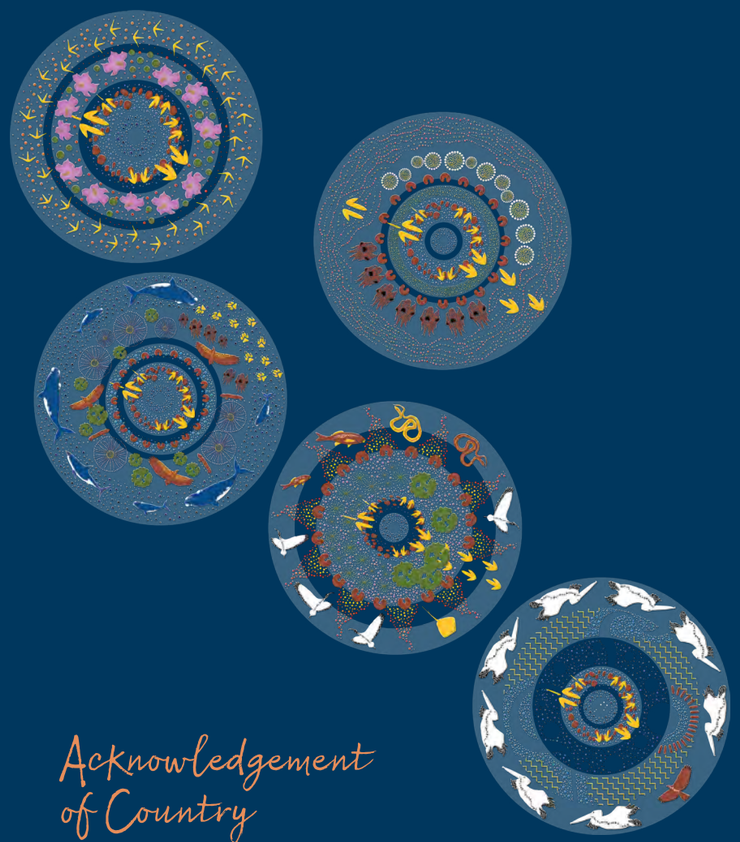
2022-23 South Australian Water Corporation Annual Report

For the year ending
30 June 2023

SA Water



Acknowledgement of Country

We acknowledge the Traditional Owners of Country throughout South Australia and in other areas of Australia where we operate and recognise their unique and continuing connection to lands and waters. We pay respect to Elders past and present, and extend that respect to all Aboriginal and Torres Strait Islander peoples visiting or living in South Australia.

Letter of transmittal

29 September 2023

The Honourable Dr Susan Close MP
Deputy Premier and Minister for Climate, Environment and Water

Dear Deputy Premier

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 2023.

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.

Allan Holmes
Chair of the Board

Contents

A message from the Chair

SA Water has continued to do what it is meant to do — provide essential water and wastewater services to South Australian communities.

The 2022-2023 year has been an especially challenging year. Costs of doing business have risen sharply. Our energy costs, like those of households, have skyrocketed, and inflationary pressures have bitten. In addition, the cost of building new infrastructure and repairing old, has increased well beyond the Consumer Price Index. Materials are in short supply and there is a labour shortage.

The exceptional flood event in the River Murray placed additional demands on the organisation's capabilities and our people rose to the challenge by providing outstanding service throughout.

SA Water has been able to navigate these challenges and perform to expectation. It has met important service standards and delivered a financial dividend to government.

However, more serious challenges lie ahead. The troubled water sector in the United Kingdom provides a warning we need to heed. Water utilities in the UK were privatised in the hope that they would deliver better value for money. However, there has been widespread public dissatisfaction as the industry has performed poorly. Wastewater has leaked and overflowed causing significant public nuisance and environmental degradation. Analysts have attributed this to a serious lack of investment in repairing and replacing aging infrastructure, and in technology to meet contemporary standards.

The UK regulatory regime also comes in for sober criticism in that it has allowed debt levels to rise appreciably, failed to invest in infrastructure to keep pace with demand, and yet at the same time, paid significant dividends to owners.

The lesson for South Australia from the UK experience is to take notice of where under-investment leads. We need to ensure our infrastructure is fit for purpose and maintained in serviceable condition. If it isn't then we will suffer a similar fate to the UK.

SA Water is in public ownership. We have an independent regulator that determines whether its business plans are prudent and efficient, the amount of revenue the business can earn and hence spend, and the service standards SA Water is required to meet. This model can serve us well. The challenge for the SA government is, however, more complex. It is mindful of the impact of water bills on customers when the cost-of-living is rising steeply, the level of state debt incurred when money is borrowed to fund capital works, and competing demands for other public services.

The Board of SA Water is responsible for the good governance of the Corporation, and it has a critical role to put the case to government for sound investment and expenditure to run the SA Water business. As the next period of regulation begins in 2024, the Board and government will strive to find the right balance.

To conclude, I acknowledge the contribution of all Board directors, and John Bastian, in particular, as his term concluded in August 2022. I thank David Ryan, our Chief Executive, and his outstanding executive team for their dedication and leadership of the Corporation. Finally, to the staff and partners of SA Water, thank you for your dedication and service to all South Australians.

Allan Holmes
Chair of the Board

A message from the Chief Executive

The past year has presented significant challenges for our business and I've seen our people respond with great focus and purpose in order to deliver for our customers and community.

In a changing economic environment, with cost of living pressures affecting our community and our business, I'm enormously proud of how our people have continued to ensure essential water services for South Australians. This has been achieved while responding to the major flooding event along the River Murray.

We have performed strongly against our customer service standards which track how we're meeting our customers' expectations. In particular, it has been pleasing to see customer satisfaction at 96 per cent against our target of 93 per cent, and first contact resolution at 100 per cent, well above our target of 85 per cent. These achievements reflect the excellence our people show in their work every day.

Our capital delivery performance has been strong, with significant progress made on critical projects including work on the new seawater desalination plant at Penneshaw on Kangaroo Island. Construction on the plant's structure is complete and work on pipelines well underway. Our Board reaffirmed its commitment to Billy Lights Point as the preferred location for a desalination plant to ensure water security for the Eyre Peninsula. Our teams continue to work closely with the local communities on Kangaroo Island and the Eyre Peninsula to deliver these important projects.

Water quality in remote communities has been improved with a reverse osmosis desalination plant delivered for Kaltjiti in the Anangu Pitjantjatjara Yankunytjatjara Lands. A small-scale desalination plant has also been delivered for the community of Oodnadatta.

In addition to maintaining and improving our day-to-day operations and managing a changing external environment, our response to the River Murray flood event was outstanding.

This once-in-a-generation flooding event was the largest seen in the river since 1956. Our people rose to the challenge to keep our customers and communities safe; protect our water and wastewater assets to prevent or reduce damage; and maintain the highest levels of service possible for the largest number of customers possible.

Our coordinated and planned approach to the flood event saw more than 100,000 customers protected from service impacts. Significant community engagement was undertaken, particularly in Mannum, to support customers who were proactively disconnected from the sewer network to protect the town's wider network from flood inundation. With engagement coordinated seamlessly with our operational response, we maintained positive relationships with the community through this difficult time.

Water quality monitoring was crucial to managing flood impacts on our many customers who rely on the river as the source of their drinking water. Additional sampling, testing and analysis services provided assurance throughout the flood. We contributed to the wider state response through the State Emergency Centre and as lead for the state government's Engineering Functional Support Group.

Throughout the flood event, we took care of our people by managing the new and evolving health and safety risks the flood presented.

Health and safety leadership training delivered this year was a success, supporting our leaders and developing their safety mindset, and helping keep our people safe and well at work.

Throughout all this, our financial performance remained strong with a $237.1 million contribution to the government to further support our state's economy.

As 2022-23 came to an end, we had our sights on the future as we prepared for our next regulatory period, 2024-28. Our Regulatory Business Plan was submitted to our economic regulator, the Essential Services Commission of South Australia, in August. Incorporating robust customer research and engagement, our plan outlines our proposed areas for investment in the 2024-28 regulatory period.

Work also progressed with partners and stakeholders on developing a strategy to ensure a resilient water future for Greater Adelaide, ensuring water security over the coming 50 years. Demand for water will increase while our drying climate will reduce available sources and we are working now to ensure Greater Adelaide will be resilient in the face of future uncertainty and extreme weather.

I thank our people for the incredible work they've delivered this year, and their dedication to our customers and community. Their tireless efforts have delivered outstanding outcomes, many of which are detailed in this report.

Thanks also goes to Allan Holmes and our Board Directors who continue to support and guide our organisation to deliver trusted water services for a healthy and sustainable South Australia.

David Ryan
Chief Executive

About SA Water

Our vision

Delivering trusted water services for a sustainable and healthy South Australia.

Our organisation

We are South Australia's leading provider of water services for more than 1.7 million people. For more than 165 years we have been working together with South Australians to ensure a reliable supply of safe, clean water and a dependable sewerage system. We deliver for customers by ensuring continuity of service, making smart asset decisions, responding to changing operational environments and achieving operational efficiencies to keep costs down.

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 financial return to government.

We are included in the portfolio of the Deputy Premier and Minister for Climate, Environment and Water and work closely with 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

Our Strategy 2020-25 sets a clear direction and charts our course for 5 years. It maintains a view towards 2050 because decisions we make can have a long-term impact on the wellbeing of our customers and community, and the future sustainability of South Australia.

Delivering trusted water services for a sustainable and healthy South Australia

Driving customer outcomes

Safe, smart, reliable and affordable services.

Success is: maintained trust, water quality, asset reliability, service continuity, efficient and affordable

Water for the future

All water sources, delivery and service options considered.

Success is: secure customer access to fit-for-purpose water

Healthy communities

Promote the health and wellbeing of active, thriving communities.

Success is: greener, cooler communities, reconciliation in action

Proactive environmental leadership

Climate change action with a reduce and reuse mindset.

Success is: waste reduced, increased by-product reuse, climate change resilience

Our people for the future

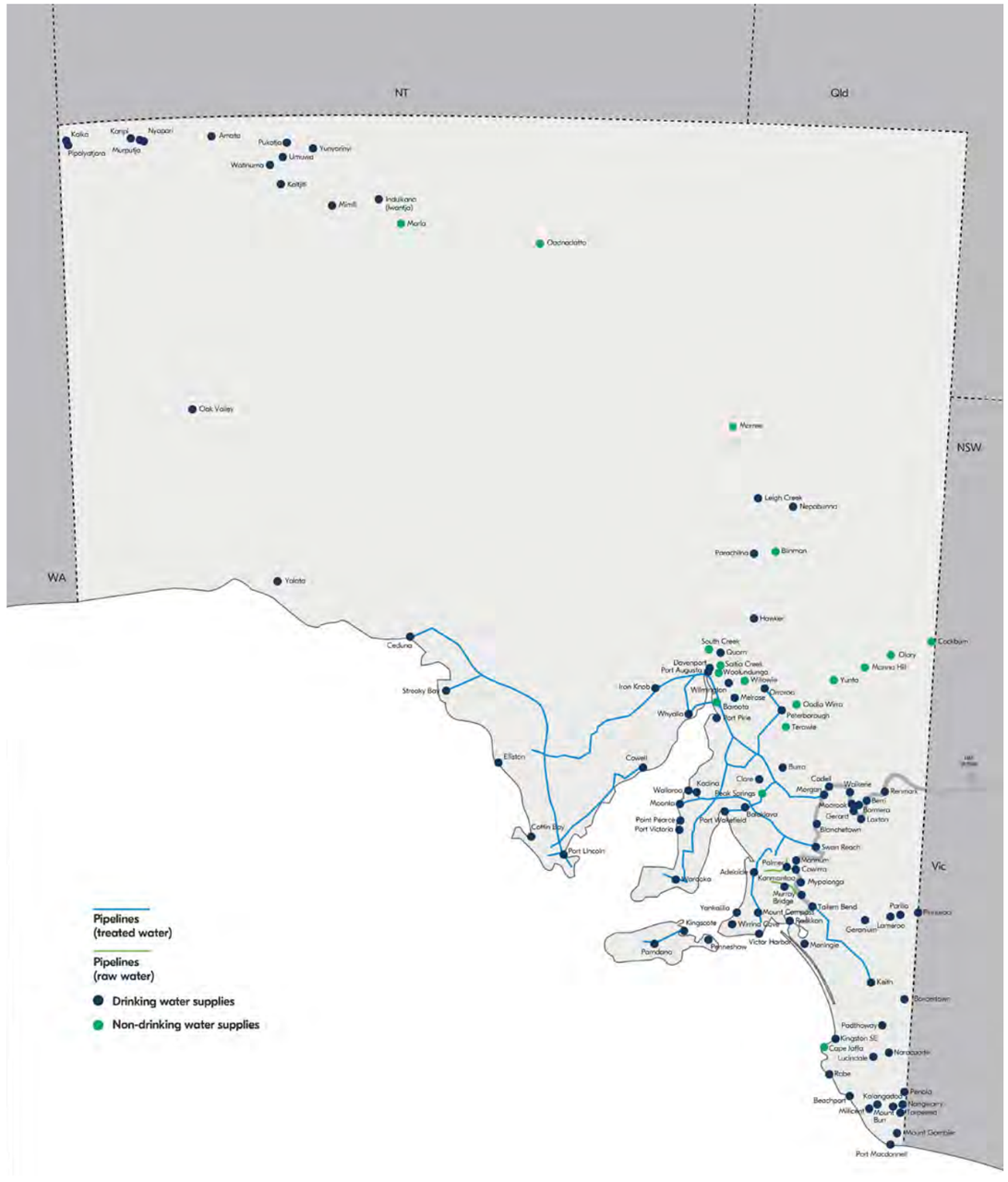
A more diverse, inclusive and capable workforce.

Success is: safe and healthy workplaces, high employee engagement, creativity through diversity

The organisation we need to be:

Safe • Innovative • Trustworthy • Courageous • Agile • Collaborative

Our water supply areas



Our services

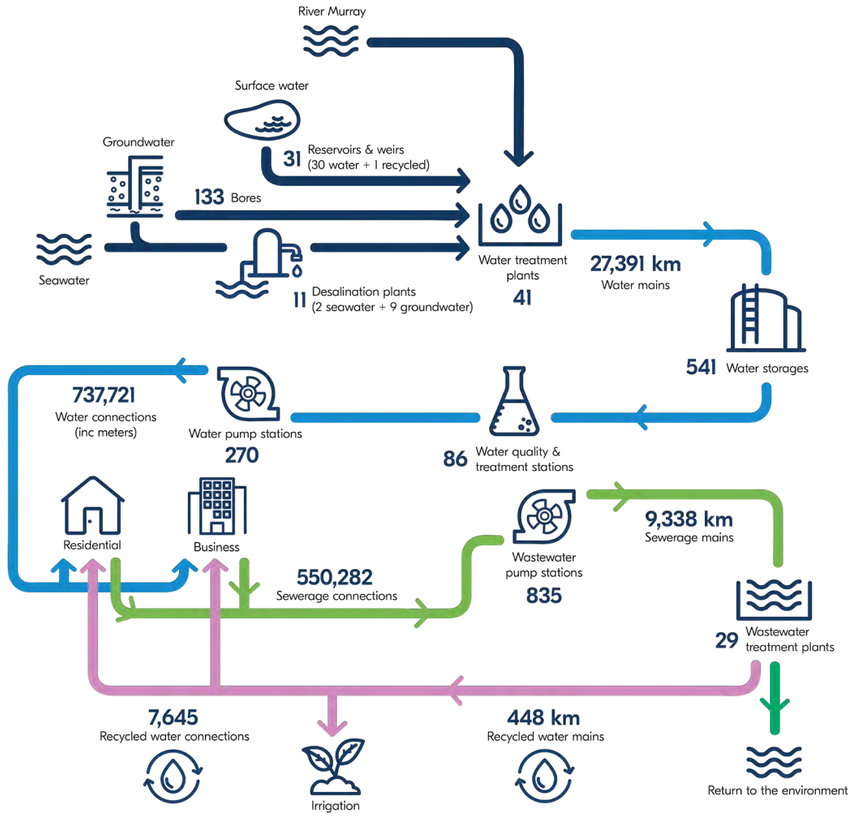
Every day, we provide essential water services to cities, suburbs and towns across South Australia.

As one of the most efficient water utilities in Australia, we are continually improving the way we do this for our customers, to keep prices as low and stable as possible over time. To deliver value for money, we strive to make smart, long-term investments, and the best use of new technologies. We remain focused on what is important to our customers and meeting our legal and regulatory responsibilities.

Of Australia's water utilities, we are the custodians of the longest water mains supply network at more than 27,000 kilometres. In addition, we manage more than 9,000 kilometres of sewerage mains and a 448 kilometre recycled water network.

