the project or business activity, we will communicate with, consult with or involve our stakeholders through our engagement programs.

Our stakeholder engagement is framed around our five engagement principles:

1 Proactive

We are proactive and visible in managing Sunwater's corporate footprint. We engage early and maintain contact with our stakeholders, even when there is nothing new to say.

2 Open and transparent

Our engagement is based on what can be achieved and opportunities to improve outcomes. Open communication means our stakeholders can provide informed comment and our transparency means we accurately evaluate and report on our activities.

3 The big picture

We engage with stakeholders in a way that considers the social environment in which we operate. We work towards understanding the interconnections between our communities and our activities.

4 Two-way communication

We listen to all of our stakeholders and validate their ideas, and look for ways to collaborate to find solutions.

5 Responsive

We continually track our stakeholders' needs and expectations and ensure their insights inform our actions. All of our contact has a purpose and we act on the feedback we receive and deliver on the commitments we make.

Our principles are aligned with our organisational purpose, strategy and values, and the critical success factors for achieving our strategic goals, which are:

- customer focused decision-making
- supportive, informed and engaged shareholders
- respectful community partnerships/ relationships.

We take a disciplined approach to stakeholder engagement and develop stakeholder management plans at an enterprise, regional and project level. Our stakeholder management plans (SMP) are written documents that outline how we manage stakeholder expectations during a project or time of change. The process for developing SMPs for major infrastructure projects is aligned with our Project, Program and Portfolio Management Framework (P3MF).

At the corporate level, a SMP exists to guide strategic conversations with key agencies, lobby groups and peak bodies (managed through the SWP1). Engaging with peak industry groups enables us to better understand and monitor water issues and provides a further avenue for customers to raise issues in relation to scheme operations and management.

We also work closely with peak industry groups on state-wide policy issues, including irrigation price reviews.

Depending on our particular strategy to engage different stakeholders, we develop or deliver communication tools such as:

- dedicated web pages
- fact sheets
- Facebook sites
- community reference groups
- key stakeholder meetings/tours
- advertising
- newsletters.

One of our significant stakeholder management tools are reference groups, which facilitate information sharing and discussion opportunities at the grass roots level. These might be called a community reference group, an industry forum, a low water storage working group, or another name relevant to the project or initiative. Sometimes these will be independently chaired or facilitated.





Our stakeholder groups ensure:

- there is engagement with relevant stakeholders who can also speak to broader community or industry concerns
- local community knowledge, skills and concerns can be considered in a project or Sunwater activity in constructive and timely way
- early identification of ideas, opportunities and potential project risks or constraints are captured to inform ongoing refinements to the project scope
- we listen to reference group members' feedback, explore suggestions offered by the group and report back.

Consultation Manager is Sunwater's enterprise stakeholder management system used to record interactions with various external stakeholders. It enables us to:

