

2018-19 South Australian Water Corporation **Annual Report**

FOR THE YEAR ENDING 30 JUNE 2019



Government of
South Australia



SA Water



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Letter of Transmittal

27 September 2019

The Honourable David Speirs MP
Minister for Environment and Water

Dear Minister

On behalf of the Board of SA Water, I am pleased to present the Corporation's Annual Report for the financial year ending 30 June 2019.

The report is submitted for your information and presentation to Parliament, in accordance with requirements of the *Public Corporations Act 1993* and the *Public Sector Act 2009*.

This report is verified as accurate for the purposes of annual reporting to the Parliament of South Australia.



Andrew Fletcher AO

Chair of the Board

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A message from the Chair



Water services have great capacity to build a resilient community through health and wellbeing, cooling green spaces and enabling economic growth, all the while supporting daily life. All factors which contribute to increasing liveability in South Australia.

The Corporation has a long history of innovation and the Board continues to look beyond a 20-year horizon to actively position and prepare SA Water as a utility of the future.

As a leader in many fields, it is important SA Water draws on global trends and developments to understand how customers' needs are changing. The Corporation's vision and strategy remain strong and focused on investing to create the future services and life customers will expect. Lessons learnt and best practice are also being gathered from different sectors, beyond the water industry. All the while, the Corporation continues to deliver for customers' evolving water services needs while remaining focused on getting the basics right in the delivery of these services.

In 2018-19, SA Water joined the United Nations' Global Compact, the world's largest corporate sustainability initiative which supports progress towards achieving the Sustainable Development Goals. These goals seek to make positive change for people, planet and prosperity by 2030.

Sustainability – of services, community and environment – is a global issue which the Corporation is working to address at a local level. With significant investment now underway in renewable energy generation and storage, there is a focus on improving sustainability while contributing to low and stable pricing, and ever reliable services.

By embracing innovation and new ideas, SA Water is supporting the state's economy. One example this year is the collaboration on the first commercial pilot of a molten silicon energy storage system built at the Glenelg Wastewater Treatment Plant by South Australian company 1414 Degrees. Providing an opportunity to trial a new application of this technology in the capture and use of biogas, SA Water is demonstrating how partnerships and innovation are helping to foster homegrown solutions for a more sustainable future.

With a view to meeting customers' evolving expectations, work is underway to implement a new model for service delivery in metropolitan Adelaide. Comprising two parts – production and treatment, and field services – this refreshed approach will combine the best of local knowledge and experience with national and international expertise. Partnerships with industry expertise will enable continuous improvement in customer service delivery.

SA Water's workforce is its biggest asset and the safety of our people, customers and the wider community remains an unwavering focus for the Board. It is pleasing to see such a strong safety culture in the Corporation. In particular, results from the State Government's *I Work for SA* survey show that 92 per cent of the workforce agree SA Water is committed to workplace safety.

With a strong connection to their local communities across the state, the contributions from the skilled, dedicated and adaptive workforce has ensured the Corporation continues to deliver for more than 1.7 million South Australians every day.



Andrew Fletcher AO
Chair of the Board

A message from the Chief Executive



With a focus on creating a better life in South Australia, this year we have made some significant achievements towards our vision.

Investing in renewable energy generation and storage, as we work towards an ambitious goal of zero net electricity costs from 2020-21, is an important contributor to a sustainable future for our business and our state. Neutralising large operating costs like electricity – which reached \$83 million in 2018-19 – contributes to low and stable prices over time for our customers.

Digital transactions continue to increase in popularity among our customers and in response we are developing and growing our digital offering. This includes our website, online account management options and use of social media. Visits across our websites were up 15 per cent from 2017-18, and self-service transactions through *mySAWater* grew nearly 90 per cent. In May 2019 we achieved a new record with more than 16,000 online transactions in just one month.

As a member of the cross-government taskforce responsible for opening reservoir reserves for public access, we worked closely with the community and a range of government agencies to open Myponga Reservoir Reserve to the public in April 2019. With a focus on supporting the implementation of this government initiative, we successfully balanced public access with ensuring drinking water quality and security, attracting more than 6,000 visitors to Myponga Reservoir Reserve in its first three months of being open.

Our shift to a harm based approach to safety has supported and influenced the engagement of our people and there has been a noticeable improvement in our proactive safety reporting of potential harm. This shift is enabling conversations through sharing opportunities to learn within our business, as well as with our partners and wider supply chain.

With a high participation rate of 74 per cent in the South Australian Government's *I Work for SA* survey, our people indicated strong levels of engagement. Across all major indicators, our people tracked above the public sector average, including engagement levels, leadership, values and wellbeing. In particular there was a high commitment to workplace safety, and a willingness to go above and beyond and suggest improvement ideas. The survey also identified opportunities for improvement such as further simplification of processes. Results are informing our ongoing work to foster a constructive and collaborative culture right across our business.

This year's long, dry summer and autumn saw an increase in water sales and a corresponding increase in energy used to deliver this extra water to our customers. With sound management, we responded to customer demand while also meeting our budgeted return to government.

In November 2018 we recognised our people who went above and beyond delivering great outcomes for our customers at our inaugural Innovation and Excellence Awards. Competition was strong across the seven award categories. Among the winners we celebrated the implementation of trenchless pipe repair techniques, improved sludge lagoon monitoring, community engagement outcomes from the Hallett Cove Wastewater Pump Station upgrade, and the retrieval of a vehicle from the Blue Lake/War War in Mount Gambier.

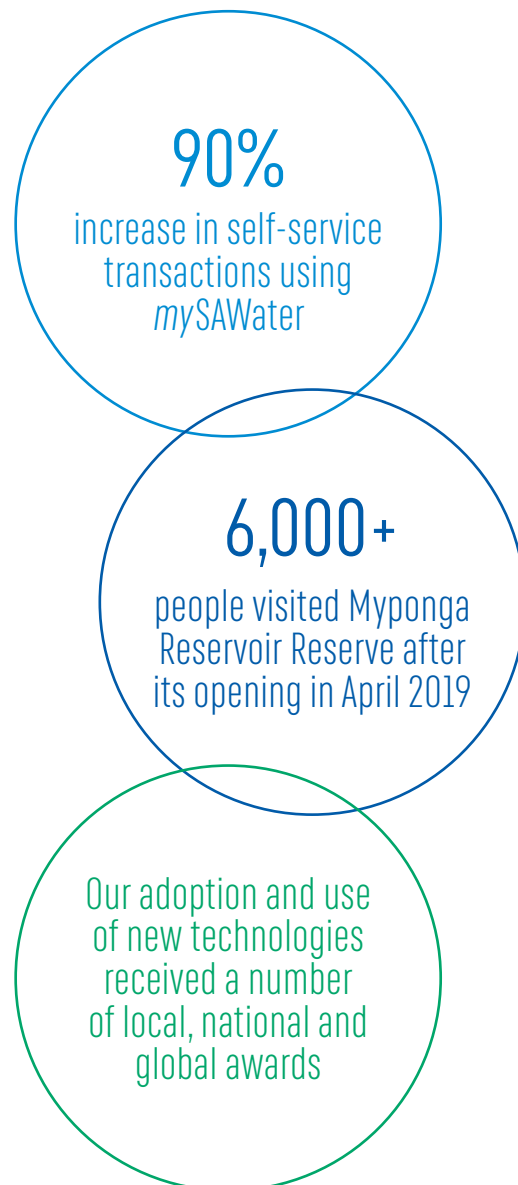
Receiving a number of local, national and global awards, we are leading the way in the water industry, particularly for our adoption and use of new technologies for customer, commuter and community benefit.

The Adelaide smart water network trial received global recognition when it was awarded a bronze medal at the International Water Association Awards in September 2018, edging out 160 entries from 45 countries in the Smart Systems and the Digital Water Economy category. The network was also acknowledged at the Institute of Asset Management Awards in London winning the Customer Service Award in November 2018.

Our smart wastewater network in trial underway in Stonyfell and Gawler was named the Best Industrial Internet of Things Project at the 2019 Internet of Things Awards.

Recognition was also received for our water quality testing laboratories with awards for the use of advanced DNA testing, combating greenhouse gas emissions from wastewater systems, and for Cryptosporidium research.

Change is all around us and it will continue as we prepare for the next regulatory period. *Our Plan 2020-24* is well advanced, having been prepared together with our customers. Extensive engagement with customers and representative groups has ensured we understand what they value and expect from us, so we can continue to deliver world class water services that support a better life in South Australia.



Roch Cheroux
Chief Executive

About SA Water

Our vision

World class water services for a better life.

Our values

Together we deliver safely and stand accountable, genuine and innovative every day.

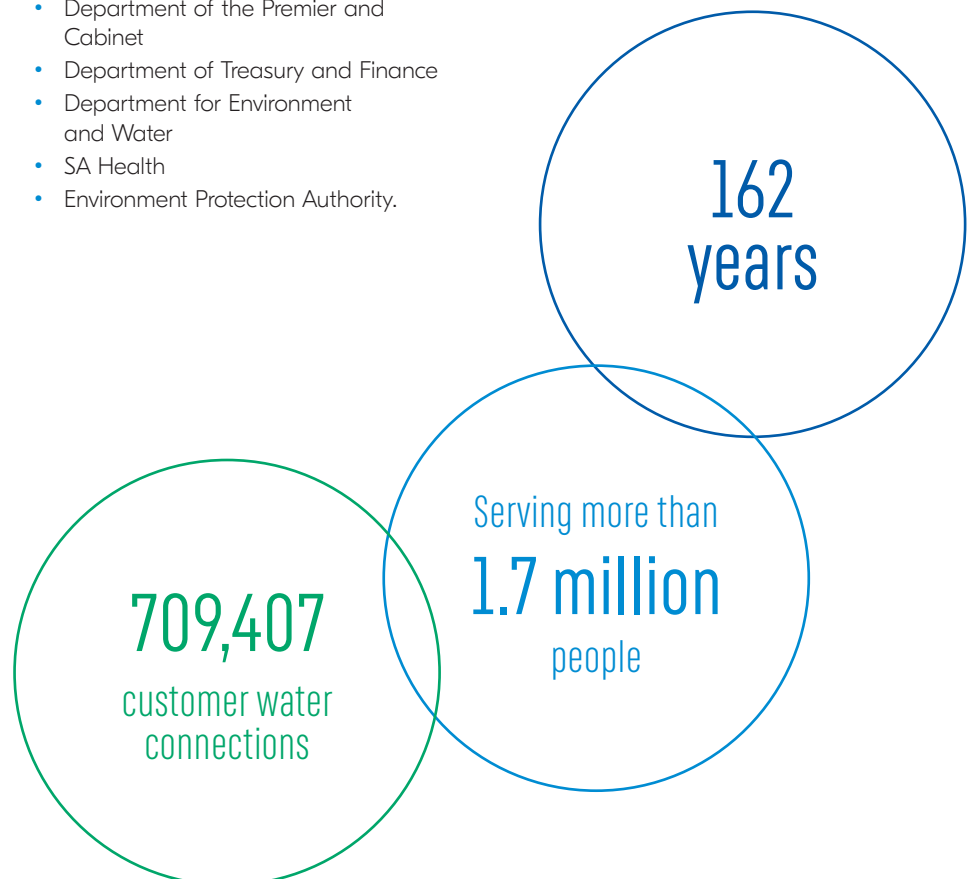
Our organisation

We are South Australia's leading provider of water and sewage services for more than 1.7 million people. For more than 160 years we have been working together with South Australians to ensure a reliable supply of safe, clean water and a dependable sewerage system. We are committed to ensuring our services represent excellent value.

As a statutory corporation we report to an independent Board and balance the delivery of services in a competitive market with our responsibility to provide a return to government.

We are included in the portfolio of the Minister for Environment and Water and work closely with a number of South Australian government agencies including:

- Department of the Premier and Cabinet
- Department of Treasury and Finance
- Department for Environment and Water
- SA Health
- Environment Protection Authority.







Our strategy



The world and our customers shape everything we do, and they are constantly changing and evolving, so we monitor global megatrends and explore the impact they may have on us and our customers, now and into the future. By anticipating future directions, we are best placed to deliver our vision of *world class water services for a better life*.

Our strategy sets our path as we work towards this vision, guiding the decisions we make each day. We listen to our customers to understand what matters to them, and include this insight in our strategic goals, outlined below.

Global megatrends and future directions informed our 10-year corporate business plan, developed in 2018-19. In late 2018 we developed future customer personas to further enrich our business planning process.

Getting the basics right every time

Customers expect us to get the basics right: the safety and availability of safe drinking water and dependability of sewerage services. We are responsive when things go wrong, fix faults quickly and meet our regulated responsibilities. Customers expect our prices to be low and stable.

Working together

As a team, our productive, respectful relationships with our customers, regulators and stakeholders are key to delivering services our customers value. Understanding and supporting our customers is vital.

Leading the way

We are leaders nationally and globally to give our customers confidence that we are innovating to achieve great outcomes for them. We support the South Australian community and economy.

Capable and committed team

Our experienced and capable team consistently lives our values with actions and behaviours to safely deliver for our customers every day. Our people are valued brand ambassadors.

Keeping it simple

Simple, easy, customer friendly processes are important to create value for our customers.



WE SUPPORT



Supporting the Sustainable Development Goals

In 2015, the United Nations General Assembly adopted 17 [Sustainable Development Goals](#) (SDGs). These goals are part of a global development blueprint through to 2030. They are universal, transcend borders and apply across the workplace, marketplace and community. They seek to reduce poverty, inequality, unrest and environmental stress around the world. Water, essential to life, plays an integral role to achieving each goal.

We are a signatory to the [Australian water industry's commitment](#) to support the SDGs as a plan of action for people, planet and prosperity. We are doing our part to achieve these goals while delivering world class water services for a better life.

This year we joined as a participant of the United Nations Global Compact, the world's largest corporate sustainability initiative which exists to implement universal sustainability principles and support progress towards achieving the SDGs.

As a participant in the Global Compact, we are actively involved in achieving the SDGs. There are 170 Australian businesses and organisations supporting the Global Compact with 30 signed up as participants, and the remainder as signatories. Participants pledge to:

- operate responsibly, in alignment with universal sustainability principles
- take actions that support the society around them
- commit to the effort from the organisation's highest level
- report annually on their ongoing efforts
- engage locally where they have a presence.

The Global Compact supports businesses and organisations to be guided by the [Ten Principles](#) of human rights, labour, environment and anti-corruption, and to contribute to the 17 SDGs.

Our services

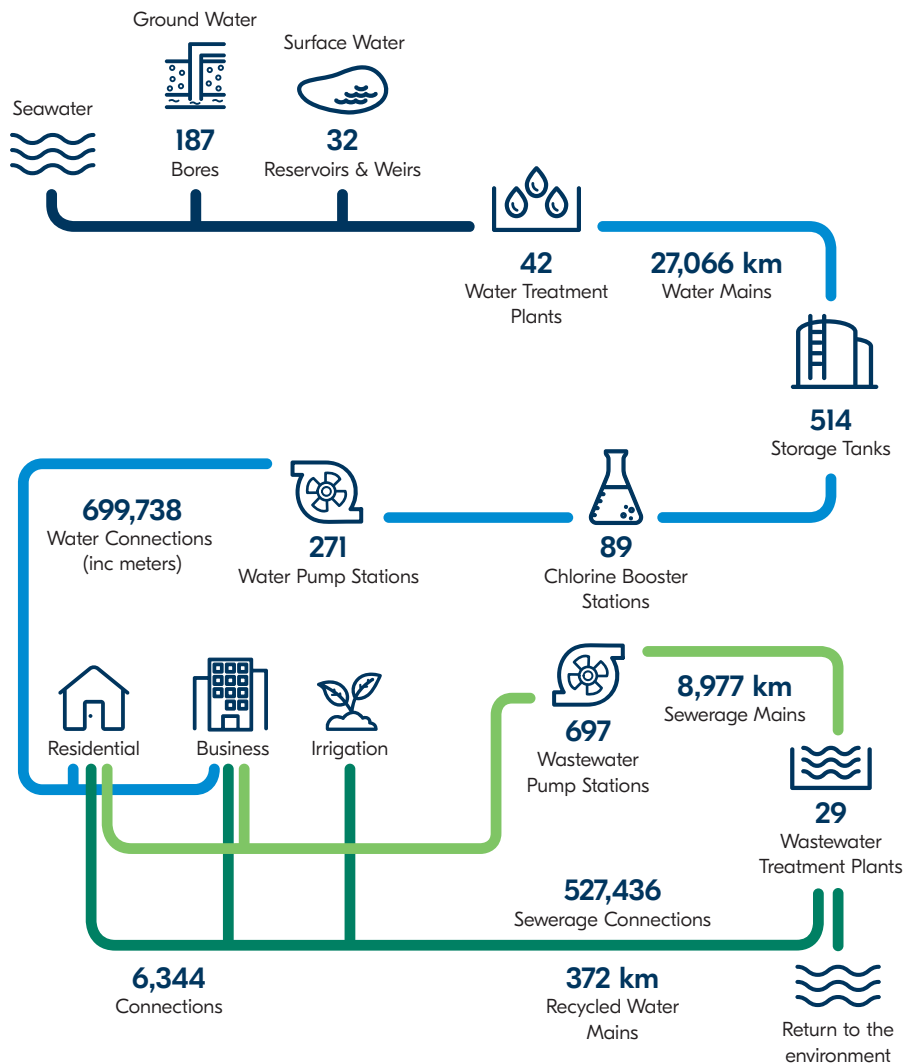
Each year we supply more than 220 billion litres of water to South Australians via our extensive and largely hidden pipes deep underground across our cities, suburbs and towns.

Every day we're providing essential services and as one of the most efficient water utilities in Australia, we are continually improving the way we do this to achieve our vision of world class water services for a better life. With the aim of keeping prices as low and stable as possible for our customers, we strive to make smart, long-term investments, the best use of new technologies, and to deliver on our commitment to efficiency.

We remain focused on meeting our legal and regulatory responsibilities as well as what is most important to our customers.