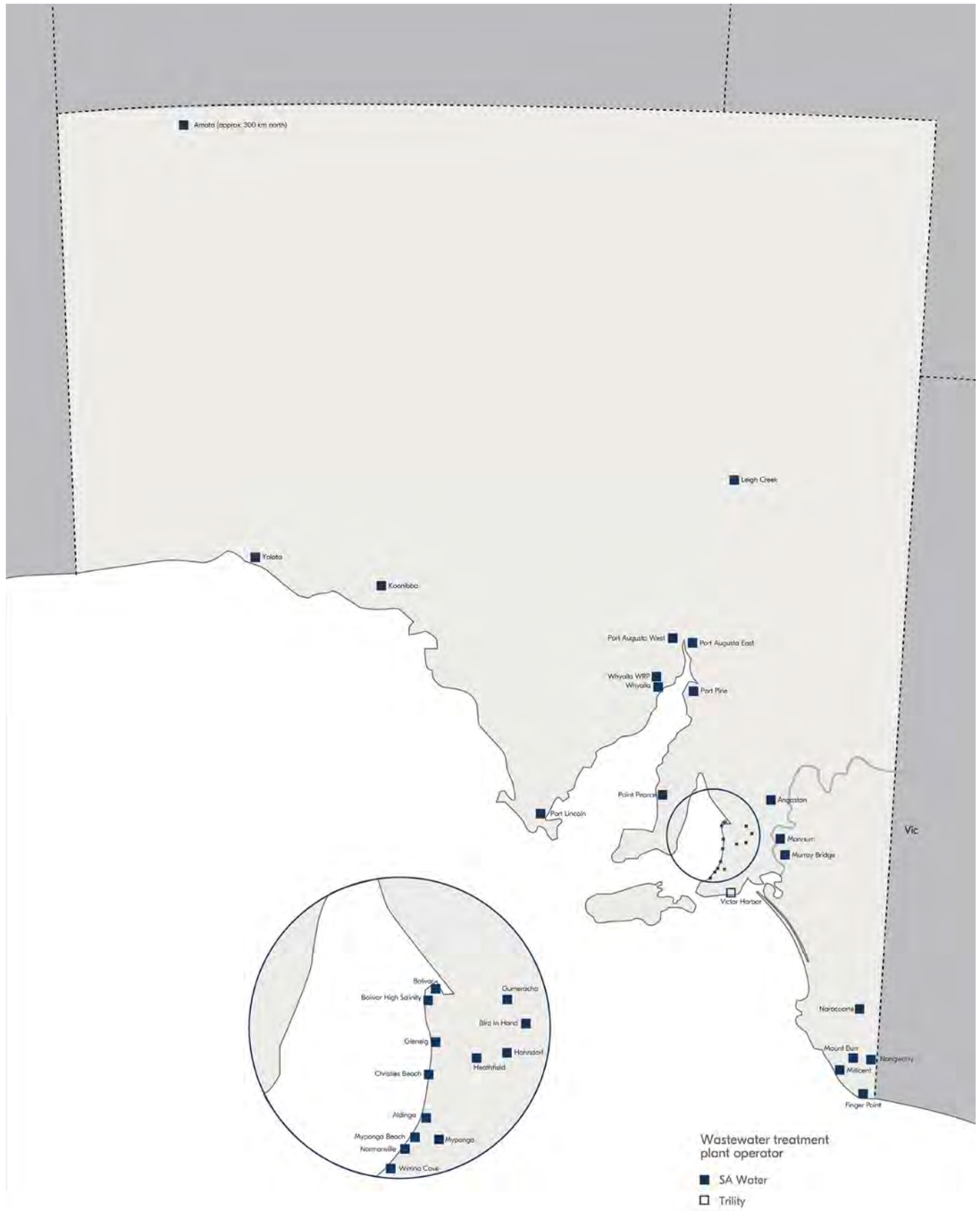
We manage drinking water quality from catchment to tap, working cooperatively with SA Health to ensure the continued protection of public health and supply of high quality, safe drinking water for our customers across the state.

Overview of our network and assets



Correct as at August 2023

Our wastewater treatment plants



Year in review

Highlights

228+ billion
litres of water delivered to **737,721 homes** and businesses

24 hectares
of native bushland restored at Millbrook Reservoir Reserve

$562.4 million
capital investment

64.9 kilometres
of new water mains installed

Lowest number of water main breaks since 2014

300,000+
customers receiving eBills

70,678
water samples collected

417,959
visitors to reservoir reserves

96%
customer satisfaction

River Murray flood response

In October 2022, with heavy rain falling in the Murray-Darling Basin catchment and flooding in New South Wales and Victoria, we began preparing for a high flow event. An event on this scale hadn't occurred since 1956.

The River Murray flood was declared a major emergency on 21 November 2022. In addition to keeping our people safe, protecting our assets and maintaining essential water and wastewater services for our customers, we contributed to the statewide government response.

There was strong support from our major framework partners, key contractors, lead suppliers, other government agencies, local governments and local landholders throughout the event.

Incident response approach

Our flood response was led by a coordinated business-wide Incident Management Team, with 3 clear objectives:

1. Keep our people, customers and communities safe.
2. Protect our water and wastewater assets to prevent or mitigate damage.
3. Maintain the highest levels of service possible, for the largest number of customers possible.

A coordinated and planned approach to the event saw services maintained for more than 100,000 customers in the river zone, and more than 45 different systems and major assets assessed for risk and protected.

Community engagement and support

Comprehensive engagement was undertaken with communities along the river. This included direct communication with affected customers, proactively preparing them for disruptions to their water and wastewater services, as well as involvement in government community information sessions.

Customer engagement was a particular focus in Mannum. A risk assessment identified the potential for flooding to impact the low-lying areas of Mannum's wastewater network.

Our Field Services team proactively disconnected 127 sewerage customers to protect individual residences and businesses and ensure the town's sewerage network continued to operate.

The Engagement team contacted every impacted customer directly through door knocking, phone calls and letters, and worked with them to understand their plans and provide practical support, mindful that some properties were occupied by residents, and some were holiday houses.

Alternative services, including drinking water, temporary showers and portaloos, were provided at our Mannum depot for customers who remained in their homes.

Bill support was provided to customers who were proactively disconnected from the Mannum wastewater network. Their sewerage charge was waived for the billing quarter in which their service was temporarily disconnected (October to December 2022). Their full bill — water and wastewater — was waived for the following quarter (January to March 2023) in recognition of flood impacts.

Support for the state government response

Throughout the flood we worked closely with other government agencies and emergency service organisations.

Gerard and Narrung, 2 Aboriginal communities directly impacted by the floods, were supported. We liaised directly with community leaders, local government, and state government agencies to assess infrastructure risks against river level projections and ensure alternatives were available if the flood disrupted drinking water and wastewater systems.

In collaboration with the State Emergency Service and private water carters, we supported supply of emergency drinking water to vulnerable households that usually relied on private supplies.

Through the Engineering Functional Support Group, we contributed to the State Emergency Centre, Zone Emergency Support Team and Incident Management Team, coordinating engineering advice and providing practical assistance in preparing levee specifications, monitoring levees and responding to levee failures. We also provided clay for emergency levees constructed by local governments along the river, and donated surplus sandbags to protect large private levees in the lower River Murray.

Special sampling, testing and analysis services were provided by our team to support decision-making in the Riverland, the lower lakes, and southern beaches, as well as for SA Health. We also provided boating support for electricity utilities to move around the flooded landscape.

Innovation

We used innovative approaches to tackle major issues like protecting our assets, ensuring service continuity, and maintaining drinking water quality.

During the River Murray response we:

- protected a crucial Murray Bridge wastewater disposal pipeline from very strong river flows by using a barge, supported by divers, to lower concrete mattresses across it.
- protected high-voltage cables using rubber wrap and floating debris booms and additional parallel pumping systems to make sure the Murray Bridge to Onkaparinga pipeline could keep operating.
- monitored source water quality by intensive river sampling and drone surveys, gathering intelligence from up-river interstate utilities, optimising treatment plants, strategically switching water storages, and introducing additional chlorination plants into our networks to maintain high levels of drinking water quality across South Australia.
- participated in the first-ever Australian deployment of DefenCell, a new technology using lightweight geotextile cells that facilitate rapid roll-out. This was delivered in partnership with the State Emergency Service, which sourced the material for use in several locations as part of the broader government flood response.

Lessons learnt

During the recovery phase we completed a thorough review to identify lessons that will help us prepare for future events.

The flood has highlighted the great value of capable and committed people, a strong customer focus, a culture of trust and empowerment, business-wide cooperation, collaboration and teamwork, clear priorities and objectives. It has also underlined the importance of robust assets and resilient services, effective customer and stakeholder engagement, and integrated systems that support effective decision-making.

Lessons learnt have identified actions including updates to our business continuity planning, fatigue management systems, asset design standards and incident management practices. In addition, Engineering Functional Support Group has received a Commonwealth grant to lead a statewide technical review of flood defence measures including DefenCell, levees and sandbagging.

Driving customer outcomes

We provide our customers with safe, smart, reliable and affordable water services. To achieve this, we maintain trust, ensure water quality and asset reliability, and provide continuity of service by preventing or minimising temporary service interruptions. We deploy connected and intelligent assets to make smart decisions and operate efficiently so our services remain affordable.

Water price increase less than the Consumer Price Index

As part of our ongoing commitment to keep water and sewerage prices as low and stable as possible, our Board and the South Australian Government approved 2022-23 price adjustments capped at 3.2 per cent on average — nearly 2 per cent less than the Consumer Price Index (CPI).

From 1 July 2022 the average metropolitan residential customer's combined water and sewerage bill increased annually by $34, compared to $54 if price adjustments reflected full CPI of 5.1 per cent. Businesses saw an average increase of $130 compared with $208.

In the Bureau of Meteorology's *National Performance Report*, which analyses and compares the performance of water utilities across the country, the ranking of our annual residential combined water and sewerage bill (based on 200 kilolitres) sits third cheapest of the 15 comparably-sized utilities across Australia.

Sustaining and expanding our networks

Our continued focus to improve and maintain our water and wastewater pipe networks saw us invest $91.4 million in our water pipe network and infrastructure, and $17.4 million in our wastewater pipe network and infrastructure.

In 2022-23 we installed 64.9 kilometres of new water mains, with 19.8 kilometres laid in metropolitan Adelaide and 45.1 kilometres in country areas of the state, through our water main management program.

As part of our 4-year, $155 million water main management program, new water mains were installed throughout the state, including:

- 6,000 metres in Lyndhurst
- 5,380 metres in Port Pirie East
- 4,530 metres in Merghiny
- 4,120 metres in Reeves Plain
- 1,260 metres in Wandana
- 2,000 metres in West Beach
- 1,118 metres in Sellicks Beach
- 822 metres in Two Wells
- 805 metres in Cumberland Park
- 600 metres in Prospect.

We installed 64.9 kilometres of new water mains in 2022-23.

Main break numbers down

Across our network, we recorded the lowest number of water main leaks and breaks since 2014. This is due to a wetter than average end to 2022 and continued investment in maintaining our water network.

In 2022-23, 3,486 water main leaks and breaks were reported across our 27,000 kilometre network, compared with 3,627 in 2021-22.

Meeting our customer service standards

Performance measures and service standards set by our economic regulator, the Essential Services Commission of South Australia, guide how we measure our success in delivering what our customers and the community expect.

In 2022-23, we achieved 96 per cent customer satisfaction against a target of 93 per cent. Of the 225,101 phone calls we received during the year, 86 per cent were answered by our Customer Care Centre, based in SA Water House, within our target timeframe of 50 seconds, ahead of our 85 per cent target.

Other notable achievements include:

Measure	Target	Achieved
First contact resolution	85%	100%
Water quality responsiveness (metropolitan Adelaide)	97%	100%
Water quality responsiveness (regional South Australia)	99%	100%
Connection application responsiveness	95%	97%
Water event responsiveness (high priority) metro	99%	100%
Water event responsiveness (high priority) regional	99%	100%
Sewer event responsiveness metro	99%	100%
Sewer event responsiveness regional	99%	99%

We met 21 of the 22 customer service standards. Our response to sewer overflow clean-ups in metropolitan Adelaide was at 95 per cent, just short of the 98 per cent target. This was primarily due to customers requesting partial or whole clean-ups at a different time of day to better suit them, or where work was hampered due to access or safety issues.

Smart maintenance gets a boost

Our Smart Maintenance program is introducing technology to provide real-time monitoring, helping us to proactively maintain our assets and better inform maintenance decisions. This year, the Diagnostic and Prognostic Maintenance (DPM) project installed technology at 21 major pump stations.

DPM collects real-time machine vibration and temperature data from our pump sets using advanced digital technology. The data is then analysed using artificial intelligence to give us critical information via our new smart infrastructure dashboard. We began using the dashboard in May. It displays:

- current and historical asset condition
- forecasted performance that considers asset health condition and operational requirements
- tracking details for autogenerated work orders to address faults identified early
- maintenance history and performance reports
- increased data analytics to improve maintenance decision-making.

When fully implemented this automation will see fewer breakdowns, extend the life of our assets, ensure greater pump availability, and ultimately lower our operational costs.

Unflushables are flushed out of our sewers

Communication and media activity from July to October 2022 about what not to flush or rinse resulted in a significant reduction in 'unflushables', such as wet wipes and cooking fats and oils, entering the state's sewers.

The message to change flushing and rinsing habits provided practical tips and the impact continued after the communication activity finished. Between August 2022 and February 2023, there was a 40 per cent reduction in sewer blockages caused by items that should not be flushed or rinsed.

The overall rate of sewer blockages dropped to a 2-year low helping reduce the number of overflows inside customer properties.

This was supported by a targeted sewer cleaning program with proactive maintenance to help reduce blockages and overflows in hotspot suburbs such as Athelstone, Blackwood and Rostrevor.

Our Healthy Sewers campaign drove positive behaviour changes in the community.

Sustainable sewers for Tea Tree Gully

On 1 July 2022 we welcomed all residents connected to the Tea Tree Gully Community Wastewater Management System as our customers, with management and operation of the system transferring to us from the City of Tea Tree Gully Council, and sewerage fees and charges coming into effect for all 4,700 properties.

In August 2022, we completed construction at our pilot sites on Glenere Drive, Dawson Drive, Angas Court and North East Road in Modbury, and connected more than 60 households and businesses to our network. Construction continued for stage one of the program which will connect approximately 500 properties in Modbury North, St Agnes and Banksia Park.

More than 60 households and businesses were connected to our wastewater network in Tea Tree Gully.

The Green Patch tank's 112 concrete panels were craned into place.

Walls are up in Green Patch water tank build

Work on our new 32-million-litre concrete water tank in Green Patch, near Port Lincoln, reached a major milestone in 2022-23, with all 112 panels craned into place to form the 88-metre-wide structure.

With the structure now in place, installation has begun to seal the inside of the tank so the quality of drinking water is protected once the tank is filled and in operation.

Warren Reservoir dam valve refurbishment

Refurbishment work on the intake and scour valves at Warren Reservoir began with a 5-week drawdown of the water level. It was lowered to zero per cent so that crews could safely access the base of the dam wall.

The project included the safe relocation of about 4.5 tonnes of the reservoir's native fish and turtles to the nearby South Para Reservoir, including species like bony bream, Murray cod, golden perch and silver perch.

Port Lincoln Wastewater Treatment Plant upgraded

In June 2023, work was completed on the Port Lincoln Wastewater Treatment Plant as part of our $400,000 investment to enhance sewage treatment and the plant's overall performance for the ongoing supply of around 100 million litres of recycled water each year.

Floating aerators in one of the plant's treatment basins and seals along the basin were rehabilitated to improve the efficiency of the biological process that breaks down nutrients in sewage.

Queensbury upgrade to keep sewer odour at bay

Work began in October on a $1.6 million upgrade of our wastewater pump station in Queensbury to improve odour control and support ongoing residential growth.

The Queensbury pump station pumps more than 15 million litres of sewage each day to the Bolivar Wastewater Treatment Plant where it's treated for reuse and return to the environment.

Upgrade for Whyalla's Recycled Water Plant

An upgrade to our recycled water plant in Whyalla was complete in October 2022. The project was part of our $200,000 investment to enhance sewage treatment and the plant's overall performance.

More than 1,300 diffusers in the plant's treatment basins were replaced, improving the efficiency of the biological process that breaks down nutrients in sewage.

The basins, capable of holding around 1.3 million litres of sewage, underwent an extensive clean as part of the upgrade.

Whyalla Recycled Water Plant currently supplies around 2.5 million litres of recycled water a day. It is used by the local council to help irrigate and green Whyalla's ovals, parks and golf courses.

Basins at the Whyalla Recycled Water Plant underwent an extensive clean.

Accessible information for customers

As part of our 2020-22 Disability, Access and Inclusion Plan and our Wider World program, we produced and published 7 accessible Easy Read documents for customers with low literacy or limited English skills.

The 7 documents, available at sawater.com.au, our front counter in SA Water House, and via our Customer Assist team and financial counsellors, focused on topics our customers identified as important to understand. The documents cover:

- how to understand and pay your water bill
- how to find water leaks and read your meter
- how to save water at your home
- support for paying your bill
- water prices for homes
- how to keep sewers healthy
- our Disability Access and Inclusion Plan.

Bacterial DNA testing first for the Australian Water Quality Centre

The Australian Water Quality Centre (AWQC) became the first laboratory in Australia to apply accredited molecular testing technology specifically to optimise water quality management.

Attaining full National Association of Testing Authorities (NATA) accreditation for its bacterial DNA molecular analysis, the AWQC's DNA testing method enables us to characterise entire microbial communities. This has revealed a diversity of microorganisms we have not been able to see before because they were so difficult to isolate using traditional methods.

This has significant benefits for improving public health, water quality research and operational decision-making.

A suite of Easy Read documents is available on our website.

In addition, the AWQC improved the customer experience by implementing a TouchPoint digital phone system. Calls to AWQC are now routed directly to the AWQC, bypassing our Customer Care Centre. The new TouchPoint system provides:

- an improved caller experience
- fast, efficient call handling and transfer
- a livestream dashboard displaying call statistics for easy, centralised administration and reporting.

Drones support water quality monitoring

In a first for our business, the use of a drone was trialled as a safe and effective way to take water samples, particularly from hard to access locations such as some parts of the River Murray.

Water sampling is part of our ongoing, comprehensive water quality monitoring program, with 70,678 water samples collected during 2022-23, and is a crucial step to make sure safe, clean drinking water is provided across South Australia.

The drones can collect a single 2-litre water sample or 4 individual 250 millilitre samples. They can be remotely operated from the shore or riverbank to reduce risks associated with on-water operations, and are programmed with GPS to streamline sampling and make it more consistent.

Algal management improvements

In 2022-23, we partnered with the CSIRO to test 'CyanoSat', a shoebox-sized hyperspectral imager, to help improve algal management. The imager flew 2 drone missions over Warren Reservoir to capture hyperspectral imaging that was comparatively analysed against our own algal management data. This new hyperspectral imager enables the entire water body to be quickly surveyed by exploiting algal colour differences to detect and differentiate species.

In addition, a trial was undertaken at Warren Reservoir to assess the effectiveness of EarthTec, an alternative copper-based product. Copper dosing is used to help control algal blooms. EarthTec is released directly from the shoreline into the reservoir via a gravity fed hose and has the potential to dramatically reduce sludge disposal costs from a water treatment plant because it involves significantly lower copper concentrations.

