Water for South East Queensland:

Planning for our future

ANNUAL REPORT 2020

This report is a collaborative effort by the following partners:

CITY OF GOLDCOAST.

LOGAN CITY COUNCIL

UrbanUtilities

Redland CITY COUNCIL

seqwater WATER FOR LIFE

Unitywater

The SEQ Water Service Provider Partners work together to provide essential water and sewerage services now and into the future.

FOREWORD

Water for SEQ – a simple statement that represents a major milestone for the region. This represents a mind shift for the Water Service Providers of South East Queensland from meeting regulatory reporting requirements to developing a strategic vision that puts water issues front and centre from a regional planning perspective.

In 2018, the SEQ Water Service Providers made a strategic and ambitious decision to set out on a five-year journey to prepare a holistic and integrated plan for water cycle management in South East Queensland (SEQ) titled "Water Plan for South East Queensland: Planning for our future". Each of the agencies had a plan for their component of the region but there was no holistic plan or framework for bringing them together or for guiding and supporting other levels of government when putting together the vision for the Region.

The SEQ Regional Plan provides vision and perspective on where population growth will occur and the transport, social infrastructure and other services that will support this growth. There was always an underlying assumption the Water Service Providers of SEQ will provide the water cycle management solutions to meet community needs. However, there was no real mechanism for this to occur. This is the gap the Water for SEQ Plan is aiming to fill. It is proposed the Water for SEQ Plan will be a key pillar of future regional plans to support the growth and lifestyle of South East Queensland through provision of sustainable, adaptable and integrated water and sewerage services to meet the community's needs.

The Water Service Providers Regional Partnership has emerged over the past six years from the Institutional and Legislative Reform Agenda dictated by the Bulk Water Supply Code and regulated reporting framework into a more collaborative and holistic partnership with a strategic regional vision and objectives.

There have been some very significant policy shifts over recent years particularly in relation to the whole-of-catchment health perspective and the role the Water Service Providers can play in improving catchment and waterway health as well as providing the core water and sewerage infrastructure to support the community's growing needs.

The Water Service Providers of SEQ are very proud of the role they play as trusted custodians of the region's precious water resources and as the water cycle manager. We draw water from the natural sources of the region and responsibly and sustainably manage the use of that resource for community benefit through the cycle to return water to the catchments and waterways of the region.

As the increasing urban growth in SEQ puts pressure on the water cycle, the Water Service Providers must rise to the challenge of sustainable management of the region's water and sewerage services. It is to this effect that the Water Service Providers have progressed the Water for SEQ Plan this year.

This year's Annual Report demonstrates the achievements of 2020 along this journey. While there have been the challenges of the COVID-19 Global Pandemic to overcome, the Water Service Providers Regional Partnership has delivered some significant milestone achievements including the establishment of a strategic vision and a delivery model for achieving the vision. These are described in detail in the report as demonstration of the commitment of the Water Service Providers Regional Partnership to deliver on the vision of the Water for SEQ Plan.

Foreword provided by Daryl Ross, former Acting Director of Road and Water Infrastructure at Logan City Council. Daryl was the Australian Water Association's 2020 Australian Water Professional of the Year and active in the Queensland Water Industry for more than 40 years.

INTRODUCTION

Water supply and sewerage services are critical for a healthy, prosperous and liveable region. South East Queensland's Water Service Providers (Seqwater, the bulk water supplier; and the SEQ Service Providers Unitywater, Urban Utilities and the council-owned water businesses of Logan, Redland and City of Gold Coast) work together to deliver the best possible outcomes for communities and effectively inform the region's future through the SEQ Regional Plan.

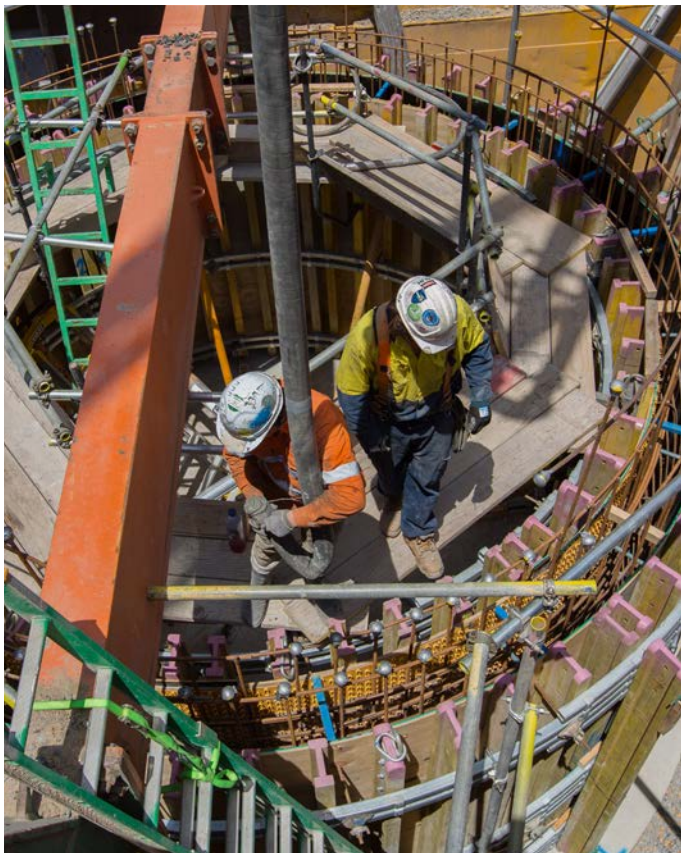
The purpose of this annual report is to demonstrate how the SEQ Water Service Providers are working together to provide better value outcomes for the SEQ community. This report will summarise the SEQ Water Service Providers' efforts and projects for 2020, and how we are progressing these initiatives in the industry to achieve our vision and strategic directions.

Building on this Annual Report, a new strategic Water for SEQ Plan, created by the SEQ Water Service Providers, will be delivered around 2023 and reviewed every five years. The Water for SEQ Plan will inform the SEQ Regional Plan and other key planning instruments, providing better outcomes for the SEQ region. Once the strategic Water for SEQ Plan has been produced, this annual report will evolve further to report on the outcomes of that plan.

Seqwater and the SEQ Service Providers work together on specific projects called Key Possible Projects (KPPs) to formally drive collaboration to address requirements in the Bulk Water Supply Code. The current KPPs are:

- Water for SEQ Plan
- Water Future Program
- SEQ Water Supply System Regional Secondary Disinfection Optimisation Project (RSDOP) and
- Co-ordinated catchment management activities.

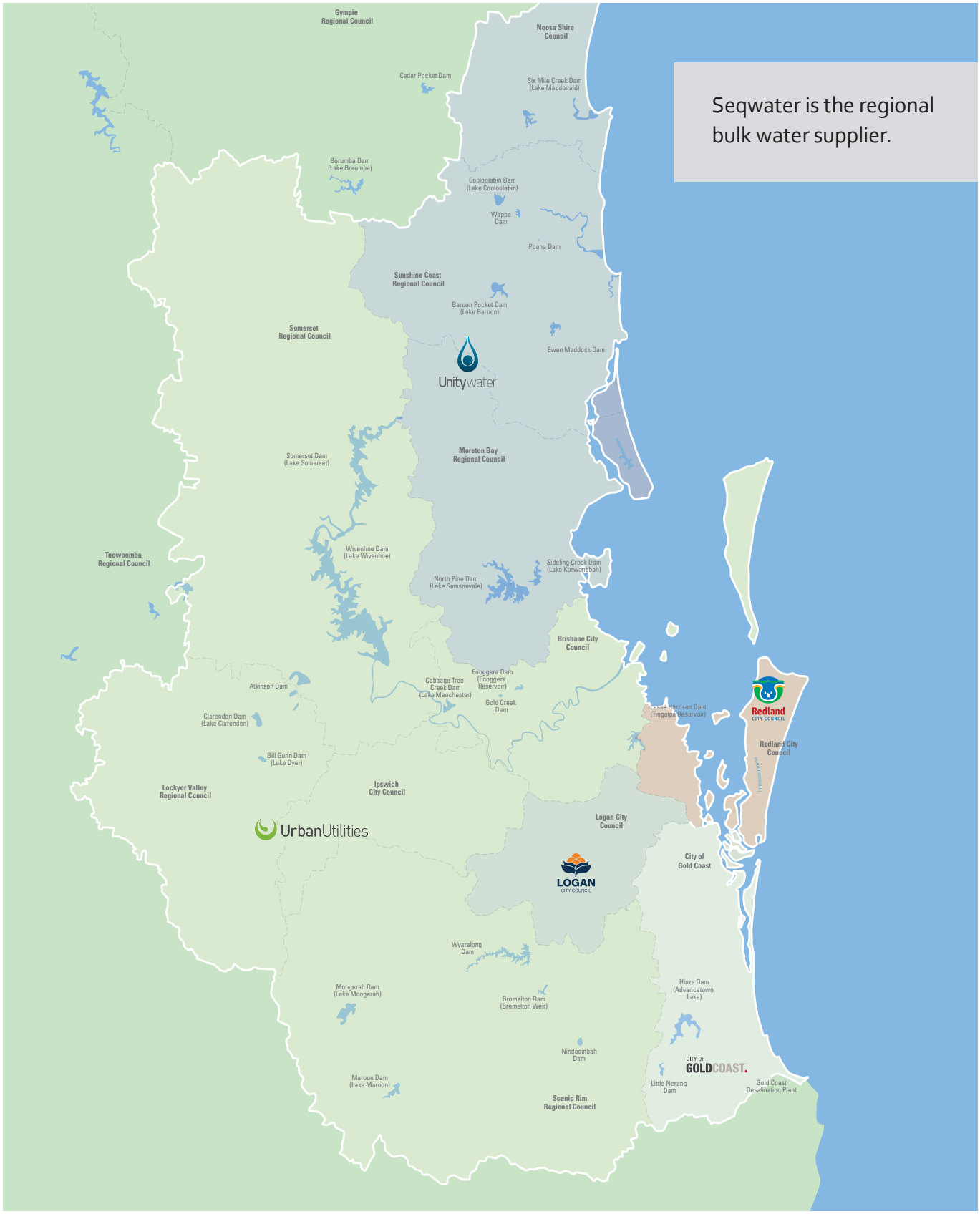
These KPPs and other collaborative projects are detailed in this Annual Report demonstrating better outcomes for SEQ communities.