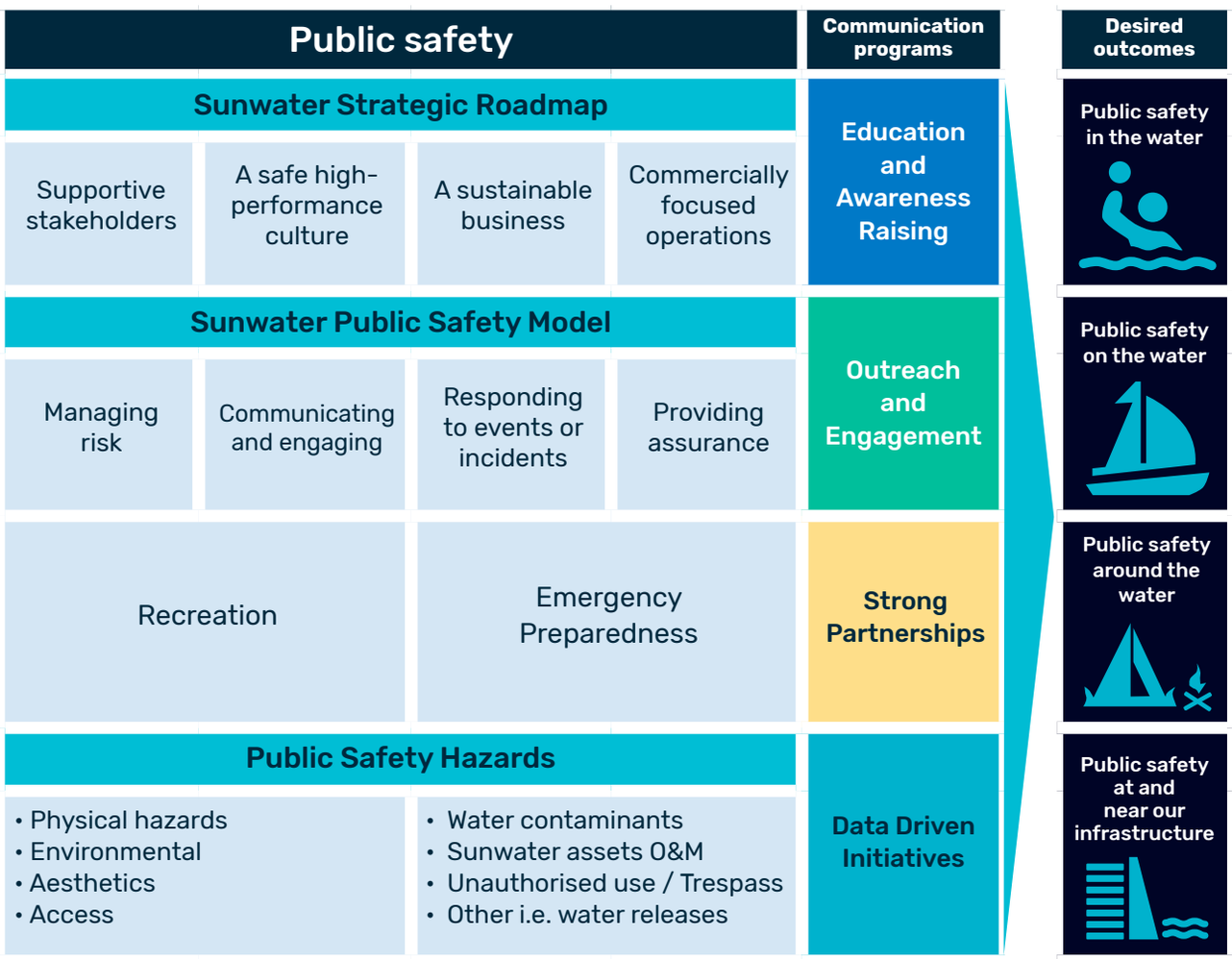
- maintain records of historical stakeholder interactions and associated actions and commitments
- view detailed reports on trending issues, complaints and enquiries, which help inform business improvement processes
- identify and organise our stakeholders by interest groups or geographical region, as well as maintain contact distribution lists
- inform employees and contractors about key issues with stakeholders so they are prepared before meeting with them.

Community engagement

Our storages are an important part of many communities—not only storing water for customers but playing valuable recreational and amenity roles. Our public safety and stakeholder teams works closely with our regional teams to drive education and engagement at the grass roots level.

Our Public Safety Communication Strategy aims to:

- encourage our local communities to learn about how our dams work
- promote safe behaviour at our storages
- ignite positive behaviour change to reduce public safety incidents
- educate about preparation for extreme weather events and our Emergency Action Plans.



Our activities include:

- school education program and education resources through our website Education Centre
- dam open days
- weather events checklists
- advertising campaigns
- media and social media campaigns
- participation in local community events
- stakeholder briefings.

We also foster strong local relationships through sponsorships of local organisations and initiatives related to:

- regional growth and development
- education for regional and rural communities
- health and wellbeing
- environment and sustainability
- community safety and resilience.

Infrastructure development and delivery

In line with our strategic goal of a sustainable business, we are focused on continued growth of our assets and water services.

Our strategic outlook for sustainable investment is underpinned by three pillars:

- Business Development – short-term targets with a one-year outlook.
- Master Plan – an optimum staging and sequencing of programs of work at a regional level with a 1-5 year outlook
- Blueprint – long-term portfolio and investigations priorities with a 5-20 year outlook.

Business Development is how we put our strategy into action, by developing projects that we can do now, to prepare for a sustainable future. We work in partnership with our customers across the urban, industrial and agricultural sectors, to identify and initiate the project lifecycle of new assets and upgrades, as well as of new water products and sales.

Our Master Plan is a development roadmap that is being progressively rolled out across our regions. By addressing regional service needs, our investment can be sequenced to maximise development benefits and help us face uncertainties. This roadmap is important for prioritising and optimising the staging and sequencing of projects.