Smart metered hydrant trial

In 2022-23, we began a trial of smart metered hydrants throughout the state. Fitted with GPS technology, the hydrants:

- are easy to locate if missing
- are geofence-enabled to provide greater clarity about meters or fireplugs that are unavailable for customers due to maintenance work
- can provide alerts and information when fireplugs have been used incorrectly
- can determine how much water has been extracted from a main which can help us respond to water quality complaints in a specific area.

An online customer portal is now available through our website for individual customers to monitor their metered hydrant water use.

Improving digital services

Digital services available for our customers and our people continue to be improved and automated to provide better customer interactions and enable better self-service.

Our projects have:

- helped customers to select and manage their preferred communication channels
- allowed eBill customers to be notified earlier if their water use is higher through a high water use notice. This also enables a more efficient turnaround time for leak detection
- helped reservoir reserve visitors to easily purchase permits, and reservoir rangers to quickly verify them, through a new online fishing permits system
- improved security by introducing multi-factor authentication for payment refunds in mySAWater
- helped our team better use and manage over 14,000 assets through a new digital media asset tool
- reduced manual workload and saved time (96%) by automating direct debit dishonours
- consolidated 'Supply by measure' customer accounts to accurately and consistently calculate bills aligned to customers with the same land use
- helped our customers to better learn about and track connection requests for drinking water, recycled water, sewerage, and water for fire services with a self service digital offering.

In May, we reached 300,000 customers registered to receive eBills.

Research builds capability

Undertaking research helps us meet the changing needs of our business, builds the knowledge and capability of our people, and ensures we are prepared for challenges in the future. In 2022-23, key research focused on:

- identifying options to control the unwanted growth of aquatic plants in the pumps supplying the Virginia Pipeline Scheme that cause on-going challenges for our customers and damage to our infrastructure
- developing a more efficient DNA-based tool for identifying the sources of faecal contamination in our source waters. This research enables us to better identify hazards in our source waters and take appropriate steps to manage catchments or treatment processes.

Services for Cape Jaffa Marina customers

In October 2022, following a formal direction from the Minister for Climate, Environment and Water, we entered into an agreement with the Cape Jaffa Anchorage Essential Services to operate and maintain the non-drinking water and wastewater services for the Cape Jaffa Anchorage Marina. The agreement saw us temporarily operating these services from 31 October 2022, to ensure continued services for marina customers.

Procurement excellence certification

In March 2023, our Supply Chain team achieved Procurement Excellence Programme certification from the Chartered Institute of Procurement and Supply (CIPS), a professional body working for procurement and supply professions around the world.

Our procurement capabilities were assessed against 98 criteria across 5 separate topics. This award places us in an elite group of just 20 Australian organisations, and we are only the second Australian water utility to achieve certification. This achievement demonstrates our procurement function is world-leading and robust, providing effective governance for supply assurance and compliance.

Paul Rucioch, Mike Gibbons, Jacqueline Guerin, John Minuzzo and Nicola Murphy accepting the CIPS certification from Charlotte Payne (second from left).

Keeping our systems and data safe and secure

In 2022-23, we appointed a General Manager Technology as well as a Chief Information Security Officer, strengthening our innovative use of solutions and technology, while ensuring we have safe and secure systems and data. Our investment in cyber security continues to be a priority and we constantly respond to the changing cyber threats and sophisticated cyber attacks we see in Australia and in the water industry.

We continue to strengthen our security and build resilient systems and processes. To understand the rapidly changing threats we face and be able to respond quickly, we established our Cyber Security Operations Centre in August, enabling us to respond quickly to cyber threats. The centre:

- triages alerts and cyber incidents raised by our users and cyber security tools
- identifies weaknesses and vulnerabilities in our applications and supporting infrastructure, and works collaboratively to pre-emptively resolve issues
- identifies trends and cyber threats that may impact our systems or people and apply remediations/mitigations to reduce cyber risks for our business.

Our Adelaide Service Delivery partnership

Our Adelaide Service Delivery partnership with Service Stream and SUEZ continued into its second year.

In 2022-23, our Metro Field Operations Service Provider, Service Stream has:

- completed 101,872 work orders, the majority of which related to customer calls, while achieving 7 out of 7 customer service standards set by the Essential Services Commission of South Australia (including best endeavours)
- improved customer satisfaction and outcomes in conjunction with our teams through optimised delivery solutions, such as non-dig-up sewer repairs and preventative sewer maintenance techniques that support longer term asset solutions
- delivered services for our customers with an average customer satisfaction score of 95 per cent
- taken on the operation and maintenance of a community Wastewater Management System in Tea Tree Gully and developed a targeted maintenance program improving service level outcomes for our new customers resulting in a 50 per cent reduction in the number of overflows on this network
- supported our capital delivery teams in delivering several projects in regional areas, including water main relay projects in Port Pirie, Moonta and Kadina, and metropolitan relay works in Enfield and Warradale
- supported the rapid mobilisation of the 2022 Adelaide 500 race event by ensuring our water and wastewater networks were ready for increased customer demand
- supported our regional teams to prepare and respond to the unprecedented River Murray flood
- significantly increased data collection from the field, enhancing analysis and reporting of field performance.

Through our production and treatment alliance, SUEZ has:

- delivered an innovative software suite called AQUADVANCED® for all metro water and wastewater treatment plants to improve the way we operate and maintain our assets to increase efficiency, performance, and reduce risk
- successfully managed record-breaking winter inflows to our metropolitan wastewater treatment plants, while achieving regulatory compliance targets
- delivered and supported a significant number of capital projects, including a new ultraviolet treatment system at Happy Valley Water Treatment Plant, replaced ultra-filtration membranes at Christies Beach Wastewater Treatment Plant (WWTP), and upgraded infrastructure at Bolivar WWTP to ensure it is future ready for wastewater systems growth
- produced 23,500 megalitres of recycled water for customers and for reuse at our metropolitan wastewater treatment plants, contributing positively to environmental impacts
- managed significant River Murray flood-related impacts ensuring our customers continued to receive high quality, reliable and safe drinking water
- collaborated with local land care, biodiversity groups and community members, with vegetation plantings at Christies Beach, Glenelg and Aldinga water treatment plants
- delivered energy self-sufficiency at Bolivar WWTP through production of energy from biogas.

Water for the future

Our production and treatment activities ensure the water we provide is fit for our customers to use, and to be recycled or returned to the environment. We harvest, store, treat, distribute and reuse water to provide fit-for-purpose water services to our customers to stimulate economic growth and meet customer needs.

Creating a resilient water future

In 2022-23 we began leading a cross-government project that is developing a Resilient Water Futures Strategy. A collaborative, integrated approach to water management for Greater Adelaide will inform a strategy due to be delivered to the South Australian Government in June 2024.

This year, the project has achieved milestones including:

- development of a robust stakeholder consultation and governance program
- co-development of a vision and strategic priorities for a secure and resilient water future for Greater Adelaide
- a complete system assessment of all water sources and demands, and determined the scale of current and future water challenges.

Extensive community engagement was undertaken to understand ideas, values and preferences about water security, service levels and water management options including:

- input from our Customer Challenge Group — which helped define our options evaluation criteria
- adaptive Planning Forums — with more than 70 water sector delegates collaboratively developing the adaptive plan
- First Nations' roundtables — working in partnership with Kaurna, Peramangk, Ngarrindjeri and Ngadjuri representatives to embed First Nations' knowledge and values in our water management and planning.

Desalination for remote communities

A new solar-powered, small-scale reverse osmosis desalination plant was completed in August at Kaltjiti in the Anangu Pitjantjatjara Yankunytjatjara Lands, replacing the existing water treatment plant.

Delivering high-quality drinking water to the remote Aboriginal community, the plant can produce up to 120,000 litres of water each day. It is fitted with 38 kilowatts of solar panels and additional battery storage, helping to harness the region's traditionally warm and sunny weather to reduce carbon emissions and our reliance on power from the local grid.

In Oodnadatta, a new small-scale reverse osmosis desalination facility was complete, sourcing water from the Great Artesian Basin.

Planning and works continued for new drinking water supplies to Marree and Marla.

The Oodnadatta desalination plant and storage tank.

Water security for Eyre Peninsula

In April 2023, the state government accepted our Board's recommendation of Billy Lights Point as the site for a desalination plant on Eyre Peninsula. The plant will provide a new reliable, climate-independent source of drinking water, to reduce the pressure on existing groundwater sources and the River Murray.

Key stakeholder engagement activities were undertaken in 2022-23 giving the Eyre Peninsula community an opportunity to provide feedback, including community information sessions, and presentations to local councils, other government bodies and local schools.

Community Marine Science Forums were held to provide the community with an understanding of the science undertaken by the South Australian Research and Development Institute to inform the decision to recommend Billy Lights Point as the preferred site.

A Project Information Centre was established in central Port Lincoln to provide local residents with an ongoing connection with the project team so they could ask questions and seek information related to the project.

Community members attending a Marine Science Forum at the Project Information Centre in Port Lincoln.

Members of the project team talked to students at Navigator College in Port Lincoln about the new desalination plant.

Delivering climate independent water on Kangaroo Island

Construction was completed in May on the structure of Penneshaw's new seawater desalination plant, with building work also commencing on the internal fit out and the plant's retaining wall.

In addition, more than 11 kilometres of a 19.3 kilometre pipeline was completed between Cygnet River and Haines which will transport water produced at the plant. We also built a 75-metre causeway to complete 75 of 190 metres of marine trenching for the pipeline.

The pipeline to bring seawater from the ocean to the new plant was 90 per cent complete as at the end of June 2023. In addition, public consultation on the plant's landscaping plan was complete and officially endorsed by Kangaroo Island Council.

Construction of the structure for the new desalination plant at Penneshaw was completed.

Northern Adelaide Irrigation Scheme review

The Northern Adelaide Irrigation Scheme (NAIS) provides recycled water from Bolivar Wastewater Treatment Plant to the Northern Adelaide Plains for agri-food production use.

A review of the scheme was undertaken to inform future approaches to drive scheme take-up and economic growth in the region. The review assessed the current and future demand for NAIS recycled water in the region, stakeholder perceptions of the NAIS pricing and service delivery, and potential opportunities to help NAIS further facilitate economic growth.

After engagement with our customers and stakeholders to ensure their views were represented, a draft NAIS report was released for public consultation in April 2023. The report has since been updated with additional feedback from the consultation process and presented to government for its consideration.

Agri-food production is a major user of water from the Northern Adelaide Irrigation Scheme.

Healthy communities

We support and promote the health and wellbeing of an active, thriving South Australia. This is achieved by building sustainable and liveable communities. We share new ways of using water effectively and efficiently to create comfortable green spaces that support wellbeing. Through actions to achieve reconciliation, we support stronger Aboriginal and Torres Strait Islander communities by helping to create economic opportunities.

Delivering our Stretch Reconciliation Action Plan

Our Stretch Reconciliation Action Plan 2020-23 is part of our commitment to reconciliation and its actions target key impact areas. Achievements in 2022-23 include:

- increased support for Aboriginal and Torres Strait Islander businesses through direct employment for various capital projects as well as encouraging our major contractors and partners to set supplier diversity targets and procurement policies
- spending more than $8 million with Aboriginal-owned businesses, comprising a direct spend of $1.06 million and indirect spend of $7.2 million, overall exceeding our target for this year by almost $200,000, and representing almost 1 per cent of our annual forecast procurement spend
- providing our people with continuous opportunities to deepen their understanding and appreciation of diverse cultures, customs, and perspectives through mandatory reinforced cultural awareness training
- supporting initiatives to improve liveability in Aboriginal and Torres Strait Islander communities through our Reconciliation Partnerships Program, Purku-itya (the Kaurna word meaning 'for community').

Nellie Hirschausen, Major Sumner, Jamahl Liddle and David Ryan mark National Reconciliation Week.

Recreation at our reservoir reserves

In 2022-23 our 11 reservoir reserves welcomed 417,959 visitors. Since public access began in 2019, we have recorded more than one million visitors.

Our program to open reservoir reserves was recognised with 5 awards in 2022-23:

1. Environmental Excellence Award from the Urban Development Institute of Australia (UDIA) South Australia's 2022 Awards for Excellence.
2. The Social and Community Infrastructure Award, also from the UDIA South Australia.
3. Social and Community Infrastructure Award at the 2023 UDIA national awards.
4. Organisational Excellence Award at the 2022 Australian Water Association South Australian awards.
5. Community Based Initiative of the Year at the 2022 national Parks and Leisure Australia Awards of Excellence.

The Reservoir Volunteer program continued, and we partnered directly with 93 community members at reservoir reserves on conservation activities such as revegetation and bush care, fish stocking, and community events at Myponga, Happy Valley, Mount Bold, Hope Valley, Warren, South Para and Barossa reservoir reserves.

In December 2022, we supported the Williamstown Action Group's Santa Dash Fun Run as part of our Reservoir Partnership Program.

Reservoir Rangers Jake Williams and Sam Haniford at Happy Valley Reservoir Reserve.

The inaugural Santa Dash fun run was held in December 2022 at South Para Reservoir Reserve.

Greening our communities

This year, we helped transform our land holdings and land around our infrastructure into greener spaces to support thriving communities.

In July 2022, a garden was established at the Port Pirie depot, featuring a variety of local flora carefully selected for their visual appeal and adaptation to the local environment. The garden includes more than 200 seedlings local to the region.

A greening project for Port Pirie was initiated and a Memorandum of Administrative Agreement was signed with the Department for Environment and Water outlining the agreed greening Port Pirie scope of work. We also undertook site surveys and soil sampling to inform final greening designs for this project. Research and greening initiatives have been shared with the Port Pirie Council which is leading the project. Our work for the Port Pirie greening program was recognised with an Australian Institute of Landscape Architects South Australian Landscape Architecture Award.

In May 2023, we partnered with the City of Charles Sturt by leasing our vacant land and transforming a disused pump station building in St Clair for the use of a new community garden.

Our field operations team at the Port Pirie Depot with their flourishing native garden.

Wastewater surveillance for SARS-CoV-2

Our Research and Science teams continued to work with South Australian and interstate health regulators to conduct wastewater surveillance for SARS-CoV-2. As the amount of clinical testing and self-reporting decreased, we continued to support SA Health to monitor wastewater for SARS-CoV-2 in Adelaide and key regional locations. Testing was also expanded to include variant testing, working with the South Australian Health and Medical Research Institute to analyse wastewater samples and identify the COVID-19 variants circulating in the community.

Community education, events and engagement

This year, 4,417 students and their teachers participated in our education program The Well, with a quarter of these students coming from regional schools.

Our Community Education team gave a range of presentations and tours, and held an open day at the Adelaide Desalination Plant. Community groups that participated in presentations included a recently arrived migrant group and people from low socio-economic communities. Migrants and a group of customers who are blind also toured the Adelaide Desalination Plant.

A new education program was developed and piloted in schools on the Anangu Pitjantjatjara Yankunytjatjara Lands.

In 2022-23, our Quench Benches and vintage caravan Miss Isla delivered clean drinking water at 158 community events including NAIDOC Week Family Day, WOMADelaide, the Adelaide 500 and the Christmas Pageant.

Our work to promote reusable drink bottles — Bring Your Own Bottle (BYOB) — encourages our community to avoid single use plastic bottles of water by bringing reusable bottles to fill with tap water when out and about. We continued our BYOB focus at community events this year and promoted our BYOB app which maps drinking fountains and bottle filling stations across South Australia.

Through our Water Talks website, more than 60,000 people learned about and engaged on a range of projects underway across the state including:

- Tea Tree Gully Sustainable Sewers
- Mount Bold Dam safety upgrade
- Eyre Peninsula desalination project
- Kangaroo Island's new seawater desalination plant project
- our planning for 2024-28.

Artwork on infrastructure

Five sites had artwork completed this year: the Minlacowie and Wool Bay Tanks, the River Torrens outlet wall, and the Loxton and Swan Reach pump houses. Artwork is part of our commitment to improving the visual amenity of our infrastructure in metropolitan and regional communities throughout South Australia. The mural on the Minlacowie tank has provided a talking point for ongoing conversations on the value of the Narungga people's knowledge, experience and contribution to the region.

Cosi at our Glenelg drinking fountain.

Manager Community Partnerships and Education Sally Denton, Deputy Mayor Richard Carruthers, Mike Makatron, Dylan Butler, Harley Hall, Conrad Bizjak, Narungga Elder Uncle Bobo Harradine, Jason Swales, Mayor Darren Braund, and Community Relations and Education Coordinator Steph Frick in front of the new Minlacowie tank mural.

Miss Isla provided water to festival goers at WOMADdelaide.

Proactive environmental leadership

As a leader in environmental management, and by partnering with our stakeholders, customers and community, we are taking action to adapt to climate change, and finding ways to reduce our greenhouse gas emissions. We make decisions that reduce waste and grow opportunities to reuse resources and by-products of our production processes to create environmental benefits.

Zero Cost Energy Future

The Zero Cost Energy Future initiative earned multiple awards in 2022-23. It was presented with the Consult Australia Awards for Excellence in the Superior Sustainability category, the Premier's Climate Change Council South Australia Climate Leaders Awards in the climate change category, the Engineers Australia Excellence Awards South Australia as a project award, and the Australian Institute of Energy South Australia awards as the South Australian Energy Project of the Year.

The large solar array near Christies Beach Water Treatment Plant.

Reducing waste and introducing circular economy

To promote sustainability and responsible practices, in 2022-23 we:

- developed a circular economy approach to guide how we effectively integrate circular practices throughout our operations
- completed a circular economy procurement project, which involved a comprehensive review of our procurement practices. As a result, we developed a specialised tool to help our people identify products with recycled content suitable for use by our business
- reused demolition materials for fill projects and improved sorting and separation processes for recycling
- incorporated recycled aggregates for pipe embedment, reducing our reliance on raw materials. For instance, we used 10 mm and 14 mm recycled aggregates instead of raw materials for pipe embedment in the Tea Tree Gully Sustainable Sewers project.

These achievements are part of our commitment to introducing circular economy into our business for a more sustainable future.