This Annual Report meets the needs of the *Bulk Water Supply Code*.

YOUR SEQ WATER SERVICE PROVIDERS

HOW WE INTERACT AND WORK TOGETHER



YOUR SEQ WATER SERVICE PROVIDERS

Seqwater is the Queensland Government statutory authority responsible for providing a bulk drinking water supply to the SEQ Service Providers.

Unitywater, Urban Utilities, and the water businesses of the Redland, Logan and the City of Gold Coast councils distribute drinking water to customers. In addition, they are also responsible for collecting and treating sewage and supplying recycled water to customers. Collectively, we are your SEQ Water Service Providers.

DELIVERING WATER AND SEWERAGE SERVICES

AND A RANGE OF OTHER BENEFITS TO SEQ

The delivery of water and treatment of sewage promotes health, prosperity and liveability in alignment with the SEQ Regional Plan.

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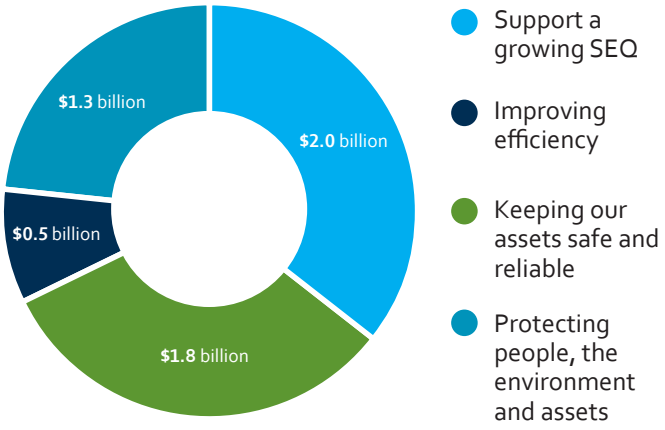
We supply water and sewerage services to more than three million people across SEQ. Over the next five years, we expect to spend almost $5 billion to meet the water supply and sewerage needs of communities as outlined in the SEQ Regional Plan and the Water Service Providers customer service charters. We will invest in:

- Supporting a growing SEQ by delivering new pipes, pumps and other infrastructure to serve the growing population. SEQ is a rapidly growing region and this is reflected in the significant expenditure in this area
- Keeping our assets safe and reliable by maintaining and renewing infrastructure
- Improving the efficiency of distribution of water and collection and treatment of sewage
- Protecting people, the environment and assets by upgrading dams to meet improved safety guidelines; reducing the amount of nutrients entering waterways and upgrading sewage treatment plants.

Whilst we all budget separately to meet these needs in our own areas of responsibility, we are planning more closely together to deliver consistent and reliable services across SEQ.

SEQ WATER SERVICE PROVIDER CAPITAL EXPENDITURE FROM 2020/21 - 2024/25



We will also spend more than $4 billion over the next five years operating and maintaining the water supply and sewerage systems.

This $4 billion includes paying our staff who work across the region and purchasing the energy and chemicals we need to operate the assets.

In addition to meeting the growing needs of the SEQ community, the delivery of water and sewerage services to SEQ provides many other benefits including:

- Health and sanitation to protect the SEQ community.
- Supporting economic growth through provision of services to approved developments and industrial, commercial and retail businesses.
- Protecting the environment through capture and treatment of sewage, reducing greenhouse gas emissions through efficient use of energy, and recycling water and other materials. We continue to identify ways to use technology and engage all levels of government and private industry in a regional approach to improve environmental outcomes.

Providing quality water and sewerage services is essential and can't be done for free. As an industry we are focused on affordability of the service and the impact of the cost of essential water and sewerage services on the communities of SEQ.

We are also working together to manage drought and reduce the economic impact on South East Queenslanders. To reduce the risk of adverse economic impacts we work together on communication and education programs, demand management initiatives and network operations.

The COVID-19 pandemic has had a significant impact on the SEQ water service provider industry, as it has with all sectors. The SEQ water service providers have continued to provide our high-quality water and sewerage services to the community throughout this time. The provision of these services during the pandemic has been critical, enabling the use of soap and water precisely when sanitation was paramount. This essential service continues to be provided to the SEQ Region. We have also:

- Rapidly developed hardship packages that have been welcomed by customers, such as extending payment periods
- Changed working practices for example, crews have learned to work in socially distanced ways whilst maintaining our high-quality water and sewerage services
- Adjusted to working remotely and continued to deliver outcomes in addition to the pandemic response
- Improved our supplier payment turnaround times to support the cash flow of local businesses.
- Provided packages to support other business sectors, enabling continued economic activity
- Contributed to the development and use of sewage testing for COVID-19, supporting health tracking and tracing.

HOW WE INTERACT AND WORK TOGETHER

The SEQ Water Service Providers discuss common challenges and find opportunities across the region to work together. The figure below depicts some of these forums.

KEY DECISION MAKERS

- Water Service Providers CEO Partnership
- Strategy and Planning Committee
- Joint Operations Committee

SUBJECT MATTER EXPERTS

(Technical Working Groups)