The Blueprint is our long-term planning approach, where our customers and stakeholders help us explore a number of scenarios for how water demand might look in the future, and ways to prepare for these. Our Regional Blueprints are a long-term strategy for achieving increased availability of water in the areas we currently service. They identify large scale projects that provide a step-change in water supply volumes, as well as new water products, efficiency initiatives and infrastructure enhancements that maximise the usage and benefits of our existing assets.



Our strategic outlook enables us to:

- identify new opportunities to facilitate and maximise future water trading revenue, well in advance of our existing industrial contracts coming to an end
- monitor and track opportunities and identify key areas or markets that we should pursue for Sunwater commercially viability, while bringing positive economic benefits to the regions we serve identify infrastructure development projects that despite their low financial return to Sunwater have the potential to generate robust economic benefits to Queensland. Subject to due diligence reviews and government development funding, we pursue the role of proponent for these.

Projects

We manage a range of complex and often interdependent projects, from the design and construction of new and improved water infrastructure, to the digital transformation of the way we work and provide our services. To do this efficiently and effectively, we use the Project, Program & Portfolio Management Framework (P3MF) which consists of standards, procedures, tools and templates.

P3MF helps us be clear on the outcomes we are seeking to achieve and provides better information, role clarity and reporting to inform decision making and achieve the best possible results. Our portfolio management process is outlined below.



PORTFOLIO MANAGEMENT

	Identification	Initiation	Evaluation	Definition	Execution	Closure	Benefits
OVERVIEW	Identify the business opportunity. Assess alignment with strategy, prioritise and categorise.	Initiate project.	Assess feasibility, analyse options and develop recommendation. Establish project governance, complete preliminary cost.	Development of business case, supply strategy, cost / benefits, analysis, etc.	Execute supply strategy and conduct procurement. Award contracts, build / develop / delivery project outputs.	Transition back to the operations / business as usual and formally close the project.	Review if project benefits were realised and if not - why?
DECISION GATES		Strategic assessment 0	Benefits analysis and preliminary business case. Preliminary evaluation. 1	Financial investment decision. Commence execution phase. Award contracts. 2	Project completion. Meet project objectives. 3	Project closure 4	Benefits realisation 5
DELIVERABLE		Opportunity identification and initiation document	Preliminary business case	Detailed business case	Executed Project Management Plan (PMP)	Project closure report	Benefits realisation report

The Sunwater lifecycle maps to the Queensland Government processes.

Queensland Government process	Strategic assessment >	Preliminary evaluation >	Business case including supply strategy >	Source suppliers >	Capital approvals > $10M shareholding ministers informed of project > $40M shareholding ministers approval required (Tridata only included for SHM > $40M capital projects)
Queensland Government deliverables	Strategic business case	Preliminary business case	Detailed business case		Major projects will interact with the Qld govt process as follows: > $50M Qld govt assist with development of business case > $100M Qld govt leads development of business case.

Dam projects

Project driver	Project type	Current/recent projects
Dam safety – Portfolio Risk Assessment (PRA) for Dam Improvement Program (DIP)	• Immediate safety remediation • Dam Improvement Project	• Paradise Dam Essential Works Project • Paradise Dam Improvement Project • Burdekin Falls Dam Improvement Project
Future economic development and water security	• New infrastructure major project • Expanded infrastructure	• Rookwood Weir Project • Burdekin Falls Dam Raising Project • Lower Burdekin Rising Groundwater Mitigation Project
Ongoing dam safety and long-term water security	• Maintenance project	• Callide Dam Gates Project
Scheme efficiency improvements	• Project jointly funded by Sunwater and NWIDF	• Mareeba-Dimbulah WSS Efficiency Improvement Project

There are a range of drivers, delivery options and funding mechanisms that influence how current infrastructure projects are determined, governed and delivered. These include our strategic planning and development process; our risk assessment-based Dam Improvement Program; local, state and federal government economic development and water security policies; and government funding initiatives.

Our Dam Improvement Program (DIP) ensures that our dams continue to function safely, hold and pass excess volumes of water during extreme weather events and provide long-term water supply for our customers in line with the current design standards.

As outlined in the earlier Dam Safety section, our detailed list of DIP projects is determined through our Portfolio Risk Assessment (PRA) process. We then submit our proposed DIP schedule to the Dam Safety Regulator for approval.

We work with the Regulator and our shareholding Ministers regarding preferred options and funding arrangements. All proposals for improvement to our dams start with a detailed business case, but the specific works required for each project under the program can differ greatly. Where a dam improvement project is expected to cost more than $40 million, and detailed business cases over $50 million, the Regulator's and shareholding Ministers' approvals are required before project commencement.