Bolivar's biogas breaks renewables record

In July 2022, we achieved a record-breaking level of 3,099 megawatt hours of renewable energy generation from biogas at Bolivar Wastewater Treatment Plant. This surpassed our yearly average of 2,800 megawatt hours and resulted in 112 per cent energy sufficiency for the month, with excess green energy exported to the grid. Bolivar Wastewater Treatment Plant had an average energy self-sufficiency rate of 95 per cent in 2022-23.

Bolivar Wastewater Treatment Plant was 95 per cent energy self-sufficient.

Building bushfire resilience

In 2022-23, our Research team began work to investigate the use of low-cost remote sensors to help measure water quality challenges and other impacts following bushfires. The research will inform future bushfire recovery efforts.

In November 2022 we completed a 3-year project, delivered by the University of New South Wales, which conducted research to improve our understanding of the impact of fires on native habitat. The outcomes of this research are now being used to improve prescribed burning methods to reduce the risk of bushfires.

Conservation and restoration of reservoir reserves

In 2022-23 we restored a 24-hectare site at our Millbrook Reservoir Reserve into a thriving open grassy woodland habitat with 82 native plant species and more than 2.2 million native grasses.

The restoration project was recognised with the Environmental Stewardship Award at the 2023 Parks and Leisure Australia South Australia Awards of Excellence.

We made significant progress in reconstructing Eyre Peninsula Blue Gum Woodland and Sheoak Grassy Woodland at Tod Reservoir Reserve on the lower Eyre Peninsula. These on-ground native vegetation offsets cover 12 hectares and biodiversity gains are tracking above target.

Two aerial operations were carried out to remove feral deer and goats from the Mount Bold and Scott Creek area, in collaboration with Landscapes South Australia Hills and Fleurieu, the Department for Environment and Water, and Forestry South Australia. The removal of these animals has a crucial role in safeguarding the region's biodiversity and facilitating the recovery of vegetation affected by the Cherry Gardens bushfire. The operation in November removed 286 deer and 61 goats, and in June, 375 deer and 12 goats were removed.

As part of an extensive fauna monitoring program, we partnered with a wildlife organisation to remove feral cats from land around Middle River Reservoir on Kangaroo Island, helping protect the endangered southern brown bandicoots and the critically-endangered Kangaroo Island dunnart.

Recycled water for irrigators

This year we reached an in-principal agreement with Willunga Basin Water to enter a new long-term contract through to 2052 for the supply of climate-independent recycled water to around 240 irrigators across the McLaren Vale region, providing water security to Willunga Basin Water customers. Willunga Basin Water supplies about 6,000 megalitres a year of recycled water, which is sourced from and treated at our Aldinga and Christies Beach wastewater treatment plants.

Our people for the future

We proactively grow a diverse and inclusive business with people who reflect the community we serve. This brings creative thinking and diversity of thought to build innovation, embracing technology to help us be safer and more efficient. Our people work safely and are part of a high performing culture where learning and collaboration deliver great customer outcomes.

Improving health and safety and wellbeing

The once-in-a-generation River Murray flood made 2022-23 a challenging year for our people. While operating along the River Murray is part of our daily work, the flood changed the operating landscape by introducing new hazards and dangers, such as working in and around flood waters. Our Health and Safety team worked alongside operational teams to support the health, safety and wellbeing of our people working on our flood response and those directly affected by the flood.

While the flood required some adjustments to our Health and Safety Improvement Plan, key projects were completed including the second psychological hazards climate survey and the roll out of Health and Safety leadership training. This bespoke training develops our leaders' safety mindset, while giving them tools to continue their development on the job.

The leadership program was further complemented by a 2-day Incident Cause Analysis Method investigation course delivered in March 2023 which supports our commitment to quality incident management.

This focus on quality incident management helps create a safe workplace for our people as evidenced by our performance against key safety measures. Our end of year result of 5.0 for the total recordable injury frequency rate was favourable to the target of 5.5. The high potential incident frequency rate result was 6.3 against a target of 6.7.

Technology improvements continued to be pursued to mitigate health and safety risk exposures. These included trialling drone water sampling and, in collaboration with UniSA, wearables to identify fatigue indicators.

Diversity, equity and inclusion

In 2022-23, a new Diversity, Equity and Inclusion Strategic Plan 2030 was endorsed, together with an accompanying governance structure. The plan sets our 2030 goal to be an innovative organisation where diversity and inclusion is part of everything we do.

As at 30 June 2023, women comprised 48.89 per cent of our leadership, favourable to our target of 40 per cent and continuing the recent upward trend. The percentage of women overall in our business is 32.39 per cent.

Through the Capital Delivery Strategic KPI Program, a report on women working in science, technology, engineering and maths (STEM) fields was prepared together with our major framework partners. The report highlighted the barriers women in STEM face, focusing on women who graduated with a STEM degree in the past 5 years and who are working in a STEM field. To understand early barriers, the focus included senior high school students in years 10, 11 and 12, university students and early career professionals. The report will be used to identify opportunities and implement activities to address the barriers and encourage greater participation of women in STEM careers.

Our sponsorship of the University of Adelaide's Women in STEM careers program continued, giving students the opportunity to connect with industry professionals and learn about career options available when they have completed their studies.

Our employee networks groups, Together for Women, Pride Together, Kauwi Miyurna and Able Together, continued to promote and share their experiences to celebrate the diversity of our workforce.

In 2022-23, Aboriginal employment was at 2.09 per cent and cultural awareness training has been reviewed with a plan in place to ensure it is specific to our needs, building a more inclusive culture.

A partnership with the Clontarf Foundation which provided traineeship opportunities, was extended until December 2025 with one trainee joining the team in Whyalla.

Disability access and inclusion

By 30 June, 86 per cent of actions in our Disability Access and Inclusion Plan were complete. This year we delivered initiatives including increased accessibility to information at public sites such as signage at reservoirs, a visitor accessibility guide for SA Water House, and business-wide awareness through events organised by our Able Together network group. The reporting period for our plan has been extended to the end of 2023 to align with Inclusive SA's State Inclusion Plan with a report to the Department of Human Services due in early 2024.

Performance management

Our annual performance appraisal and development cycle is aligned to the financial year, which includes setting goals, supporting our people's development and having performance discussions. In 2022-23, 98 per cent of our people completed their annual performance reviews.

Water quality

SA Health statement

SA Health and SA Water work cooperatively to ensure the continued protection of public health in relation to the supply of drinking water across the state. 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.

During 2022-23, SA Water conducted 46,089 tests for analytes in drinking water supplies throughout the state for compliance with the *Australian Drinking Water Guidelines* (2011) (ADWG). These results were reported to SA Health in line with agreed reporting protocols. Compliance with the ADWG for *E. coli* was achieved in 99.97 per cent of metropolitan Adelaide samples and 99.96 per cent of regional samples. Overall compliance with the ADWG for health-related parameters was 99.98 per cent for metropolitan systems and 99.85 per cent for regional areas.

The total number of incidents notified by SA Water during 2022-23 (179) was higher than in 2021-22 (136) but most of this was due to an increase in Type 2 incidents. There were 2 Priority Type 1 incidents during 2022-23 for enteric protozoa detected in treated water samples. Both of these incidents were managed appropriately to prevent risks to drinking water quality.

The impact of the River Murray flooding event in December 2022 resulted in an increase in incidents particularly related to elevated levels of cyanobacteria, and physical parameters such as high turbidity. The flood waters contributed to overall poor water quality in the River Murray resulting in treatment and disinfection challenges at water treatment plants fed by River Murray water. Incidents relating to disinfection by-products also increased.

High rainfall events led to a significant increase in the detections of enteric protozoa (*Cryptosporidium* and *Giardia*) in drinking water catchments and source waters. There were 42 Type 2 incidents involving detection of enteric protozoa in the catchment following rain events or at the inlets to drinking water treatment plants. No faults were detected from the continuous monitoring of treatment plant performance during the periods when the protozoa were detected in the source water.

The number of incidents (9) related to recreational use of reservoir reserves was lower than in 2021-22 (20). The incidents did not have a measurable impact on drinking water quality.

There was a small increase in the number of detections of *E. coli* in drinking water samples in 2022-23. Appropriate remedial action was taken to minimise the impact to public health. Overall compliance of *E. coli* monitoring remained very high.

All water quality incidents were notified by SA Water in a timely manner. Appropriate remedial actions and responses were implemented following incidents to ensure 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) and *Safe Drinking Water Regulations 2012* provide the regulatory framework for drinking water providers in South Australia and are administered primarily by SA Health. 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
- 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 (NATA) accredited laboratories for sample testing
- reporting of water quality test results to SA Health and providing consumers with drinking water quality information.

As a registered drinking water provider, we have established risk management plans, including approved monitoring programs and an incident notification protocol. We provide water quality testing reports for metropolitan and regional water supplies on a monthly basis with results showing a very high level of compliance.

An independent audit was undertaken in February 2023 as required by the Act.

The audit spanned a duration of 2 weeks focusing on examining a selection of representative drinking water supplies. It encompassed both desktop assessments and on-site visits which included travelling to the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands.

The 2-week audit recognised overall compliance with the Act. Highlights identified by the auditor included:

- A mature drinking water management system.
- A culture that recognises the importance of drinking water quality — this is deeply embedded within the organisation, and is to be applauded.
- Staff who are adaptable, dedicated, skilled and sharing.
- Water planning for, response during, and recovery from the River Murray flood. This event would test any organisation, and the level of dedication to ensuring the best outcomes are noted and congratulated.
- Contract partners to SA Water are also much more integrated now into the overall delivery of safe water. It is apparent that water quality, not contractual limits is the primary driver of interactions, and all partners were observed to be undertaking their roles in a collaborative and cooperative fashion.
- In response to previous audit findings, SA Water not only addressed the specific concerns but took a wider view to review the finding, determine the most appropriate solution and implement it across the business.

Overall, the audit showed a very high level of compliance, however, as expected, with a detailed audit, 2 non-conformances were identified as well as a number of improvement actions. As in previous years, these items will be assessed and corrective actions will be taken.

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

The 85 drinking water supplies we operate serve customers across metropolitan and regional South Australia. This year we have merged what was previously reported as country and remote Aboriginal communities into one category (regional).

To maintain quality, we have SA Health-approved drinking water quality monitoring programs with samples collected and analysed throughout all aspects of the water supply system, including catchment and source water, treatment processes, and the distribution network up to the water meter on individual properties.

We monitor for health and aesthetic compliance and to optimise water quality. Samples are collected by our trained field workers to make sure 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 NATA requirements.

Number of sample locations and test analytes — statewide, metropolitan, regional supply systems, 2022-23

Drinking water systems	Statewide	Metropolitan	Regional
Supply systems	85	7	78
Customer tap sample locations	512	173	339
Catchment to tap sample locations*	1,504	349	1,155
Catchment to tap routine test analytes	≈393,000	≈69,000	≈324,000

*Includes customer tap sample locations

Drinking water quality and performance

In 2022-23, we demonstrated robust management of water quality by consistently providing safe, clean drinking water to our customers despite the challenges posed by the flood event in the River Murray.

Statewide, metropolitan and regional drinking water supply systems health-related performance, 2022-23

Health-related parameters	Statewide systems (number of test analytes)	Metropolitan systems	Regional
Samples free from *E. coli*	99.96% (10,229)	99.97% (3,167)	99.96% (7,062)
Samples compliant with ADWG health parameters*	99.89% (46,089)	99.98% (12,655)	99.85% (33,434)
	Target: 99.90%	Target: 99.90%	Target: 99.90%

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

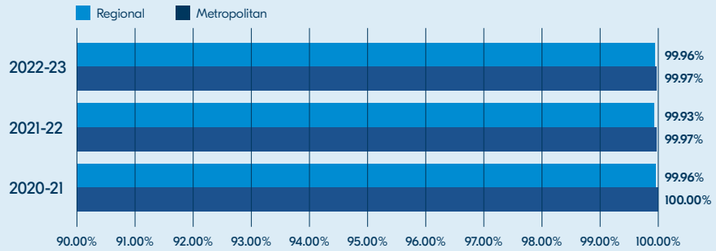
Direct exceedances of the ADWG were used rather than the 95th percentiles for compliance of individual chemical parameters.

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 46,089 test analytes from our drinking water supplies (customer tap sample locations) throughout South Australia to determine health-related compliance. We achieved 99.96 per cent *E. coli* compliance across customer tap sample locations with exceptions in one metropolitan and 3 regional systems. Compliance with ADWG health-related parameters across customer tap sample locations was marginally below target at 99.89 per cent. This result can be largely attributed to the flood event which saw a short-term rise in disinfection by-products in several of the systems fed directly from the River Murray.

Although we aim for 100 per cent compliance all the time, the ADWG recognises that occasional exceedances may occur with most guidelines for chemicals based on a lifetime of exposure. 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 that appropriate responses and corrective actions were implemented for all exceedances and these mitigated any risks to public health.



Compliance with *E. coli* levels at metropolitan and regional drinking water supply system customer tap sample locations since 2020-21 (customer tap sample location tests free from *E. coli*).

Incident management

We apply the ADWG Framework for Management of Drinking Water Quality which includes 2 components for the management of incidents:

1. communication
2. incident and emergency response protocols.

Our Water Quality Incident and Emergency Management Protocol is in place and we have a web-based incident management system to record and generate notifications of water quality incidents. These are aligned to 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 Act and *Safe Drinking Water Regulations 2012*.

SA Health defines 3 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.

Number of incidents in statewide drinking water supplies (metropolitan and regional)

Reporting period	Priority Type 1	Type 1	Type 2
2022-23	2	48	129
2021-22	0	50	86
2020-21	1	45	57
2019-20	1	36	63
2018-19	1	24	54
2017-18	2	42	90

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

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 2022-23, there were 2 Priority Type 1 incidents reported due to the detection of *Cryptosporidium* in product water from a water treatment plant (WTP). In one of the instances, the WTP had ultraviolet disinfection, which is an effective barrier against *Cryptosporidium*, and in the other the *Cryptosporidium* was non-infectious.

The poor source water quality following the River Murray flooding event from December 2022 led to treatment and disinfection challenges in our water treatment plants and networks. This, in turn, caused an increase in turbidity, disinfection, disinfection by-products, cyanobacteria, enteric protozoa and bacteriological incidents.

During 2022-23, there was a decrease in chemical detections and a significant improvement in non-compliance at reservoirs with recreational access resulting in a decrease in contamination incidents.

The rise in Type 2 incidents can also be attributed to increased rainfall events during the year leading to an increase in enteric protozoa detections in our surface water catchments.

In 2022-23, we continued to address the causes of preventable Type 1 notifications. Strategies used to achieve this include refresher training, 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 water supply systems and the detection and management of risks continued during 2022-23. 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 help manage water quality incidents.

Criteria used in the IRI based on total reportable SA Health Priority Type 1 and Type 1 incident notifications are:

- incident reported to relevant agencies by phone immediately (less than one hour)
- incident entered into the incident management system in less than 2 hours
- initial effective response taken within 3 hours
- written report to the Minister for Climate, Environment and Water by 3pm the next business day
- root cause analysis completed within 10 working days
- preventive actions implemented within agreed timeframes.

The overall 2022-23 strategic target for the IRI is 85 per cent compliance.

The Incident Response Index achieved for metropolitan and regional incidents for 2022-23

System	IRI
Metropolitan	100%
Regional	95%
Target	85%

Effective governance

Legislation

Established as a public corporation on 1 July 1995 under the *South Australian Water Corporation Act 1994*, legislation guides our operations, the most significant legislature includes:

- *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*
- *Landscape South Australia Act 2019.*

Key regulators

The Essential Services Commission of South Australia is the state's independent economic regulator that determines our allowable revenue, sets service standards, and monitors our performance and compliance in the delivery of essential water and sewerage services for our customers.

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

The Office of the Technical Regulator sets standards and requirements for water and sewerage infrastructure, and the operation of that infrastructure, to ensure public safety.

The Environment Protection Authority sets standards for acceptable discharge from 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 arrangements for managing 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 Climate, Environment and Water. The Board sets our strategic direction and monitors performance, driving efficiency and protecting our long-term financial viability in accordance with the *Public Corporations Act 1993*.

The following Board directors, appointed by the Governor of South Australia, served during 2022-23:

- Allan Holmes, Chair (from 25 July 2022)
- John Bastian AM (to 2 August 2022)
- Sue Filby
- Janet Finlay
- Chris Ford
- Fiona Hele
- David Ryan.

Day-to-day management of the business is delegated by the Board through the Chief Executive to the Executive. 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 $15 million (GST inclusive) and expenditure up to $4.4 million (GST inclusive) on any one project.

A charter prepared by the former Minister and the Treasurer, in consultation with the Board, was in place for 2022-23 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 2022-23, 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.