- Demand Management Technology
- Research and Innovation

WORKING TOGETHER

Planning for future resilience

- Water Security
- Regional Safety
- Asset Planning

EMERGENCY RESPONSE

Meeting and collaboration, frequency increases

- Major Outage
- Flood
- Drought

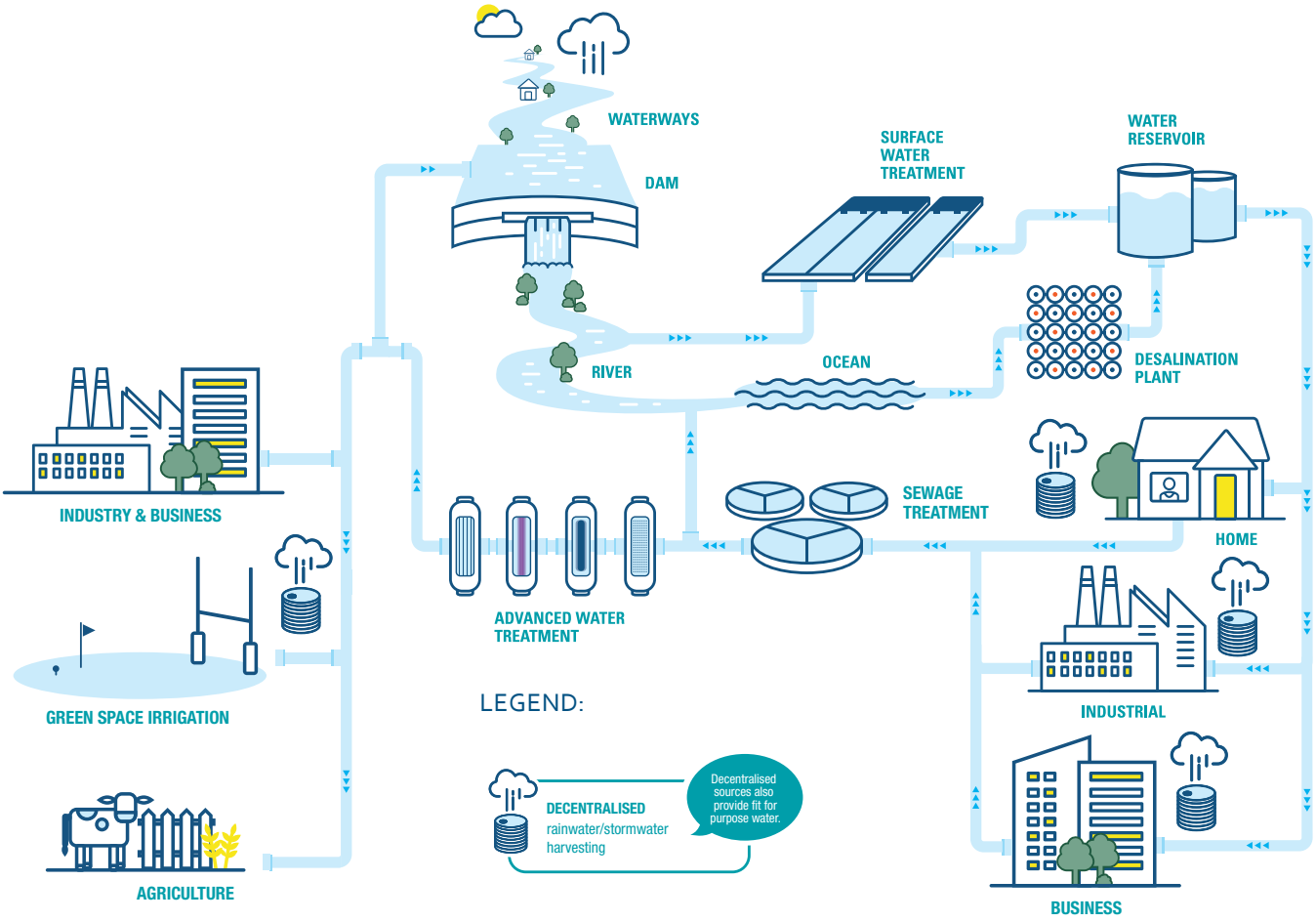
OUR WATER CYCLE

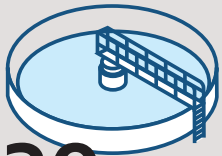
Water is sourced from dams, surface water from rivers, the sea and underground aquifers, and requires significant treatment to meet Australian Drinking Water Guidelines.

The diagram below shows the urban water cycle from the collection of raw water, through treatment and distribution to the customer, then collection from the customer as sewage where it is treated and either returned to the natural environment or reused.

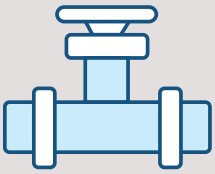
The Water for SEQ Plan focuses on effective planning within this water cycle.

We recognise stormwater also plays an important role in this water cycle. Whilst the first Water for SEQ Plan will focus largely on water supply and sewerage, the longer-term intention as indicated in the vision and strategic directions, is to also integrate stormwater into this decision-making.