The implementation of a dam improvement project does not mean that the dam infrastructure is unsafe or poses a risk. The regular monitoring and assessment of our dams that we undertake ensures that they function as intended. A dam improvement project is recommended to improve the useful life of the asset.

Paradise Dam Essential Works Project

The Paradise Dam Essential Works Project, completed in 2021, completed necessary works to reduce pressure on the dam wall in a significant flood event, including lowering the spillway by 5.8 metres. These were short-term risk reduction measures while a longer-term dam remediation plan was confirmed. An options assessment conducted in conjunction with the essential works recommended that further technical information be gathered to enable the state government to determine the best long-term option for the dam.

More information is available here.

Paradise Dam Improvement Project

The Paradise Dam Improvement Project's long-term works will likely include further stabilisation and strengthening of the spillway, including mass concrete buttressing and extended protection of the downstream riverbed, among other works, which will take several years. We are working closely with DRDMW, who is leading the Stage 1 detailed business case options assessment for the project.

More information is available here.


Burdekin Falls Dam

Burdekin Falls Dam Raising Project

This project is a proposal to raise the existing dam as a potential means to increase water supply in the Burdekin and surrounding regions. Following completion of a preliminary business case we found that:

- the current storage capacity will not meet forecast future demand
- a potential dam raising between two and six metres should be further assessed to meet the service need
- there is a sufficient level of interest and forecast future water demand from agricultural and industrial users to warrant further investigation into these two raising options.

To gain efficiencies, we are combining this project's detailed business case with the Burdekin Falls Dam Improvement Project. The detailed business case will consider long-term demand for water to determine the extent of any raising required. We will also identify social, environmental and economic impacts and benefits.

More information is available here.

Burdekin Falls Dam Improvement Project

This project is aiming to ensure the dam's long-term viability by:

- increasing its resilience to extreme weather events
- bringing it in line with modern engineering design standards
- ensuring it meets the safety requirements set out in the *Water Supply (Safety and Reliability) Act 2008 (Qld)*.
- Proposed improvement works include raising saddle dams and spillway abutments, installing post-tensioned anchors to the dam's main spillway and abutments, and constructing a new right-bank saddle dam. Following the development of a preliminary business case, we are working with DRDMW to develop a combined detailed business case for this project and the Burdekin Falls Dam Raising project. Progressing the projects as a single business case will allow the government to consider all available options and a possible combined design solution which may result in significant cost savings.

More information is available here.

Rookwood Weir Project

Rookwood Weir is a critical piece of water infrastructure for Central Queensland that will capture valuable water in the lower Fitzroy River, about 66 kilometres south-west of Rockhampton, for use across the region. It will have a full supply volume of 74,325 megalitres. The weir will provide water security; boost the regional economy; grow and diversify industry and agriculture; and allow for the buying and selling of water.

The project has two parts:

- constructing the weir
- enabling works that will upgrade existing infrastructure to support both the construction of the weir and its operation.

The project is funded by the Australian Government and Queensland Government. Construction is managed by the Rookwood Weir Alliance made up of Sunwater and the design and construction proponents. Completion is expected in 2023.

More information is available here.

Callide Dam Gates Project

This project has been set up to investigate, repair and restore Callide Dam's gates to address intermittent occurrences of vibration during their operation. The project involves:

- removing the gates from service, including removing the gate faces from the gate arms
- carrying out maintenance work to address the vibration issue
- investigating temporarily increasing the dam storage level
- investigating, remediating and restoring the gates with an engineering solution to address the gate vibration.

Targeted completion date for this work is the end of 2021, subject to determining a permanent solution for the gates.



Rookwood Weir Project



Lower Burdekin Rising Groundwater Project

This project will deliver:

- investigations to determine targeted seepage mitigation works
- targeted infrastructure seepage mitigation works.

Field investigations will be undertaken during the first two years to inform the targeted work in year's three and four, with targeted completion by end of 2024.

Mareeba-Dimbulah WSS Efficiency Improvement Project

The Mareeba-Dimbulah WSS Efficiency Improvement Project involved upgrading scheme infrastructure across six areas to improve operation and distribution efficiency. Jointly funded by Sunwater and the NWIDF, the project aims to reduce water losses by up to 8306 megalitres and, in doing so, deliver more water for customers.

It has involved installing more than 100 automated control gates, replacement and installation of approximately 14 kilometres of pipeline, expansion of various in-channel storages and improvements to concrete structures to support the automated gates installation and irrigation offtakes monitoring.