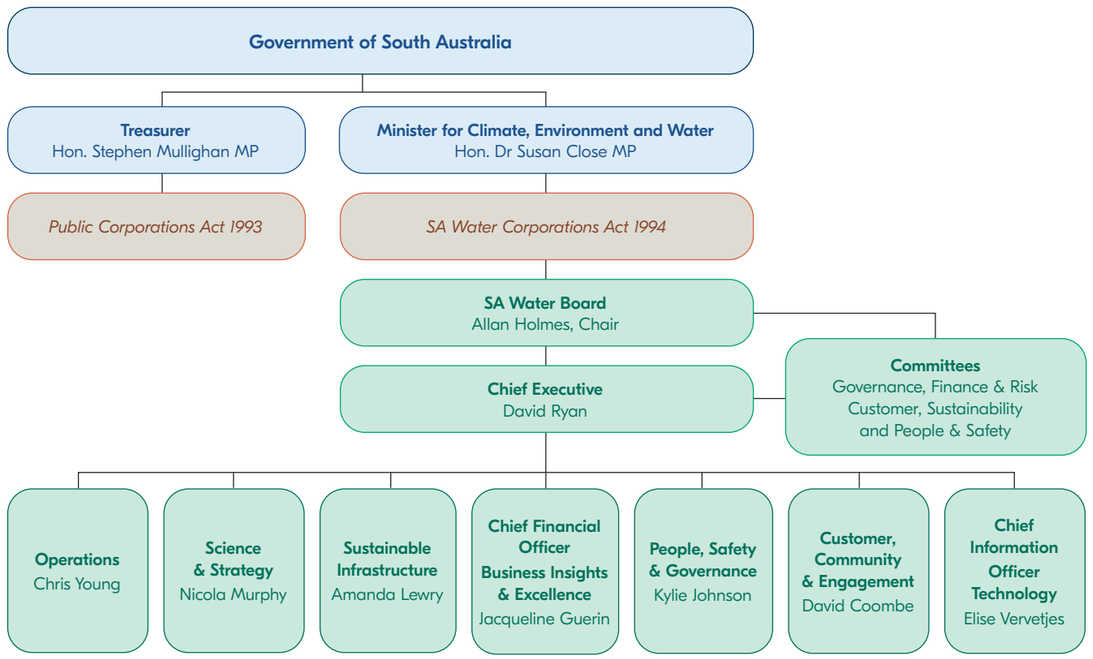
Board committees

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

- **Governance, Finance and Risk Committee** — supports the Board in fulfilling its corporate governance and oversight responsibilities in relation to our financial planning and reporting, internal and external audit, internal control processes, risk management systems, legal compliance, and fraud control.
- **Customer, Sustainability and People and Safety Committee** — supports and advises the Board with regards to our people, our customers and outcomes related to the environment and sustainability. This committee focuses on strategic matters that may have significant impacts on our business, and actively participates in discussions about the direction for any relevant strategies of the Corporation. The committee helps ensure the business has the right capabilities and plans in place to manage the impacts of an ever-changing climate and ensuring future generations are considered in the decisions of today.
- **Customer, Community and Business Development Committee** — helped the Board's oversight of customer and community needs, interactions and outcomes, to ensure they are aligned with business and brand strategy. This committee held its last meeting on 16 November 2022.
- **People, Culture and Innovation Committee** — supported the Board on matters associated with human resources policies, strategies and practices including health and safety, culture, capability, diversity, equality and inclusion, remuneration and future workforce planning, taking into account the strategy, government policy, relevant Board policies, business needs and regulatory requirements. This committee held its last meeting on 9 November 2022.

Organisation structure

As at 30 June 2023



Financial performance

Financial performance summary

In the 2022-23 financial year, we recorded year-end profit before tax of $70.8 million. Revenue was $1.425 billion with some of the contributors to this being:

- strong water sales
- significant contributed assets arising from mains extension contributions and infrastructure assets gifted to us from developers
- capital contributions to us for work we perform, due to strong statewide development activities.

Total expenses were $1.355 billion. Some of the contributors to this were:

- significant operating costs including Alliance contracts and framework partner costs
- additional costs associated with providing services to approximately 17,000 new customers per annum (1.2 per cent growth)
- significant electricity volumetric and network charges to facilitate our networks
- increases in chemical, transport and construction costs as a result of various world economic impacts
- interest expense and depreciation of infrastructure assets make up more than 45 per cent of the total expenses.

Contributions to government

As a significant revenue contributor to the Government of South Australia, for the broader benefit of the people of South Australia, an amount of $237.1 million was paid in 2022-23.

This saw $74.3 million of business operating expenditure contributed to other government agencies and/or councils through:

- external fees and charges paid to other government agencies
- provision of services delivered by other government agencies
- operational taxes such as land tax or council rates.

Within interest expense, $94.2 million was paid to the South Australian Financing Authority as guarantee fees and margins. An income tax equivalent of $18.8 million and a dividend of $49.8 million were also paid.

Contributions to government	2022-23 actuals $'000
External fees and charges	55,497
Contract services provided	1,365
Operational taxes and tax equivalents	17,456
Total contained within operating expenses	**74,318**
As a percentage of total operating expenses	10.3%
Interest expense – guarantee fees*	89,853
South Australia Government Financing Authority margin fees	4,378
Additional interest paid to owner	**94,231**
Income tax equivalents	18,774
Dividends at 100% of profit after tax**	49,824
Total amounts paid to government	**237,147**

*Guarantee fees are paid to the South Australian government to remove any competitive advantage we might have due to our ability to borrow under the South Australian government credit rating.

**Dividend was paid based on 100 per cent of the forecast profit after tax (PAT) as at April 2023. The actual year end PAT position was higher. This will be adjusted in the 2023-24 dividend payment.

Capital expenditure

This year, we spent $562.4 million on capital expenditure, with $28.5 million spent on information technology and $533.8 million on infrastructure and mandated growth (extensions and connections).

Information technology investments continue to focus on improving outcomes for our customers and the business as well as the safety of our people, including:

- improved service channels and customer digital experience
- increased technology security and reliability (including cyber security)
- increased business efficiency and employee experience
- innovative technologies such as smart maintenance, underwater robotics and virtual reality.

We continue to focus on improvements to our water and wastewater infrastructure assets and water security of the state, and to invest in major infrastructure projects, all of which have a positive impact on our customers and/or the state. In 2022-23 these included:

- Kangaroo Island Desalination Plant $49.8 million
- Tea Tree Gully Sustainable Sewers $29.7 million
- Eyre Peninsula desalination augmentation $12.0 million
- Bolivar Wastewater Treatment Plant capacity growth upgrade $10.0 million
- Mount Bold Dam safety upgrade $7.4 million
- Zero Cost Energy Future infrastructure $3.7 million.

Consultants

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

Consultant	Amount ($)	Description/purpose
$10,000 or less		
Isle Utilities Pty Ltd	10,000	Sewer overflow benchmarking
Between $10,000 and $50,000		
Red Wagon Workplace Solutions	16,000	Advice regarding staff matters and industrial relations issues
Farrah Seidel	32,000	An independent, external party to investigate a bullying and harassment complaint
KPMG	42,097	Supporting preparation of our Regulatory Business Plan for the 2024-28 regulatory period
Greater than $50,000		
PricewaterhouseCoopers	113,938	Water engineering technologies operating and commercial model review Professional tax services in preparation of a reasonably arguable position paper on the income tax treatment of contributed assets

Supplementary reporting items

Fraud

Our Fraud and Corruption Control Framework outlines our commitment to creating an honest and ethical business environment with zero tolerance of fraud or corruption in any form. We perform a range of activities to prevent, detect and respond to fraud and corruption, including:

- executive oversight of our Fraud and Corruption Control Framework by the General Manager People, Safety and Governance as designated Fraud and Corruption Control Coordinator
- regular fraud and corruption risk assessments undertaken with risk treatment plans for high-risk areas
- investigations of all allegations of fraud or corruption in accordance with our Fraud and Corruption Control Framework
- data analytic reviews conducted on payroll and accounts payable transactions by our internal audit function
- communication to our people on their requirement to act in accordance with our Ethical Standards Procedure, how to report matters of concern and the protections provided to them in the *Public Interest Disclosure Act 2018*

There were no instances of potential fraud externally reported in 2022-23.

Public interest disclosure

Through our Public Interest Disclosure Procedure, we are committed to encouraging and facilitating disclosure, in the public interest, of information about substantial risks to public health, safety or the environment, or about corruption, misconduct and maladministration in public administration.

There was one matter disclosed to a responsible officer of the agency under the *Public Interest Disclosure Act 2018* in August 2022. Following an internal investigation, we reported the matter to the Officer for Public Integrity (OPI). Upon review, the OPI referred the matter to the Independent Commission Against Corruption South Australia (ICAC). ICAC's investigation concluded with no findings of corruption, misconduct, maladministration or otherwise.

Risk management

Strategic risk management supports our forward planning and critical thinking to enable well-informed decision-making across our operations.

Risk management is controlled by our Governance Policy and supported by our Risk Framework which has been developed to align with the requirements of the SA Government Risk Management Guide and aligns to the principles of risk management as set out in the international risk management standard *ISO 31000:2018 Risk Management — Guidelines*.

Our risk profile is reported regularly to our Board through its Governance, Finance and Risk Committee.

Complaints

All forms of organisational feedback including complaints are seen as opportunities for us to improve our performance in delivering excellent customer experiences, as well as building customer trust and confidence and developing operational efficiencies.

We strive to capture, understand, and resolve complaints at first contact whenever possible. Our Customer Advocate team helps investigate and respond to complaints which were not able to be resolved on first contact. Additionally, we proactively look for ways to improve the feedback management processes across the business.

In 2022-23, we received 3.55 complaints per 1,000 customers, up from 2.94 complaints per 1,000 customers in 2021-22. This increase was driven by improved focus on better complaint capture and training our people in complaint management. It is viewed as a positive indication of improvement and not identified as a specific trend or operational issue.

More than one third (36.24 per cent) of all complaints received were recorded as first contact resolution complaints. We responded to 97.18 per cent of complaints within target times, with 7.03 per cent of complaints escalated to the ombudsman.

Together with the Water Services Association of Australia and other Australian water utilities, we are reviewing and implementing best practice guidelines to extend our ability to capture customer complaints resolved at first contact, to build valuable insights for our business and improve the overall experience for our customers.

The most common complaint types received in 2022-23 related to:

1. water quality
2. meter reading and estimates
3. repairs and maintenance of infrastructure in the metropolitan area.

In 2022-23, the Energy and Water Ombudsman of South Australia (EWOSA) referred 184[1] complaints to us on a range of issues, which is an increase from 144 in 2021-22. The highest complaint type remains costs incurred for high water use, which is consistent with complaints referred in 2021-22.

This year, 81 per cent of customers who had a complaint handled by our Customer Advocate team indicated they were satisfied with our complaints handling process.

Through our complaint management process, the Customer Advocate team completes root cause analyses, post complaint reviews and case studies for complaints throughout the year. Case studies include a full account of the complaint details, a summary of the case investigation, the outcomes, and any applicable process improvement recommendations.

In response to customer feedback, we continue to implement changes, and in the past year this has included:

- improvements to complaint recording and data collection including staff training
- meter reading procedures.

Supporting customers

In 2022-23, 1,053 new customers joined our Customer Assist Program. The program helps residential customers with support to help pay their bills. At 30 June 2023, 1,916 residential customers had participated in a financial hardship program with a $2,936 average bill balance. The program connects customers with support to help them better manage their bills, and in 2022-23, 655 residential customers successfully exited the program.

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

Ministerial directions

DIRECTION TO THE SOUTH AUSTRALIAN WATER CORPORATION

PURSUANT TO SECTION 6 OF THE PUBLIC CORPORATIONS ACT 1993

BACKGROUND:

1. Pursuant to section 6 of the *Public Corporations Act 1993*, and sections 6 and 7(2)(f) of the *South Australian Water Corporation Act 1994*, the South Australian Water Corporation (SA Water) is subject to control and direction by its Minister, and has the functions conferred on it by its Minister.

2. The *South Australian Water Corporation Act 1994* is committed to the Minister for Climate, Environment and Water (the Minister) as per Gazettal notice dated 22 March 2018, p. 1256 (formerly the Minister for Environment and Water—title altered as per Gazettal notice dated 24 March 2022, p. 901).

3. Pursuant to section 32 of the *Water Industry Act 2012* (SA), Cape Jaffa Anchorage Essential Services (CJAES) has written to the Essential Services Commission of South Australia to surrender its retail licence for the provision of sewerage and non-drinking water services to residential and non-residential customers, with an effective surrender date of 31 October 2022.

4. The Minister considers it appropriate to direct SA Water to temporarily take over the existing operations of Cape Jaffa Anchorage Essential Services (CJAES) and seek to investigate potential longer-term arrangements for non-drinking water and sewerage services with CJAES and its customers.

DIRECTION:

5. I, Susan Close, Minister for Climate, Environment and Water, direct SA Water under section 6 of the *Public Corporations Act 1993* to:

    i. use its best endeavours to obtain the agreement of Cape Jaffa Anchorage Essential Services, to temporarily take over the operation of non-drinking water and sewerage services to ensure continued operation to customers of CJAES as at 31 October 2022 – until 30 June 2023;

    ii. once the above agreement has been obtained, take over the operation of non-drinking water and sewerage services to ensure continued operation to customers of CJAES as at 31 October 2022 – until 30 June 2023 and at existing prices, as outlined in Attachment 1;

    iii. investigate longer-term arrangements for non-drinking water and sewerage at Cape Jaffa on a full cost recovery basis.

6. For the avoidance of doubt and to the extent of any inconsistency, this direction overrides any other previous direction to SA Water under section 6 of the *Public Corporations Act 1993* – with respect to customers of CJAES as at 31 October 2022.

7. For the avoidance of doubt this direction is conditional upon SA Water having or acquiring the proper licencing and legal authority to comply with this direction.

8. This Direction may be revoked at any time.

Hon Susan Close MP

MINISTER FOR CLIMATE, ENVIRONMENT AND WATER

31 / 10 / 2022

ATTACHMENT 1

EXISTING PRICES FOR CUSTOMERS OF CJAES AS AT 31 OCTOBER 2022

Fee Name	GST	Fee
Installation/Connection		
Non-drinking water connection fee 20mm with Meter	GST exempt	Price on application
Sewer connection Fee 100mm connection	GST exempt	Price on application
Connections provide a connection point to an allotment.		
Supply/access		
Non-drinking water supply fee	GST free	$360 per annum payable quarterly
Sewer access fee	GST free	The higher of 37.95 cents per $1000 of property value per quarter or minimum access fee of $144.25
Property value is set by the Valuer General.		
Non-drinking water usage		
Flat rate tariff	GST free	$2.836 per kL
Other		
Paper invoice fee	Taxable	$5.00 payable per invoice
Late payment fee[1]	Taxable	$10.00 payable per invoice
1. Fee will be applied for all invoices unpaid by the due date and charged in the following billing quarter		

PUBLIC CORPORATIONS ACT 1993
PURSUANT TO SECTION 6
Direction to the South Australian Water Corporation

Background:

1. Pursuant to section 6 of the *Public Corporations Act 1993*, and sections 6 and 7(2)(f) of the *South Australian Water Corporation Act 1994*, the South Australian Water Corporation (SA Water) is subject to control and direction by its Minister, and has the functions conferred on it by its Minister.

2. The *South Australian Water Corporation Act 1994* is committed to the Minister for Climate, Environment and Water (the Minister) as per Gazettal notice dated 22 March 2018, p. 1256 (formerly the Minister for Environment and Water – title altered as per Gazettal notice dated 24 March 2022, p. 901).

3. Pursuant to section 32 of the *Water Industry Act 2012* (SA), Cape Jaffa Anchorage Essential Services (CJAES) has previously written to the Essential Services Commission of South Australia to surrender its retail licence for the provision of sewerage and non-drinking water services to residential and non-residential customers, with an effective surrender date of 31 October 2022.

4. The Minister previously considered it appropriate to direct SA Water to temporarily take over the existing operations of Cape Jaffa Anchorage Essential Services (CJAES) and seek to investigate potential longer-term arrangements for non-drinking water and sewerage services with CJAES and its customers.

5. The Minister now considers that a new direction is appropriate to extend the timeframe for SA Water's temporary take over of existing operations at Cape Jaffa, to allow more time for longer-term arrangements for non-drinking water and sewerage services to be investigated.

Direction:

6. I, Susan Close, Minister for Climate, Environment and Water, direct SA Water under section 6 of the *Public Corporations Act 1993* to:

i. use its best endeavours to obtain the agreement of Cape Jaffa Anchorage Essential Services (CJAES) to continue its temporary take over of the operation of non-drinking water and sewerage services at Cape Jaffa, to ensure continued operation to customers of CJAES as at 31 October 2022 – until 30 June 2024.

ii. once the above agreement has been obtained, take over the operation of non-drinking water and sewerage services to ensure continued operation to customers of CJAES as at 31 October 2022 – until 30 June 2024.

iii. support further investigations by the Department for the Environment and Water into longer-term arrangements for non-drinking water and sewerage at Cape Jaffa.

7. For the avoidance of doubt and to the extent of any inconsistency, this direction overrides any other previous direction to SA Water under section 6 of the *Public Corporations Act 1993* – with respect to customers of CJAES as at 31 October 2022.

8. This direction may be revoked at any time.

Dated: 30 June 2023

HON SUSAN CLOSE MP
Minister for Climate, Environment and Water

Appendices

Appendix A — Audited financial statements

South Australian Water Corporation annual financial statements for the year ended 30 June 2023.

INDEPENDENT AUDITOR'S REPORT

Government of South Australia
Auditor-General's Department

Level 9
State Administration Centre
200 Victoria Square
Adelaide SA 5000
Tel +618 8226 9640
ABN 53 327 061 410
audgensa@audit.sa.gov.au
www.audit.sa.gov.au

To the Chair
South Australian Water Corporation

Opinion

I have audited the financial report of the South Australian Water Corporation for the financial year ended 30 June 2023.

In my opinion, the accompanying financial report gives a true and fair view of the financial position of the South Australian Water Corporation as at 30 June 2023, its financial performance and its cash flows for the year then ended in accordance with relevant Treasurer's Instructions issued under the provisions of the *Public Finance and Audit Act 1987* and Australian Accounting Standards.

The financial report comprises:

- a Statement of Comprehensive Income for the year ended 30 June 2023
- a Statement of Financial Position as at 30 June 2023
- a Statement of Changes in Equity for the year ended 30 June 2023
- a Statement of Cash Flows for the year ended 30 June 2023
- notes, comprising material accounting policy information and other explanatory information
- a Certificate from the Chair, the Chief Executive and the Chief Financial Officer.

Basis for opinion

I conducted the audit in accordance with the *Public Finance and Audit Act 1987* and Australian Auditing Standards. My responsibilities under those standards are further described in the 'Auditor's responsibilities for the audit of the financial report' section of my report. I am independent of the South Australian Water Corporation. The *Public Finance and Audit Act 1987* establishes the independence of the Auditor-General. In conducting the audit, the relevant ethical requirements of APES 110 *Code of Ethics for Professional Accountants (including Independence Standards)* have been met.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Responsibilities of the Chief Executive and the Board for the financial report

The Chief Executive is responsible for the preparation of the financial report that gives a true and fair view in accordance with relevant Treasurer's Instructions issued under the provisions of the *Public Finance and Audit Act 1987* and the Australian Accounting Standards, and for such internal control as management determines is necessary to enable the preparation of the financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

In preparing the financial report, the Chief Executive is responsible for assessing the entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the assessment indicates that it is not appropriate.