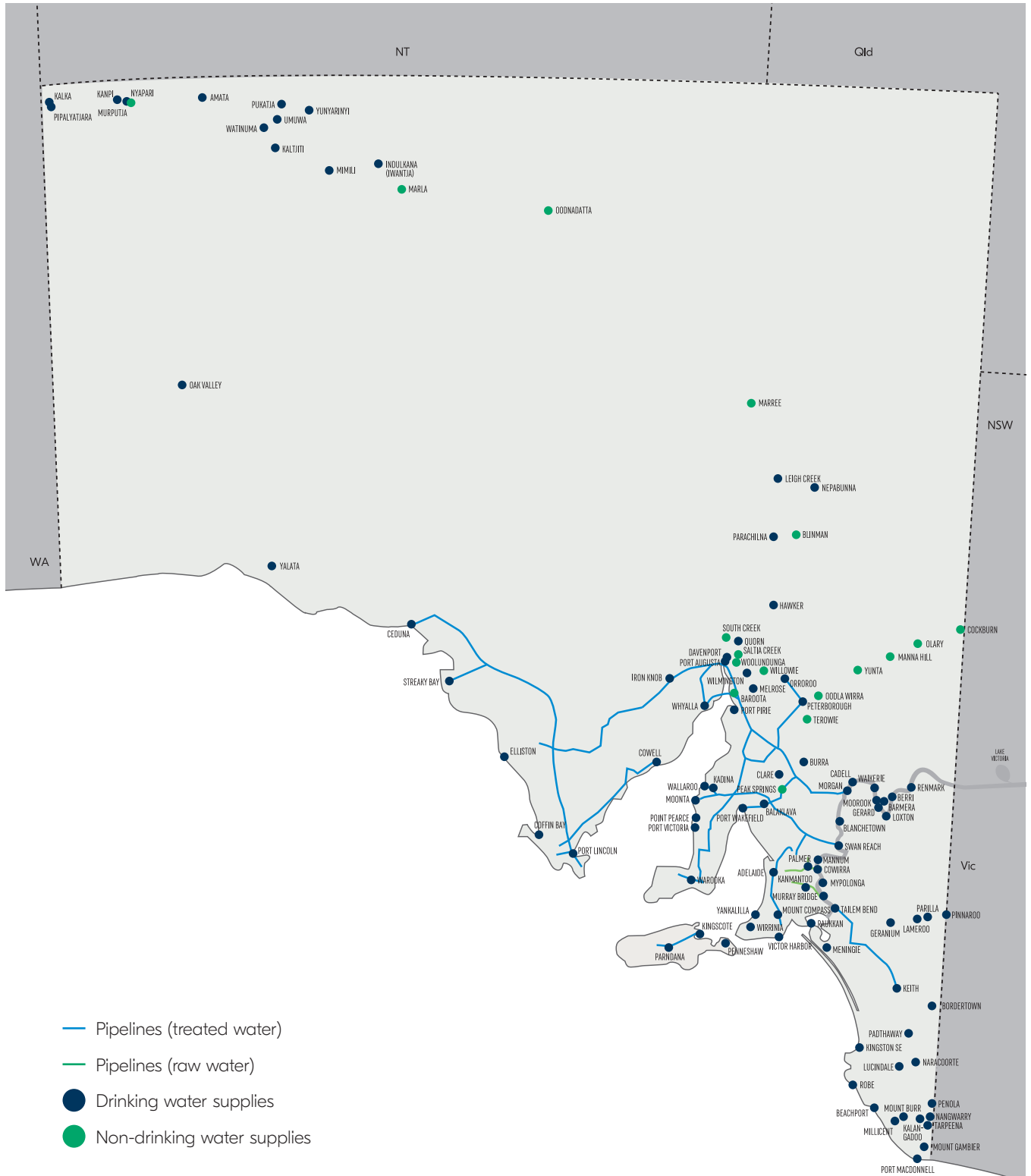
Of all Australian water utilities, we have the longest water mains supply network at more than 27,000 kilometres. In addition, we manage nearly 9,000 kilometres of sewerage mains and the longest recycled water network in the country, at more than 370 kilometres.

Overview of our networks and assets

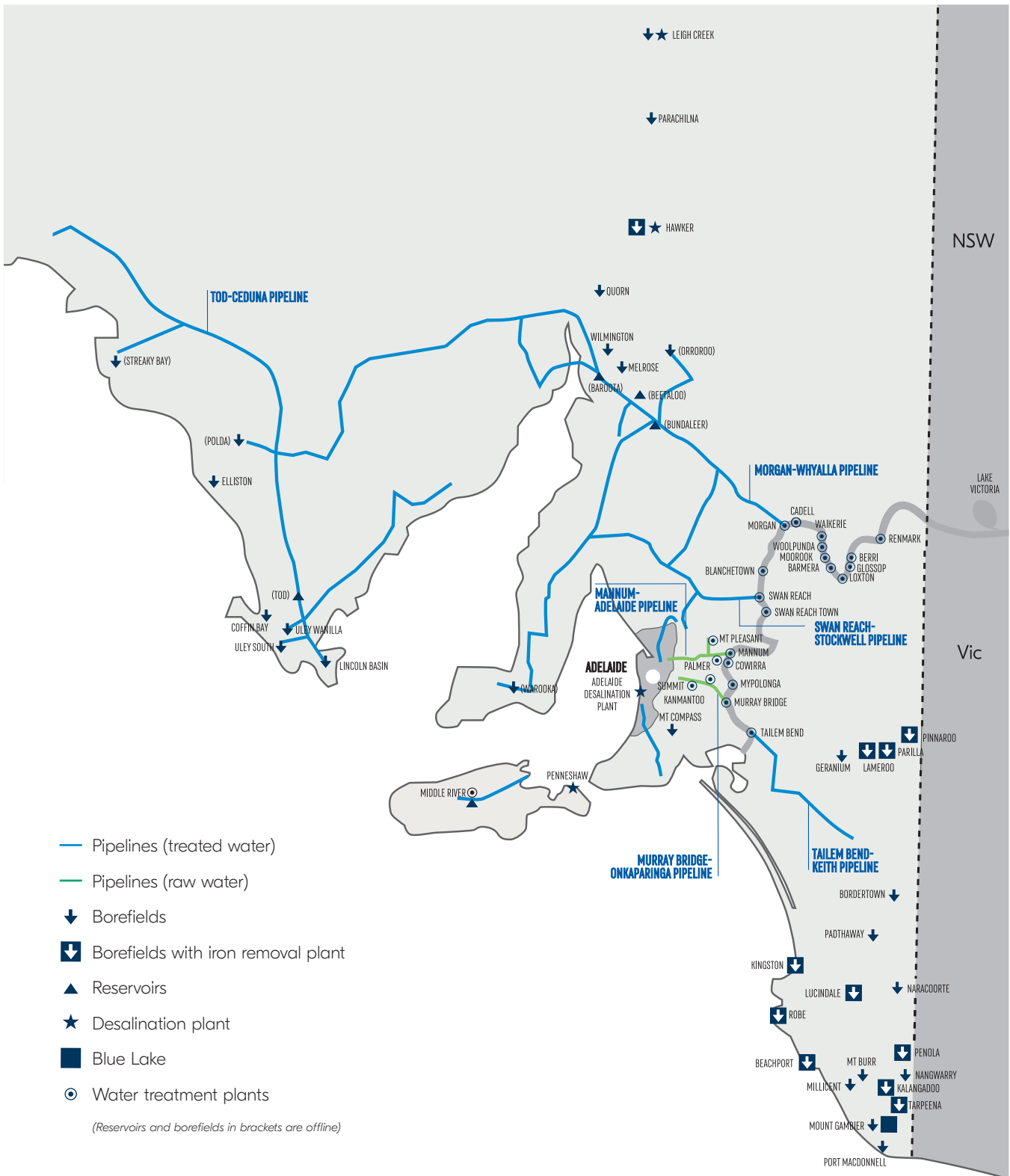


Correct as at July 2019

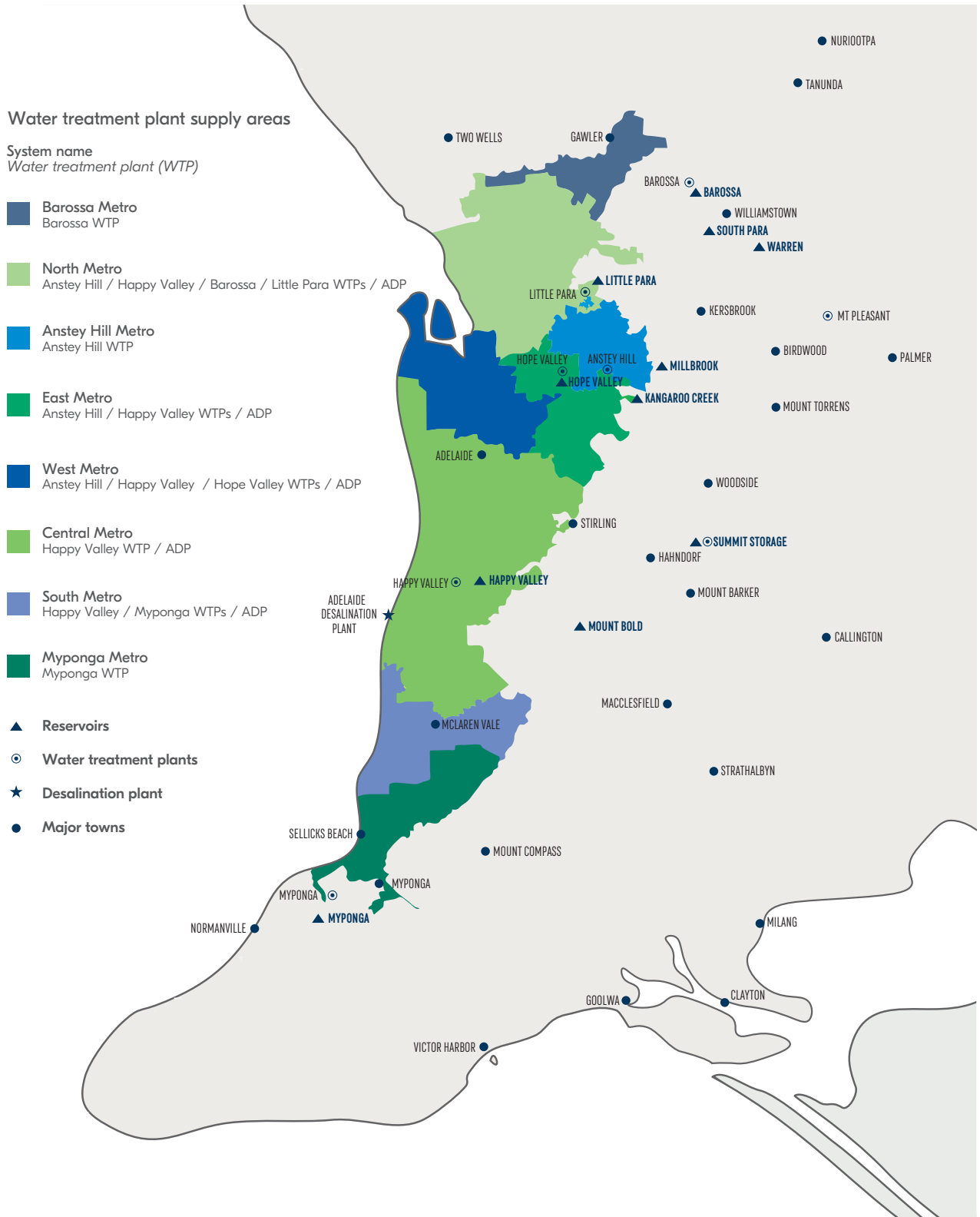
Map of our supply areas



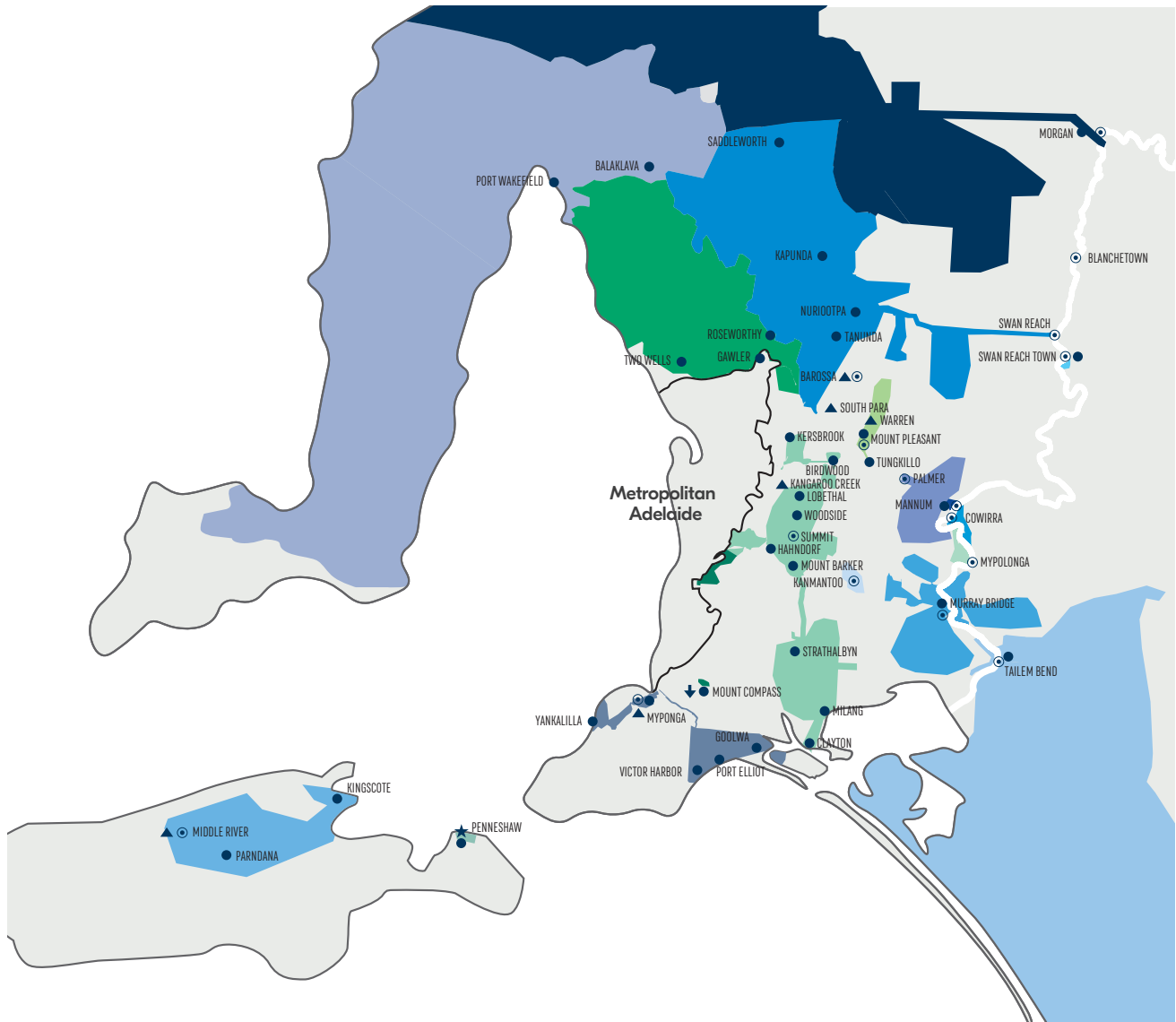
Map of our reservoirs, water treatment plants, borefields and major pipelines



Map of our reservoirs, water treatment plants and supply areas, metropolitan Adelaide



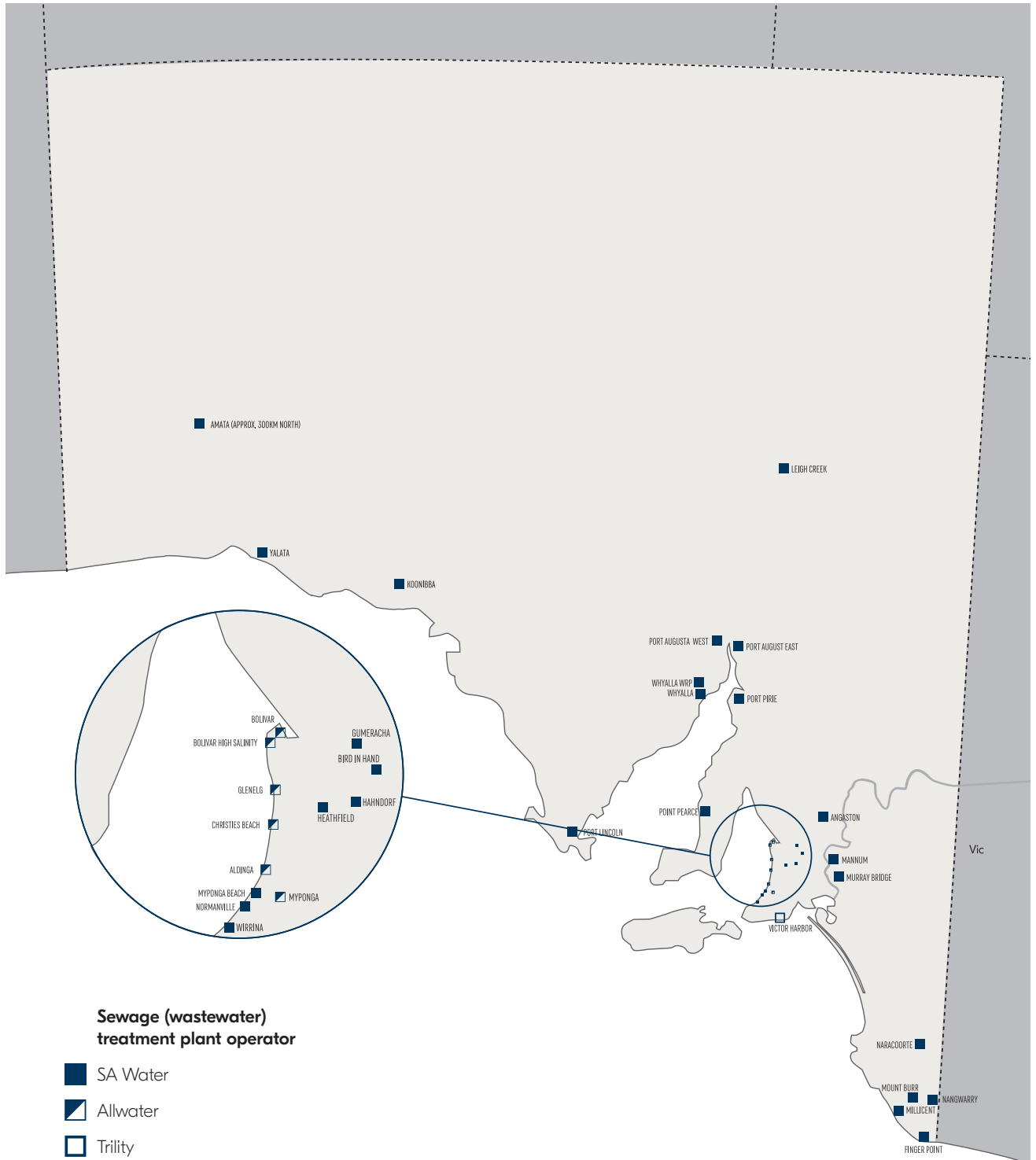
Map of our reservoirs, water treatment plants and supply areas, outer metro