The project is supported by the National Water Grid Authority which is committed to delivering new and reliable water to enhance water security and underpin regional economic growth.

More information is available here.



Our capabilities and services

We are one of the largest builders, owners and operators of water pipelines in Queensland. Our technical capabilities include:

- route alignment options and optimisation
- options analysis for the water supply and bulk water delivery infrastructure to our customers
- leading the development and construction of pipelines and storages
- physical hydraulic modelling at our Rocklea laboratory – the second biggest in Australia
- financial modelling and assessment
- in-house environmental management for operational delivery and project development
- planning and modelling water supply plans
- water hammer analysis
- pipeline/pumping optimisation.

Sunwater is a specialist designer, owner, builder and maintainer of pipeline water supply systems.

We offer broad-based engineering expertise, specialist skills and tailored end-to-end solutions. A one-stop shop, se design, develop and deliver bulk water infrastructure projects from beginning to end for new water allocations, water supply and efficient transportation to your site. Finance 'build own operate' (BOO) water delivery infrastructure Sunwater can provide flexible funding arrangements for the design, supply and operation of water assets, including agreements to recoup costs over time through mutually beneficial commercial arrangements.

We encourage customers to come to us when a project is first planned to take advantage of potential synergies and savings during the project's life by sourcing all stages under one roof. Our in-house capabilities are provided by water industry experts who take a holistic approach to each project. Close integration of options analysis, design, planning, environmental and construction aspects of a project can reduce long-term costs without compromising the quality of the outcomes.

Environment

Our people are all responsible for protecting the environment which surrounds us and of which we are a part.

Our Environmental Management System (EMS) is certified to **ISO 14001:2015 standard** (the international standards developed and published by the International Organization for Standardization). It provides our customers, stakeholders and community with confidence that we are committed to delivering water for the prosperity of current and future generations.

Our Environmental Management System (EMS) provides the framework for:					
Establishing our Environmental Policy	Ensuring compliance with environmental regulations	Identifying, assessing and managing the potential environmental impacts of our business activities	Managing our activities to prevent or minimise environmental harm	Identifying opportunities to improve efficiencies and reduce costs	Creating a culture of continual improvement



Environmental Policy

"At Sunwater, we are all responsible for the environment which surrounds us and of which we are a part. Sunwater believes that all employees are responsible for environmental protection."



Our Environmental Policy is our roadmap for the future direction of our business as an environmentally aware organisation. Together with our employee code of conduct and corporate objectives, the policy guides our business operations in the way we meet statutory obligations, our own corporate goals and progress on sustainable practices.

We ensure our operations contribute to a sustainable environment by:

- providing ongoing environmental awareness training and support for employees.
- maintaining effective communication with our employees and other stakeholders, such as customers and the visitors who utilise recreation areas, to ensure that environmental management practices are followed.
- continuously improving our environmental management by setting measurable goals, monitoring, reporting and reviewing the effectiveness of the management system.
- actively engaging with natural resource management groups and government agencies to achieve good environmental outcomes by preventing pollution or serious environmental harm.
- minimising the potential for adverse impacts from our activities on the environment and requiring our contractors to do the same.
- seeking to identify other ways of improving our environment performance, such as through innovation and application of new methods.
- setting achievable environmental targets and reporting against these.
- reporting and investigating environmental incidents.
- fulfilling our environmental compliance obligations.

Environmental regulations compliance

Due to the diversity of our operations, we monitor and maintain an extensive environmental legal obligations register – this ensures our business processes and procedures continue to comply with all legislative requirements. These requirements are diverse and vary from environmental protection and biosecurity, to greenhouse and energy reporting, to vegetation management and water quality monitoring.

They influence how we operate and monitor our water supply schemes, our planning and development, and new infrastructure project delivery. Our environmental team works closely with our operations and projects teams to ensure all compliance requirements are identified and managed so we meet our objective of environmental compliance.

Managing our activities

We identify, assess and manage environmental risks arising from our activities to prevent or minimise environmental harm in relation to:

- air quality
- biosecurity
- cultural heritage
- hazardous substances
- energy use and emissions
- public health
- sensitive area/protected species
- soils and geology
- vegetation management
- waste management
- water quality.

Our procedures and processes provide direction to our people on how to effectively manage identified risks for regular activities – some of which are described below.

Our Environment team undertakes facilitated risk assessments for new tasks where risk mitigation measures are required.