The Board is responsible for overseeing the entity's financial reporting process.

Auditor's responsibilities for the audit of the financial report

As required by section 31(1)(b) of the *Public Finance and Audit Act 1987* and section 32(4) of the *Public Corporations Act 1993*, I have audited the financial report of the South Australian Water Corporation for the financial year ended 30 June 2023.

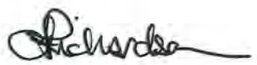
My objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this financial report.

As part of an audit in accordance with Australian Auditing Standards, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- identify and assess the risks of material misstatement of the financial report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the South Australian Water Corporation's internal control
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Chief Executive
- conclude on the appropriateness of the Chief Executive's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial report or, if such disclosures are inadequate, to modify the opinion. My conclusion is based on the audit evidence obtained up to the date of the auditor's report. However, future events or conditions may cause an entity to cease to continue as a going concern
- evaluate the overall presentation, structure and content of the financial report, including the disclosures, and whether the financial report represents the underlying transactions and events in a manner that achieves fair presentation.

My report refers only to the financial report described above and does not provide assurance over the integrity of electronic publication by the entity on any website nor does it provide an opinion on other information which may have been hyperlinked to/from the report.

I communicate with the Chief Executive about, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during the audit.



Andrew Richardson
Auditor-General

22 September 2023

Certification of the Financial Statements

We certify that the:

- Financial statements of SA Water Corporation:
  - are in accordance with the accounts and records of the authority; and
  - comply with relevant Treasurer's instructions; and
  - comply with relevant accounting standards; and
  - present a true and fair view of the financial position of the authority at the end of the financial year and the result of its operations and cash flows for the financial year.
- Internal controls employed by SA Water Corporation for the financial year over its financial reporting and its preparation of financial statements have been effective.

.....
Jacqueline Guerin
Chief Financial Officer

.....
David Ryan
Chief Executive

.....
Allan Holmes
Chair

Date 15/9/2023

South Australian Water Corporation
Statement of comprehensive income
For the year ended 30 June 2023

	Notes	2023 $'000	2022 $'000
Income			
Revenue from ordinary activities	4	**1,424,011**	1,355,499
Other income	5	**1,436**	7,048
Total income		**1,425,447**	**1,362,547**
Expenses			
Depreciation and amortisation expense	6	**(364,717)**	(368,405)
Borrowing costs	6	**(298,478)**	(286,185)
Electricity expense		**(71,525)**	(73,475)
Services and supplies	6	**(209,273)**	(178,463)
Operational and service contracts		**(240,029)**	(232,495)
Employee benefits expense	6	**(142,440)**	(141,431)
Other expenses	6	**(28,157)**	(34,038)
Total expenses		**(1,354,619)**	**(1,314,492)**
Profit before income tax equivalents		**70,828**	**48,055**
Income tax expense	7	**(18,774)**	(11,742)
Profit after income tax equivalents		**52,054**	**36,313**
Other comprehensive income			
Items that will not be reclassified to net result			
(Loss)/gain on revaluation of infrastructure, plant and equipment assets	32(a)	**(1,906,277)**	(526,385)
Income tax relating to items of other comprehensive income	7(c)	**579,531**	148,143
Other comprehensive income for the year, net of tax		**(1,326,746)**	**(378,242)**
Total comprehensive result		**(1,274,692)**	(341,929)
Total comprehensive result for the year is attributable to:			
The SA Government as owner		**(1,274,692)**	(341,929)

The above statement of comprehensive income should be read in conjunction with the accompanying notes.

South Australian Water Corporation
Statement of financial position
As at 30 June 2023

	Notes	2023 $'000	2022 $'000
ASSETS			
Current assets			
Cash and cash equivalents	29	**5,571**	7,176
Receivables	8	**185,120**	185,708
Inventories	9	**10,771**	10,098
Tax receivables	20	**5,951**	-
Other current assets	10	**17,012**	17,998
Finance lease receivable	11	**1,527**	2,110
Total current assets		**225,952**	**223,090**
Non-current assets			
Finance lease receivable	11	**-**	1,469
Deferred tax assets	12	**95,455**	88,953
Intangible assets	13	**137,640**	151,982
Infrastructure, plant and equipment	14	**11,653,228**	13,332,529
Right-of-use assets	16	**151,945**	166,858
Other non-current assets	17	**2,391**	1,226
Total non-current assets		**12,040,659**	**13,743,017**
Total assets		**12,266,611**	**13,966,107**
LIABILITIES			
Current liabilities			
Payables	18	**208,955**	185,712
Financial liabilities/borrowings	19	**62,982**	49,554
Tax liabilities	20	**-**	4,341
Provisions	21	**36,629**	35,590
Other financial liabilities	22	**289**	-
Other current liabilities	23	**35,975**	27,302
Total current liabilities		**344,830**	**302,499**
Non-current liabilities			
Payables	24	**1,863**	2,478
Financial liabilities/borrowings	25	**7,386,612**	7,272,622
Deferred tax liabilities	26	**768,135**	1,296,722
Provisions	27	**30,204**	34,651
Other non-current liabilities	28	**316,378**	325,675
Total non-current liabilities		**8,503,192**	**8,932,148**
Total liabilities		**8,848,022**	**9,234,647**
Net assets		**3,418,589**	**4,731,460**
EQUITY			
Contributed equity		**249,792**	238,147
Asset revaluation surplus	32(a)	**2,868,715**	4,207,847
Retained earnings	32(b)	**300,082**	285,466
Total equity		**3,418,589**	**4,731,460**

The above statement of financial position should be read in conjunction with the accompanying notes.

South Australian Water Corporation
Statement of changes in equity
For the year ended 30 June 2023

	Notes	Contributed equity $'000	Asset revaluation surplus $'000	Retained earnings $'000	Total $'000
Balance at 1 July 2022		**238,147**	**4,207,847**	**285,466**	**4,731,460**
Deferred income tax finance lease	7(c)	-	-	(526)	(526)
Restated total equity at the beginning of the financial year		**238,147**	**4,207,847**	**284,940**	**4,730,934**
Profit for the year		-	-	52,054	52,054
Transfer to retained profits on (disposal)/transfer from asset revaluation surplus	32	-	(12,912)	12,912	-
Income tax relating to components of other comprehensive income	7(c)	-	572,400	-	572,400
Income tax relating to non-assessable income from prior year	7(c)	-	7,657	-	7,657
Gain/(loss) on revaluation on infrastructure, plant and equipment assets	32(a)	-	(1,906,277)	-	(1,906,277)
Total comprehensive result for the period		**-**	**(1,339,132)**	**64,966**	**(1,274,166)**
Transactions with the SA Government in their capacity as owners:					
Contributions of equity*		12,255	-	-	12,255
Transfer of Crown land**		(610)	-	-	(610)
Dividends provided for or paid	36	-	-	(49,824)	(49,824)
		11,645	**-**	**(49,824)**	**(38,179)**
Balance at 30 June 2023		**249,792**	**2,868,715**	**300,082**	**3,418,589**

*In 2022/23, SA Water received the following contributions of equity;
- $2.60m from the SA Government to partially fund the opening of South Australian reservoirs for recreational use;
- $4.269m to partially fund key works completed for the Kangaroo Island Desalination Plant;
- $0.486m was received to fund completion of the Angle Vale Super School Augmentation project;
- $4.90m was received for the construction of a new Wastewater Treatment Plant and pipeline for Thomas Foods International.

In accordance with Interpretation 1038 Contributions by Owners made to Wholly-Owned Public Sector Entities, these payments have been recognised as contributed equity.

**SA Water transferred parcels of land at Hindmarsh Tiers to the SA Government under the Crown Land Management Act 2009 (CLMA 2009). This land had been dedicated by the Minister for Environment and Water to SA Water, pursuant to legislative powers vested to the Minister under section 18 of this Act. Upon revocation of dedication under section 19 of the Act the land has reverted to the Minister and is accounted for as a redemption of ownership interest in SA Water.

The above statement of changes in equity should be read in conjunction with the accompanying notes.

South Australian Water Corporation
Statement of changes in equity
For the year ended 30 June 2023
(continued)

	Notes	Contributed equity $'000	Asset revaluation surplus $'000	Retained earnings $'000	Total $'000
Balance at 1 July 2021		**224,319**	**4,597,921**	**267,203**	**5,089,443**
Deferred income tax finance lease	7(c)	-	-	(2,412)	(2,412)
Restated total equity at the beginning of the financial year		**224,319**	**4,597,921**	**264,791**	**5,087,031**
Profit for the year		-	-	36,313	36,313
Transfer to retained profits on (disposal)/transfer from asset revaluation surplus	32	-	(14,244)	14,244	-
Income tax relating to components of other comprehensive income	7(c)	-	150,555	-	150,555
Gain/(loss) on revaluation on infrastructure, plant and equipment assets	32(a)	-	(526,385)	-	(526,385)
Total comprehensive result for the period		**-**	**(390,074)**	**50,557**	**(339,517)**
Transactions with the SA Government in their capacity as owners:					
Contributions of equity*		17,627	-	-	17,627
Transfer of Crown land**		(3,799)	-	-	(3,799)
Dividends provided for or paid	36	-	-	(29,882)	(29,882)
		13,828	**-**	**(29,882)**	**(16,054)**
Balance at 30 June 2022		**238,147**	**4,207,847**	**285,466**	**4,731,460**

*In 2021/22, SA Water received the following contributions of equity;
- $2.471m from the SA Government to partially fund the opening of South Australian reservoirs for recreational use;
- $13.243m to partially fund key works completed for the Kangaroo Island Desalination Plant;
- $1.205m was received to fund completion of the Angle Vale Super School Augmentation project;
- $0.708m was received from the Government Building Energy Fund to support the Glenelg Wastewater Treatment Plant Trade Waste Storage System and Energy Demand Management Phase 2 projects.

In accordance with Interpretation 1038 Contributions by Owners made to Wholly-Owned Public Sector Entities, these payments have been recognised as contributed equity.

**SA Water transferred parcels of land at Beetaloo Reservoir to the SA Government under the Crown Land Management Act 2009 (CLMA 2009). This land had been dedicated by the Minister for Environment and Water to SA Water, pursuant to legislative powers vested to the Minister under section 18 of this Act. Upon revocation of dedication under section 19 of the Act the land has reverted to the Minister and is accounted for as a redemption of ownership interest in SA Water.

The above statement of changes in equity should be read in conjunction with the accompanying notes.

South Australian Water Corporation
Statement of cash flows
For the year ended 30 June 2023

	Notes	2023 $'000	2022 $'000
Cash flows from operating activities			
Receipts from customers		**1,347,282**	1,276,511
Payments to suppliers and employees		**(758,934)**	(743,706)
Interest received		**181**	117
Receipts from community service obligations		**141,057**	138,837
Receipts from contributions		**14,061**	14,839
Receipts from government grants		**2,135**	1,767
Borrowing costs paid		**(299,774)**	(286,054)
Income tax equivalents paid		**(17,736)**	(29,979)
Income tax equivalents refunded		**33,103**	-
Net cash inflow from operating activities	**30**	**461,375**	**372,332**
Cash flows from investing activities			
Payments for construction and purchase of infrastructure, plant and equipment		**(533,776)**	(442,532)
Payments for intangible assets		**(22,297)**	(20,442)
Payment for acquisition of interest in Joint Operation		**(1,260)**	-
Proceeds from sale of infrastructure, plant and equipment		**5,900**	8,006
Proceeds from sale of renewable energy certificates		**3,674**	-
Net cash (outflow) from investing activities		**(547,759)**	**(454,968)**
Cash flows from financing activities			
Proceeds from borrowings		**1,063,200**	783,100
Repayment of borrowings		**(921,274)**	(667,200)
Proceeds from equity contributions		**12,255**	17,627
Dividends paid	36	**(49,824)**	(29,882)
Repayments of finance lease liability		**(19,578)**	(17,703)
Net cash inflow from financing activities		**84,779**	**85,942**
Net (decrease)/increase in cash and cash equivalents		**(1,605)**	3,306
Cash and cash equivalents at the beginning of the financial year		**7,176**	3,870
Cash and cash equivalents at end of period	**29**	**5,571**	**7,176**

The above statement of cash flows should be read in conjunction with the accompanying notes.

1 Summary of significant accounting policies

The South Australian Water Corporation ("SA Water" or the "Corporation") was established on 1 July 1995, as a State owned statutory corporation by the South Australian Water Corporation *Act 1994*, to which the provisions of the *Public Corporations Act 1993* apply. SA Water provides retail water supply and sewerage services in accordance with its licence, provided by *the Water Industry Act 2012* (the Act) which came into operation on 1 July 2012. The Act repealed the *Waterworks Act 1932*, *Sewerage Act 1929* and *Water Conservation Act 1936*.

The Corporation has prepared these financial statements in compliance with section 23 of the *Public Finance and Audit Act 1987*.

(a) *Basis of preparation*

These general purpose financial statements have been prepared in accordance with relevant Australian Accounting Standards and comply with the Treasurer's Instructions and Accounting Policy Statements promulgated under provisions of the *Public Finance and Audit Act 1987*, as well as complying with and Interpretations issued by the Australian Accounting Standards Board and the *Corporations (South Australia) Act 2001*. South Australian Water Corporation is a for-profit entity for the purpose of preparing the financial statements. Where the Treasurer's Instructions are more prescriptive than the equivalent Australian Accounting Standards, SA Water has applied the Treasurer's Instructions in the application of accounting frameworks.

The financial statements are prepared based on a 12 month reporting period and presented in Australian currency/ dollars. The historical cost convention is used unless a different measurement basis is specifically disclosed in the note associated with the item measured.

The Corporation's statement of Comprehensive Income, Statement of Financial Position and Statement of Changes in Equity have been prepared on an accrual basis and are in accordance with the historical cost convention, except for infrastructure, plant and equipment, derivative financial instruments and renewable energy certificates which are measured on a fair value basis in accordance with the valuation policy applicable.

Changes in accounting policy

There were no changes in accounting policy during the financial period.

Comparative information

The presentation and classification of items in the financial statements are consistent with prior periods except where specific accounting standards and/or accounting policy statements have required a change.

Where presentation or classification of items in the financial statements have been amended, comparative figures have been adjusted to conform to changes in presentation or classification in these financial statements unless impracticable.

The restated comparative amounts do not replace the original financial statements for the preceding period.

Rounding

All amounts in the financial statements and accompanying notes have been rounded to the nearest thousand dollars ($'000) unless otherwise stated.

(b) *Taxes*

SA Water is liable for income tax equivalents, land tax and council rate equivalents, payroll tax, fringe benefits tax, goods and services tax (GST) and emergency services levy.

Income tax equivalents

From 1 July 2001, the Corporation has operated under the National Tax Equivalent Regime (NTER) pursuant to the Memorandum of Understanding on NTER between the Commonwealth of Australia, the Commissioner of Taxation and all of the States and Territories. The NTER is administered by the Australian Taxation Office.

1 Summary of significant accounting policies (continued)

(b) *Taxes (continued)*

Income tax equivalents (continued)

Income tax expense is calculated in accordance with *AASB 112 Income Taxes* using the balance sheet liability method. The income tax expense for the period is the tax payable on the current period's taxable income measured at the current national income tax rate adjusted for permanent differences and movements in deferred tax assets and liabilities.

Deferred tax assets and liabilities are recognised for temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. The measurement of deferred tax assets and liabilities reflects the tax consequences that would follow from the manner in which the Corporation expects, at the reporting date, to recover or settle the carrying amount of its assets and liabilities. Deferred tax assets and liabilities are recognised at the tax rates expected to apply when the assets are recovered or liabilities are settled. Current and deferred tax is recognised as an expense in the statement of comprehensive income except where it relates to items that are credited or debited to equity, in which case the deferred tax is also recognised directly in equity.

Deferred tax assets are recognised to the extent that it is probable that future tax profits will be available against which deductible temporary differences can be utilised.

Land tax and council rate equivalents

The charge for land tax and council rate equivalents has been calculated by Revenue SA, based on valuations supplied by the Valuer-General.

Goods and services tax

Income, expenses and assets are recognised net of the amount of GST except:

- when the GST incurred on a purchase of goods or services is not recoverable from the Australian Taxation Office, in which case the GST is recognised as part of the cost of acquisition of the asset or as part of the expense item applicable; and
- receivables and payables, which are stated with the amount of GST included.

The net amount of GST recoverable from, or payable to, the Australian Taxation Office is included as part of receivables or payables in the statement of financial position.

Cash flows are included in the statement of cash flows on a gross basis and the GST component of cash flows arising from investing and financing activities, which is recoverable from, or payable to, the Australian Taxation Office is classified as part of operating cash flows.

(c) *New accounting standards and interpretations not yet effective*

Australian accounting standards and interpretations that have recently been issued or amended but are not yet effective, have not been adopted by the Corporation for the period ending 30 June 2023.

SA Water has not yet quantified the impact of adopting the new and amended standards and the resulting impact on the financial statements of the Corporation.

2 Financial risk management

(a) *Market risk*

(i) Interest rate risk exposures - financial liabilities

The Corporation's financial liabilities are exposed to interest rate risk. The Corporation constantly analyses its interest rate exposure and consideration is given to potential renewals of existing positions and the use of alternative risk mitigation strategies. To minimise interest rate volatility, the Corporation enters into forward starting loans (FSLs) with the South Australian Financing Authority (SAFA) where it agrees to borrow specified amounts in the future at a pre-determined interest rate. FSLs are non-derivative financial instruments which are outside the scope of AASB 9, and are disclosed as unrecognised fixed rate loan commitments. Refer note 2c.

A key component of the Corporation's interest rate risk management framework is the requirement for a permissible duration range to be maintained, which reflects the average term to maturity of the Corporation's core debt portfolio. SA Water's Treasury Risk Management Policy allows for a permissible duration range of 2.1 - 6.5 years.

The following sensitivity analysis is based on the interest rate risk exposures in existence at the balance date, assuming all other variables are held constant. The movements in post-tax profit and equity for the year are due to higher/lower interest costs from floating rate debt and cash balances. The movement in interest expense is estimated by applying the interest rate movement to the balance of floating rate debt and cash balances outstanding at balance date. There is no exposure to interest rate risk for fixed rate debt at balance date, so it is excluded from the sensitivity analysis.