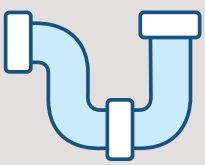


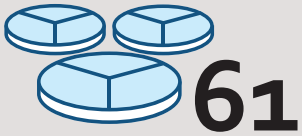
30 WATER TREATMENT PLANTS



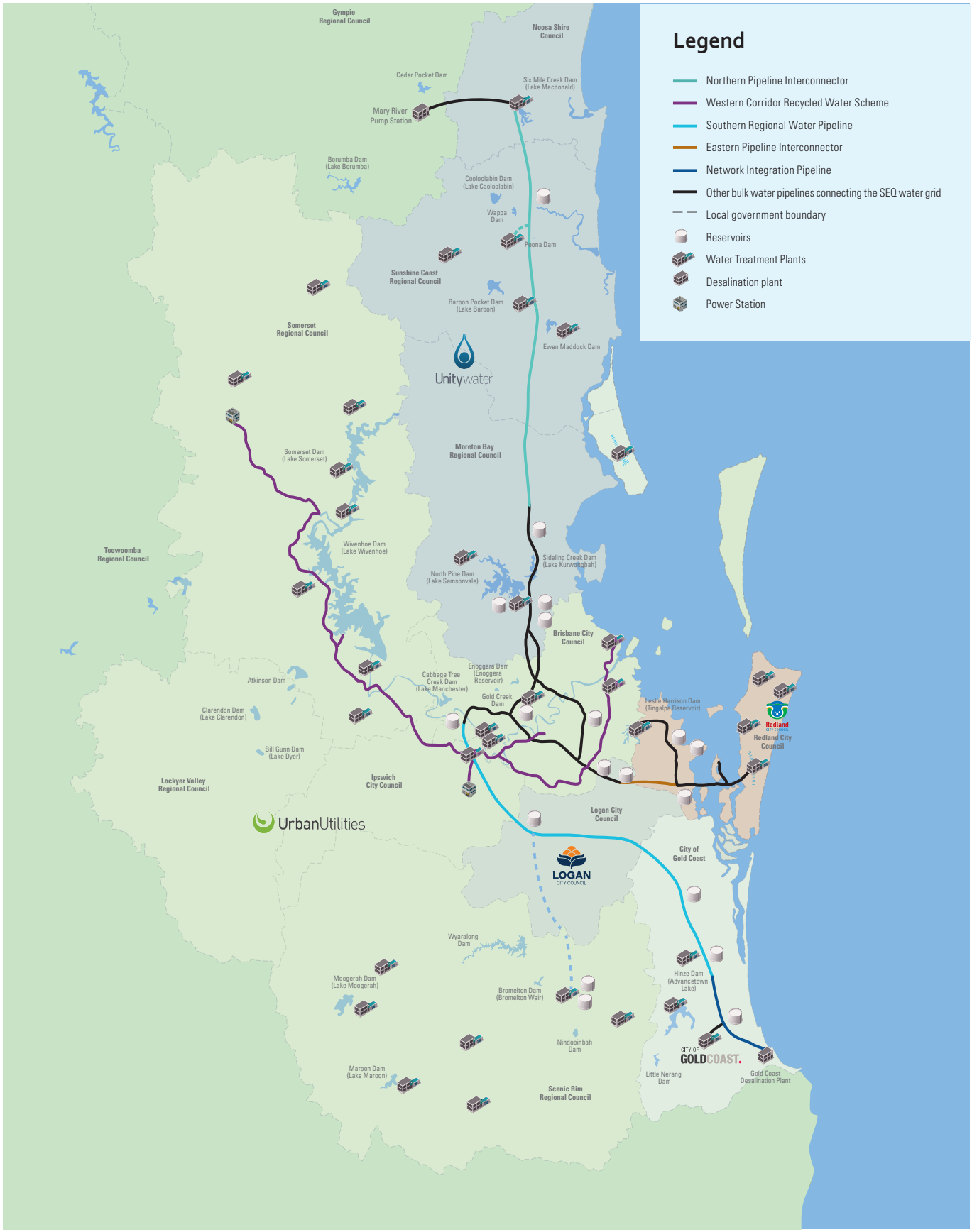
23,350 kM OF WATER MAINS

22,531 kM OF SEWER MAINS





61 SEWAGE TREATMENT PLANTS



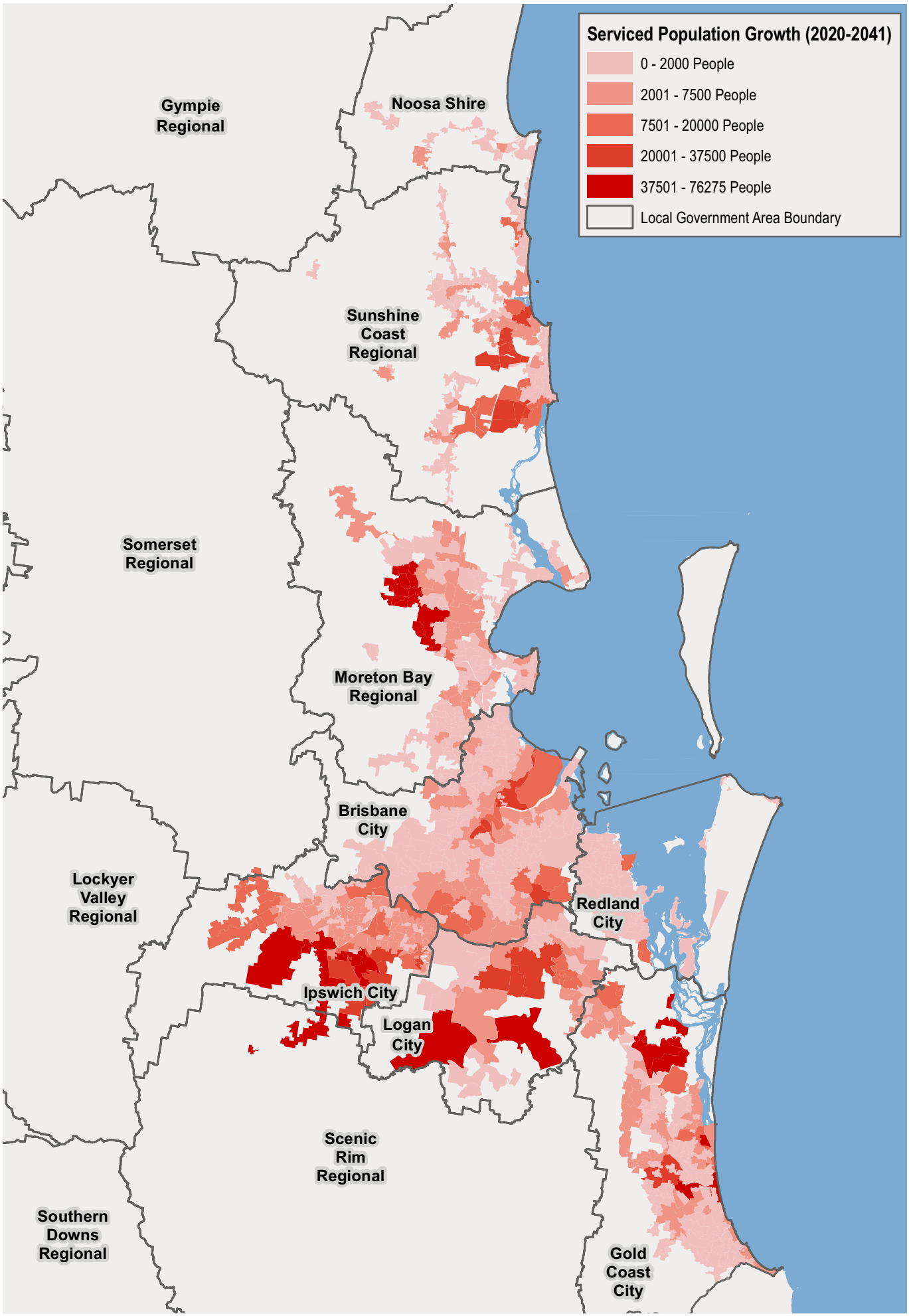
Across SEQ there are multiple water storages, water and sewerage treatment plants, pumps and pipes. The map above provides an insight into the size and complexity of the bulk water supply network across SEQ. Beyond this network, the SEQ Service Providers draw water to supply homes and business through their distribution networks. In addition the SEQ service providers collect sewage from homes and business through their sewerage networks and transport the sewage to their sewage treatment plants for treatment. There are 61 sewage treatment plants across SEQ.

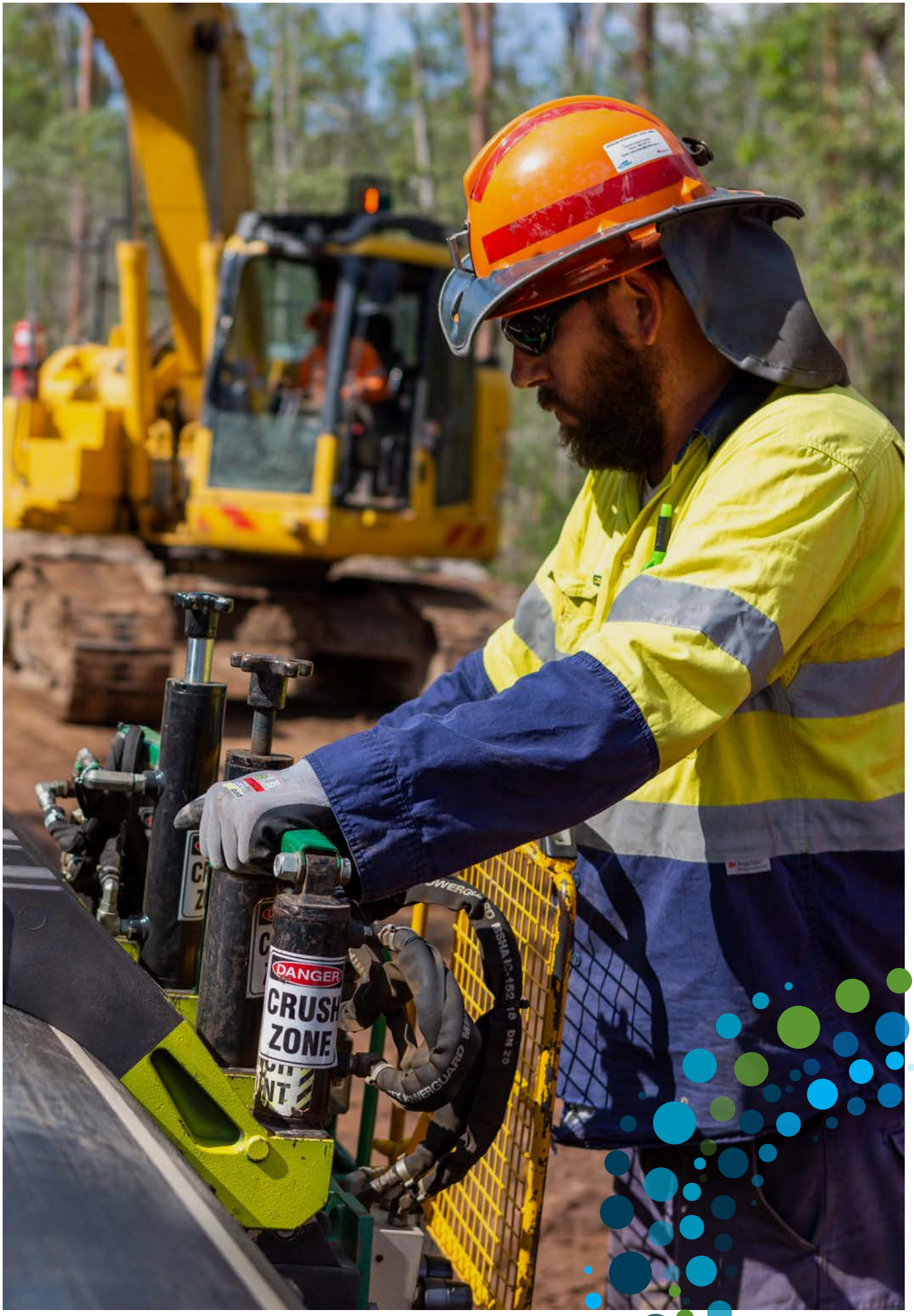
OUR GROWING COMMUNITY

The population of SEQ is expected to grow by two million people over the next 25 years. The identified significant growth areas are shown on the map on page 14. The Water Service Providers are working together to provide safe, low cost and sustainable services to the growth areas that contribute to the lifestyle and sustainability of the region.

The SEQ Water Service Providers contribute to this economic activity through significant investment of capital and economic returns to their communities.

We have a critical role in supporting and enabling regional growth in South East Queensland. This occurs by proactively providing innovative service and asset solutions in partnership with the private sector developers. We are further progressing this collaboration with better outcomes for the community through development of the Water for SEQ Plan which will support the growth targets underpinned by the SEQ Regional Plan.


Serviced Population Growth (2020-2041)
0 - 2000 People
2001 - 7500 People
7501 - 20000 People
20001 - 37500 People
37501 - 76275 People
Local Government Area Boundary
Gympie Regional
Noosa Shire
Sunshine Coast Regional
Somerset Regional
Moreton Bay Regional
Brisbane City
Lockyer Valley Regional
Redland City
Ipswich City
Logan City
Scenic Rim Regional
Southern Downs Regional
Gold Coast City


DANGER
CRUSH
ZONE

CHALLENGES AND OPPORTUNITIES

Water and sewerage services are critical now and in the future. It is essential we consider our future challenges and opportunities to continue to provide quality and best value services.

We recognise there are many challenges to consider, including climate change and population growth. We are working together to better understand these challenges, and find opportunities to further secure and enhance services, providing better outcomes for SEQ communities.

Our research has shown the following trends and challenges (see page 17) have the potential to impact how water and sewerage services are managed into the future. While developing our strategic directions the following opportunities to improve our approach to addressing these challenges have been identified:

- Continually improving our collective understanding of potential future scenarios such as increasing water scarcity and the resilience of our services so that we have confidence in continuity of safe and reliable services.
- Continuing to work with stakeholders to improve catchment and ecosystem health, and influence land use planning and development to achieve a sustainable water cycle.
- Use advances in technology to improve water and sewerage services. For example, using real-time water quality monitoring equipment to alert network operators to a problem so action can be taken before customers are affected.
- Build on collaborative processes and improve cross-sector integration, enabling more effective planning across the water cycle.
- Develop fit-for-purpose solutions and increase focus on water-energy-carbon nexus, resulting in more sustainable water and sewerage services.

IDENTIFIED TRENDS AND CHALLENGES

CLIMATE VARIABILITY AND CHANGE

The SEQ climate is highly variable and it is expected to become more so with climate change impacts including increased frequency and severity of floods, droughts and heatwaves. This will impact water demands. Increased evaporation could bring forward the need to build new water sources.