Water treatment plant (WTP) supply areas

- | | | | |
|-------------------------|-----------------------|-------------------------|--------------------------|
| ■ Morgan WTP | ■ Cowirra WTP | ■ Myponga WTP | ↓ Borefields |
| ■ Swan Reach WTP | ■ Swan Reach Town WTP | ■ Kanmantoo WTP | ▲ Reservoirs |
| ■ Mount Pleasant WTP | ■ Mypolonga WTP | ■ Mount Compass (bores) | ⊙ Water treatment plants |
| ■ Morgan-Swan Reach WTP | ■ Murray Bridge WTP | ■ Tailem Bend WTP | ★ Desalination plant |
| ■ Barossa WTP | ■ Palmer WTP | ■ Middle River WTP | ● Major towns |
| ■ Happy Valley WTP | ■ Summit WTP | ■ Penneshaw WTP | — Metro boundary |
| ■ Mannum WTP | | | |

Map of our sewage treatment plants





2018-19 snapshot



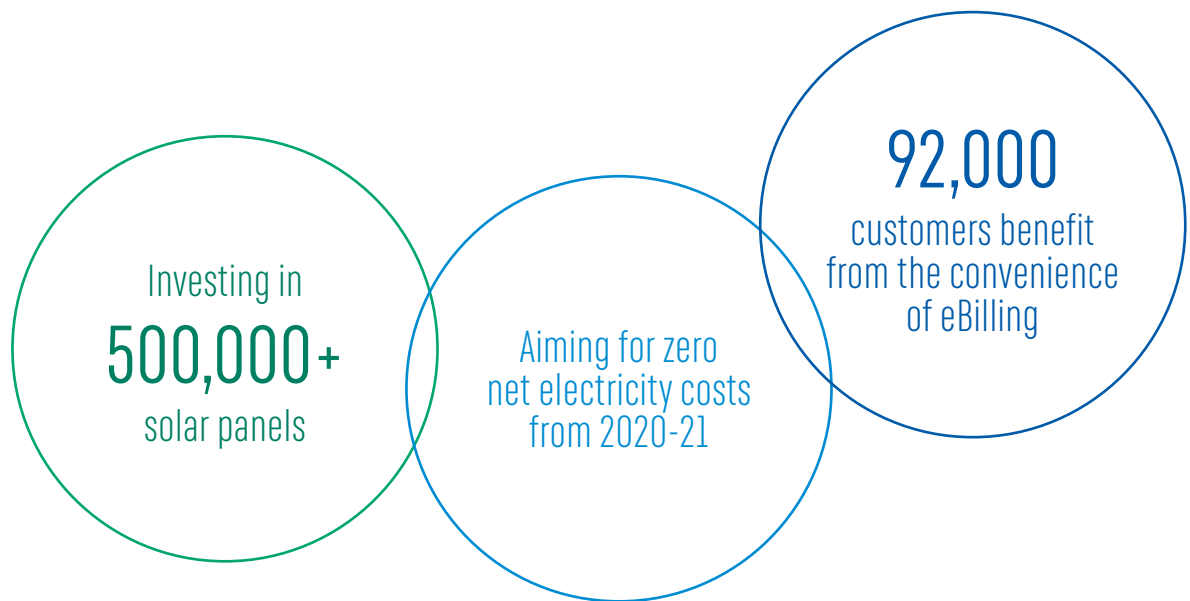
A BETTER LIFE IN SOUTH AUSTRALIA

Water is critical to how we live, work and play in this state, and we continue to explore opportunities to make our spaces more liveable and our services more accessible and sustainable.

Through our industry-leading initiative, we are changing the way we work to deliver better water services for our customers living with a disability or debilitating lifestyle condition (*Better understanding our customers*, page 31). Working together with this group of customers, we are gaining greater understanding of their water service needs and challenges. The goal is to ensure anyone living with a disability or accessibility issue is able to best engage with our services, and that we are meeting their needs.

Building on our trial at Adelaide Airport to cultivate green space to manage urban heat islands, we continued to use water in new ways. Cool zones were created at the 2019 Tour Down Under Village providing riders and spectators respite from the heat with the help of water misters. This type of innovation is creating new opportunities for people to use water differently and make our everyday lives more comfortable. See *Cooling the community* on page 46 for more details about this initiative.

Much has been achieved as we implement our 2017-20 Reconciliation Action Plan. Our activities this year range from education and training programs, infrastructure upgrades and supporting Aboriginal businesses, to community art projects, dual naming and sharing stories. There are full details on pages 39 to 41.



A sustainable future

Central to a sustainable future is our investment in renewable energy generation and storage. In February 2019 we awarded a contract to South Australian company Enerven to install about 154 megawatts of solar photovoltaic generation and 34 megawatt hours of energy storage across up to 70 of our sites. This investment in more than 500,000 solar panels will help us towards an ambitious goal of zero net electricity costs from 2020-21 and there are details under *Creating a zero cost energy future* on page 44.

Growing digital capability and offering

Technology and digital capability is increasingly central to how we operate our business and interact with our customers.

The smart water network has expanded, including to Penneshaw on Kangaroo Island (see *Penneshaw benefits from smart network expansion* on page 42), and continues to generate significant interest among our industry peers in Australia and around the globe. See *Getting smarter across the state* on page 42 and *Smart water network wins global prize* on page 43 for full details. With an investment of \$5 million, we are trialling advanced smart sewer technology (see page 43) in the wider metropolitan area to complement our existing sewer maintenance programs with the aim of improving service reliability.

Nearly 92,000 customers across more than 100,000 properties now benefit from the convenience of eBilling (*Digital services for customers* on page 31), with interactions online and through social media continuing to grow.

Our people and their safety

Moving beyond the traditional lag metrics for work health and safety, we adopted a harm based approach to safety in March 2019 (*Safety and wellbeing of our people*, page 47). This focuses our attention on the potential outcomes of an incident or event as well as the actual outcomes. Actual or potential life changing events are classified as 'diamond events' enabling us to prioritise serious incidents and focus our resources to prevent the likelihood of a recurrence.

Our refreshed *Inclusion and Diversity Plan* (see page 47) builds on our culture and values to create a workforce that offers flexibility, with opportunities for emerging talent, women, and Aboriginal and Torres Strait Islanders.



Year in review

GETTING THE BASICS RIGHT EVERY TIME

Customers expect us to get the basics right: providing safe quality drinking water, and dependable sewerage services. We are responsive when things go wrong, fix faults quickly and meet our regulated responsibilities. While delivering services our customers value, we are mindful of keeping prices as low and stable as possible.



Technology for field-based workers is standard business practice.

Technology for our people in the field

The statewide rollout of our technology program for field-based workers is complete and now a standard business practice. With the formation of the Service Continuity team, which brought together our call centre, fault reporting, community support and statewide dispatch functions, this technology is a key enabler to consolidate and streamline how our network teams operate across metropolitan and regional areas.

There are now 760 field-based workers using the Work Order App, our electronic workflow management tool. This year, 180 people from our alliance partner Allwater were trained in using the Work Order App and it is now core kit for our Technical Services and Trade Waste teams.

Access to our eMap tool, which enables electronic access to asset information in the field, was expanded to include people employed by Allwater. The capability of this tool is being further developed. During 2018-19, the capture in eMap of water shutoffs in the metropolitan area has started, enabling us to notify customers of an unplanned temporary service interruption.

Right across the state, our people are now using a digital scheduling and dispatch system, known as Click. A pilot of Click is underway in the Technical Services team where it has been identified this technology can improve the service we provide for customers.

Further development of our Capacity Planning Tool is underway to enable short- and long-term forecasting, as well as work and resource planning.

With our in-vehicle safety system rolled out to regional areas, in 2018-19 it was successfully integrated into Click enabling improved dispatch decision making for high priority incidents and occurrences by using current location and resourcing information.

Warooka pipeline construction on Hardwicke Bay Road.



Managing our networks

To ensure delivery of reliable, high quality services to our customers across the state, during 2018-19, we invested \$294.6 million in the water network and infrastructure, and \$217.8 million in the wastewater network and infrastructure.

Our ongoing water network management program focuses on improving the reliability of supply for our customers. We installed more than 58 kilometres of new water mains: more than 47 kilometres in metropolitan Adelaide and more than 11 kilometres in country areas.

Across our water network of more than 27,000 kilometres, including more than 9,000 kilometres in metropolitan Adelaide and nearly 18,000 kilometres in country South Australia, there were 4,115 main breaks and leaks in 2018-19.

A key measure used to assess and compare the performance of water distribution networks is the rate of breaks per 100 kilometres of water main. The Bureau of Meteorology's *National performance report 2017-18: urban water utilities*, released in February 2019, analyses the performance of 85 water utilities across Australia and confirmed our customers experience 13.6 water main breaks per 100 kilometres of water main, which is well below the national average of 19.4, and only bettered by four other major utilities.

We continue to innovate to improve network maintenance and provide reliable services for our customers. In 2018-19 our use of smart network technology increased and incorporates both water and wastewater networks. See more details under 'Leading the way' (see page 39).

Building proactive maintenance capability

We purchased and implemented five portable vibration analysers plus machinery health management software for asset health diagnostics and prognostics.

This advanced and highly scientific technology is being used to move assets located across the state from fixed, time-based maintenance to data-driven and condition-based sustainment. By identifying the condition of assets early, we are better placed to minimise impacts on customers' supply and the network.

Our overall maintenance approach is moving from reactive to proactive management, enabling increased asset reliability and availability in our network supporting the provision of reliable services for our customers.

Yorke Peninsula towns tap into better water

From October 2018, 1,500 people living and working in Warooka and Point Turton on the Yorke Peninsula began receiving a more secure supply of high quality drinking water through a newly-constructed pipeline.

The \$9 million upgrade resulted in construction of a 38.5 kilometre pipeline, a booster pump station along the route, 1,250 metres of new water mains in Point Turton and re-roofing of the Warooka storage tank.

The towns' water source was switched from a bore field in the Para-Wurlie Basin in the lower Yorke Peninsula to the River Murray. Our extensive modelling showed the bore field was not adequate to meet future drinking water demand.

Water for Warooka and Point Turton is now treated at either the Morgan or Swan Reach Water Treatment Plant and then transported within the new pipeline, which connects to our existing network at Minlaton, before being piped to homes and businesses.



Above: The new earth bank storage at Morgan Water Treatment Plant.

Right: General Manager Asset, Operations and Delivery Mark Gobbie and District Leader for Clare and Mid Murray David Daly with new Orroroo pipeline infrastructure.



Increased Morgan water storage provides security, quality and economic benefits

Increased operational flexibility provided by extra storage at our Morgan Water Treatment Plant further improved the quality of drinking water, ensuring demand can continue to be met while achieving long-term cost savings.

A new double-lined earth bank storage was the major component of a \$15 million upgrade to the plant, and following completion of construction and relevant testing in March 2019, is now operating as part of the wider water network.

Water storage capacity at the plant has increased from 12 to 42 million litres and with more available storage, water from the plant can be supplied at a steadier rate to meet the needs of the network it feeds.

The more consistent the flow within and out of the plant, the more control we have of our treatment systems, which makes it easier to manage water quality.

The treatment plant and network can essentially operate more independently of each other, giving our operators the ability to schedule energy-intensive activities like pumping at times when electricity prices are favourable.

We use pumps to move water from the plant and along the 358-kilometre Morgan to Whyalla pipeline, which supplies safe, clean drinking water to more than 130,000 people from the state's mid north all the way to central Eyre Peninsula.

A filter backwash tank and an additional 130 metres of underground pipework at the treatment plant site was also installed as part of the project.

This new infrastructure will help ensure the filtration and disinfection stages in our water treatment process continue to be safe, efficient and ready to meet an expected increase in demand.

New pipeline delivering for Orroroo

Customers in Orroroo have a new, high-quality drinking water supply reaching them through a 36 kilometre water pipeline to Peterborough which connects the town to our River Murray network.

From March 2019, the pipeline has significantly improved the aesthetic quality of the township's drinking water through the supply of water produced by the Morgan Water Treatment Plant. Through the pipeline, water is sent to a storage tank just outside Orroroo before being delivered to homes and businesses.

The project included the replacement of 17 kilometres of water main between Peterborough and Yongala.

Orroroo's supply was previously sourced from Walloway Basin groundwater, which although classified under the Australian Drinking Water Quality Guidelines as drinkable, did not meet certain taste qualities due to its natural salinity, a common feature of groundwater in Australia.

Glenelg water main renewal

In October 2018, we completed the installation of 970 metres of new water main at Glenelg, including under the southern side of Jetty Road, to improve the reliability of drinking water supply to local customers and reduce the potential for disruptive breaks and leaks.

Working together with the City of Holdfast Bay, local traders' association and the Department of Planning, Transport and Infrastructure, we ensured minimal disruption to traders and people travelling through the area, including a pause in activity to accommodate the summer trade and peak tourist period.

Free-flowing traffic was maintained during the day with work undertaken at night along Jetty Road, and during the day on side roads to minimise noise and traffic inconvenience for residents.

About 370 metres of the new water main installed was under Jetty Road, with the remainder moved to parts of Newmans Lane, Cowper Street and Milton Street.

APY Lands upgrades for a better life

Water infrastructure upgrades at Watinuma in the state's Anangu Pitjantjatjara Yankunytjatjara (APY) Lands were completed in May 2019 to improve the safety and reliability of drinking water for the local communities.

Since taking on management of water services in an additional three Aboriginal communities in the region — Kanpi, Nyapari and Watinuma — as well as government facilities at Murputja in late 2017, we have undertaken works to upgrade the water systems in these remote parts of the state ensuring they are durable and sustainable.

In Watinuma, we replaced water storage, treatment and distribution infrastructure, upgraded two bores — one solar and one electric — and installed smart meters to monitor water use, a new remotely monitored computer system as well as a 10 kilowatt solar and battery, plus a storage facility, to provide back-up power.

The use of solar and battery helps reduce our environmental footprint and costs and, when needed, is a reliable alternative to conventional electricity supply, given the region's warm climate and plentiful sunlight.

Works have begun in Murputja where we will construct a new water desalination treatment and storage plant which will also supply drinking water to nearby Kanpi and Nyapari.

Throughout we work closely with local people to ensure the outcomes are community-driven, this includes the engagement, planning, design and construction phases, as well as ongoing management and maintenance.

This is part of how we work with Aboriginal communities to support them through innovative solutions to provide safe, clean water, a key focus in our Reconciliation Action Plan.



The new water storage tanks in Watinuma.



Above: The new tank at Coomandook will support customers supplied through the Taillem Bend to Keith pipeline.

Right: Refurbishment of the water storage tanks in Kingscote is underway.



111
 water storages will be restored and renewed across South Australia by 2020

A boost for water tanks and storage

As part of our \$89 million tank rehabilitation and renewal program running from 2016 to 2020, we are investing in 111 water storages across South Australia to maintain the supply of water to customers.

New tank at Coomandook

Construction began in November 2018 on a new nine megalitre drinking water storage tank at Coomandook. The \$10 million project improves water security for customers in the Lower Murray, Mallee and Upper South East regions who are supplied through the Taillem Bend to Keith pipeline.

When completed, the pipeline's storage capacity in the region will increase by about 30 per cent.

The pipeline is the primary source of drinking water for more than 10,000 people and increasing the area's water security supports the water demand from the growing population and economy.

Whyalla water tank refurbishment

In early 2019 we began refurbishing Whyalla's tank which, at 12 metres high, has a capacity of 56 million litres, or about 22 Olympic swimming pools of water.

This year's work follows similar maintenance work on Whyalla's other identical tank in 2018. The two large storages are important in supplying water to thousands of customers in the area including industrial customers like the large steelworks, so it is vital they support the delivery of safe, clean drinking water for years to come.

Works included internal concrete rehabilitation, new overflow pipework, new external concrete drains, as well as new roof beams and almost 5,000m² of roof re-sheeting. The tank refurbishment continues into 2019-20.

Increasing water storage on Kangaroo Island

Two nine megalitre concrete water storage tanks on Kangaroo Island are being restored. In 2018-19, one tank was completed and the second tank will be refurbished in 2019-20.

Prior to restoration the tanks were last operational about 20 years ago. When filled they will quadruple treated water storage capacity in the Kingscote water supply network enabling a more reliable service for customers.

Valuable valves improving Murray Bridge water service

In early 2019 we installed four isolation valves on the main pipe supplying drinking water to Murray Bridge, to improve reliability of supply to the regional city and limit impact on the community during any future required works.

Construction was undertaken overnight to minimise impacts with an alternate supply of drinking water arranged for water-dependent businesses.

Having more valves in our network means we can better isolate sections of pipeline for repairs. This reduces the size of areas and number of customers that experience temporary supply interruptions.

Improved flow in Waikerie

Beginning in May 2019, a series of upgrades were undertaken to our drinking water network in Waikerie to further improve the quality and reliability of water supplied across this area.

Work included the installation of about 25 metres of water main to the town's storage tank. In addition, specialised valves now better manage water pressure and modifications were made to the network where water leaves the treatment plant before being delivered to customers. The upgrade ensures consistent flow and pressure of the water in the network.

All works are expected to be complete in 2019-20.

Extra desalination to secure Kangaroo Island's long-term water needs

An additional desalination plant at Penneshaw was identified as the preferred option to secure Kangaroo Island's long-term water supply, in a refreshed plan developed together with the local community.

The plan, released in late 2018, confirms the existing Middle River and Penneshaw networks have adequate capacity to meet current needs and sustain growth until around 2036, unless a major development accelerates a step-change in water demand.

Under this organic growth scenario, development of the new water source will likely be actioned from 2030.

First created in 2009 and reviewed annually, our long-term plan for Kangaroo Island's water supply was significantly updated in 2018-19 to reflect current weather and climatic data, water supply and demand projections, and community priorities.

We currently operate two water supply systems for customers on Kangaroo Island — the Middle River, which supplies an average of 356 million litres of water across 1,500 customer connections, and the 400 kilolitre per day capacity Penneshaw Desalination Plant for approximately 300 customers on the eastern end of the island.