At 30 June 2023 it has been assumed that a reasonable possible shift in interest rates over the next reporting period could be 0.75% upwards and -0.75% downwards.

		Interest rate risk			
		-0.75%		+0.75%	
30 June 2023	Carrying amount $'000	Profit $'000	Equity $'000	Profit $'000	Equity $'000
Financial assets					
Cash and cash equivalents	5,571	(29)	(29)	29	29
Financial liabilities					
Short term borrowings	(42,700)	224	224	(224)	(224)
Total increase/(decrease)		**195**	**195**	**(195)**	**(195)**

		Interest rate risk			
		-1.0%		+1.5%	
30 June 2022	Carrying amount $'000	Profit $'000	Equity $'000	Profit $'000	Equity $'000
Financial assets					
Cash and cash equivalents	7,176	(50)	(50)	75	75
Financial liabilities					
Short term borrowings	(30,774)	215	215	(323)	(323)
Total increase/(decrease)		**165**	**165**	**(248)**	**(248)**

2 Financial risk management (continued)

(a) *Market risk (continued)*

(ii) Electricity price risk exposures

The Corporation has established a multi-faceted risk management framework incorporating an overarching Energy Price Risk Management Policy to manage its energy exposure in the wholesale National Electricity Market.

The energy portfolio is managed to mitigate the associated financial risk through activities including demand management, electricity self-generation and financial market hedging.

The Corporation monitors its energy consumption profile and uses permitted electricity derivatives, where the pre-determined risk limits are forecast to be exceeded, to manage its exposure to electricity spot prices on energy purchases.

All derivatives are categorised as financial assets or financial liabilities at fair value through profit and loss and classified as economic hedges in the Statement of Financial Position as the Corporation has elected not to apply hedge accounting under AASB 9 Financial Instruments: Recognition and Measurement.

Permitted electricity derivatives include exchange traded futures and electricity swaps.

The Corporation is prohibited from the selling and early termination of derivative financial instruments.

The following sensitivity analysis is based on electricity price risk exposures in existence at balance date assuming all other variables are held constant. The movements in post-tax profit and equity for the year are due to higher/lower electricity costs associated with electricity purchased at a floating market price.

It has been assumed that a reasonable possible change in the relevant forward prices for wholesale electricity prices over the next reporting period could be 10% upwards and 10% downwards. Sensitivity of 10% is based on industry standards and historical volatilities in the electricity pool prices.

		Electricity price risk			
		-10%		+10%	
30 June 2023	Carrying amount $'000	Profit $'000	Equity $'000	Profit $'000	Equity $'000
Financial liabilities					
Derivative financial instrument - Electricity swaps	(289)	(20)	(20)	20	20
Total increase/(decrease)		**(20)**	**(20)**	**20**	**20**

(b) *Credit risk*

Credit risk is the risk of financial loss to the Corporation resulting from the failure of a customer or a counterparty to a financial instrument to meet its financial obligations as and when they fall due.

Credit management policies and procedures are in place to ensure there is an appropriate level of due diligence in relation to credit history and financial integrity for financial transactions undertaken by SA Water. In addition, receivable balances are monitored on an ongoing basis and actions to recover outstanding debt are instigated in accordance with the Corporation's collection policies and practices with the result that exposure to bad debts is not significant.

Under the South Australian Water Corporation Act 1994, water rates and charges are secured via a first charge on the property.

The Corporation has no significant concentration of credit risk.

All borrowings are directly undertaken by SAFA on behalf of the Corporation. The Corporation does not hold any credit derivatives to offset its credit exposure.

Electricity derivatives are entered into on organised exchanges and with highly rated financial counterparties.

2 Financial risk management (continued)

(c) *Liquidity risk*

The Corporation has in place a Treasury Risk Management Policy to provide a prudential framework for managing liquidity risk. The policy was reviewed in 2021 and approved by the Treasurer on 28 February 2022. SA Water is required to hold in cash or committed facilities appropriate capacity to meet immediate funding requirements and provide any unforeseen cash flow needs. Liquidity levels are monitored on a daily basis.

Contractual maturities

The table below analyses the Corporation's financial liabilities as at the reporting date based on the remaining period to the contractual maturity date. The amounts disclosed are the future contractual undiscounted cash flows. The contractual cash flows for fixed rate and floating rate borrowings include principal, interest, guarantee fees and SAFA margins.

Maturing borrowings are included in the table at their maturity date and are refinanced at prevailing market interest rates. Fixed rate borrowings are interest only with no fixed repayment date for the principal component. Any principal component of fixed rate borrowings that has already been refinanced prior to the reporting date via forward starting loans (FSLs) is excluded from the relevant maturity grouping. The future cash flows relating to FSLs are separately disclosed in the table below as unrecognised fixed rate loan commitments.

At 30 June 2023	Less than 1 year $'000	Between 1 and 2 years $'000	Between 2 and 5 years $'000	Over 5 years $'000	Total contractual cash flows $'000
Derivatives					
Electricity swaps	289	-	-	-	289
Total derivatives	289	-	-	-	289
Non-derivatives					
Non-interest bearing liabilities*	136,017	-	-	-	136,017
Fixed rate borrowings	319,021	1,753,579	3,018,557	2,611,132	7,702,289
Floating rate borrowings	42,937	-	-	-	42,937
Unrecognised fixed rate loan commitments**	20,965	41,053	123,176	956,009	1,141,203
Lease liabilities	25,122	19,753	27,544	67,521	139,940
Total non-derivatives	544,062	1,814,385	3,169,277	3,634,662	9,162,386

* Non-interest bearing liabilities disclosed are financial liabilities at cost and exclude amounts relating to statutory payables such as tax equivalents and commonwealth taxes including fringe benefits tax and PAYG withholding.

**For 30 June 2023, the principal component relating to FSLs that were refinanced prior to reporting date have been excluded from the less than 1 year category, and included in the over 5 years category in which the FSLs will mature.

2 Financial risk management (continued)

(c) *Liquidity risk (continued)*

At 30 June 2022	Less than 1 year $'000	Between 1 and 2 years $'000	Between 2 and 5 years $'000	Over 5 years $'000	Total contractual cash flows $'000
Non-derivatives					
Non-interest bearing liabilities*	115,423	-	-	-	115,423
Fixed rate borrowings	622,645	1,038,076	2,821,587	3,886,882	8,369,190
Floating rate borrowings	30,834	-	-	-	30,834
Unrecognised fixed rate loan commitments**	296	4,672	14,010	109,342	128,320
Lease liabilities	24,703	23,200	34,662	77,529	160,094
Total non-derivatives	793,901	1,065,948	2,870,259	4,073,753	8,803,861

* Non-interest bearing liabilities disclosed are financial liabilities at cost and exclude amounts relating to statutory payables such as tax equivalents and commonwealth taxes including fringe benefits tax and PAYG withholding.

**For 30 June 2022, the principal component relating to a FSL that was refinanced prior to reporting date has been excluded from the less than 1 year category, and included in the over 5 years category in which the FSL will mature.

2 Financial risk management (continued)

(d) *Fair value measurements*

The fair value of financial assets and financial liabilities is the price that would be received to sell the asset or paid to transfer a liability in an orderly transaction between market participants at the balance date.

(i) Fair value of financial liabilities

The fair value for long term borrowings is estimated by discounting the anticipated future cash flows to their present value based on current market interest rates at the respective balance dates.

The carrying amounts and fair values of long term borrowings at balance date are:

	2023		2022	
	Carrying amount $'000	**Fair value $'000**	Carrying amount $'000	Fair value $'000
Long term borrowings (note 25)	**7,289,000**	**6,805,622**	7,159,000	6,736,814

The fair values of all other financial liabilities approximate the carrying values.

3 Accounting estimates and judgements

The preparation of financial statements requires the use of certain critical accounting estimates. It also requires management to exercise judgement in the process of applying the Corporation's accounting policies.

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Revisions to accounting estimates are recognised in the period in which the estimate is revised and in any future periods affected.

In particular, the areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements, are listed below:

- Contributed assets (refer note 4);
- Renewable energy certificates (refer note 10);
- Configuration or customisation in a cloud computing environment (refer note 13);
- Asset valuation methodology and useful lives of assets (refer note 14);
- Impairment of assets (refer note 14);
- Unbilled water sales (refer note 4);
- Provision for long service leave (refer note 27); and
- Provision for workers compensation (refer note 21 & 27).

4 Revenue from ordinary activities

	2023 $'000	2022 $'000
Revenue from contracts with customers		
Water and sewer rates and charges	**1,087,901**	1,061,441
Recoverable works	**81,159**	52,909
Fees and charges	**63,449**	54,385
Contributed assets	**41,762**	40,215
	1,274,271	**1,208,950**
Other revenue		
Community service obligations	**136,371**	133,511
Government grants	**10,689**	10,676
Rents	**2,420**	2,151
Miscellaneous	**62**	91
Interest	**152**	38
Interest - finance leases	**46**	82
	149,740	**146,549**
Total	**1,424,011**	**1,355,499**

Water and sewer rates and charges

SA Water sets its water and sewerage prices in accordance with a pricing methodology that is guided by the principles outlined in the National Water Initiative and the South Australian Government's statewide pricing policy. Statewide pricing means that most customers pay the same price regardless of where they live or the actual cost of providing the service. Prices are set to achieve the revenue caps set by the Essential Services Commission of South Australia (ESCOSA). The water demand and sewerage customer growth inputs are consistent with ESCOSA's regulatory determination.

The revenue for water and sewerage charges is comprised of the following:

Water usage charge

This is a volumetric charge based on the number of kilolitres of water that are used by the customer. This is charged to customers for costs associated with pumping, treatment and the filtration of water. The supply of water to the customer is deemed to be a distinct performance obligation under the contract with the customer.

Revenue is recognised over time as water is received and consumed by the customer. The amount of revenue recognised is comprised of water usage billed for the period and an accrual for unbilled usage at 30 June.

The underlying revenue recognition principle is to recognise revenue in the period it is consumed. The period ended 30 June calculation is based on state-wide water supplied, customer billing information, and an assessment and adjustment for non-revenue water (includes water produced and then lost or unaccounted for, such as evaporation, fire fighting and leaks).

South Australian Water Corporation
Notes to the financial statements
30 June 2023
(continued)

4 Revenue from ordinary activities (continued)

Water and sewer rates and charges (continued)

Water access charge

This is a fixed charge that is billed to customers whose properties have been provided with access to the water supply network (connected or unconnected). This is charged to customers for costs associated with building, maintaining and replacing water mains, pipes, reservoirs and other water infrastructure. Commercial customers receive a fixed charge per annum, plus additional property rate charge per $1000 that applies to the portion of property value greater than $10 million. Most other customers receive a fixed charge equivalent to the minimum charge. Commercial property rate charges are updated every year on the basis of the latest Valuer General property values.

Revenue is recognised over time as customers require access to their water service connection.

Sewerage access charge

A performance obligation exists to enable customers to have access to SA Water's sewerage infrastructure. Revenue is recognised over time as customers require access to the sewerage services. All customers are billed quarterly with the last bill of the year being for the period ended 30 June. Revenue is recognised as the performance obligation is satisfied.

Properties that have been provided with access to the sewerage network (connected or unconnected) pay this charge. This is a charge that is billed to the customer quarterly for the removal and treatment of sewage. Charges are associated with building, maintaining and replacing sewer pipes, sewerage pump stations, sewerage treatment plants and other sewerage infrastructure.

Sewerage charges are updated every year on the basis of the latest Valuer-General property values. The number of cents charged per $1,000 of property value is varied to ensure alignment with the regulatory revenue allowance. Therefore, SA Water does not incur revenue gains or losses from changes in property values.

Community service obligations (CSOs)

The Corporation is required under its charter to provide a number of non-commercial services to the community on behalf of the Government. The Government provides SA Water with funding to compensate for these non commercial activities. The main CSOs relate to under recovery of country water and sewerage services (due to the requirement for state wide pricing) and the provision of water and sewerage concessions to certain properties e.g. charities, churches, public schools and remote communities.

4 Revenue from ordinary activities (continued)

Contributed assets

Contributed assets principally arise from:

(i) Mains extensions contributions:

Customers or Developers who make a contribution where a service or connection has been requested that will require construction of a new main.

A performance obligation exists to construct infrastructure for customers based on the cash contributions that are received by SA Water. This performance obligation is satisfied at a point in time and revenue is recognised when the constructed assets are practically completed. When the customer initially makes the payment the amount received is recognised as a contract liability.

(ii) Gifted assets:

Developers who make contributions where water and sewer infrastructures are constructed by developers and transferred to SA Water for nil value. This contribution is recognised at the fair value of these assets which is estimated using the depreciated modern equivalent replacement cost. Contributed asset revenue is recognised when the ownership of the constructed assets is transferred to SA Water.

(iii) Miscellaneous capital contributions:

The Corporation constructs the infrastructure at the developer's request.

The performance obligation is satisfied over time and revenue recognised at key milestones during the construction of the asset.

(iv) Augmentation cash contributions:

When an individual development forms part of a larger area where further development will occur, rather than only consider what upgrade work is required for the individual development, an augmentation charge can be established to fund the overarching infrastructure required to serve the total area to be developed.

An augmentation charge may also be applied where there are a number of existing properties not currently connected to a service offered by SA Water.

The performance obligation is satisfied at a point in time when the customer has access to water and sewerage services.

The administration fees associated with the processing of an application are treated as a distinct performance obligation. Revenue is recognised at a point in time when payment is received from the customer.

Recoverable works

SA Water is requested by local councils and other government departments to undertake capital works and make alterations to the water and sewerage network in accordance with contract specifications. The performance obligation for these contracts is satisfied over time as the work is undertaken.

SA Water provides a comprehensive range of water and sewerage services including sampling, analysis, advice and research. The performance obligation for these contracts is satisfied at a point in time. Revenue is recognised as customers are billed, which is after testing has been undertaken and the results have been reported to the customer.

South Australian Water Corporation
Notes to the financial statements
30 June 2023
(continued)

4 Revenue from ordinary activities (continued)

Fees and charges

This includes ancillary services that are associated with the provision of water and sewerage services. These services include the connection of the customer to the water and sewerage network. A performance obligation exists for SA Water to connect customers to the water and sewerage network. As the service provided requires the construction of an asset, revenue is recognised over time as the constructed assets are practically completed. In accordance with the contract with the customer, payment must be received before works can be undertaken. When the customer initially makes the payment, the amount received is recognised as a contract liability. For other fees and charges the performance obligation is satisfied and revenue recognised at a point in time once the service has been provided by SA Water.

A performance obligation also exists to provide customers access to dispose of hazardous waste through SA Water infrastructure. The amount charged is based on volume of waste that is disposed. Revenue recognition occurs as services are provided.

Government grants

In accordance with *AASB 120 Accounting for Government Grants and Disclosure of Government Assistance*, grants from the Government are recognised at their fair value when there is reasonable assurance that the grant will be received and the Corporation will comply with all attached conditions to the grant.

Government grants relating to construction of infrastructure, plant and equipment are initially recognised as unearned revenue (current and non-current liability) and then transferred to income over the periods, and in the proportions, in which depreciation on those assets is charged.

Disaggregation of revenue from contracts with customers

In accordance with AASB 15, revenue has been disaggregated based on the provision of water and wastewater services to customers.

30 June 2023	**Water $'000**	**Wastewater $'000**	**Total $'000**
Revenue from contracts with customers			
Water and sewer rates and charges	**746,325**	**341,576**	**1,087,901**
Recoverable works	**71,105**	**10,054**	**81,159**
Fees and charges	**38,731**	**24,718**	**63,449**
Contributed assets	**18,444**	**23,318**	**41,762**
Total revenue from contracts with customers	**874,605**	**399,666**	**1,274,271**

30 June 2022	Water $'000	Wastewater $'000	Total $'000
Revenue from contracts with customers			
Water and sewer rates and charges	734,847	326,594	1,061,441
Recoverable works	49,620	3,289	52,909
Fees and charges	29,749	24,636	54,385
Contributed assets	20,222	19,993	40,215
Total revenue from contracts with customers	**834,438**	**374,512**	**1,208,950**

5 Other income

	2023 $'000	2022 $'000
Net gain on disposal of infrastructure, plant and equipment	**914**	4,926
Gain on derecognition of right-of-use asset*	**22**	-
Reversal of prior year infrastructure, plant and equipment revaluation decrement**	**500**	2,122
Total	**1,436**	**7,048**

The gain or loss on disposal of non-current assets is recognised at the date that control of the asset passes to the buyer. The gain or loss on disposal is calculated as the difference between the carrying amount of the asset at the time of the disposal and net proceeds from the sale. Upon disposal or derecognition, any asset revaluation surplus relating to a particular asset being sold is transferred to retained earnings.

* During the 2023 financial year a sublease was entered into which resulted in a gain being recognised on derecognition of that portion of the building that had been recognised as a right-of-use asset.

** Reversal of prior year revaluation decrement relates to land and buildings asset classes.

6 Expenses

	Notes	2023 $'000	2022 $'000
Depreciation and amortisation			
Infrastructure, plant and equipment	14	**321,643**	327,245
Intangible assets	13	**23,147**	26,011
Right-of-use assets	16	**19,927**	15,149
Total depreciation and amortisation		**364,717**	**368,405**
Borrowing costs			
Interest paid/payable on short term and long term borrowings		**292,136**	278,836
Interest expense on lease liabilities		**6,342**	7,349
Total borrowing costs		**298,478**	**286,185**
Services & supplies			
Consultancy costs		**214**	531
Cost of goods sold		**31,169**	33,214
External fees and charges		**56,925**	55,374
Licences		**32,345**	21,899
Materials and chemicals		**35,043**	22,152
Other services and supplies		**52,420**	44,110
Short-term leases		**1,157**	1,183
Total services & supplies		**209,273**	**178,463**
Employee benefits			
Salaries and wages		**111,194**	106,236
Long service leave		**3,337**	2,696
Annual leave		**11,301**	14,436
Workers compensation		**281**	442
Superannuation contribution		**16,327**	17,621
Total employee benefits		**142,440**	**141,431**
Other expenses			
Net bad and doubtful debts		**299**	(7)
Write-off in value of infrastructure, plant and capital WIP		**2,871**	6,495
Infrastructure, plant and equipment revaluation decrement		**24,698**	27,550
Net loss from electricity derivatives at fair value through P&L		**289**	-
Total other expenses		**28,157**	**34,038**
Consultancy costs			
Less than $10,000 (Number 2023: #0; 2022: #2)		**-**	12
$10,000 and above (Number 2023: #5; 2022: #5)		**214**	519
		214	**531**

6 Expenses (continued)

Superannuation

The amount charged to the statement of comprehensive income represents the contributions made by the Corporation to the superannuation plan in respect of employment services of current staff. The contributions are made to the state government superannuation scheme and several non-state government superannuation schemes. With relation to the state government superannuation scheme, the Department of Treasury and Finance centrally recognises the superannuation liability in the whole of government financial statements.