CHANGING **COMMUNITY EXPECTATIONS**

The community has increasing expectations for lower cost essential services, convenient flexible billing, ready access to information, expert service 24 hours a day and seven days per week, sustainable development including beneficial reuse of water, resilience to climate change, enhancing liveability and urban amenity, and involvement and transparency in decision making.

INFRASTRUCTURE RENEWALS AND UPGRADES

Across SEQ, water and sewerage assets require upgrades due to population growth, infrastructure that is reaching the end of its economic service life and changing standards.

GROWING **POPULATION** AND DEMAND

The SEQ population is expected to grow by more than 2 million people over the next 25 years, increasing the demand for water. Current water sources are not sufficient to serve future populations. Hence, new water sources must be delivered sustainably and affordably. Drought, higher temperatures, and changes to urban amenity and food production can also increase water demand.

RESOURCE COMPETITION

As the population grows, there will be increasing challenges to balance water requirements for drinking water, agriculture, industry, energy, environment, recreation and flood protection. Trade-offs will be needed to try and achieve best value outcomes for the community.

CHANGING LAND USE AND SOURCE WATER QUALITY

Land use activities within the source water catchments can negatively impact catchment health and raw water quality and increase the cost of water and sewage treatment, and health risks.

COMPLEX WATER **GOVERNANCE**

Current institutional arrangements have water, sewerage and stormwater managed across three sectors, making total water cycle management initiatives challenging.

GLOBAL SHOCKS

Key threats to global security, including escalating impacts from climate change, increasing cybercrime, socio-political volatility and pandemics, can affect water supply security locally. Impacts on water and sewerage services from global disruptions can include interruptions to supply chains, changes in population growth and demand, and risks to built assets, and source water quality from extreme weather events, requiring utilities to plan for the unexpected.

WORKING TOGETHER WITH ONE VISION...

Our vision and strategic directions to achieve better outcomes for the SEQ community

During 2020, our energy was focused on preparing our collaborative vision and strategic direction statements. For the first time there is now a region wide Water for SEQ vision developed by the SEQ Water Service Providers who collectively have responsibility for all water and sewerage services across the region.

This work has established the roadmap for our collaborative actions moving forward, with the resulting actions being monitored through this annual report.

We see water and sewerage services as a vital pillar in support of the economy, lifestyle and health of SEQ and we must work together through our vision and strategic directions to strengthen our work to provide better outcomes for SEQ.

We are committed to working towards the vision and will engage with other key stakeholders enabling broader outcomes to be met. To support this, we have already engaged with State and Local governments and other key stakeholders and will continue to do so. The diagram below details our vision and strategic direction statements.

OUR **VISION**

Integrated and collaborative water cycle management across South East Queensland ensures water and sewerage services are reliable, affordable, and sustainable both now and in the future.

People trust an aligned water industry to deliver outcomes that are best for the region and support the health and wellbeing of people, enhance local waterways and catchments, manage uncertainties, and drive economic prosperity for the region. The benefits and costs of an integrated and regional approach to water management are realised, pursued and shared equitably between stakeholders.

STRATEGIC DIRECTION **1**	STRATEGIC DIRECTION **2**	STRATEGIC DIRECTION **3**	STRATEGIC DIRECTION **4**	STRATEGIC DIRECTION **5**	STRATEGIC DIRECTION **6**
People understand, value and feel connected to water.	Water drives a thriving, sustainable economy.	Collaboration across organisations and sectors drives integrated, regional water outcomes.	Water services (raw water, drinking water, sewerage, recycled water, stormwater) are delivered safely, affordably and sustainably across South East Queensland's diverse communities.	Water services support and enhance quality of lifestyle and health and wellbeing of people.	South East Queensland's catchments and ecosystems are healthy and enhanced by effective water management across jurisdictional boundaries.

PROGRESSING OUR **STRATEGIC INITIATIVES**

To support achieving the vision and strategic directions we have developed strategic initiatives. These strategic initiatives are the new Key Possible Projects (KPPs) and we will map our progress of each of these in future annual reports.

STRATEGIC INITIATIVE 1

Take a leadership role and communicate to State and Local Government the value of integrated water management in achieving sustainable development and broad regional outcomes.

STRATEGIC INITIATIVE 2

Utilise existing Water Security Provider platforms and establish new inter-agency forums to improve collaboration and to support solutions across geographic and institutional boundaries.

STRATEGIC INITIATIVE 3

Develop a collaborative and strategic approach to community engagement, education and messaging around regional water issues and outcomes.

STRATEGIC INITIATIVE 4

Capture and share information, experiences and learnings across the water sector to ensure a growing body of knowledge that includes lessons from the past.

STRATEGIC INITIATIVE 5

Foster innovation in the water sector and develop pathways to translate innovation into practical outcomes.

STRATEGIC INITIATIVE 6

Maximise opportunities for delivering broad, regional benefits in the short, medium and long-term through coordinated project evaluation and decision-making supported by innovative cost benefit analysis and options assessment tools.

STRATEGIC INITIATIVE 7

Review the service standards for environmental, economic, social and cultural outcomes, to provide the best value for the SEQ community.

STRATEGIC INITIATIVE 8

Review and update project decision-making frameworks to consider updated service standards.

STRATEGIC INITIATIVE 9

Influence SEQ regional planning so integrated water outcomes are embedded in land-use and other planning, policy and regulation.

CASE STUDIES

Our 2020 case studies provide a snapshot of four projects where we have progressed towards our vision and strategic direction statements.

RESPONDING TO DROUGHT

SEQ is currently experiencing extended dry conditions, including during 2019-2020, with Water Grid storage levels reaching as low as 55.3%.

When we respond to drought, it is critical that we all work together to provide a coordinated and collaborative regional approach. This allows us to provide consistent and clear messages to the community and ensure we respond to drought effectively.

During this drought we worked together on educating the community about reducing water consumption, outlining water restriction schedules, establishing source water agreements, and planning ahead for the next drought trigger.

WHO'S INVOLVED

- City of Gold Coast
- Logan City Council
- Redland City Council
- Seqwater
- Unitywater
- Urban Utilities
- State Government

BENEFITS INCLUDE:

- By working together, and with the help of our community, we can now respond more effectively, reducing the risk of severe drought water restrictions, which will have a significant impact on the SEQ economy and our lifestyle.
- Drought preparedness planning is significantly advanced to increase resilience within the water supply system and community at large, and the region is ready to respond to continuing drought conditions
- We have a better understanding of the whole system and administrative drought response challenges and have a pathway to resolve these issues.

NEXT STEPS

- Continue collaborative planning to further increase readiness and align drought response approaches across the SEQ Water Service Providers.
- Monitor the drought situation and act in accordance with the drought response approach.
- Work closely to progress water restrictions and how to enforce the restrictions should we need to.
- Further develop communication and engagement activities for climate-independent water sources such as purified recycled water and the use of the Western Corridor Recycled Water Scheme as drought severity increases.

SERVICING THE OFF-GRID COMMUNITIES

Urban communities supplied from a water source that is not connected to the treated water grid are referred to as 'off-grid'. This includes 16 communities across South East Queensland (e.g. Canungra, Dayboro, Kenilworth, Boonah-Kalbar, Point Lookout) that range in population from 70 to more than 34,000 residents. These communities are supplied with water from sources including run-of-river, bores and local dams. These water sources can be impacted during drought. We are working together to plan for water security and growth to support off-grid communities, and the SEQ region.

WHO'S INVOLVED

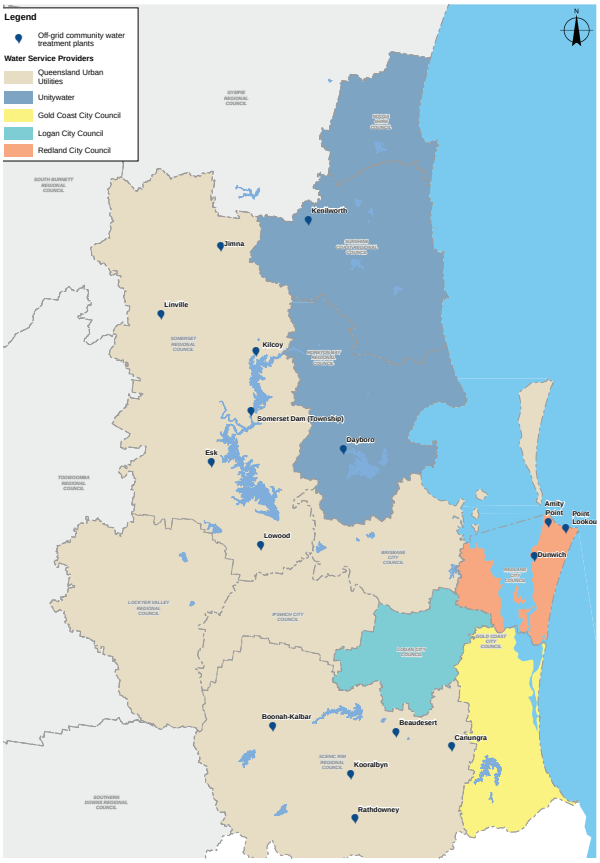
Seqwater provides bulk water supply services to these communities.