In time, expanded desalination capacity at Penneshaw could serve the entire island and provide additional benefits including options for new areas to connect to the mains network.



Left: Construction is underway on the final stages of the Port Lincoln Wastewater Treatment Plant upgrade.

Below: The new trickle filter is lifted into place at the Port Adelaide Wastewater Pump Station.



Port Lincoln's sewerage network upgrade

The three-year program of sewerage network upgrades to support residential and industrial growth in Port Lincoln reached its final stages in June when construction started on a new anaerobic digester and associated infrastructure at The Port Lincoln Wastewater Treatment Plant.

At a cost of \$18 million, the new wastewater treatment infrastructure will increase the site's ability to receive waste produced by local industry, as well as reducing methane emissions and improving odour management.

Working together with the local industry we identified a sustainable solution, paving the way for continued expansion of Port Lincoln's major economic contributors.

The sewerage network upgrade project is expected to be completed by late 2020.

New trickle filters for Port Adelaide wastewater system

A \$2 million-plus system to reduce and manage odour from the Port Adelaide Wastewater Pump Station was completed in December 2018.

The solution was implemented to benefit local residents and with a similar system already in use at our Parafield Gardens facility, it has proven to be a highly-effective filtering system that benefits odour management. It has a three-stage bacterial odour control process requiring the installation of a 12.1 tonne, 13-metre-high bio-trickling filter and three smaller bio-filters.

The bio-trickling filter uses bacteria to remove the odorous gas from the wastewater. As the air rises through the tank, water feeds the bacteria which eats away at the odour and eventually releases treated, clean air through the top of the unit.

Receiving an average of 22.5 million litres of sewage every day, the Port Adelaide Wastewater Pump Station is a vital facility serving more than 30,000 homes and businesses in Adelaide's western suburbs.

Throughout, the design and installation process, we worked together with the local community to keep them updated and ensure their expectations were met.

Below: The refurbished Largs North Wastewater Pump Station.

Right: Customers on the Eyre Peninsula take the tap test at the Cleve Field Days.



Improving sewerage services in Adelaide's north-west

The upgrade of sewerage services in north Le Fevre continued in 2018-19, as part of the \$12 million works to support future growth in this area.

This project includes refurbishment of the Largs North Wastewater Pump Station and installation of about 4.5 kilometres of new sewer main connecting this site to its counterpart in Ethelton.

It has been undertaken to ensure we continue to provide a dependable sewerage service for our customers as the local area grows through new developments. There are additional benefits with improved odour management and reduced potential for overflows.

The new pipeline was installed in early 2019 and works are due to be completed in 2019-20.

Improving water aesthetics

In 2018-19, we undertook a number of initiatives to improve our customers perception of drinking water quality. Our ongoing work in this area has seen customer satisfaction with drinking water quality lift to 74 per cent in 2018-19, up from 68 per cent in 2017-18.

Technical improvements included:

- Changing the disinfection process for the Myponga township's water supply from chlorine to chloramine. This had a positive impact on customer perceptions of the taste and smell of their drinking water.
- A more proactive and effective addition of powdered activated carbon at water treatment plants to remove the earthy/musty taste and odour that can be associated with algal blooms at surface water reservoirs.
- Proactive flushing of key areas of the metropolitan Adelaide network to remove pipeline sediment and reduce the number of dirty water occurrences customers may experience.
- A pipeline connecting Warooka, Point Turton and Orroroo to our River Murray supply and improving the quality of drinking water in these townships.

Engagement with our customers continued including:

- *Take the Tap Test*, and *You Be the Judge* activities, giving the community the opportunity to taste and provide feedback on tap water sourced from various parts of South Australia. Analysis of this feedback continues to improve our understanding of the water tastes and smells our customers prefer, which helps inform future investment in our water network and treatment management.
- Proactive media to improve our customers' awareness of drinking water quality management and the benefits of drinking tap water.
- The installation of ten drinking water fountains in the community this year, following installation of four in 2017-18.

Trade waste servicing goes digital

Management of grease arrestor servicing has improved with the development and rollout of an app for use by liquid waste haulers, improving trade waste customer monitoring and compliance.

In 2018-19, the grease arrestors and settling pits of all trade waste customers were tagged with a code haulers use to collect pumping information. The new system provides us with data on the pump out frequency enabling us to better manage each customer's compliance with trade waste discharge authorisation conditions. Customers who are not servicing their grease arrestors, or whose pre-treatment devices are not compliant will be readily identified for follow up by our Trade Waste team. Improved monitoring and compliance also helps reduce the number of fat chokes in the sewerage network associated with poorly serviced or absent grease arrestors.

Liquid waste hauler companies received training to use the new system which came into effect 1 July 2019.

Ensuring service continuity and support when things go wrong

The Service Continuity team has continued to develop its capability to respond to temporary service interruptions. Since January 2019, the team has been operating 24/7 providing a dedicated service and enhanced customer experience across the state.

To achieve this, we have:

- Recruited and cross-trained our people in the new Service Impact Management role.
- Created a single, multi-function centre which manages fault calls, scheduling, dispatch and monitoring of work, data and information management, and reporting.
- Created a single point of contact to coordinate a statewide service for our customers and the community.
- Embraced new technology available through our customer relationship management systems which provides us with a single view of customers, work and available resources.
- Improved notifications for customers experiencing temporary service interruptions.

With the service continuity initiative completed in April 2019, improvements now continue as part of our normal business operations.

Price increase held to CPI

The 2019-20 water and sewerage price adjustments were capped at 1.3 per cent on average, to reflect the Consumer Price Index (CPI)*, and our ongoing commitment to keeping water and sewerage prices for South Australians as low and stable as possible.

The average metropolitan residential customer receiving water and sewerage services will see an annual increase of about \$16**.

Prices take into account a range of factors, including the cost to provide, sustain and enhance the delivery of water and sewerage services across the state.

Statewide pricing ensures most of our customers pay the same price per kilolitre of water, no matter where they live or the actual cost of providing the service to that location. Sewerage prices, based on the capital value of a customer's property as set by the Valuer-General, are also designed so average bills are as consistent as possible across the state.

Our performance compares favourably with our interstate counterparts. Our annual residential water and sewerage bill (based on 200 kilolitres) was the eighth cheapest among 15 similar-sized Australian utilities, according to the Bureau of Meteorology's *National performance report 2017-18: urban water utilities*.

* March Consumer Price Index, All Groups Index Number (weighted average of eight capital cities) published by the Australian Bureau of Statistics, to align to ESCOSA's 2016-20 revenue determination.

** Based on the average metropolitan residential water use of 184 kilolitres and property value of \$467,000.



The refurbishment of Lock 3.

Maintenance on the Murray

From July through to September 2018, work to upgrade the Tauwitchere Barrage Lock at the Murray Mouth was undertaken as part of the essential maintenance schedule on behalf of the Murray-Darling Basin Authority.

The barrage is one of the little known structures along the River Murray with only about 250 boats and other vessels navigating through each year.

At about 3.5 by 13 metres, it is one of the smaller structures, yet it plays an important part in the wider river system.

It is a small hand-operated lock which is very rare in Australia. The lock upgrade was undertaken to make the operating procedure quicker and easier.

Work included the installation of new valves to reduce opening and closing times by up to 80 per cent, and repainting the lock chamber gates.

Tauwitchere is one of five barrages, as part of the wider Goolwa Barrages system, which extends from Sir Richard Peninsula in the west to Pelican Point on the northern side of the Murray Mouth. The other barrages include Goolwa, Mundoo, Boundary Creek and Ewe Island.

Further up the river, Lock 3 at Overland Corner was re-opened for navigation in September 2018, following the completion of a \$700,000 refurbishment of the River Murray structure.

In just three months, our teams:

- repainted lock gates
- replaced gate seals and bottom fenders
- rehabilitated upstream and downstream valves and tunnels
- replaced all cathodic protection systems.

The lock was emptied while these sustainment works were completed and then gradually refilled in September to its usual eight million litres of water.

Ensuring information security

We continue our investment in cyber security and verified our performance standards by engaging in regular external reviews and testing. In 2018-19, Board Directors, General Managers and Senior Managers participated in specialised cyber security training.

Build organisational resilience

To embed our organisational resilience, we have developed a Resilience Capability Plan which is now being implemented.

This work strengthens and improves our mitigation and management of disruptive events and incidents to create opportunities for continual improvement to the reliable services we provide to our customers.

The plan focuses on developing maturity in:

- organisational awareness
- planning and decision making
- risk and governance
- performance management
- communication
- major incident management and technology tool
- business continuity
- training, exercises and lessons learned.

In 2018-19 we have:

- Shifted our thinking towards a holistic organisational resilience approach.
- Built resilience into all levels of our corporate planning process.
- Brought the risk and resilience teams together and begun the process to integrate our risk and resilience frameworks to include temporary service disruption-related risks, in accordance with AS/NZ 5050.
- Started building resilience into relevant performance management measures.
- Communicated with key groups within the business to build awareness about resilience.
- Introduced a simple method for managing major service interruptions and trained key senior leaders in how to apply it.

Improved asset management

Work continued in 2018-19 to embed our Asset Management System and integrate it across the business. This follows recent work to increase the maturity of our asset management.

Our strategic asset management approach ensures performance is continually reviewed and improved. A team realignment this year, and the creation of an Asset Management System team, support delivery of this initiative as we embed the system into our business.

Maturing the way assets are managed helps us strengthen the customer and stakeholder experience by maintaining the desired levels of service and raising the value of the services we provide, without increasing our expenditure.

WORKING TOGETHER

As a team, our productive, respectful relationships with customers, regulators and other stakeholders are central to delivering valued services. Understanding and supporting our customers is vital.



Customers are increasingly using digital and self-serve channels we offer.

Better understanding our customers

Our customer profile groups continue to be used across the business to help us plan, and tailor products, services and communication for our customers.

In 2018-19, we had a particular focus on understanding the needs of people living with a disability so we could better respond to and meet the needs of these customers.

Following discussions with the Department for Human Services and the South Australian Council of Social Service, we facilitated a survey plus one-on-one meetings with customers who live with disabilities and their carers.

Through this research we built an understanding of the challenges and experiences these groups face, and we mapped four focus areas where we can make changes to help make their lives a little better:

1. customers with high needs
2. communication challenges
3. high information needs
4. assistance with tasks.

Up to 15 initiatives have been identified to provide service solutions for these customers, with some already being implemented and others requiring investment over time. They range from a language aide program for customers using Auslan and other alternate languages, to investigating ways to reduce the anxiety that many people living with a disability face when answering the door.

This initiative was presented at Ozwater'19, the Australian water industry's major annual conference, and awarded best paper, acknowledging its national significance.

Customer profile work continues to evolve and inform the services we provide. Work to expand profiles beyond residential customers began and we conducted extensive research of our business customers to better understand their water and wastewater service needs.

Digital services for customers

In 2018-19 we implemented a customer relationship management system which enables improved customer experience when people interact with us, including account inquiries and service issues.

Direct debit by credit card and self-serve payment arrangements are now available by simply calling us, in addition to the self-service offerings of *mySAWater*.

As at 30 June 2019, there were 91,787 customers across 100,847 properties registered for eBills, either as a direct arrangement or through *mySAWater*.

Our customers' use of digital channels continues to grow with self-service transactions through *mySAWater* growing nearly 90 per cent up from 79,312 in 2017-18 to 150,368 in 2018-19.

Supporting customers with bill payments

The needs of our customers continue to change and we are committed to adapting and responding to deliver the services and support they need and value.

Through our Customer Assist Program we work together with people experiencing financial difficulties and agree a bill payment plan.

During 2018-19, there was an average of 1,770 customers per month participating in the program, with 954 customers successfully completing the program and returning to paying their bills quarterly.

Additional financial assistance was available to eligible customers participating in the program through incentive co-contribution payments. This financial year we began work to automate this payment support program which helps customers to complete the Customer Assist Program and return to regular bill payments.

Customers inform future planning

Building on our customer research and engagement work in 2017-18, this year we worked with customers in two significant engagement phases. This customer feedback is informing *Our Plan 2020-24* (Our Plan), which will detail how and what we plan to deliver for customers in the next four-year regulatory period.

Our customers have helped shape future focus areas, which are in addition to the services we are required to provide to meet our legislative and regulatory responsibilities.

From July to October 2018, our Customer Working Group, comprising 22 customers, focused on draft proposals we developed using feedback received in previous stages of customer engagement and workshops.

Insights from the *What matters to you?* survey, which ran from April to May 2018, were used to prepare business cases for initiatives which customers told us they value and support.

Working together with the Customer Working Group, we shared, discussed and deliberated items including service level priorities that were tested in *What matters to you?*, and proposed service standards to ensure Our Plan is aligned with our customers' values and priorities.

Following this, from November 2018 through to May 2019 we did further work to understand where our customers want us to invest. Through the online survey – *Would you invest in this?* – in excess of 6,000 customers took the opportunity to have their say on five initiatives proposed for inclusion in Our Plan.

Survey responses helped us understand if customers were willing to pay for five proposed investment projects. This feedback informed the ongoing negotiation process being managed by the Essential Services Commission of South Australia (ESCOSA) and the final drafting of Our Plan.

As well as online engagement opportunities, in September 2018 we engaged customers at the Royal Adelaide Show, with more than 400 people completing our quick poll survey.

Our Plan will be submitted to ESCOSA in October 2019.

Building our reputation in the community

To ensure we keep our customers well informed, a series of training masterclasses were provided to nearly 200 of our people so they can provide more effective, meaningful and timely communication. In addition, we made information about the breadth of our operations behind the scenes and day to day more available to our customers and community through traditional and social media.



The Customer Working Group deliberated on service level priorities.

The *Bring Your Own Bottle* (BYOB) community education campaign got underway in 2018-19 to reduce reliance on expensive bottled water and reduce plastic waste. The campaign is supported by the beginning of the rollout of drinking water fountains, with the installation of six fountains at Adelaide Oval. In addition, numerous local councils have embraced the opportunity to install a fountain for the benefit of their local community and visitors, with more details below.

Development of a BYOB app is underway to help people more easily find locations to have a drink or refill their bottle with our clean, safe drinking water for free. Information from metropolitan and regional councils is expected to be released in the second half of 2019 with more than 1,000 fountains mapped around the state.

Field staff, project teams and contract partners have been supported to effectively build relationships, gather feedback and structure decision making processes. This enables genuine and meaningful opportunities for our stakeholders to understand community needs as we develop and deliver new projects and initiatives.

An increased understanding of our customers is helping us better meet their communication needs. Using developments from our customer relationship management system, we have begun providing customers with more relevant and meaningful communication via their bill. This capability will continue to evolve.

1,000+
free and safe refill
locations will be mapped
around the state

New fountains provide more water for drinking

Our network of free drinking water fountains across the state has been expanded with 10 fountains installed in 2018-19, providing more options for South Australians and visitors alike to refill their bottles or stop for a quick drink.

The fountains are all connected to our supply network and feature a modern design ‘water window’ for easy filling of a reusable bottle. Many also feature a foot pedal-operated in-ground dog bowl which lowers and fills with water for single use, ensuring adequate drainage and clean water every time. They have built-in solar lighting making them bright and easy to find at night.

In December 2018, a drinking water fountain was installed in Kapunda’s main street in time for the town’s end of year party. It was the first to feature artwork created by Aboriginal artist Paul Herzich, which depicts waterholes specific to Aboriginal groups from across South Australia.

In partnership with Adelaide Oval’s Stadium Management Authority, we unveiled six water fountains at the start of the AFL season in March 2019, giving visitors access to free drinking water on the eastern plaza, at the Victor Richardson Gates on the southern side, in the western stand near the Sheffield Shield Room, and on the Northern Deck.

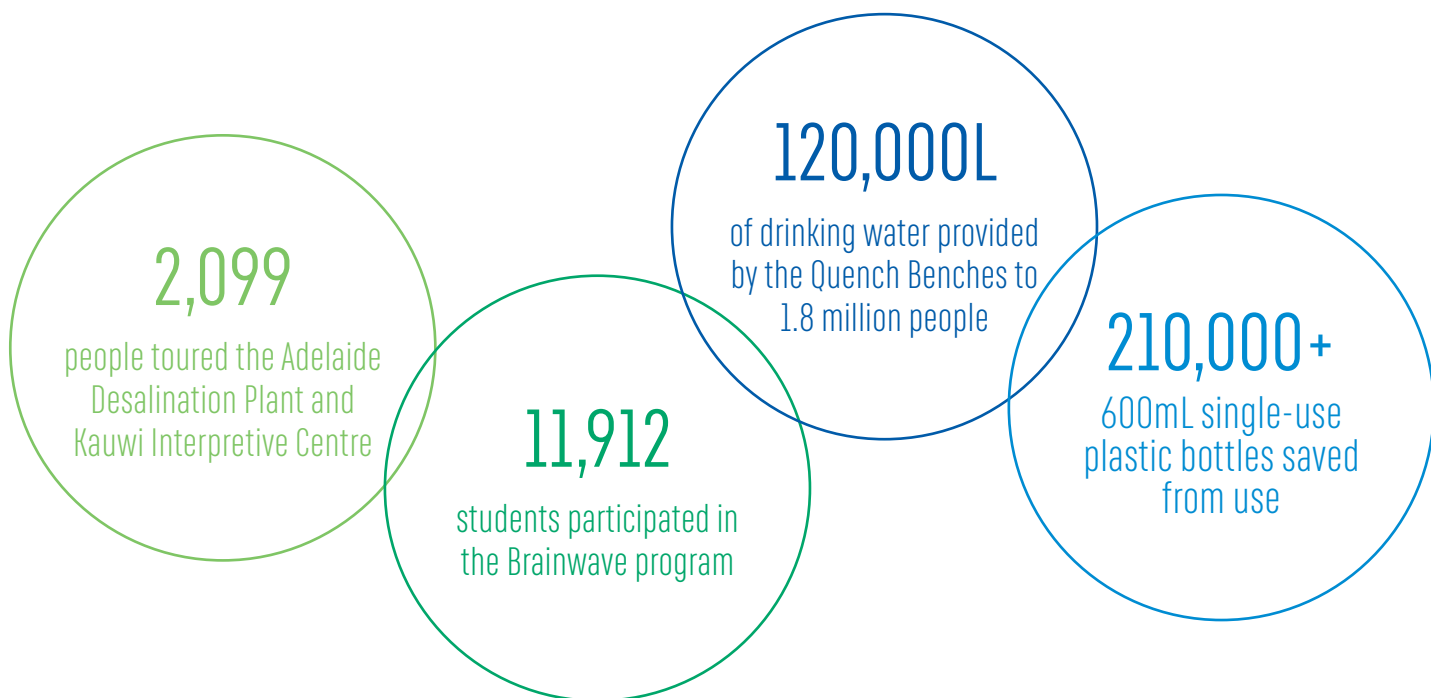
To support access to Myponga Reservoir Reserve, which opened in April 2019, two water fountains were installed with one in the reserve and one in the town’s park. In June a fountain was installed outside SA Water House in Victoria Square/ Tarntanyangga for people out and about in the city.