Water quality monitoring

Each water supply scheme (WSS) has an overview manual which sets out the specific water quality monitoring requirements for the scheme. These rules are designed to meet our legal requirements under the Resource Operations Licence (ROL) for that scheme, as well as other compliance obligations.

We assess our storages for health risks associated with blue-green algae and keep our recreational users informed. In particular, we monitor and update blue-green algae hazard levels, in line with the National Health and Medical Research Council's Guidelines for Managing Risks in Recreational Water and DRDMW requirements.

The guidelines outline three hazard levels, green/amber/red, for storage operators and water users to assess the risk posed by blue-green algae during primary contact water recreation activities, such as swimming, canoeing and water skiing. This information is published on our website.

We are also required to closely monitor water quality associated with our drinking water treatment plants operations to allow potable water distribution to the public at our recreational areas.

Environmental water releases

Several of our water storages are required to make environmental water releases in accordance with the legislative environmental requirements outlined in the relevant Water Plan, each scheme's ROL and the *Water Act 2000* (Qld). These releases are designed to assist in maintaining downstream water and aquatic ecosystem health.

Supporting our projects

When planning and establishing projects to deliver new or upgraded water infrastructure, environmental management is of key importance. Environmental considerations are complex and a comprehensive project governance framework has been established to guide good decision making, particularly in terms of project approvals, risk assessments and project assurance. Our Environment team works closely with the relevant project manager to implement this process within the context of the P3MF framework to ensure appropriate environmental controls are in place and compliance obligations are adequately governed. More information about our P3MF is located in the Projects section.



Energy use and emissions

We have reported on our greenhouse gas emissions since inception of the National Greenhouse and Energy Reporting Scheme in 2008.

Fishway operations

Fishways facilitate the movement of fish migration and help contribute to our rural economies and communities by retaining local fish species. Sunwater operates and maintains 16 fishways across its water supply schemes. These include a variety of fishway designs to allow for the passage of a broad range of fish species like lungfish, bream, perch, barramundi, bass and grunter. Fishways currently operated and maintained by us include vertical slot fishways; fish ladders; fish locks and fish lifts.

Improving environmental performance and reducing costs

Every part of our business plays an integral role in identifying and implementing projects designed to improve efficiencies, which in turn result in improved environmental performance and reduced costs. Some examples include:

- **Mareeba-Dimbulah WSS Efficiency Improvement Project** – this project will increase the efficiency of water delivery throughout the scheme by changing the method of delivery from a supply to demand-driven model and reducing operational losses.
- **Water efficiency strategy and plan** – this is designed to improve irrigation channel water use efficiency through various actions including channel lining, automation of channel control and metering upgrades. It will also offer strategic oversight of river operations through modelling and water ordering management measures
- **Waste Management Strategy** – this aims to assess and manage waste across the life cycle of our activities. It will enable us to transition towards a circular economy where economic growth is decoupled from the consumption of finite resources and to identify opportunities for further cost savings.



We are continuously improving our environmental management by setting measurable goals, monitoring, reporting and reviewing the effectiveness of our EMS. Examples of some of our projects achieving improved environmental performance are provided below:

- We established a Fishways and Aquatic Reference Group to provide an open forum for the regular discussion of scientific and technical information relating to fishway design, installation, and operation. This forum will ensure a consistent and agreed understanding between industry and government experts to facilitate better outcomes for our stakeholders and our environment.
- In 2021 we developed a Sustainability Framework to assist us in meeting our commitment to safely delivering water for prosperity now and into the future for Queensland. The framework will progressively develop targets around the key areas below:
  - water security
  - low carbon future
  - biodiversity
  - responsible consumption and production
  - innovation
  - customer, community and cultural heritage
  - governance and business systems.