Urban Utilities, Unitywater and Redland City Council own and operate reticulated networks to distribute the water to the end-use customer.

We work together to plan and maintain service for these communities now and in the future.

BENEFITS INCLUDE:

- By working together there is a greater shared understanding of the off-grid communities' water needs, potential population growth, water source limitations and ability to provide water by other means during a drought situation.
- This increased shared understanding enables more effective planning and greater water security outcomes for off-grid communities.



Off-grid communities supplied by Seqwater

NEXT STEPS

- Finalise the overarching off-grid drought response framework and actions for across the region.
- Continue the current collaborative planning work for inclusion in the Water Security Program (2022) including:
  - new drought response plans for each off-grid community
  - long-term water security plans for each community.

WATER QUALITY SERVICE STANDARDS

Seqwater and Unitywater collaborated to define both the current and desired water quality service standards for the provision of bulk drinking water from Seqwater. There were existing stringent water quality requirements, such as the Australian Drinking Water Quality Guidelines. We wanted to do more to better define the quality required at the point of handover, and to include additional water quality parameters.

The current service standard includes water quality parameters and monitoring points not previously part of any regulatory or contractual requirement. The desired service standard represents a judgement on the water quality consumers desire and are willing to pay for and requires some additional investment and/or operational changes to achieve. Where there is a gap between the current service standard and desired service standard, an improvement plan describes how the gap will be addressed.

Seqwater is now working with the other SEQ Service Providers to progress this work.

WHO'S INVOLVED

- Seqwater
- Unitywater (complete)
- Urban Utilities (near complete)
- Redland City Council (started)
- Logan City Council (started)
- City of Gold Coast (yet to start)

BENEFITS INCLUDE:

- The water quality service standards will be used to drive towards the optimal balance of water quality and cost for consumers.
- The desired service standard provides Seqwater with a basis for operational and capital investment justification.

NEXT STEPS

- Complete water quality service standards between Seqwater and the SEQ Service Providers.
- Progress improvement action plans to drive towards the desired service standard.

DEMAND FORECASTING AND DATA SHARING – WATERHUB

Waterhub is a critical system for regulatory compliance in bulk metering management and reporting. It was established in 2009 under the bulk authority's obligation to create, maintain and administer a Metering Database to facilitate water supply and demand functions applicable to it under the water legislation. Waterhub has evolved over the last 11 years to include advanced water consumption analytics, behaviour-based demand modelling and a dynamic reporting platform.

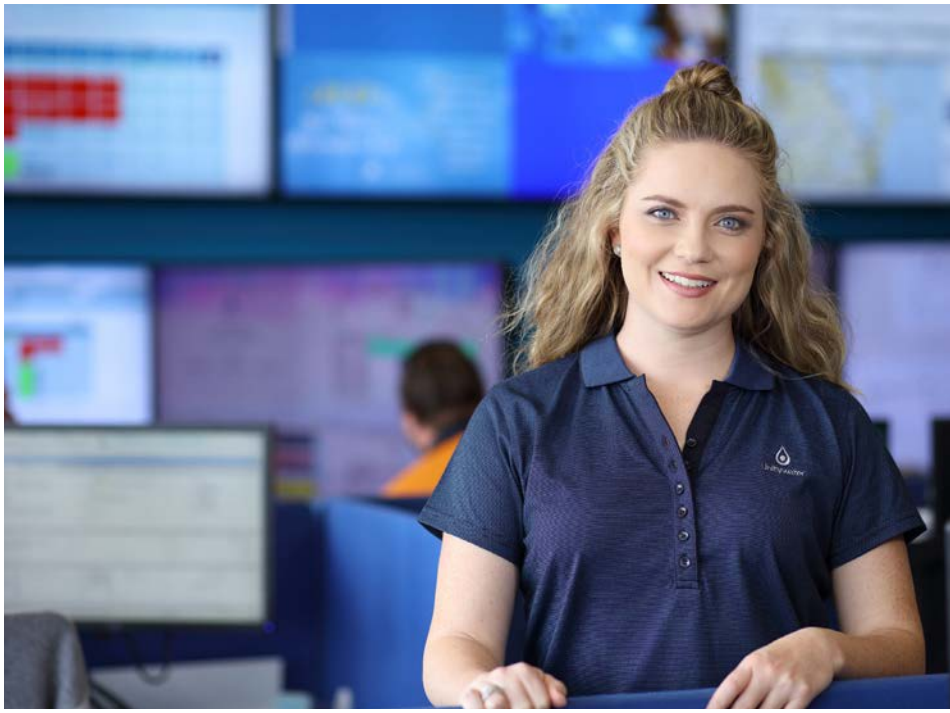
Waterhub continues to play a vital role in encouraging coordinated and collaborated water security planning between the bulk and the distribution sectors to achieve a best value for money outcomes for South East Queenslanders.

WHO'S INVOLVED

- City of Gold Coast
- Logan City Council
- Redland City Council
- Seqwater
- Unitywater
- Urban Utilities

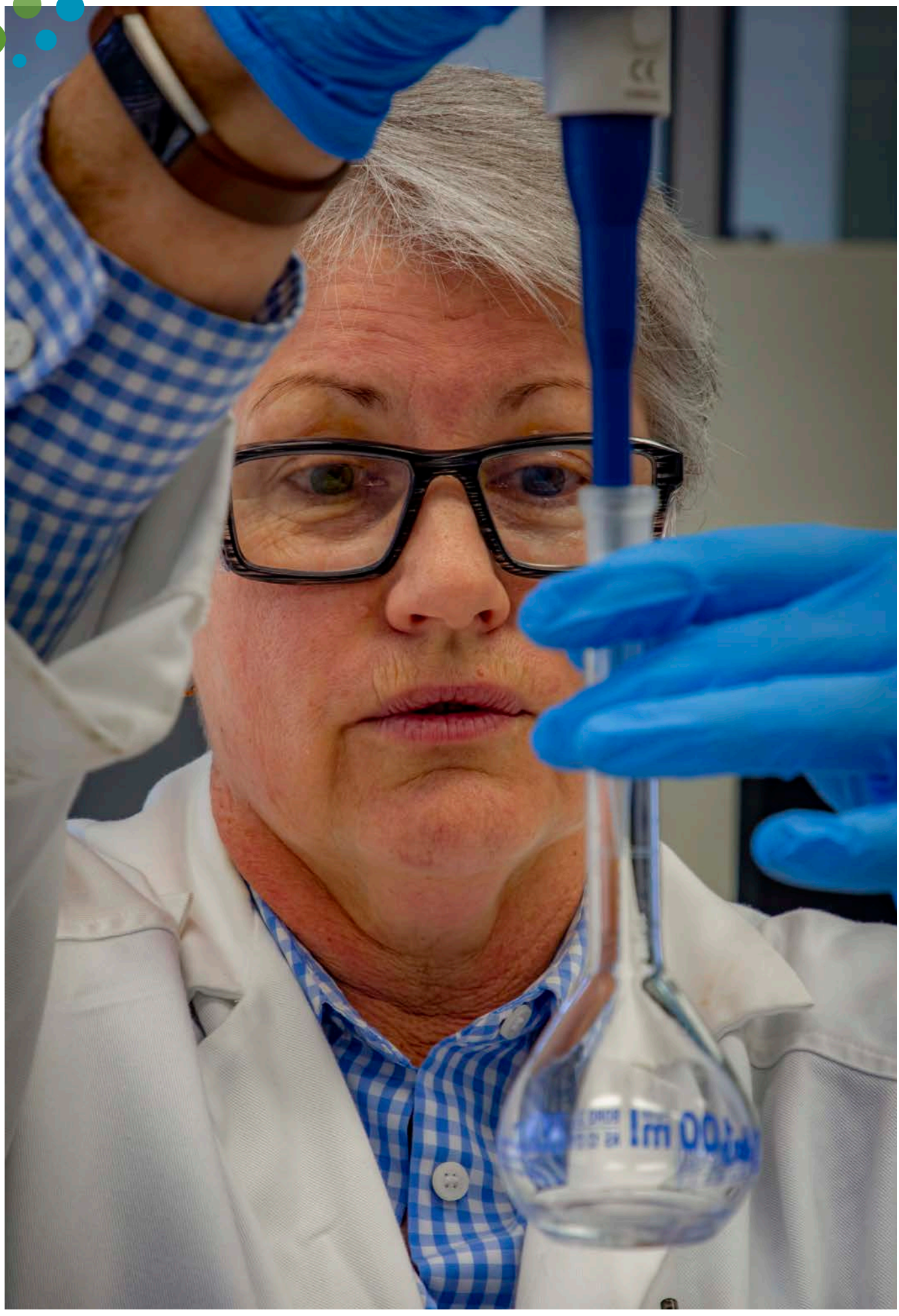
BENEFITS INCLUDE:

- Centralised bulk production information management providing quality assurance in bulk supply settlement and regulatory reporting.
- Cultivated water information sharing, consumption analytic capability development and demand forecast alignment between Seqwater and the SEQ Service Providers. This was achieved through improved accessibility and transparency to underpin water information and sharing of data analytic and reporting capabilities.
- Improved SEQ Service Provider commitment in data quality improvement collaboration and timeliness of data submission by delivering data analytic and reporting capability benefits back to the SEQ Service Providers.
- Increased collaboration has improved water consumption reporting and demand forecasting.