There are clear environmental and economic benefits of choosing tap water and with a growing network of drinking water fountains across the state, we are helping our customers build a healthy habit by bringing their own reusable bottles.



Above & right: New drinking water fountains have been installed at Myponga Reservoir Reserve and the Adelaide Oval.





Community programs and events

In 2018-19, our community and education program provided learning opportunities including:

- 11,912 students and their teachers participating in our Brainwave program learning about the importance of water as a resource, the water cycle, ways to overcome scarcity and how we can all contribute to sustainability.
- 2,099 people toured the Adelaide Desalination Plant and Kauwi Interpretive Centre.
- 677 people attended community presentations about water services and toured our treatment plants.
- Our Quench Benches proved popular providing more than 120,000 litres of drinking water to about 1.8 million people at more than 150 public events across South Australia. This is equivalent to saving more than 210,000 single use 600ml plastic bottles.
- More than 8,000 people stopped by and talked with us about water services as well as ask us questions at events including the Royal Adelaide Show; Eyre Peninsula, Riverland and South East field days; and the annual *Science Alive!* exhibition.



The Quench Benches were used by more than 1.8 million people around the state in 2018-19.

Building our state's women in STEM

In March 2019, we announced an important partnership with the University of Adelaide to support career and development opportunities for women in the fields of Science, Technology, Engineering and Mathematics (STEM).

Our sponsorship of the University's 2019 Women in STEM Careers Program, helped 100 women throughout the year through access to workshops focusing on leadership, career development and entrepreneurship.

Supporting one of the largest leaderships for female STEM students in Australia aligns with our ambitious target on the number of female graduates joining our business — 60 per cent by 2024.

This goal is within reach with women making up more than half of our current STEM graduates and 43 per cent of total graduates.

Crystal Brook students have the smarts on water

Crystal Brook Primary School is one of 10 South Australian schools participating in our Smart Water Schools program.

Through the program, students have access to a secure portal gathering real-time information from loggers attached to their site's smart water meter.

Students from Crystal Brook Primary School showed they have the smarts on water management when they presented findings from their smart water meter study to members of our executive team in August 2018.

The school's smart meter began delivering water and cost savings shortly after it was installed, helping find a malfunctioning water timer on the school's irrigation system, which was always on and unnecessarily using up to 11,000 litres a day.

Popular with both students and teachers, the smart meter project links to the Australian Curriculum across Science, Technology, Engineering and Mathematics.

Improving customer service for developers

To better support developers and growth in South Australia, in 2018-19 we made improvements to account management services and access to our people and information. These include:

- A single point of contact for major developer customers providing a quick response when they need help.
- A new process for disinfection of assets constructed by developers which resulted in better understanding of the responsibilities of everyone involved.
- Case managers allocated to land development applications giving customers a direct relationship with our people who deal with their application.
- Improved access to AquaMap — a system that provides map-based information about our network — is now available making it easy for developers to access network information as they undertake preliminary design work.

In addition, an online service for developers has been scoped ahead of further work in 2019-20.

Land subdivision billing changes

This year we worked with conveyancers and the development industry to change how customers are billed following the subdivision of land.

Acting on feedback from customers and developers, we reviewed the practice which resulted in charges remaining on one billing account through to the end of the financial year, regardless of when a subdivision had taken place. This system was based on the timing of land valuation information received from Land Services SA.



Top: Rainwater tanks installed at the Elliston Community Sports Centre.

Middle: The Bee and Butterfly waterwise garden in West Croydon.

Bottom: Students from Crystal Brook Primary School presented results from their work as part of the Smart Water Schools program.

Conveyancers play an important role in calculating settlement payments when a property is subdivided and sold, yet customers who sold newly subdivided blocks would continue to receive SA Water bills with charges that no longer belonged to them.

Our Billing team re-engineered the process to ensure property owners who sell do not receive a bill for the property for the remainder of the financial year after they sell. It also enables the new owners to monitor their water use from the time they buy the property instead of from the next financial year. All process and system changes were made, ready for full implementation from 1 July 2019.

Outback towns join our supply network

The drinking water supply to Copley and Lyndhurst in South Australia's far north came under our management from August 2018.

Migrating the full provision of water services to our operations followed ongoing engagement with the previous water providers and the local communities. Residents and businesses in both towns were supported through the transition to becoming SA Water customers.

Ongoing water use charges for the 73 new customers in Copley and Lyndhurst have moved to our statewide price, which enables most of our customers to pay the same price regardless of where they live or the actual cost of providing the service.

As with all our residential customers across the state, these communities now benefit from a 24/7 customer response service, access to bill payment support when necessary, and network maintenance provided by a locally-based crew.

Drinking water for both communities continues to be sourced from an existing series of bores near Leigh Creek, which is then desalinated and treated to meet the Australian Drinking Water Guidelines.

Future water supply for Eyre Peninsula

In 2018 we reactivated plans to enhance the Eyre Peninsula's drinking water supply network with a proposed new seawater desalination plant.

A new seawater desalination plant was identified as the preferred option to supplement future supply in a long-term plan developed with the local community and Natural Resources Management Board in 2008. Community engagement was integral to the development of this plan.

This financial year we have worked with the region's residents to share details of the plans and receive their feedback to help us as we develop the proposal. Community open days were held in November 2018 in Port Lincoln, Ceduna, Wudinna and Cowell.

Water produced from the proposed desalination plant would supplement groundwater from the Uley South Basin, and may help improve water aesthetic issues such as hardness, a natural characteristic of the region's groundwater.

A site at Sleaford Bay was identified as the preferred location for a stand-alone desalination plant, based on a number of factors including its proximity to the water supply network, strong ocean currents and accessibility.

Targeted community meetings with traditional and local property owners began in late 2018 to share our planning and investigations associated with the proposal and to talk through site-related issues.

Engagement with the Eyre Peninsula community will continue throughout the planning and construction phases to ensure their interests are being accounted for and opportunities for local knowledge is identified to add value to the delivery of the project.

Water main move supports King William Road renewal

To help facilitate the City of Unley's redevelopment of King William Road, we relocated about 200 metres of water main under the Hyde Park strip during May and June 2019.

Overnight works kept community impact to a minimum enabling the free flow of traffic during the day and avoiding peak trade periods for businesses on Friday and Saturday nights.

Key to this project's planning was working with businesses in the area and understanding their individual water needs.

The relocation enables the City of Unley to install new kerbing without damaging our infrastructure and ensures safe access to the water network for any future maintenance.



Left: Sleaford Bay has been identified as the preferred site for a proposed seawater desalination plant for the Eyre Peninsula.

Top right: The main under King William Road was relocated in May and June 2019.

Bottom right: A new supply of recycled water is supporting the expansion of businesses in the Adelaide Hills.

Recycled water supporting economic growth in the Adelaide Hills

Recycled water supply in the Adelaide Hills is providing great economic and environmental value, while ensuring security of supply and underpinning local business growth.

A new supply of recycled water from our Gumeracha Wastewater Treatment Plant is supporting the expansion of businesses in the Adelaide Hills.

Leading South Australian apple grower Joyson Orchards harvested their first premium Rockit apple crop in autumn 2019, just four years after expanding, enabled by recycled water.

By adapting existing vineyard infrastructure with industry-leading growing techniques, and direct drip feed irrigation, the business is building a resilient and sustainable food production system to meet local and national demand. Growth in the business resulted in two additional full-time jobs and up to 45 seasonal positions.

In 2018-19 we also began working with the community in Hahndorf to explore prospective uses for high quality recycled water from the Hahndorf Wastewater Treatment Plant.

The local community was invited to participate and submit ideas through our Water Talks website as we look to expand our already extensive recycled water network.

The public responded positively with many parties keen to explore the opportunity in more detail. A sustainable approach to the reuse of water is important to South Australians and we will continue to work with customers to develop options for recycled water use in the Adelaide Hills.

Any reuse scheme from the Hahndorf treatment plant will likely be operational within the next four years.

Port Pirie sports new odour dome

A collaboration with the Port Pirie Regional Council has helped ensure the success of the town's reinvigorated Memorial Oval sporting complex, thanks to the installation of an innovative fibreglass dome above the site's wastewater ventilation.

With the oval's proposed two-storey function centre to be built just 15 metres from an existing wastewater vent, the team at our Crystal Brook workshop found an innovative solution to ensure visitor comfort.

To minimise potential odour impacts and ensure visual amenity, a unique one metre green fibreglass dome which uses charcoal to filter odour and gas from the wastewater system, proved the best solution.

Council installed a timber fence around the perimeter of the dome which helps screen the facility while still providing full and easy access for us to maintain the equipment.

Working closely with Council, having early discussions and understanding what we each needed to achieve was

Below: District Leader Port Pirie and Crystal Brook Shaun Northcott and Manager Customer Field Services Darren Walker at the new odour dome in Port Pirie.

Right: The vehicle being lifted out of the Blue Lake/War War by crane.



key to delivering the best technical solution, and great outcomes for the complex and its thousands of visitors every year.

Car retrieved from Blue Lake/War War

In September 2018 our Mount Gambier-based team, together with crane and diving experts, safely removed a partially-submerged vehicle from the south-east's iconic Blue Lake/War War.

The car had been floating in a secure, sectioned off part of the reservoir, following an incident in early August.

The retrieval was a complex and delicate process which required considerable planning. The safety of the community and our people was at the forefront during the process.

A dive crew floated the vehicle around 200 metres to the retrieval area, before it was lifted out of the water by a 220 tonne crane with a 71-metre arm, which was situated on a higher level within our pumping station site.

Mount Gambier's drinking water supply was switched to being sourced from the local bore field during the retrieval as a precaution.

Quick response ensures customer supply on Eyre Peninsula

In February 2019 crews from across the state responded when a truck damaged a water pipeline near Poochera on the western Eyre Peninsula.

A road train collided with an above-ground water pipeline on the Eyre Highway causing damage to about 170 metres of pipeline that delivers water to Ceduna and Streaky Bay. Our crews acted quickly, working together to ensure the situation did not affect supply to these major towns.

Water stored in tanks near Ceduna, Smoky Bay and Streaky Bay ensured ongoing water supply to customers in the three townships, with an alternative water supply available for our approximately 100 farming and residential customers in Poochera.

The repairs proved a large and complex job, with crews coming from a number of our Eyre Peninsula depots and welding teams mobilised or on standby from Crystal Brook, South Para and the Riverland.

About 25 people worked safely and swiftly throughout the weekend to ensure local customers could access water.

LEADING THE WAY

To achieve our vision, we must be national and global leaders giving our customers confidence we are innovating to achieve outcomes for them. As a leader in South Australia, we support our local community and economy.

Leading reconciliation

Our stretch *Reconciliation Action Plan 2017-20* (RAP) guides our reconciliation actions and in 2018-19, we achieved in a number of areas detailed below and in the following report items.

Working together with remote communities we have completed a project for wastewater reuse and greening of the Amata oval to AFL standard. Upgraded infrastructure at Watinuma has been commissioned, see *APY Lands upgrades for a better life* (page 23) for details of these upgrades.

In September 2018, the innovation space in SA Water House was named Kurlanaintyerlo with the assistance of the Kurna community, a Kurna word meaning on the crest of a wave. The word and its meaning guided the design of the space which is an adaptable area suitable for a range of activities and aims to help us challenge the status quo.

In addition to SA Water House, the Aboriginal and Torres Strait Island flags are now installed at our offices in Port Lincoln and Crystal Brook.

Tia Tuckia, Warevella and Yarilena homelands have been supported with community infrastructure matters throughout the year, including leak detection and fixes.

At the end of June 2019, 57 per cent of our RAP actions have been delivered.

Education and training opportunities in Aboriginal communities

Through education and training, we worked with communities and groups across South Australia including:

- Facilitating 15 plumbing courses on the Anangu Pitjantjatjara Yankunytjatjara Lands with more than 40 students and community members learning plumbing basics to increase sustainability by fixing leaking taps.
- An Aboriginal education program, which we deliver in partnership with KESAB *environmental solutions*, with a focus on teacher training for Anangu educators to enable community ownership and delivery of the program. The program is linked to curriculum and promotes the value of water and encourages sustainable use. This year we partnered with the South Australian Museum and took Anangu students to local water holes to test water quality and build their understanding of safe drinking water. The program was also delivered to Aboriginal communities on the far west coast.



Top left: The green Amata oval.

Bottom left: One of 15 plumbing courses for students and community members on the Anangu Pitjantjatjara Yankunytjatjara Lands.

Right: Testing water quality at water holes on the Anangu Pitjantjatjara Yankunytjatjara Lands.

- Involvement of Aboriginal and Torres Strait Islanders from within our business in the STEM Aboriginal student congress, which attracted more than 500 students from 140 schools. The congress engages Aboriginal students in years five to 10 through a range of interactive, challenging and culturally relevant experiences to encourage more Aboriginal students to choose STEM subjects in years 11 and 12. We provided a tour of the Kauwi Centre and Bush Tukka Garden at the Adelaide Desalination Plant, and delivered our Sustainability Challenge education program.
- Partnering with Volunteering SA to deliver our twinning program which matches Aboriginal not-for-profit businesses with skilled people to work on short-term, high-impact projects.

Reconciliation Week 2019

During National Reconciliation Week, 27 May to 3 June 2019, we hosted nine events for our people across the state aligned to the theme: grounded in truth walk together with courage. Activities included Kurna language sessions for people based in SA Water House helping to bring Aboriginal culture to the forefront of our work.

In Mount Gambier, newly installed paintings and signage were unveiled, giving the Blue Lake its traditional Boandik name: War War. War War means ‘the sound of many crows’ and reflects the crow Dreaming of the Boandik people, who are the Traditional Owners of the Mount Gambier region.

Recognising and acknowledging the lake’s name and story is a step towards revitalising culture and reforming the community’s connection with Country.

Dual naming, and use of local Aboriginal languages, including Kurna lessons during National Reconciliation Week, aligns with 2019 being designated the UN Year of Indigenous Languages.



Top: Barngarla artwork on the pipeline near Port Lincoln.

Bottom: Boandik Elder Aunty Penny Bonney, Boandik artist Belinda Bonney and Boandik Elder Aunty Valda with the painted panels at Blue Lake/War War pump station.



Connecting with communities through art

A 40 metre section of the above ground water pipeline near Port Lincoln was painted with an artwork we commissioned depicting the importance of water to the Barngarla people.

Several members of the Barngarla Aboriginal community worked with local school students in early 2019 to design and create the art, which was unveiled to the wider public during National Reconciliation Week.

The painting tells the story of the goordla gawoo ngaoowiridi — fresh water cycle. It shows the strong relationship Aboriginal people have to water and their connection to the sea, the animals and plants that rely on it, and how water was and continues to be used to sustain life.

At Beetaloo Reservoir in the state’s mid-north, an artwork by Nukunu artist Jessica Turner was installed in September 2018.

Erected at the reservoir’s public lookout, the colourful artwork titled ‘Wobma’ details the cultural and spiritual relationship the Nukunu people have with land and water in the Spencer Gulf and southern Flinders Ranges.

Working together with the Burrendies Aboriginal Corporation, Boandik community artists and Elders, as well as several local school students in Mount Gambier, four panels were painted to tell the story of Craitbul, the giant Boandik ancestor. These floor to ceiling pieces are now on display inside the Blue Lake/War War pumping station.

Digital stories capture water wisdom

Working with the Barngarla people (Port Lincoln to the far west coast), the Kaurna people (Adelaide), and the Boandik people (Mount Gambier), we produced digital stories about Aboriginal innovation, management and treatment of water.

By capturing important insights and knowledge about how water was used and managed by the first Australians, we can respectfully convey the understanding and practice of sustainable water management, and how it has shaped spiritual and living connection to Country and, importantly, how it can influence contemporary water management practices.

It is hoped Water Wisdom will build understanding and appreciation of the significant innovations and technologies developed and used by Aboriginal people for thousands of years. Documenting this knowledge ensures it can be made available to the wider community and future generations to keep culture and knowledge alive.

To keep the knowledge of Kaurna people alive, their knowledge about key water sites and resources on the Adelaide Plains is being gathered and captured to form a cultural water knowledge database on how water ways were used and managed.

Vera Richards, Jack Buckskin, Kaiden Richards and Emma Richards share their water wisdom during filming at Port Lincoln.

Supporting Aboriginal businesses to grow

Continuing our efforts to support the growth of South Australian Aboriginal businesses, we brought 24 Aboriginal-owned businesses together with our tier one construction partners in October 2018.

At our inaugural Aboriginal Business Forum, everyone learned more about the challenges faced by major contractors and Aboriginal businesses, and had the opportunity to establish or foster effective working relationships.

This supported our commitment to reconciliation, by bringing people together, promoting equity and working to find the best outcomes possible for Aboriginal and Torres Strait Islander people through economic development and business opportunities.

In 2018-19, our direct spend with Aboriginal owned businesses was nearly \$500,000 and the indirect spend was in excess of \$3 million. Contributing to this has been the Aboriginal Business Forum, greater awareness among our people about Aboriginal businesses, and updates to procurement methodology and plans to support commitments in our Reconciliation Action Plan.



Below: With smart meters installed, Penneshaw residents and businesses can monitor their water use online.

Right: Advanced smart water network technology is improving network management and maintenance.



Penneshaw benefits from smart network expansion

In late 2018, people living in Penneshaw were our first residential customers to access smart technology en masse with the installation of about 300 smart water metres at residences and businesses in the Kangaroo Island township. Flow and pressure sensors were also placed at key points in the broader local network as part of our smart water network expansion.

As with customers participating in the smart water network trial in the Adelaide central business district, customers in Penneshaw are using these smart meters to monitor their water consumption through a secure, online portal.