Glossary		
As low as reasonably practicable	ALARP	This principle states that risks, lower than the 'limit of tolerability' are tolerable only if risk reduction is impracticable or if its cost is grossly disproportionate to the improvement gained.
Announced Allocation	AA	Each year on 1 July, we announce available water allocations for the water year for the majority of our water supply schemes.
Balancing storage		This is a storage within a water distribution system or a pipeline that is used to balance inflows and outflows of water.
Barrage		A structure constructed across a watercourse to prevent the inflow of tidal water, and as such is a physical barrier between salt and freshwater.
Blueprint		Our planning approach where our customers and stakeholders help us explore a number of scenarios for how water demand might look in the future, and ways to prepare for these.
Business resilience framework		The structural framework that sets out how Sunwater responds to an event which may pose a threat or opportunity to the organisation.
Comprehensive risk assessment	CRA	This is a staged process of systematically reviewing dam data, updating models and conducting a quantitative risk assessment on each dam. CRAs are completed on a rolling cycle, typically every five years.
Consultation Manager		Our enterprise stakeholder management system used to record interactions with various external stakeholders.
Continuous sharing		An alternative system to announced allocations for sharing water and managing water accounts. Customers' accounts are managed individually and on a daily basis where an individual share of scheme inflows, a deduction of a share of evaporation and seepage losses, and an account of their daily water usage is maintained.
Corporate Plan		The document that guides Sunwater business direction, by setting out our purpose, values, specific strategies, targets and key performance indicators.
Customer Advisory Committee	CAC	A diverse customer forum for collaborating and consulting with us on a range of strategic matters relating to infrastructure management, maintenance and innovation.
Dam		A dam is a large wall constructed across a valley to collect and control rainfall flow and runoff into a catchment, or to raise the level of water already held within a catchment area.
Dam Improvement Program	DIP	A portfolio of prioritised dam improvement projects that ensures our dams continue to function safely, hold and pass excess volumes of water during extreme weather events and provide long-term water supply for our customers in line with the current design standards.
Dam outlet		A structure in the side of the dam wall that is used to manually release water into the downstream river.
Dam Safety Regulator		The Department of Regional Development, Manufacturing and Water Executive who exercises the responsibilities of the Water Supply Act.

Glossary		
Department of Regional Development, Manufacturing and Water	DRDMW	Sunwater shareholding department
Distribution Operations Licence	DOL	It is granted by DRDMW to local management entities and allows them to take or interfere with the flow of water in order to operate their infrastructure.
Emergency action plan	EAP	It provides guidance for actions required during an emergency event at the dam, including downstream releases from dams as well as potential failure scenarios.
Environmental management system	EMS	Our framework for establishing our Environmental Policy, ensuring compliance with environmental regulations, identifying, assessing and managing the potential environmental impacts of our business activities.
Failure impact assessment		Process used to determine the number of people whose safety could be at risk should a dam fail (population at risk). The results of the assessment are used to determine whether a dam is referable and the failure impact rating of a dam.
Failure impact rating		A measure of the population at risk should a dam fail. There are two categories: • Category 1—between two to 100 people at risk by the dam failing. • Category 2—more than 100 people at risk by the dam failing.
Fixed tariffs		Tariff charged quarterly or six-monthly in advance, according to the water allocation held by the customer, regardless of the amount of water taken in the year.
Full supply level	FSL	Full supply level, for a dam, means the level of the water surface of the dam when the water storage is at maximum operating level and the dam is not affected by flood.
Fully supply volume	FSV	The volume of water in the storage at its maximum operating level and the dam is not affected by flood.
Gated dam		A dam that has spillway gates which are positioned in the dam wall and will progressively open as the dam level rises, and close as the dam level reduces. Gates can be opened manually or automatically by a pulley system or a float system.
High Priority water allocations	HP	High priority (HP) water allocations are the most reliable water allocation and are typically used for town water supply, industrial use — including mining and power generation — and for high-value cropping. Our HP water allocation holders can access water more frequently and with fewer restrictions than holders with medium priority water.
Irrigator		A landowner who grows crops or pastures for a commercial gain
Irrigation channel		A channel, lined with concrete, clay or a flexible membrane to prevent seepage, and with pipes under the water, and used to transport irrigation water from a water source to the areas to be irrigated.
Irrigation Advisory Committee	IAC	A group of representative irrigation customers within a water supply scheme that: • provides advice and recommendations to us regarding scheme operational issues • represents the interests of the broader irrigator base regarding our ongoing operation of the scheme • provides an opportunity for us and our customers to raise and discuss matters of mutual interest in relation to customer relationships and management of the physical aspects of the scheme.