NEXT STEPS

- Improved sub-regional water security planning through greatly improved sub-regional water consumption analytics, reporting and demand projection.
- Implementation of an End-User Reporting Solution to support on-demand data-driven decisions.
- Incorporation of SEQ Service Providers' network metering data to improve short-term water consumption behaviour monitoring and assessment of effectiveness of demand management initiatives.



REFLECTING ON 2019 CASE STUDIES

In 2019, we developed case studies to demonstrate the benefits of working together. Many of these projects are ongoing. The table below summarises these case studies, the benefits they achieved and the current status, and how they link as actions under the new strategic initiatives. Detail on the strategic initiatives can be found in the next section.

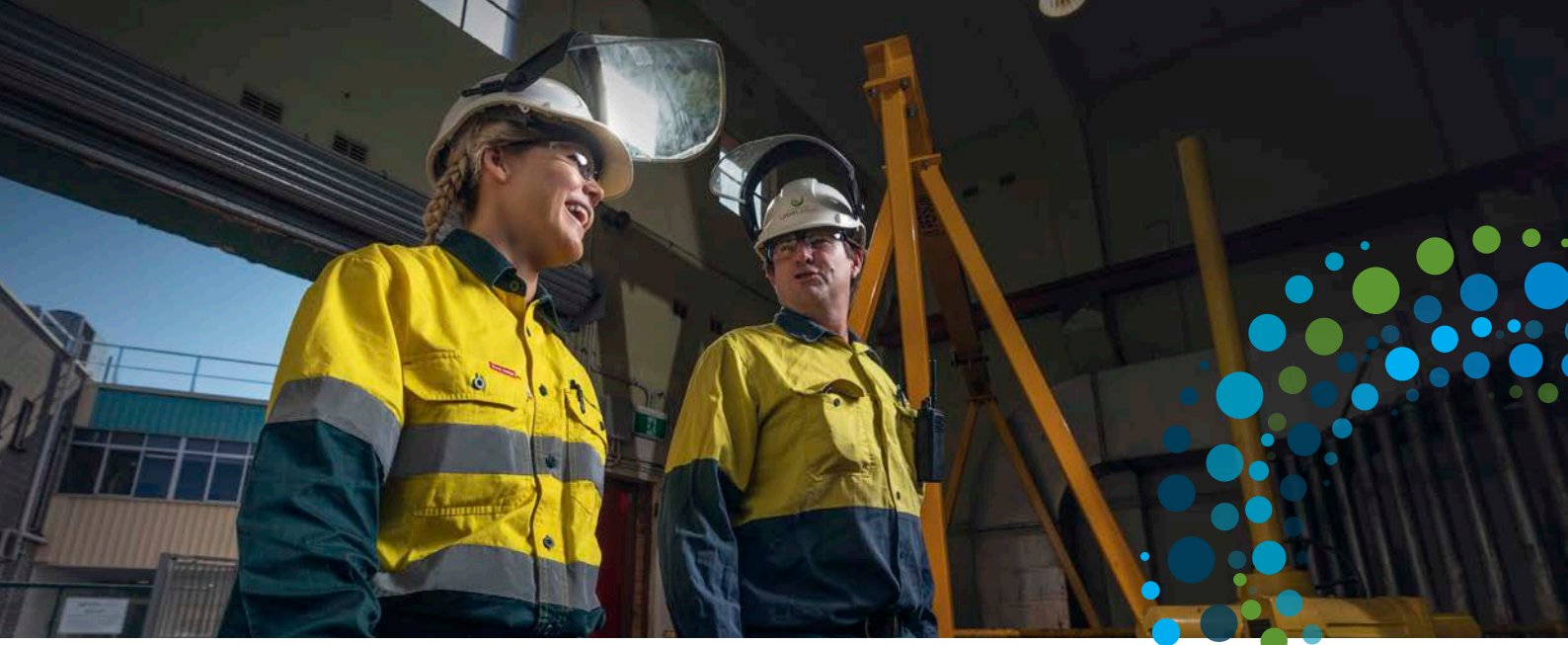
Initiative	Benefits	Status
Water for SEQ Plan (Key Possible Project) 	• Provide our community with long-term security for water and sewerage services. • Deliver on the intent of the SEQ Regional Plan. • Demonstrate how we are working together to provide value to SEQ communities through collaboration and mature strategic decision-making processes.	Plan under development with key activities including the development of the vision and strategic directions completed in 2020. This project will be ongoing.
Scenario planning for an unpredictable future 	• Develop an understanding of individual SEQ water industry organisation needs and how decisions impact upon them. • An understanding of possible future risks and opportunities to guide long-term planning. • A basis for commonality in scenario testing for long-term water security in South East Queensland.	This work will be used in the Water Security Program (due 2022) to improve resilience of the water supply to changes in climate and other planning assumptions.
Water Future Program (Key Possible Project) 	• Partnerships: At the core of the Program's approach is working in partnership as a water sector and with government, community and industry partners. • Opportunities to work together include the H2O Kids educational program (prep to Year 12), community events, social research and engagement	Obtaining and applying the insights gained from listening to and understanding how SEQ communities value water and what considerations are important for water management now and in the future. These insights will also inform how we continue to effectively engage with SEQ communities in a meaningful way. This program is ongoing.
Drought simulation event 	• Enhance our level of preparedness and support the resilience of our communities in times of drought. • Continual improvement of our collaborative drought response	Additional events occurred in 2020 including participation from State and Local Government. Simulation events will occur on an ongoing basis.
SEQ water supply system secondary disinfection optimisation (Key Possible Project) 	• Improved disinfectant stability, allowing more efficient and effective management of residuals. Create cost efficiencies for Water Service Providers with respect to maintaining secondary disinfection	Currently progressing through recommendations of the 'Secondary Disinfection Improvement Plan': • Several minor projects completed • 'Kimberley Park Pipework Modifications' underway • 'Central Region pH Increase Impact Assessment' will be complete 2020. Early engagement with key customers has commenced • 'North Pine and Mt Crosby Water Treatment Plants pH Correction Projects' progressing with delivery forecast for 2022/23.

Initiative	Benefits	Status
Improvement of water quality in the South Pine Water Supply Scheme 	• Improved disinfection levels throughout the network. • Improved public health outcome.	Planning is underway by Seqwater to raise the pH of treated water from Mount Crosby and North Pine Dam Water Treatment Plants (linked to the secondary disinfection optimisation project). In addition, a chloramination dosing facility recently constructed at the Aspley Reservoir by Seqwater, is now operational. Analysis of options to improve water quality is completed. The water quality improvements offered by each option have been assessed. The selected solution involves construction of new water mains and isolation of an existing reservoir. The cost of this option is $10M. The reservoir will be maintained to service future populations. Construction will occur over the next three to four years.
Co-ordinated catchment management activities (Key Possible Project) 	• A robust framework that provides cost-effective management of sediment and nutrient pollution in SEQ. • Catalyse development of a long-term cost-effective roadmap for achieving environmental values and water quality objectives of Moreton Bay. • Provision of wider community benefits, such as biodiversity or urban cooling, through delivery of environmental improvement projects such as establishment of riparian vegetation.	The project is ongoing. The project team facilitated a successful workshop at the 2019 Riversymposium in Brisbane to challenge whether nutrient trading can deliver better water quality outcomes for SEQ beyond offset deals. The two key research and development projects on catchment resilience and nutrient equivalency progressed well and on schedule but were temporarily suspended due to Covid-19 business impacts but are now recommencing.
Stapylton sewerage catchment servicing 	• Community benefits from the delay or elimination of the need to construct significant new assets. • Potentially significant regional cost savings from mitigated upgrades and bring forward costs at Pimpama Sewage Treatment Plant, and the City of Gold Coast Recycled Water Release System. Reduced energy costs through localised treatment and discharge. • Breaking down administrative boundary silos and sharing the benefits of effects-based planning. • Better environmental outcomes through dilution of hard-to-treat trade waste by combining with a larger municipal catchment.	Final negotiations underway between Councils. Detailed design for key infrastructure underway. Construction works to be completed by June 2022.