The smart meters send water use information to the portal every hour with customers able to opt in to receive text message or email notifications about water use or inconsistencies, on a daily, weekly or monthly basis. This interconnected system has helped customers identify leaks and other faults in their plumbing which may have resulted in high water use, had it not been detected by the smart meter.

Smart meter data is also providing us with a holistic view of Penneshaw's water needs. The two flow and pressure sensors have the ability to help identify any network water losses and inform our operational, planning and investment decisions.

The trial in Penneshaw will continue through to August 2019 and guide wider smart network investments.

Getting smarter across the state

In 2018-19, the installation of advanced smart water network technology expanded to four targeted locations in metropolitan and regional areas of South Australia, building on the successful trial in the Adelaide CBD.

This technology enables us to identify and proactively fix a number of fault types before they affect our customers or inconvenience commuters.

As the smart network in the CBD continues to evolve, we are further refining its operation, including how to use the data to best effect in network management. With the CBD implementation bringing benefits for our customers through network management improvements, the technology is now being expanded.

An analysis of our water network identified Athelstone, North Adelaide, Penneshaw and Port Lincoln as appropriate areas to extend our smart water network. The type of technology installed at each location differs, depending on the issue being addressed.

Athelstone has a relatively high rate of water main breaks due to some of the most reactive clay soils in Adelaide, coupled with high supply pressure as a result of the area's topography.

To help combat this, we installed a pressure modulating control station, as well as sensors to monitor the pressure and sound activity within the network. Using data from the sensors we can use the control station to remotely measure and maintain a stable water pressure in the network at varying periods of demand through the day.

We have also installed several sensors along a large trunk main on Gorge Road in Athelstone to reduce the impact of breaks and leaks on commuters in this high traffic area.

In total, 35 pressure sensors (including 15 transient loggers), 19 flow meters, 120 acoustic leak detection sensors and two water quality sensors were fitted across the four locations.

Smart water network wins global prize

Our world-leading adoption of smart water network technology was recognised with a bronze prize at the International Water Association's Project Innovation Awards held in Tokyo in September 2018.

The smart water network trial in Adelaide's CBD edged out 160 entries from 45 countries in the *Smart Systems and the Digital Water Economy* category, cementing our position as an international leader in integrating digital and smart technologies for the benefit of customers.

The network, implemented in a \$4 million trial, combines acoustic sensors, pressure and flow data, high speed transient pressure sensors, smart meters and water quality sensors to identify potential leaks and trigger intervention before leaks or breaks escalate to inconvenience customers or commuters.



Smart sewers

Stonyfell and Gawler are the two locations in our \$5 million trial of advanced smart sewer technology, which aims to reduce the incidence and impact of sewerage network faults and issues for our customers and the wider community.

In Stonyfell, our focus is on detecting sewer pipe blockages to prevent overflows either inside or outside homes, which occur in the Adelaide foothills suburb at a higher than average rate than other areas.

The smart technology complements existing ongoing sewer maintenance programs by enabling a more targeted approach. We are one of the first Australian water utilities to use the technology in a comprehensive whole of suburb approach.

The sewer system in Stonyfell has been fitted with flow and level sensors, which monitor the movement of sewage in the pipes. This gives us near-real time information on where a blockage is, making it easier to despatch our crews to fix it, well before it affects our customers.

In Gawler, we have installed odour detection sensors and weather stations to better understand the behaviour of odour in this part of the network and how we can better manage the issue over time.

In total for the wastewater network, there are 88 level sensors, 88 odour detection sensors and 11 weather stations.

The combination of technology across both our water and wastewater networks, a world-leading analytics platform and the expertise of our smart network team is giving us a more detailed view of our underground systems than ever before, and helping us continually improve.

This trial was named the Best Industrial Internet of Things Project at the 2019 Internet of Things Awards, acknowledging our pioneering work in the rapidly evolving field of smart networks.

Woolpunda takes out top gong in state water taste test

Water produced from Woolpunda Water Treatment Plant was awarded best tasting tap water in South Australia at the Water Industry Operators Association of Australia annual competition in August 2018.

Woolpunda was one of 14 samples from across the state judged by a panel of water industry experts and interested members.

The competition showcases South Australia's drinking water, acknowledging the somewhat unsung work of water operators, and getting people talking about tap water.



Top: A smart sewer sensor installation in Stonyfell.

Bottom: Woolpunda Treatment Plant Operator Greg Haynes with the state's top drop.



Left: The solar array at Glenelg Wastewater Treatment Plant.

Below: Solar panels installed at Hope Valley Water Treatment Plant.

Growing innovation

Improving, refining and innovating are helping us lead the way in the water industry.

In 2018-19, our *Innovation Speaker Series* continued to expose us to fresh ideas and approaches, with presentations from Queensland Urban Utilities, the University of Adelaide and Uber.

People from all areas of the business also came together to develop a framework for growing our people's ideas. Since forming in September 2018, the group has continued to uncover insights into how we create a cultural change to encourage and spread innovation.

The innovation team continued to connect and collaborate across the business on a number of projects including:

- our zero cost energy future
- reimagining water and wastewater master planning
- asset management
- odour approach
- work zone traffic management
- liveability
- integrated utility
- agile working.

A case study of our recent innovation journey was presented to industry peers at Ozwater'19, the national water industry's annual conference.



Creating a zero cost energy future

The idea to create a zero cost energy future was conceived and shaped by our people and is a demonstration of how we are leading the way to integrate renewable energy and storage with the nation's longest water network.

Installation of solar panels was completed at three of our Adelaide metropolitan sites: Hope Valley Water Treatment Plant, Christies Beach Wastewater Treatment Plant and Glenelg Wastewater Treatment Plant.

At Hope Valley, the system achieved savings on electricity costs of 61 per cent in June 2019, down from an average of \$21,000 to \$8,000.

In February 2019 we appointed Enerven as the contractor to deliver our \$304 million investment in solar photovoltaic panels and energy storage. This project will see the installation of 154 megawatts of solar generation and 34 megawatt hours of storage across up to 70 of our sites.

With an energy bill of \$83 million in 2018-19, this investment in more than 500,000 solar panels is expected to deliver a return in six years with the view to reducing our costs and keeping water service charges as low and stable as possible over time for our customers.

Construction work will support about 250 jobs, and includes a commitment to engage local Aboriginal-owned businesses evaluated on their competitive rates, as well as apprentice training and opportunities for the supply chain within South Australia.

Remote boats improve sludge management

Two remote-controlled boats are navigating the lagoons of our wastewater treatment plants in a novel and efficient new way to improve sludge management and minimise odour at facilities across the state.

Developed by the University of Western Australia, vessels use sonar navigation technology to remotely survey sludge build-up at the bottom of wastewater lagoons.

Fine sediment that remains suspended in the water after primary treatment stages settles at the bottom of wastewater polishing lagoons to form a sludge, which is then periodically removed to maintain the lagoons' holding capacity and minimise the potential for odour to develop.

A sonar unit scans the bottom of the lagoon and records data to an SD memory card that is then overlaid with a Google Earth map to visually display the sludge depths.

Removing sludge is an important yet often time consuming exercise, and this new technology provides a highly efficient way to accurately survey and know when to de-sludge.



One of the new remote-controlled boats now being used to survey sludge lagoons.

Biosolid breakthrough a boost for farmers

A study undertaken by our Water Expertise and Research team into high-quality organic biosolids this year confirmed a faster timeframe to eliminate pathogens, realising significant benefits to the agriculture and water industries in Australia.

Each year we collect and safely treat about 30,000 tonnes of organic biosolids from our wastewater treatment plants, and we provide it free to primary producers who use it to improve soil quality for crops such as cereals, citrus or vines.

Our research challenged the guidelines to store high-grade biosolids for three years to ensure all pathogenic microorganisms were inactive before delivering the final product. The project demonstrated a better quality biosolid product can be achieved in just one year.

Following an intensive monitoring program for both fresh and aged biosolids of up to 30 months, we detected no additional improvement in the guideline requirements of biosolids tested by extending the stockpiling period beyond 12 months.

This is a significant outcome for both farmers and water utilities across the country, with the potential to reduce costs for on-site storage and deliver a better quality biosolid product to primary producers.

Greenhouse gas reductions inform global guidelines

Our world-leading climate change research has successfully demonstrated an ability to monitor and reduce nitrous oxide emissions by 30 per cent from Bolivar Wastewater Treatment Plant.

Setting a benchmark for treatment plants around the world, the research has also informed the United Nations' greenhouse gas guidelines.

Trialled in partnership with the University of Queensland, the ground-breaking research collected and modelled nitrous oxide through floating 'hoods' anchored along activated sludge plants and pipes through a computer monitoring system, which then analysed the gas in short intervals.

The technology was created using the engineering resources and more than 20 years' expertise of our commercial business unit Water Engineering Technologies, which designs and manufactures customised solutions for water and wastewater utilities across Australia.

The technology developed by the team allows emissions of the gas to be monitored in real time, for the very first time.

The research has been scientifically validated and published in four academic publications, putting us at the forefront of addressing a major problem commonly facing wastewater treatment across the world.

With nitrous oxide having a global warming potential 310 times greater than carbon dioxide, it is vitally important that all utilities work to reduce emissions in their operations without compromising on plant performance.

Misters cool the air at the Tour Down Under Village (right) and TreeClimb in the Adelaide Park Lands (below).



Cooling the community

Riders and spectators at this year's Tour Down Under could escape the extreme hot weather and keep cool thanks to unique new 'cool zones' we created in partnership with race organisers.

Throughout this major event, hundreds of water misting jets provided refreshing blasts of cool air to people visiting the City of Adelaide Tour Village in Victoria Square/Tarntanyangga, and helped them manage the warm conditions experienced during the race.

Following the successful use of misters at the corporate hospitality facility for the Down Under Classic and Women's Tour Down Under, they were installed at the Tour Village for everyone to enjoy.

Using water in different ways can increase the use of spaces and liveability during our hot summers and is an important way we are working to create a better life for South Australians.

The 'cool zones' proved popular and followed trials looking at ways to keep suburban houses and gardens cool, as well as our world-first heat mitigation trial at Adelaide Airport.

A similar misting system was installed at TreeClimb in the Adelaide Park Lands, to help keep aerial adventurers cool over the busy summer school holiday period.

Growth in laboratory services

In 2018-19, the Australian Water Quality Centre (AWQC), our national laboratory service, positioned itself to better meet the current and future needs of water utilities seeking its services. This included building understanding of the national water industry and its needs, and research to inform and shape service development for AWQC laboratories in Adelaide and Melbourne.

Molecular testing services were expanded in the Adelaide laboratory, while the Melbourne laboratory increased its capabilities to include sampling and a wider range of chemical testing services. To support growth in the Melbourne laboratory, new premises were identified ahead of a move planned for early 2020.

The AWQC continued to actively support the national water industry through conference exhibitions, sponsorships and presentations.

At the 2018 Water Industry Alliance Smart Water Awards, the AWQC was recognised for its world-leading molecular services winning the Innovation in Large Organisations Award. The paper by the AWQC's Method Development Coordinator was shortlisted for best paper at Ozwater'19.

In 2018-19, the AWQC actively participated in a number of national water industry conferences including Water Industry Operators Association of Australia, Australian Water Association state conferences in South Australia, Northern Territory and Tasmania, and Ozwater'19.

CAPABLE AND COMMITTED TEAM

Our experienced and capable team consistently lives our values to safely deliver for our customers every day.

Safety and wellbeing of our people

The introduction of a harm based approach to safety in March 2019 has seen a shift in focus from traditional lag metrics to events that could have been life altering, if not for luck. These actual or potential life-changing situations are called diamond events.

As part of this change, we reviewed and modified our approach to incident investigation enabling us to prioritise serious incidents and better focus our resources to prevent the likelihood of recurrences. Harm Based Diamond Alerts are now distributed to our people to share information and lessons from these events, and start safety conversations.

Random drug and alcohol testing began in September 2018. Through to 30 June 2019, we conducted 448 tests with an equal split of regional and metropolitan sites and no confirmed positive results.

In 2018-19 our wellbeing initiatives have largely focused on mental wellness with 25 workshops conducted for people leaders to improve their understanding of how to effectively support our people.

People leaders in the Customer Field Services team have started the Leadership Fundamentals program, which incorporates safety leadership and the principles of our safety framework – engagement and empowerment. All field-based workgroups continue to develop and implement their own safety frameworks.

Our work health and safety asset improvement program has focused on seven high-risk categories:

1. Fall prevention – addressing the hazard of working at height.
2. Hazardous substances – addressing issues identified through site audits relating to working with or near dangerous or corrosive chemicals.
3. Asbestos removal – progressively removing all asbestos containing materials.
4. Wastewater pump station relocation – moving stations located in-road or at the roadside.
5. Electrical safety – identifying and addressing assets, primarily switchboards, that are deemed to pose an unacceptable risk to operators.
6. Fire detection and emergency evacuation – ensuring all sites where our people are based are well protected by compliant fire detection and evacuation systems
7. General and minor health and safety – addressing specific sites or hazards that do not fit in the above categories.

Field worker safety

Rollout of the in-vehicle safety system supporting our remote and isolated workers to undertake their roles safely, was completed and is now installed in 550 vehicles. The system has an in-built alert that automatically raises an alarm in the event immediate help is needed. The system is monitored 24 hours a day, seven days a week by our Operations Control Centre in Adelaide.

A wider assessment was undertaken of the risks relating to the personal safety of our field crews in remote or isolated areas, and the safety support we provide them. While there is significant support already in place, this exercise highlighted a number of opportunities for improvement which will be progressed in 2019-20.

Inclusion and diversity

A refreshed Inclusion and Diversity Plan was prepared to ensure alignment with our vision and strategy. It has four focus areas:

1. Women in SA Water – increasing opportunities for women in leadership and non-traditional roles including field-based, STEM and trades.
2. Aboriginal and Torres Strait Islander employment and retention – supporting our Reconciliation Action Plan.
3. Flexible and inclusive workforce – overcoming unconscious bias, increasing and supporting diversity in all its forms.
4. Emerging workforce – growing innovation and diversity of thought through opportunities for new and emerging people in our business.

Each focus area is led by a General Manager with the Chief Executive taking leadership of the overall plan.

Our existing recruitment and retention processes, as well as our culture and values underpin our inclusion and diversity program.



Participants in our 2018-19 graduate program.

Building a high performing and collaborative team

There were two key focus areas for developing our people in 2018-19:

1. Leadership Fundamentals

Leadership Fundamentals was piloted with managers from our Customer Field Services team. The program has an emphasis on building on the basics, developing greater consistency in our leadership capability, and supporting our leaders to:

- provide clear performance expectations
- create greater levels of accountability
- build a constructive workplace culture within their teams
- improve their leadership communication
- effectively lead their teams in an environment of constant change
- recognise great work.

2. Teamgage

Teamgage is an online tool that enables our people to effectively collaborate and have meaningful conversations with their team. It provides an opportunity for teams to regularly provide feedback to their people leaders and track how everyone is going. The ongoing process is designed to measure change and improvements in key areas over time.

Teamgage was piloted with more than 160 of our people, with the rollout across the business will continue in 2019-20.

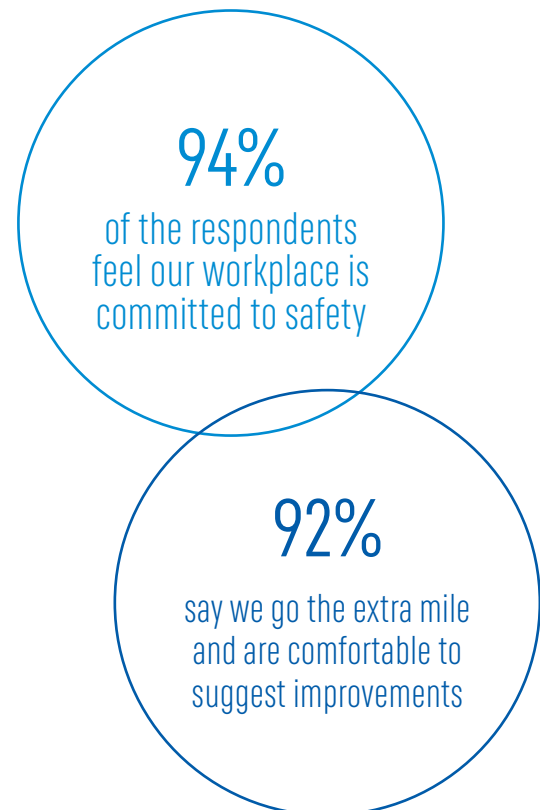
As well as these focus areas, in 2018-19, 74 per cent of our people responded to the South Australian Government's *I Work for SA* survey. The results showed that across all major indicators, our people tracked above the public sector average.

The 72 per cent engagement level corresponds to 74 per cent when compared with our previous engagement methodology, which is an increase of five per cent over 12 months. It shows our people have a strong commitment towards the business and strive to do their best.

The key highlights from the survey include:

- 94 per cent of the respondents feel our workplace is committed to safety
- 92 per cent say we go the extra mile and are willing and comfortable to suggest ideas to improve the way we do things.

The survey also identified opportunities for improvement such as further simplification of processes and growing the number of people who feel comfortable to speak up and challenge the way we work when they see a better way. Results will inform our ongoing work to build a constructive and collaborative culture.



Awards celebrate our innovation and excellence

In December 2019, our inaugural Innovation and Excellence Awards acknowledged our people who are excelling as they deliver for our customers. There were seven awards:

1. **Innovation Award** – presented to members of our Woodside Depot team in recognition of their work to test and implement trenchless pipe repair techniques that are delivering cost, safety and environmental benefits.
2. **Together Award** – for the large, cross-disciplinary team involved in the retrieval of a vehicle that crashed through a railing in Mount Gambier and into the Blue Lake/War War. This was a complex operation and our people played a critical role ensuring the incident was managed safely and proactively. See Car retrieved from Blue Lake/War War on page 38.
3. **Safety Leadership Award** – presented to the team that worked on improving sludge monitoring of lagoon-based wastewater treatment plants. See Remote boats improve sludge management on page 45.
4. **Inspirational Leadership Award** – Riverland District Leader Shaun Elphick received this award in recognition of his positive approach and inspirational endeavours.
5. **Environment and Energy Award** – awarded to Manager Environmental Opportunities Greg Ingleton for his work on the innovative Adelaide Airport heat trial. Through smart application of irrigation techniques to an open environment at the airport, he was able to show that the surrounding area could be cooled significantly, bringing a range of benefits to the airport operators.



Above: Winners of the Together award – representatives from the team involved in the vehicle retrieval at Blue Lake/War War.