Glossary		
Irrigation Customer Reference Group	ICRG	A customer group that advises us on a range of strategic matters relating to our management and maintenance of irrigation assets to ensure the reliable and efficient delivery of water to irrigation customers.
Medium Priority water allocations	MP	Medium priority (MP) water allocations generally have lower reliability than high priority water allocations and are mainly used for agriculture. This means during drier conditions, and when storage levels are low, these water allocations are the first to be limited (below 100 per cent allocation). MP water allocation holders pay lower fees than those with high priority water allocation holders.
metres Australian Height Datum	mAHD	Elevation in metres with respect to the Australian Height Datum – a term generally equal to elevation above median sea level – the level of the water surface of the dam when the water storage is at maximum operating level and the dam is not affected by flood.
Non-referable assets		These are our water storages where less than two people would be placed in danger if the storage was to fail.
Offstream storage		A storage which is generally constructed from earth and rockfill outside the bed and banks of the water courses and used to store water by pumping from the adjacent water course.
Portfolio risk assessment		This evaluates the comprehensive risk assessments to determine the priority of projects for the Dam Improvement Program.
Referable		A dam, or storage, is considered 'Referable' under the Water Supply Act if: • a failure impact assessment was required for the dam (as defined in the Act) • the assessment found the dam has a failure impact rating • the assessment has been accepted by the chief executive administering the Water Supply Act.
Regional Blueprint		Our long-term strategy for achieving increased water availability in the areas we currently service through existing water supply schemes.
Regulated pricing		Pricing subject to the Queensland Competition Authority review and Queensland Government approval
Resource Operations Licence	ROL	Issued to Sunwater by the department of Regional Development, Manufacturing and Water for each WSS, the ROL set out details about the scheme's water infrastructure. It allows us to: • take or interfere with the flow of water in order to operate our dams and weirs • use streams to distribute water to our customers • It also sets out rules about environmental releases and all monitoring and reporting obligations required of us.
Resource Operations Plan	ROP	Sets out the rules for operating a water supply scheme's assets
Project, Program & Portfolio Management Framework	P3MF	A set of project management standards, procedures, tools and templates which helps us be clear on the outcomes we are seeking to achieve and provides better information, role clarity and reporting to inform decision making and achieve the best possible results.
Scheme Operations Manual		It sets out scheme operating rules, water sharing rules, temporary trade rules and how we make releases.

Glossary		
SLAM **S**top, consider the work involved **L**ook for and identify the hazard **A**ssess the risks, and **M**anage and develop risk controls.	SLAM	Sunwater safety program that raises awareness of safe work practices and focuses on preventing any injury in any of our workplaces, including out in the field.
Statement of Corporate Intent	SCI	The formal performance agreement between our Board of Directors and the shareholding Ministers which sets out our financial and non-financial targets for the financial year.
Strategic response team	SRT	A team of senior leaders who lead the organisation's response to a high or extreme risk or impact event.
Supplemented allocation		Water managed by Sunwater with our dams supplementing natural streamflow to supply customers
Ungated dam		A dam that uses a spillway and outlet to release water downstream.
Unregulated pricing		Pricing not subject to external review or approval and negotiated with the customer
Unsupplemented allocation		Water managed by DRDMW and only accessed if available through natural streamflow.
Volumetric tariffs		Tariff charged per megalitre of water taken by the customer, measured at the water meter or 'offtake'.
Water Act		It provides the framework for sustainably managing Queensland's water resources and establishing a system for: • planning, allocation and use of water • allocation of quarry material and riverine protection • effective operation of water providers such as Sunwater.
Water allocation		A water allocation is a volume of water that entitles a customer to a percentage of that water, based on the available water in the scheme dams, weirs or barrages. Water allocations have a separate title, or 'property right', like a land title. It can be bought and sold on the water trading market. They are announced at the beginning of a water year, which generally, begins on July 1.
Water carry over		The volume of water allowed to be carried over from the unused portion of the entitlement at the end of the previous water year.
Water Exchange		Sunwater's online water trading platform
Water Plan		These are developed under the Water Act, and they set the strategies and targets to sustainably manage and allocate water resources for a particular catchment area.
Water Management Protocol		It implements the water plan strategies, declares unallocated water volumes reserved for particular purposes and provides permanent water trading rules for Sunwater's and the Department of Regional Development, Manufacturing and Water's (DRDMW) customers.
Water supply scheme	WSS	The systems we use to collect, move, treat, store and distribute water to our customers.
Weir		A weir is a structure built across a river or a creek to regulate the water flow. It holds back the flow of water so it can be stored and released downstream when it's needed.

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General

12) In these Terms and Conditions:

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13) Sunwater may amend these Terms and Conditions at any time by written notice to you.

14) If a court finds any of these Terms and Conditions to be unenforceable or invalid, that Term or Condition will be enforced to the fullest extent permitted by applicable law and the other Terms and Conditions will remain valid and enforceable.

15) The laws of the State of Queensland, Australia, will govern these Terms and Conditions, as well as Sunwater's and your observance of them. In the event that a dispute arises from these Terms and Conditions, you agree to submit to the non-exclusive jurisdiction of the courts of Queensland, Australia.