Initiative	Benefits	Status
Water system planning to provide better outcomes for the community 	• We are working together to ensure the most prudent and cost-efficient Water Grid and distribution network solutions are identified and implemented. • Being involved in recent joint planning, we have a better understanding of future bulk water supply challenges and opportunities to effectively plan the wider network. • Clarity has been achieved on the servicing of major development areas considered in the local area planning. • The benefit of working together is that the lowest-cost solution frequently entails working within both the bulk (Seqwater) and distribution (SEQ Service Provider) networks. • This type of planning is a collaborative approach which allows the most prudent and cost-effective solution to be identified and implemented for the community.	Local area plans continue to be developed across the region
Continuous improvement in Emergency Management (Building operational emergency management capability) 	• Review of the validity of current plans and familiarisation of these arrangements within the water sector. • Exploring and enhancing the understanding of the roles of other agencies in major water sector emergencies in Queensland. • Improved shared capability across all SEQ Water Service Providers in managing an event of this nature should it occur.	SEQ Water Service Providers continued to enhance the emergency management capability by conducting Exercise Hydra. The annual exercise supports practise and validation of the arrangements under Bulk Authority Emergency Response Plan (ERP), and how the sector works collaboratively to support delivery of water services to SEQ customers during emergencies. The exercises engage a range of key organisations outside the sector like Queensland Health, Department of Natural Resources, Mines and Energy and representatives under Queensland Disaster Management Arrangements.
Total water cycle planning for Sunshine Coast and Noosa 	• The Sunshine Coast and Noosa local government areas are rapidly growing coastal communities. • Large greenfield development areas exist at the southern end of the Sunshine Coast and the development of these areas provides an opportunity to think carefully about the provision of efficient and environmentally responsible water and sewerage services. • Representatives of Seqwater, Unitywater and the Sunshine Coast Regional Council and Noosa Shire Council are collaborating to guide the plan. • The group are focused on delivering a plan which will contribute to the sustainable growth of the two local government areas by reducing demand on drinking water, improving the health of natural waterways and reducing the amount of energy used in the urban water cycle. • Achieving of these outcomes will protect the environment from the impacts of growth, urban amenity is improved and the local economy will be boosted by using recycled water and the nutrients in this water to irrigate and fertilise commercial crops that generate new jobs.	Unitywater will deliver the first draft of the Total Water Cycle Management plan in 2021. The draft will include outcomes of targeted consultation with 28 stakeholder groups, including local and state government, and environment and community groups. Consultation has covered a wide range of issues for each river catchment, such as growing sediment loads due to poor land management to a low level of use of recycled water. Consultation has also revealed opportunities to add value to the local economy by using recycled water to support local horticulture and create new jobs.

Initiative	Benefits	Status
Improvement in water quality for the Caloundra, Redcliffe and Caboolture water supply scheme	• Improved disinfection levels throughout the network. • Reduced water age resulting in better taste and odour outcomes.	**Caloundra** Unitywater has completed investigation of options to improve water quality using the same methodology as for the investigation of the South Pine Water Supply Scheme. This investigation identified improvements that would be realised by installing a disinfectant dosing facility at water supply reservoirs in Sugar Bag Road, Caloundra and other potential options for improvement which require further investigation. Unitywater has delivered the new disinfectant dosing facility which has improved water quality outcomes for Unitywater's customers. **Redcliffe** Investigation of water quality improvements is planned to commence in the first quarter of 2021/22. **Caboolture** Work has commenced on an investigation of water quality improvements. This work is expected to be completed in February 2021.
Catchment activities - Caboolture River 	• Unitywater's customers benefit from this project because it is a low-cost approach to management of nutrients which contributes to keeping the cost of sewage treatment services low. • The broader community and the environment benefit because this project combined with other nutrient management projects, including the proposed Wamuran Irrigation Scheme and Unitywater's sewage treatment plant upgrade program, will enable planned development to occur while protecting the Caboolture River from the load of sediment and nutrients in treated sewage effluent that is generated by population growth. • The improved health of the river will contribute to the lifestyle of existing and future populations through improved recreational amenity and biodiversity.	Bellmere Under its nutrient management program, Unitywater has completed rehabilitation of an eroded section of bank of the Caboolture River located in Bellmere. This included planting and establishment of approximately 500 trees and shrubs. This has contributed to improvement of water quality by preventing sediments and nutrients entering the river and biodiversity by restoring riparian vegetation. Lower Caboolture River Unitywater is preparing designs for rehabilitation of eroding and collapsing banks of the Caboolture River (between the Caboolture River Weir and Bakers Flat). Unitywater plans to commence construction of the rehabilitation works early in 2021 which will involve rehabilitation of approximately 4.3 km of river bank and prevent approximately 3.5 tonne per annum of nitrogen entering the river.

STRATEGIC INITIATIVES



IMPLEMENTING THE WATER FOR SEQ STRATEGIC INITIATIVES

As we progress towards achieving our vision and strategic directions, we are implementing a range of actions. In 2020, the implementation has largely been on Water for SEQ foundational pieces of work. This work has resulted in greater collaboration across the SEQ Water Service Providers, increased regional knowledge, provided collaborative focus on best value outcomes for the SEQ community and over time will result in financial savings and economic benefit for SEQ. The table below highlights the actions completed for each strategic initiative this year.

STRATEGIC INITIATIVE 1

Take a leadership role and communicate to State and Local Government the value of integrated water management in achieving sustainable development and broad regional outcomes.

Actions completed this year

Developed Water for SEQ vision and strategic directions to provide clear strategic pathway for the SEQ region.

Commenced engagement with State and Local Government to encourage involvement in Water for SEQ.

STRATEGIC INITIATIVE 2

Utilise existing Water Security Provider platforms and establish new inter-agency forums to improve collaboration and to support solutions across geographic and institutional boundaries.

Actions completed this year

Completed foundational work to establish networks and governance to support the progression of Water for SEQ.

Progressed local area planning to increase efficiencies in planning and operation between Seqwater and SEQ Service Providers.

STRATEGIC INITIATIVE 3

Develop a collaborative and strategic approach to community engagement, education and messaging around regional water issues and outcomes.

Actions completed this year

United approach to drought communications.

Ongoing collaborative work around community education through the Water Future program (KPP) (see case study update).

STRATEGIC INITIATIVE 4

Capture and share information, experiences and learnings across the water sector to ensure a growing body of knowledge that includes lessons from the past.

Actions completed this year

Building operational emergency management capability (see case study update).

Increased information sharing between the water service providers through networks, workshops and other platforms.

Presentations at professional conferences to promote Water for SEQ and collaborative planning.

Collaborative work to improve planning for external shocks and influences.

Actively sharing updates on relevant research projects and technology innovations and on projects where we are partners.

Actively sharing outcomes of research and assessment with interstate and international water service providers.

STRATEGIC INITIATIVE 5

Foster innovation in the water sector and develop pathways to translate innovation into practical outcomes.

Actions completed this year

Jointly supported the Clean Australia and Water Security Co-operative Research Centre (CRC) bids.

Jointly supported an ARC Linkage Project bid and a Water Research Australia project bid (Seqwater and Urban Utilities) both of which were successful in attaining funding and should deliver benefits to both organisations.

STRATEGIC INITIATIVE 6

Maximise opportunities for delivering broad, regional benefits in the short, medium and long- term through coordinated project evaluation and decision-making supported by innovative cost benefit analysis and options assessment tools.

Actions completed this year

Scenario planning for an unpredictable future (see case study update).

Drought simulation event (see case study update).

SEQ water supply system secondary disinfection optimisation (KPP) (see case study update).

Improvement of water quality in the South Pine Water Supply Scheme (see case study update).

Co-ordinated catchment management activities (KPP) (see case study update).

Ripley / Bundamba change in servicing strategy (see case study update).

Stapylton sewerage catchment servicing (see case study update).

Water system planning to provide better outcomes for the community (see case study update).

Established a regional demand forecast for consistent planning.

Established systems and platforms to better share demand data (see case study).

Established regionally consistent drought water restriction schedules and agreement to implement at drought triggers as detailed in the Water Security Program.

Participating in the Adaptive Planning Community of Practice which will provide an enhanced decision-making tool.

STRATEGIC INITIATIVE 7

Review the service standards for environmental, economic, social and cultural outcomes, to provide the best value for the SEQ community.

Actions completed this year

Commenced work on drought risk appetite principles and appetite for the region.

Commenced work on increased demand management considerations and setting of long-term demand targets.

Developed water quality service standards for the region (see case study).

STRATEGIC INITIATIVE 8

Review and update project decision making frameworks to consider updated service standards.

Actions completed this year

This work will progress following actions from strategic initiative 7 above.

STRATEGIC INITIATIVE 9

Influence SEQ regional planning so integrated water outcomes are embedded in land-use and other planning, policy and regulation.

Actions completed this year

Commenced development of the Water for SEQ Plan (KPP) (see case study update).

Gained a greater understanding of the impact of decentralised schemes and their impact on water security.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