Left: The team from Crystal Brook, winners of the Surprise and Delight (Internal) award.

6. **Surprise and Delight Award (External)** – presented to the team that delivered the Hallett Cove Wastewater Pump Station upgrade. In delivering two major upgrades at the pump station over 12 months, Environmental Services together with the Stakeholder Engagement and Asset Management teams and alliance partner Allwater managed and improved our relationship with the local community. The result is a beautiful landscape that the community uses and enjoys.
7. **Surprise and Delight Award (Internal)** – won by electricians from our Crystal Brook Workshop who took on the challenge to install new switchboards, power supplies and control cabling while the Henley Beach and Fulham sewer pump stations continued to operate. The successful outcome was a collaboration between our electricians, alliance partner Allwater and external contractors.





KEEPING IT SIMPLE

Simple, easy, customer friendly processes are important to create value for our customers. Keeping it simple motivates our people to challenge the status quo, get involved and act on their ideas for improving how we work.

Increasing technology and digital capability

The delivery of information technology projects has accelerated this year with 50 additional digital features newly available to the business, up from 40 introduced in 2017-18. Our IT Delivery team has worked with our change managers to help ensure our people make best use of the technology features being delivered.

In addition, there has been ongoing development and scaling of the agile framework, which is used by more than 35 per cent of our IT projects. This has been well supported by our internal agile coach helping our people understand the mindset and method.

The IT services panel came into effect on 1 July 2018 enabling us to consolidate and better manage and use our suppliers. The panel provides services for both operational and project activity.

Simple processes

During 2018-19, we worked on 59 projects to simplify a range of processes. Of these, 22 were completed and 25 remain in progress as at the end of June. Among those delivered, we have:

- **Reduced the number of internal sewer overflows** experienced by customers by simplifying processes and improving the way we work. We have reduced repeat blockages and known 'black spots' in the network, used trenchless repair technology and improved levels of customer service.
- **Developed and implemented *Keeping it Simple***, an improvement process and system that can be used by anyone in the business. Through this process, 96 improvement ideas were raised with benefits identified for implemented ideas in excess of \$2.5 million.
- **Customer Assist process review**, for optimised compliance with the *Water Industry Act (2011)* and regulated reporting requirements. This work led to quicker and easier responses to customers experiencing financial difficulty who call us; meeting targets for responding to written correspondence; a simpler way to manage some types of customers inquiries; and clearly defined processes for training and skill development for our people.
- **Improved laboratory test turnaround times** to meet customer expectations by creating capacity in the team to focus on method development. Results included a 10 per cent increase in productivity in two of our laboratories following a 5S LEAN audit, as well as efficiencies gained through the acquisition of a new instrument and more efficient digital archiving.
- **Improved timesheet processes** for our people not yet recording their time digitally, leading to time savings for our Payroll team and district leaders.

Integrating risk management

By simplifying processes related to risk management, we are improving safety outcomes, operational and capital efficiencies, and better integrating enhanced risk intelligence and behaviours in our business.

In 2018-19 we delivered:

- Improvements to tools including our electronic risk, hazard and incident register (known as SAAM), and risk assessment template.
- A completed framework and tool for multi-criteria analysis and integration with our risk management framework.
- Updated risk management framework and consequence criteria review.
- A risk champion network within the business and their guiding terms of reference.
- An embedded standard risk process which aligns the risk calculation approaches from different disciplines with our corporate risk criteria.
- Alignment of risk scanning, insights and coordination with our business strategy development, incorporating lessons learnt and risk insights from environmental scans.
- A review and future state flow chart of risk process integration between health and safety and asset management.
- One consolidated system for all risk-related information with 30 environmental aspects and impacts registers brought into SAAM.

As a result of these actions, risk management in the business has been standardised, enabling an end-to-end process, eliminating duplication, and facilitating better connection of risk management with business activities and decision making.

Our risk intelligence has improved through consolidating risk data and making it more available. These actions are moving us towards the aim of using risk data to inform corporate performance. Our collaboration on risk is improving as we enhance and harness the value of risk management.

Integrating management systems

This year we focused on nine core quality management system processes with the aim to improve their effectiveness and efficiency. By identifying and partnering with the process owners, we initiated work to collaboratively deliver the design and implementation of improvements.

The nine processes were:

1. audits and reviews
2. capability development
3. customer and stakeholder engagement
4. improvement innovation
5. knowledge management
6. performance management
7. planning
8. procurement
9. risk management.

In 2018-19 we upgraded and expanded our hazard, incident and risk management tool to incorporate environmental risks. An audit module was added to the system to facilitate audits and ensure findings are captured and managed from one central tool.

Continual improvement of our Business Management System was introduced, applying an agile approach to deliver incremental improvements.

The internal management systems audit schedule was redesigned using risk to define the frequency of audits, ensuring efforts are focused on the areas where most value will be added.

Organisational change readiness

Building on the pilot run in 2017-18, our Leading Change Module — including eLearning, classroom training and one-on-one coaching — was completed by 40 people leaders and 25 IT project managers.

Rollout of five change management approach elements began in 2018-19:

1. base methodology
2. consistent change processes
3. training — leading change
4. roles and responsibilities
5. tools and templates.

These were targeted for IT project managers, customer delivery managers and other people leaders managing significant change.

Our people leaders are key to achieving change effectively. Training delivered is a critical part of implementing and maturing our organisational change readiness capability.

Additionally, a standardised induction package for change leads was piloted to ensure best practice is applied consistently, regardless of business demand.

At 30 June 2019, we were considered 'project level' mature in our change capability. Achieving this level is part of our progress to be at 'enterprise level' of maturity which enables improved customer experiences from a workforce that is ready, willing and able to lead and deliver improvements and change.

Adelaide service delivery into the future

As we continue to evolve to meet our customers' changing expectations and our regulatory requirements, we have reviewed the way services are delivered for our customers in metropolitan Adelaide.

In November 2018, we notified Allwater that the current contract would not be extended, to enable a new contracting arrangement that reflects the evolving needs of our customers. Preparations are now underway for changes that will come into effect from 1 July 2021 when we adopt a new contract model comprising two components: production and treatment, and field services.

Best practice service delivery models from around the world were reviewed as we developed our new approach which balances local knowledge and experience with the best national and international expertise available.

The procurement process for both contracts is underway and will continue to progress during 2019-20.

SUSTAINABLE DEVELOPMENT GOALS



As the providers of essential water and sewerage services to 1.7 million South Australians, our core business aligns with the UN Sustainable Development Goal number 6, clean water and sanitation. In addition, a number of activities undertaken in 2018-19 support additional Sustainable Development Goals, as outlined below.

Action	Sustainable Development Goals	More information
Water infrastructure upgrades in the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands to improve the safety and reliability of drinking water to the local communities.	 	Page 23
Building an understanding of the challenges and experiences of customers living with a disability to help us better plan, and tailor products, services and communication.		Page 31
Through our Customer Assist Program we work together with customers who are experiencing financial difficulties to agree a bill payment plan and help them return to paying bills quarterly.		Page 32
An expanded network of free drinking water fountains across the state, providing more options for South Australians and visitors to build a healthy habit and refill reusable drink bottles or stop for a drink of tap water.		Page 33
Our community and education program provided opportunities for students and community to learn about the importance of water as a resource and how we can all contribute to sustainable water use and management.	 	Page 34
<p>Through our Community Partnerships Program, we supported 17 grass-roots not-for-profit organisations deliver programs in their local communities including:</p> <ul style="list-style-type: none"> • Uniting Country SA's Itchy Emu Clinic in Port Augusta providing free head lice treatment for local children, tackling the problem of nits through a chemical-free treatment and a fun educational program. • A 27,000 litre rainwater tank and guttering for a water harvesting project at the Elliston Community Sports Centre to ensure the facilities can support a more sustainable water future. • Can:Do 4Kids providing a safe and inclusive environment for children with sensory needs to improve their aquatic skills. • Supporting a group of West Croydon residents to green the space along the trainline on Day Terrace with two new water connections. 	     	Page 35
In partnership with the University of Adelaide, supporting career and development opportunities for women in the fields of Science, Technology, Engineering and Mathematics.	 	Page 35

Action	Sustainable Development Goals	More information
<p>Through our Smart Water Schools program, which is linked to the Australian Curriculum, students have access to a secure portal to gather, analyse and act on real-time information collected from loggers attached to their school's smart water meter.</p>		Page 35
<p>Recycled water supply in the Adelaide Hills is providing great economic and environmental value, while ensuring security of supply and underpinning local business growth.</p>		Page 37
<p>Our stretch Reconciliation Action Plan 2017-20 guides our reconciliation actions. Outcomes in 2018-19 include:</p> <ul style="list-style-type: none"> • education and training programs • upgrading infrastructure • greening the Amata oval • Reconciliation Week activities • dual naming of sites • community art projects • capturing and sharing stories • displaying the Aboriginal and Torres Strait Island flags • conceiving and hosting an Aboriginal Business Forum. 	   	Pages 39-41
<p>To create a zero cost energy future, we will install 154 megawatts of solar generation and 34 megawatt hours of storage across up to 70 of our sites. With an energy bill of \$83 million in 2018-19, this investment in more than 500,000 solar panels is expected to deliver a return on investment in six years with the view to reducing our costs and keeping water services charges as low and stable as possible for our customers.</p>	 	Page 44
<p>Our world-leading climate change research has successfully demonstrated an ability to monitor and reduce nitrous oxide emissions by 30 per cent from Bolivar Wastewater Treatment Plant. Setting a benchmark for treatment plants around the world, the research has informed the United Nations' greenhouse gas guidelines.</p>	 	Page 45
<p>Using water in different ways can increase the use of spaces and liveability during our hot summers and is an important way we are working to create a better life for South Australians. 'Cool zones' created with water misters were popular with spectators at events such as the Tour Down Under and aerial adventurers at TreeClimb.</p>		Page 46
<p>A refreshed Inclusion and Diversity Plan was prepared to ensure alignment with our organisational vision and strategy. It has four focus areas:</p> <ol style="list-style-type: none"> 1. women in SA Water 2. Aboriginal and Torres Strait Islander employment and retention 3. flexible and inclusive workforce 4. emerging workforce. 	  	Page 47

WATER QUALITY

SA Health statement

SA Health and SA Water continued to work cooperatively and successfully throughout 2018-19 to ensure the protection of public health in relation to the supply of safe, clean drinking water across South Australia. SA Water complied with all requirements under the *Safe Drinking Water Act 2011* including the notification of incidents under the interagency *Water/Wastewater Incident Notification and Communication Protocol*.

SA Water collected 46,118 samples from drinking water supplies throughout the state. Samples were analysed for compliance with the Australian Drinking Water Guidelines (2011) (ADWG) and results were reported to SA Health in line with agreed reporting protocols. Compliance with the ADWG for *E. coli* was achieved in 100 per cent of metropolitan Adelaide samples, 99.99 per cent of country samples and 100 per cent of remote Aboriginal community samples. Overall compliance with the ADWG for health-related parameters was 100 per cent for metropolitan systems, 99.90 per cent for country areas and 99.49 per cent for remote community supplies.

The total number of incidents reported by SA Water in 2018-19 was significantly lower in comparison to the previous financial year. A reduction was observed across a range of incident categories including detections of enteric protozoa and exceedances of ADWG values for health-related inorganic chemicals and disinfection-by-products. Incidents in relation to the detection of high numbers of cyanobacteria in source water also decreased significantly. A trend in decreasing numbers of incidents has been observed over the past few years and could be attributed to a number of factors including improvements in source water quality and enhanced treatment implemented by SA Water.

Water quality incidents were notified by SA Water in a timely manner. Appropriate remedial actions were implemented and ensured that the protection of public health was maintained at all times. No incidents required public notification during the reporting period.

Safe drinking water legislation

The *Safe Drinking Water Act 2011* (the Act) provides the regulatory framework for drinking water providers in South Australia and is administered primarily by SA Health with assistance from local government. Provisions in the Act are underpinned by the ADWG and prescribe requirements for drinking water providers, including:

- registration of drinking water providers with SA Health
- development and implementation of risk management plans (RMPs)
- establishment of approved drinking water quality monitoring programs
- notification of incidents or non-compliance
- audits and inspections to determine compliance with the Act
- use of National Association of Testing Authorities accredited laboratories for sample testing
- reporting of water quality test results to SA Health and providing consumers with drinking water quality information.

SA Water is registered as a drinking water provider and has established RMPs including approved monitoring programs and an incident notification protocol. SA Water provided water quality testing reports for metropolitan, country and remote community water supplies on a monthly basis with results showing a very high level of compliance.

46,118
samples were collected
statewide

99.92%
statewide compliance with
the ADWG achieved

Under the Act, SA Water is required to undergo an annual independent audit. In 2018-19, the fifth audit of SA Water was undertaken since commencement of the Act. A number of representative SA Water drinking water supplies were included in the audit. The audit outcomes were consistently positive and noted that SA Water was operating in compliance with the requirements and intent of the Act. Compliance improved relative to the four previous audits and no significant non-compliances were detected.

Further information on the *Safe Drinking Water Act 2011* can be found at sahealth.sa.gov.au/safedrinkingwateract/.

Additional information about water quality can be found at sawater.com.au/.

Catchment to tap

We manage drinking water quality from catchment to tap in line with our Drinking Water Quality Management System to ensure a consistent and reliable supply of high quality, safe drinking water for our customers.

This management system is based on the Framework for Management of Drinking Water Quality outlined in the ADWG and endorsed by the National Health and Medical Research Council. The framework outlines good drinking water supply management, based on the best available scientific evidence that will assure drinking water quality and safety at the tap.

Water quality monitoring and testing

To ensure the quality of our product, we have SA Health-approved drinking water quality monitoring programs across metropolitan, country and remote Aboriginal communities of South Australia, from catchment to tap, including field and laboratory tests.

We monitor for health and aesthetic compliance and to optimise water quality. Samples are collected by our trained field workers to ensure they are taken correctly, and field results have a high degree of integrity. Laboratory analyses are carried out by our Australian Water Quality Centre in accordance with ISO 9001 Quality Systems and the requirements of the National Association of Testing Authorities.

The following table summarises routine monitoring and testing activities in our SA Health-registered drinking water supply systems in 2018-19.

Number of sample taps and test analytes – statewide, metropolitan, country and remote Aboriginal communities water supply systems, 2018-19

Drinking water systems	Statewide	Metropolitan	Country	Remote Aboriginal Communities
Supply systems	87	8	60	19
Customer tap sample locations	490	186	285	19
Catchment to tap sample locations*	1,439	372	950	117
Catchment to tap routine test analytes	372,352	72,279	289,997	10,076

* Includes drinking water customer taps

Drinking water quality and performance

In 2018-19, we demonstrated robust management of water quality by consistently providing safe, clean drinking water for our customers.

The following table summarises our performance for health-related parameters of routine samples at customer taps.

Statewide, metropolitan, country and remote Aboriginal communities drinking water supply systems health related performance, 2018-19

Health-related parameters	Statewide systems (number of test analytes)	Metropolitan systems (number of test analytes)	Country systems (number of test analytes)	Remote Aboriginal Communities (number of test analytes)
Samples free from <i>E. coli</i>	99.99% (10,560)	100% (3,309)	99.99% (7,151)	100% (100)
Samples compliant with ADWG health parameters*#	99.92% (46,118) Target: 99.90%	100% (13,408) Target: 100%	99.90% (32,126) Target: 99.80%	99.49% (584) Target: 99.80%

* Percentage of routine results at customer taps within drinking water systems which comply with the ADWG health limits (including *E. coli*).

Direct exceedances of the ADWG were used rather than the 95th percentiles for compliance of individual chemical parameters.

Prior to calculating per cent compliance for health-related chemicals, individual results are rounded to the same number of significant figures as the guideline value in the ADWG (as prescribed in the ADWG and agreed with SA Health).

We analysed 46,118 routine test analytes from our drinking water supplies throughout South Australia to determine health related compliance.

- We achieved 99.99 per cent *E. coli* compliance across customer taps with an exception in one country system.
- Compliance with ADWG health-related parameters across customer taps was above target at 99.92 per cent.

Although we aim for 100 per cent compliance, the ADWG recognises that occasional exceedances may occur. In accordance with the guidelines and the interagency *Water/Wastewater Incident Notification and Communication Protocol*, all detections were immediately communicated to SA Health, investigated by us and corrective actions implemented as agreed with SA Health.

SA Health has confirmed that drinking water provided to customers by us was safe and appropriate responses and corrective actions were implemented in all cases and these mitigated any risks to public health.

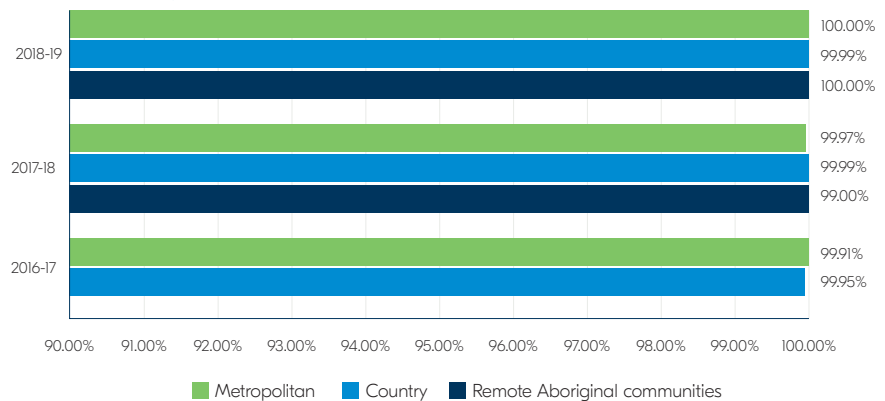
The greatest challenge to country compliance is disinfection by-products due to several South Australian source waters containing high amounts of natural organic matter. We have identified these systems and are proactively implementing management strategies to address these situations.

In 2018-19 we successfully changed how we disinfect the filtered water delivered to the Myponga township from chlorine to chloramine. This change is the first step to convert the entire Myponga drinking water system, which serves a large proportion of the Fleurieu Peninsula, to chloramine which will help mitigate the disinfection by-products challenges faced in this system, as well as having the added benefit of improving the taste and smell of the water.



In late 2017 we took on the Aboriginal communities ground water supply systems of Kanpi and Murputja. At that time, these supplies did not meet all the process requirements and health objectives of the *Safe Drinking Water Act 2011* and have naturally occurring fluoride above the Australian Drinking Water Guidelines (2011). A water supply upgrade project is underway which will see Kanpi, Murputja and Nyapari water supplies merged, and the installation of a reverse osmosis treatment plant to remove the elevated fluoride. This project will improve the compliance and reliability of drinking water for the people living in these communities.

***E. coli* compliance at metropolitan, country and remote Aboriginal communities drinking water supply system customer taps since 2016 (customer tap samples free from *E. coli*)**



Compliance in remote Aboriginal communities was first reported in 2017-18.

Incident management

We are committed to applying the Australian Drinking Water Guidelines (2011) (ADWG) Framework for Management of Drinking Water Quality which includes two components for the management of incidents and emergencies:

- communication
- incident and emergency response protocols.

We have a Water Quality Incident and Emergency Management Protocol in place and a web-based incident management system to record and generate notification of water quality incidents. These are in line with the interagency *Water/Wastewater Incident Notification and Communication Protocol* that is maintained by SA Health to adopt the principles of the ADWG and satisfy requirements of the *Safe Drinking Water Act 2011* and *Safe Drinking Water Regulations 2012*.

SA Health defines three types of health related incident classifications based on a precautionary approach:

1. Priority Type 1 incident notification

An incident that, without immediate appropriate response or intervention, could cause serious risk to human health and is likely to require immediate interagency meetings to consider responses. Procedures for Type 1 incident notifications also apply.

2. Type 1 incident notification

An incident that, without appropriate response or intervention, could cause serious risk to human health.

3. Type 2 incident notifications

An incident that, without appropriate response or intervention, represents a low risk to human health.

Following is a comparative summary of the Priority Type 1, Type 1 and Type 2 incident notifications reported against the interagency *Water/Wastewater Incident Notification and Communication Protocol*.

Statewide supplies (metropolitan, country, and remote Aboriginal communities)

Reporting period	Priority Type 1	Type 1	Type 2
2018-19	1	24	54
2017-18*	2	42	90
2016-17 [#]	2	48	159
2015-16	4	32	74
2014-15	1	43	84

Note: these notifications do not include wastewater, recycled water and non-drinking supplies.

* Remote Aboriginal communities incidents included in annual reporting from 2017-18. In 2018-19, there was one Type 1 and no Type 2 incident reported in remote Aboriginal communities.

Impacted by River Murray blackwater event.

Priority Type 1 and Type 1 incidents are immediately reported to SA Health, while all Type 2 notifications are reportable within 24 hours, in line with the interagency *Water/Wastewater Incident Notification and Communication Protocol*. In 2018-19, the numbers of incident notifications decreased significantly when compared with 2017-18. This can be attributed to a reduction in cyanobacteria, disinfection by-products and enteric protozoa incidents, primarily due to improved process monitoring and control systems at water treatment plants and improved source water quality in the River Murray.

In 2018-19, we continued our focus on early detection and reporting to external agencies, briefing the Minister for Environment and Water in accordance with the interagency *Water/Wastewater Incident Notification and Communication Protocol*, ensuring prompt corrective action and addressing the causes of preventable Type 1 notifications, such as disinfection failures and filtered water turbidity exceedances. Strategies employed to achieve this include optimisation of our drinking water quality monitoring program, ongoing operational and capital improvements, and continuous improvement of our Drinking Water Quality Management System.

The proactive water quality management of targeted individual water supply systems and detection and management of risks continued during 2018-19. Changes in reporting criteria issued by SA Health in the interagency *Water/Wastewater Incident Notification and Communication Protocol* also occurred and contributed to a change in reporting requirements.

Incident Response Index

The Incident Response Index (IRI) drives and guides correct responses when a Priority Type 1 or Type 1 incident is detected. The IRI is assessed against a number of criteria, with each component in the IRI designed to assist the management of water quality incidents, including reporting, initial response and longer term preventive measures. The overall 2018-19 strategic target for the IRI is 85 per cent compliance.

Criteria used in the Incident Response Index (based on total reportable SA Health Priority Type 1 and Type 1 incident notifications)

Incident reported to relevant agencies by phone immediately (less than one hour)	Overall strategic 2018-19 target: 85%
Incident entered into the incident management system in less than two hours	
Initial effective response taken within three hours	
Written report to Minister for Environment and Water by 3pm next business day, in accordance with the interagency <i>Water/Wastewater Incident Notification and Communication Protocol</i>	
Root cause analysis completed within 10 working days	
Preventive actions implemented within agreed timeframes	

The continual review and improvement of our incident management processes has positively impacted our overall water quality incident response and performance, maintaining an overall score well above our target.

The Incident Response Index (IRI) achieved in metropolitan, country and remote Aboriginal communities and overall for 2018-19 compared to 2017-18

System	IRI 2017-18	IRI 2018-19
Metropolitan	97%	99%
Country	92%	97%
Remote Aboriginal communities	65%	67%
Overall (weighted combined metropolitan, country and remote Aboriginal communities)	90%	96%

Focus for 2019-20

In 2019-20 we will:

- Continue to improve our online incident management system for reporting and management of water quality incidents and hazards.
- Conduct refresher training on the *Water Quality Incident and Emergency Management Protocol* for country, metropolitan and remote Aboriginal communities incident managers.
- Continue to work collaboratively with SA Health in the review and update of the interagency *Water/Wastewater Incident Notification and Communication Protocol*.
- Streamline our incident management procedures to support our incident managers in their response.

Safe Drinking Water Act audit

In November 2018, we were audited under the *Safe Drinking Water Act 2011* (the Act) and successfully met all our legislative requirements. The successful outcome of the audit found:

- We operate in compliance with both the explicit requirements and the implied intent of the Act, Regulation, SA Health audit report template and the Australian Drinking Water Guidelines (2011) (ADWG). Our people and contractors consistently demonstrated this compliance and understanding of the need for such compliance.
- The audited sites and systems demonstrated improved compliance relative to the four previous audits (2014 to 2017) and showed positive responses to findings from those previous audits. The result was evidence of continual improvement in the spirit of the ADWG.
- The expertise in water quality management of our people was impressive and the auditor had confidence in how we discharged our responsibilities and showed our genuine organisational commitment to water quality management.
- The standard of our supporting systems was high and all twelve elements of the ADWG Framework were fully implemented.

Overall it was concluded that our water quality management planning was mature, embedded, extensive and comprehensive.

The audit result demonstrates the good level of collaboration across the business, with our contract partners, and SA Health.

There were no significant non-compliances from the audit, however several observations or opportunities for improvements were identified. These included actions such as further reducing drinking water safety and quality risks associated with power failures. We will take formal and systematic steps to review and address these opportunities in addition to the many other improvements we have planned.





Effective governance

Legislation

SA Water was established as a Public Corporation on 1 July 1995 under the *South Australian Water Corporation Act 1994*. SA Water's operations are guided by legislation, the most significant include:

- *Public Corporations Act 1993*
- *Water Industry Act 2012*
- *Safe Drinking Water Act 2011*
- *South Australian Public Health Act 2011*
- *Work, Health and Safety Act 2012*
- *Environment Protection Act 1993*
- *Natural Resources Management Act 2004*.

Key regulators

The Essential Services Commission of South Australia is the independent economic regulator for the water industry. It sets service standards and revenue levels for water and sewerage services we provide.

SA Health sets and monitors standards for drinking water quality and regulates recycled water use in the state.

The Office of the Technical Regulator is responsible for ensuring minimum industry standards and requirements for installation and operation of water and sewerage infrastructure are met, ensuring public and environment safety.

The Environment Protection Authority sets standards for acceptable discharge from SA Water's wastewater treatment facilities and monitors our operations and activities to minimise impact on the environment.

The Department for Environment and Water regulates access to natural water sources, protects water catchments and native vegetation and is the state body responsible for the River Murray as part of the Murray-Darling Basin.

The Board

The Board is appointed under the *South Australian Water Corporation Act 1994* to govern the business on behalf of the State Government, reporting to the Minister for Environment and Water. The Board sets the strategic direction and monitors performance, driving efficiency and protecting our long-term viability in accordance with the *Public Corporations Act 1993*.

The following Board directors, appointed by the Governor of South Australia, served during 2018-19:

- Andrew Fletcher AO, Chair
- John Bastian AM
- Janet Finlay
- Fiona Hele
- Ian Stirling
- Sue Filby
- Roch Cheroux.

Day-to-day management of the business is delegated by the Board through the Chief Executive to the Senior Leadership Team. Pursuant to section 18 of the *South Australian Water Corporation Act 1994*, the Minister has delegated authority to the Board of SA Water to approve procurements of up to \$10 million and expenditure up to \$4 million on any one project.

A charter prepared by the Minister and the Treasurer, in consultation with the Board, was in place for 2018-19 in accordance with section 12 of the *Public Corporations Act 1993*. The charter guided the Board in seeking to balance community service with prudent commercial principles.

Directors' interests and benefits

For 2018-19, no director had an interest in any contract or proposed contract with SA Water, other than contracts in the ordinary course of business. No benefits were received by any director of SA Water by virtue of a contract that was made with SA Water, other than in normal course of business as set out in the financial statements.

Board committees

The Board has established a committee structure to assist it in meeting its responsibilities. Each committee has a charter that guides its functions and duties and is reviewed regularly.

Governance, Finance and Risk Committee

— supports and assists the Board in fulfilling its corporate governance and oversight responsibilities in relation to our financial planning and reporting, internal and external audit functions, internal control processes, risk management systems, compliance, and fraud control.

Strategy, Policy and Innovation Committee

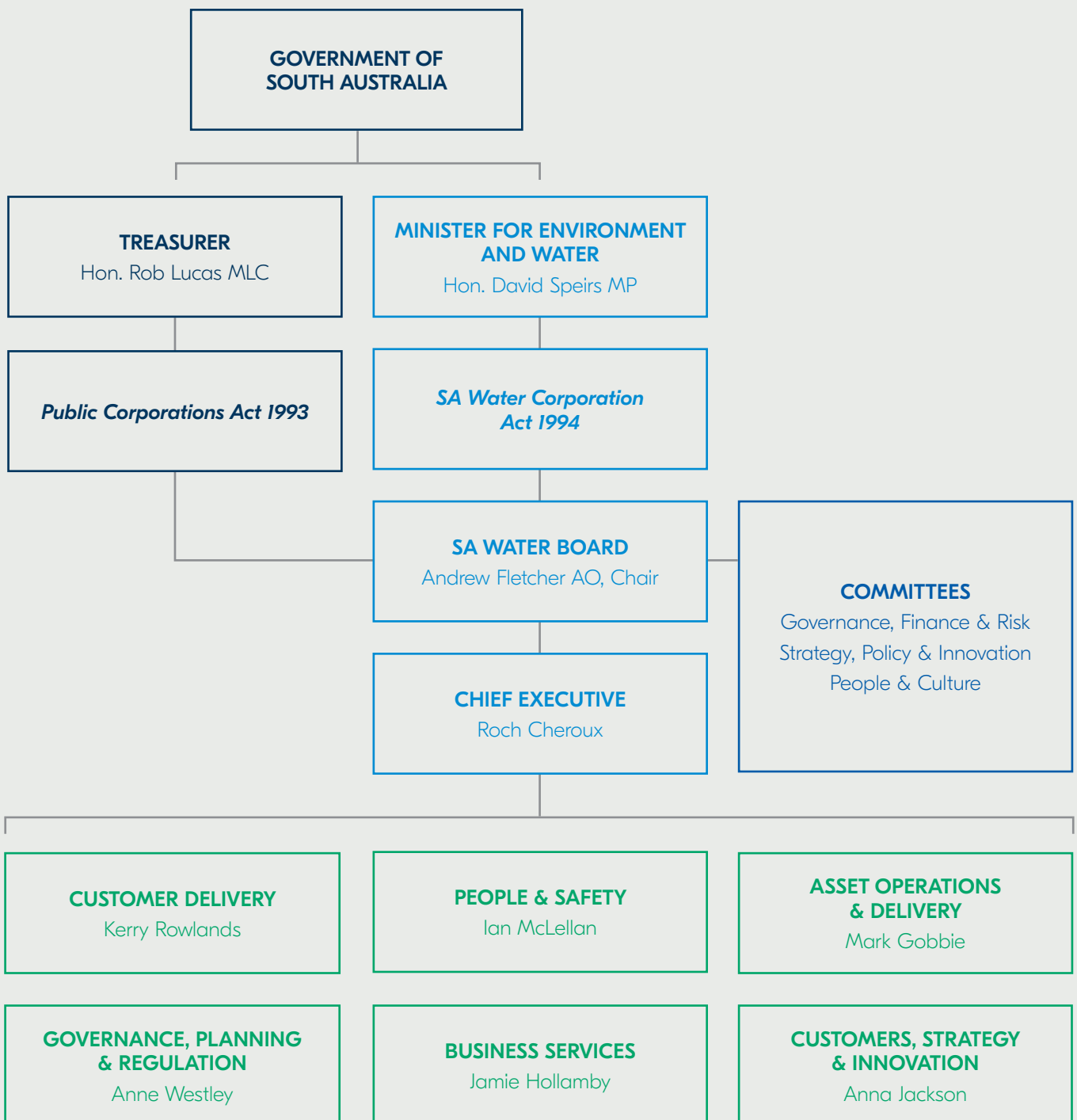
— assists the Board's oversight of the long-term strategy of the corporation to ensure it remains a valuable, relevant and effective water and sewerage service provider with high levels of customer, community and stakeholder service and support.

People and Culture Committee

— supports and assists the Board on matters associated with workforce planning, remuneration and corporate culture, taking into account the strategy, government policy, relevant Board policies, business needs and regulatory requirements.

Organisation structure

As at 30 June 2019







Financial performance

Financial performance summary

The following is a brief summary of our overall financial performance.

The year-end profit before tax result is \$272.5 million which is \$39 million higher than the original budget. This result can be attributed to a number of factors including:

- higher operating revenues from an increase in water sales of \$62 million and recycled water sales of \$2.8 million
- interest and finance charges savings of \$6.8 million.

These were offset by:

- higher electricity costs of \$15.3 million and higher chemical costs of \$2.4 million resulting from the increased water sales
- other underlying operating expenditure increases of \$5.3 million
- accelerated depreciation and asset write offs of \$7.7 million relating to plant and equipment, infrastructure and capital work-in-progress
- other reductions in revenue and expenditure of \$1.9 million.

Consultants

The following is a summary of external consultants engaged, and the nature and cost of the work undertaken.

Consultant	Amount	Description/purpose
Less than \$10,000		
Bakjac Consulting Pty Ltd	185.00	Coaching service
SA Federation of Ratepayers	945.72	Sitting fees
Marchmont Hill Consulting	1,800.00	Civil maintenance benchmarking
J Bowley Consulting Engineers	4,500.00	Heritage engineer report, Cobdogla
The University of Adelaide	6,300.00	Technical report on Water RA Project 110-49 Environmental <i>E. coli</i>
Between \$10,000 and \$50,000		
J Squared Consulting	10,880.00	Fire system audit including site inspection and preparation compliance
Hudson Howells	24,793.50	Mount Barker irrigation scheme
Due Diligence Consultants Pty Ltd	28,283.40	Financial integrity and due diligence reporting for Trillity contract
Inside Infrastructure Pty Ltd	37,500.00	Specialised sewer renewals program assessment, external resource to ensure integrity
Teamgage Pty Ltd	47,685.00	Subscription
Greater than \$50,000		
Marsden Jacob Associates Pty Ltd	60,699.13	<i>Our Plan 2020-24</i> customer research
Acil Allen Consulting Pty Ltd	64,767.00	<i>Our Plan 2020-24</i> water demand model review and Acil energy trace price model
KPMG	217,133.80	Advisory services for the Adelaide Service Delivery Project, <i>Our Plan 2020-24</i> benchmarking review, rate of return peer review
Total	505,472.55	

See also tenders.sa.gov.au/tenders/index.do for a list of all external consultancies, including nature of work and value. See also the Consolidated Financial Report of the Department of Treasury and Finance at treasury.sa.gov.au for total value of consultancy contracts across the SA Public Sector.



Supplementary reporting items

Fraud

There were five instances of alleged fraud detected in 2018-19. The matters were either investigated, or are in the process of being investigated, and were reported to the appropriate authorities.

Strategies implemented to control and prevent fraud

We have a zero tolerance to fraud.

We perform a range of activities to control and prevent fraud. Key to these activities are:

- senior executive oversight of our Fraud and Corruption Control Policy by the General Manager, Governance, Planning and Regulation
- investigations of all allegations of fraud made under the policy
- data analytic reviews conducted by Internal Audit of all payroll and accounts payable transactions, as well as other ad-hoc audits
- regular communications and reminders to our people of the need to report matters of concern and to act in accordance with our values and Code of Conduct.

Whistleblowers disclosure

Pursuant to section 7 of the *Public Sector Act 2009*, we have appointed Responsible Officers for the purposes of the *Whistleblowers Protection Act 1993*.

We did not receive any whistleblower-related allegations during 2018-19.

Summary of complaints

Complaints received from customers are an opportunity to build and maintain customer confidence and trust as well as improve our customer experience performance and operational efficiency.

Our comprehensive approach to dealing with complaints includes a focus on first contact resolution with a dedicated team. Our Customer Advocacy and Resolution team is responsible for investigating and responding to complaints which were not able to be resolved on first contact.

In 2018-19, we registered 2.06 complaints per 1,000 customers. This is a decrease compared to 2.22 complaints per 1,000 customers in 2017-18. We continue to track below the national benchmark of 3.3, based on the Bureau of Meteorology's *National performance report 2017-18: urban water utilities*.

Together with the Water Services Association of Australia and other Australian water utilities, we are reviewing practices to ensure we are effectively capturing customer complaints to continue to generate valuable insights to improve overall customer experiences.

The most common complaint types relate to water quality, repairs and maintenance of infrastructure in the metropolitan area, and costs incurred for high water consumption.

In 2018-19, 195* complaints were made about us to the Energy and Water Ombudsman of South Australia (EWOSA) on a range of issues. Costs incurred for high water use continued to top the list of escalated concerns.

When compared to 2017-18, EWOSA complaints have remained consistent, with a slight decrease.

Our Customer Advocacy and Resolution team completes root cause analyses, post-complaint reviews and case studies, which are important steps in our complaint management process. Case studies include details of the complaint, a summary of the investigation, the outcome and process improvement recommendations.

*The number of EWOSA complaints referred to us may differ between our reporting and EWOSA's due to variances in reporting practices.