Depreciation

Leased infrastructure, plant and equipment are depreciated over the term of the lease. For Build-Own-Operate-Transfer (BOOT) arrangements, as ownership of the underlying asset is transferred to the Corporation at the end of the lease term, depreciation is calculated over the useful life of the underlying asset. Owned infrastructure, plant and equipment and other assets are depreciated using the straight line method over their estimated useful lives ranging from 2 to 170 years. The useful lives of assets are reviewed annually and have been assessed as follows:

Class of assets	Useful life (years)
- Water and sewer	7 - 170 years
- Renewable energy assets	4 - 25 years
- Right-of-use infrastructure assets	20 - 50 years
- Buildings	50 years
- Plant and equipment	3 - 15 years
- Other	2 - 50 years

The method of depreciation has regard to the underlying nature of the assets and their expected use in operations of the Corporation. Work in progress is not depreciated until assets are completed and have been commissioned for operation.

Borrowing costs

Borrowing costs include interest expense, government guarantee fees, South Australian Finance Authority (SAFA) margins and finance lease charges.

In accordance with *AASB 123 Borrowing Costs*, borrowing costs attributable to the acquisition or construction of infrastructure, plant and equipment are capitalised after considering materiality. The Corporation has not capitalised borrowing costs in the year as the proportion related to the acquisition and construction of infrastructure was assessed as not material.

The Corporation's Treasury Risk Management Policy and Energy Price Risk Management Policy provide a prudential framework for the management of the Corporation's financial risks including interest rate risk, foreign exchange price risk and commodity price (e.g. electricity) risk. Within the parameters of these policies, SA Water utilises derivative financial instruments for foreign exchange and commodity price risk to implement appropriate financial risk mitigation strategies. Interest rate risk arising from borrowings is managed in accordance with the debt management strategies outlined in note 2(a)(i).

Derivatives

Derivative financial instruments are initially recognised at fair value on the date on which a derivative contract is entered into and subsequently remeasured to fair value.

South Australian Water Corporation
Notes to the financial statements
30 June 2023
(continued)

6 Expenses (continued)

Derivatives (continued)

Any changes in the fair value of derivatives are recognised immediately as an adjustment to other income or other expenses in the Statement of Comprehensive Income.

Electricity derivatives are remeasured to fair value with reference to published market prices and quotations.

Leases

At inception of a contract , the Corporation considers whether a contract is, or contains a lease in accordance with *AASB 16 Leases*. A lease is defined as 'a contract, or part of a contract, that conveys the right to use an asset (the underlying asset) for a period of time in exchange for consideration'. To apply this definition the Corporation assesses whether the contract meets three key requirements which are whether:

- The contract contains an identified asset, which is either explicitly identified in the contract or implicitly specified by being identified at the time the asset is made available to the Corporation.
- The Corporation has the right to obtain substantially all of the economic benefits from use of the identified asset throughout the period of use, considering its rights within the defined scope of the contract.
- The Corporation has the right to direct the use of the identified asset throughout the period of use. This will arise where the Corporation has the right to direct 'how and for what purpose' the asset is used.

At lease commencement date, the Corporation recognises a right-of-use asset and a lease liability on the statement of financial position. The right-of-use asset is measured at cost, which is made up of the initial measurement of the lease liability and any initial direct costs incurred by the Corporation. When the Corporation incurs an obligation for costs to dismantle and remove a leased asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease, a provision is recognised and measured under *AASB 137 Provisions, Contingent Liabilities and Contingent Assets*. The costs are included in the related right-of-use asset.

The lease liability is measured at the present value of the lease payments unpaid at that date, discounted using the interest rate implicit in the lease if that rate is readily available or the incremental borrowing rate. The lease payment is allocated between interest expense and a reduction in the lease liability, with the interest expense calculated using the incremental borrowing rate published by the Department of Treasury and Finance.

The right-of-use asset is adjusted for remeasurement of lease liabilities and derecognition associated with the recognition of a finance lease for subleases. The right-of-use asset is also assessed for impairment when such indicators exist.

Short term and low-value leases

In accordance with AASB 16 *Leases* and *Treasurer's Instructions (Accounting Policy Statements)* the Corporation must apply the recognition exemption for short-term leases and leases for which the underlying asset is of low value. The recognition exemption for short-term leases is applied by class of underlying asset to which the right-of-use relates. In accordance with AASB 16 a short-term lease is a lease that, at the commencement date, has a lease term of 12 months or less. The recognition exemption of low-value assets has been applied where the underlying asset value is less than $15,000. In accordance with AASB 16 the lease payments associated with these types of leases are recognised as an expense over the term of the lease.

7 Income tax expense

(a) *Income tax expense*

	2023 $'000	2022 $'000
Current tax on profits for the year	**6,262**	32,181
Deferred tax	**12,508**	(20,384)
Amounts under/(over) provided in prior years	**4**	(55)
	18,774	**11,742**
Deferred income tax (revenue) included in income tax expense comprises:		
Increase in deferred tax assets (note 12)	**(4,923)**	(3,384)
Increase/(decrease) in deferred tax liabilities (note 26)	**17,432**	(17,000)
	12,509	**(20,384)**

(b) *Numerical reconciliation of income tax expense to prima facie tax payable*

	2023 $'000	2022 $'000
Profit from continuing operations before income tax expense	**70,828**	48,055
Tax at the Australian tax rate of 30.0% (2022: 30.0%)	**21,248**	14,417
Tax effect of amounts which are not deductible (taxable) in calculating taxable income:		
ADP intangible asset amortisation	**510**	510
Government grants	**(2,619)**	(2,619)
Provision for employee benefits	**(70)**	(104)
Gain on sale of land	**(299)**	(407)
	18,770	**11,797**
Amounts under/(over) provided in prior years	**4**	(55)
Income tax expense	**18,774**	**11,742**

(c) *Income tax relating to items of other comprehensive income*

	2023 $'000	2022 $'000
Loss on revaluation of infrastructure, plant and equipment (note 26 & 12)	(572,400)	(150,555)
Non-assessable income from prior year	(7,657)	-
Leased infrastructure assets (note 26)	526	2,412
	(579,531)	**(148,143)**

8 Current assets - Trade and other receivables

	2023 $'000	2022 $'000
Receivables		
Rates receivable (water and sewer)	**121,536**	131,061
Sundry debtors*	**44,859**	36,485
Impairment loss on receivables (note 8(a))	**(174)**	(119)
	166,221	**167,427**
Other receivables		
Community service obligations	**18,899**	18,281
	185,120	**185,708**

*Sundry debtors includes trade waste revenue, Australian Water Quality Centre revenue & other miscellaneous fees and charges.

Receivables for rates and charges and sundry debtors are normally settled within 21 days. These are recognised in the accounts as amounts due. Collectability of receivables is reviewed on an ongoing basis. An allowance for doubtful debts is raised based on a review of outstanding amounts at balance date.

(a) *Impaired trade receivables*

The Corporation recognises an allowance for impairment loss on receivables from the initial recognition of trade receivables using the simplified approach permitted by AASB 9. Under the simplified approach lifetime expected credit losses have been recognised using historical write-off experience.

An allowance for impairment loss on receivables has also been recognised based on an assessment of expected credit losses where a debtor has experienced a known credit event.

Receivables are written off when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include the failure of a debtor to enter into a payment plan with the Corporation, the Company has gone into liquidation or the Corporation is unable to recover the water and sewer charges from the sale of the customers property in accordance with the South Australian Water Corporation Act 1994.

Movements in the allowance for impairment loss on receivables are as follows:

	2023 $'000	**2022 $'000**
Opening balance at 1 July	**119**	137
Increase in the allowance	**76**	30
Amounts written off	**(244)**	(11)
Amounts reversed	**223**	(37)
Closing balance at 30 June	**174**	**119**

SA Water has elected not to adopt a provision matrix methodology for measuring expected credit losses under AASB 9 due to the immateriality of exposure to credit risk. The information relating to the ageing analysis for rates and sundry receivables is shown below:

8 Current assets - Trade and other receivables (continued)

(a) *Impaired trade receivables (continued)*

	2023 $'000	2022 $'000
At 30 June the ageing of rates receivable is as follows:		
Not past due	**89,451**	88,823
Past due 22 - 60 days	**14,500**	20,158
Past due 61 - 90 days	**2,688**	3,153
Past due 91 - 120 days	**870**	865
Past due > 120 days	**14,027**	18,062
	121,536	**131,061**

	2023 $'000	2022 $'000
At 30 June the ageing of sundry debtors is as follows:		
Not past due	**39,875**	32,392
Past due 31 - 60 days	**4,461**	3,274
Past due 61 - 90 days	**184**	363
Past due 91 - 120 days	**16**	187
Past due > 120 days	**323**	269
	44,859	**36,485**

Balances for other receivables relates to Community Service Obligations and do not contain impaired assets and are not past due. It is expected that these balances will be received when due.

(b) *Fair value and credit risk*

Due to the short-term nature of the current receivables, their carrying amount is assumed to approximate their fair value.

The maximum exposure to credit risk at the end of the reporting period is the carrying amount of each class of receivables mentioned above. Refer to note 2 for more information on the risk management policy of the Corporation and the credit quality of the Corporation's receivables.

9 Current assets - Inventories

	2023 $'000	2022 $'000
Raw materials and stores	**10,840**	10,155
Allowance for obsolete stock	**(215)**	(377)
Work in progress	**146**	320
	10,771	**10,098**

Inventories are valued at the lower of cost and net realisable value. The cost of goods and services, if any, manufactured by SA Water are on a full absorption cost basis.

Inventories are held for purposes of maintenance and construction and not for resale.

10 Current assets - Other current assets

	2023 $'000	2022 $'000
Interest receivable	**25**	7
Prepayments	**13,822**	15,152
Renewable Energy Certificates*	**3,148**	2,723
Australian carbon credits	**17**	116
	17,012	**17,998**

*SA Water generates and purchases Renewable Energy Certificates (RECs) from renewable sources such as solar, biogas and hydro, to meet legislated obligations in relation to Australia's Renewable Energy Target scheme. Unused RECs accumulated as at 30 June are recorded at their fair value and are expected to be utilised in satisfying the Corporation's future Renewable Energy target obligations or sold where surplus RECs have been created.

11 Finance lease receivable

The following is a maturity analysis of the current and non-current finance lease receivable which is required under *AASB 16 Leases*:

	2023 $'000	2022 $'000
Undiscounted finance lease payments receivable		
Less than 1 year	**1,536**	2,155
Between 1 and 2 years	**-**	1,476
Total undiscounted finance payments receivable	**1,536**	**3,631**
Less unearned finance income	**(9)**	(52)
Total finance lease receivables	**1,527**	3,579
Current finance lease receivable	**1,527**	2,110
Non-current finance lease receivable	**-**	1,469
Total finance lease receivable	**1,527**	**3,579**

The Corporation subleases two floors of its office building located in Adelaide CBD. One floor is subleased to the South Australian Tourism Commission and another floor to the Department for Trade, Tourism and Investment. The remaining term of each of the subleases is 0.75 years, which aligns to the head lease. The subleases are classified as a finance lease. The payments received for the subleases are allocated between a reduction in the lease receivable and interest received.

None of the finance lease receivable at the end of the reporting period is past due and taking into consideration the historical default experience and current economic conditions it is considered not to be impaired.

12 Non-current assets - Deferred tax assets

	Notes	2023 $'000	2022 $'000
The balance comprises temporary differences attributable to:			
Doubtful debts		**13**	(4)
Obsolete stock		**65**	113
Infrastructure, plant and equipment		**28,947**	22,170
Pooled assets		**60**	72
Payables		**1,759**	1,504
Audit fee payable		**150**	146
Government grants		**10,435**	10,598
Employee benefits		**12,856**	14,115
Deferred lease incentives		**173**	173
Lease liability - right-of-use assets		**(11,146)**	(8,333)
Unearned customer contributions		**59**	(390)
Unearned income		**4,917**	3,160
Provision for asset disposal		**5,537**	5,114
Provision for workers compensation		**171**	189
Derivative financial instruments		**87**	-
		54,083	**48,627**
Amounts recognised directly in equity:			
Unearned customer contributions		**2,335**	2,335
Revaluation of Infrastructure, plant and equipment	32	**(290)**	(342)
Lease liability - Initial adoption of AASB 16		**36,236**	36,236
Leased infrastructure assets		**(1,061)**	(1,061)
Lease make good provision		**494**	494
Deferred lease incentives		**(173)**	(173)
Doubtful debts - Initial adoption of AASB 9		**39**	39
		37,580	**37,528**
Recognition of leases - AASB 16			
Recognition of new leases		**3,785**	2,798
Lease liability remeasurement		**7**	-
		3,792	**2,798**
Total deferred tax assets		**95,455**	**88,953**

	2023 $'000	2022 $'000
Movements:		
Opening balance at 1 July	**88,953**	84,658
Charged to the statement of comprehensive income (note 7(a))	**4,923**	3,384
Charged to equity (note 32(a))	**52**	63
Recognition of new leases - AASB 16	**988**	848
Lease liability remeasurement	**7**	-
Amounts under provided in prior years	**532**	-
Closing balance at 30 June	**95,455**	**88,953**
Deferred tax assets expected to be recovered within 12 months	**21,773**	18,668
Deferred tax assets expected to be recovered after more than 12 months	**73,682**	70,285
	95,455	**88,953**

13 Non-current assets - Intangible assets

	Easements $'000	Prescription rights $'000	Computer software $'000	AIDP Intangible $'000	Purchased water rights $'000	Total $'000
Year ended 30 June 2023						
Opening net book amount	6,647	4,500	46,903	52,773	41,159	151,982
Additions	90	-	8,715	-	-	8,805
Amortisation charge	-	-	(21,447)	(1,700)	-	(23,147)
Closing net book amount	**6,737**	**4,500**	**34,171**	**51,073**	**41,159**	**137,640**
At 30 June 2023						
Cost	6,737	4,500	298,435	70,982	41,159	421,813
Accumulated amortisation	-	-	(264,264)	(19,909)	-	(284,173)
Net book amount	**6,737**	**4,500**	**34,171**	**51,073**	**41,159**	**137,640**

13 Non-current assets - Intangible assets (continued)

	Easements $'000	Prescription rights $'000	Computer Software $'000	ADP Intangible $'000	Purchased water rights $'000	Total $'000
Year ended 30 June 2022						
Opening net book amount	6,647	4,500	64,593	54,473	41,159	171,372
Additions	-	-	6,621	-	-	6,621
Amortisation charge	-	-	(24,311)	(1,700)	-	(26,011)
Closing net book amount	**6,647**	4,500	46,903	52,773	41,159	151,982
At 30 June 2022						
Cost	6,647	4,500	289,720	70,982	41,159	413,008
Accumulated amortisation	-	-	(242,817)	(18,209)	-	(261,026)
Net book amount	**6,647**	**4,500**	**46,903**	**52,773**	**41,159**	**151,982**

13 Non-current assets - Intangible assets (continued)

Issued water licences

The South Australian Government has issued water licences to the Corporation under the relevant Water Allocation Plan for the water resource given effect by the *Landscape South Australia Act 2019*. Some of these licences have conditions attached which restrict the use of the allocations endorsed thereon. All licences are held to underpin the water security of SA Water customers. These licenses are held by the Corporation in accordance with Department of Treasury & Finance (DTF) Accounting Policy Statement on Intangible assets.

The Corporation has concluded that a reliable estimate of the fair value of these water licences cannot be determined because there are no active markets for the rights endorsed on the licences. As there is no active market, these licences have not been recognised in the Corporation's Statement of Financial Position.

The Corporation holds River Murray licences to underpin the metropolitan Adelaide, associated country areas and our River Murray Country towns customers.

Rights other than those relating to the River Murray are:

- Various South East Region licences;
- Various Murray Mallee Area licences;
- Various Eyre Peninsula Region licences;
- McLaren Vale licence for the Aldinga Wastewater Treatment Plant;
- Northern Adelaide Plains licence for the Bolivar Wastewater Treatment Plant;
- Western Mount Lofty Ranges licences; and
- Far North region licences.

Purchased water rights

The Corporation owns a series of tradable water rights that it has purchased from the Southern Murray Darling Basin water trading markets. The rights are perpetual and title is held by the Corporation under the relevant legislation in the jurisdiction of issue (as water access entitlements onto licences issued by the South Australian Government under the Landscape South Australia Act 2019 (SA), as water shares issued by the Victorian Government under the Water Act 1989 (VIC), and as unit shares issued by the New South Wales Government under the Water Management Act 2000 (NSW)). The allocations made to these water rights are held in South Australia or are able to be transferred into South Australia from within the Southern Murray Darling Basin, subject to statutory trading rules.

During normal River Murray flow conditions the South Australian purchased River Murray licences must be held to meet the requirements of the Section 6 direction of the Public Corporation Act 1993. This direction was gazetted on 11 June 2020 and requires that;

"SA Water must provide the full environmental watering volume required in eligible years under clause S-IV(ii) of Schedule 1 of the Implementation Plan for Augmentation of the Adelaide Desalination Plant (100 gigalitres per annum), National Partnership Agreement on Water for the Future (up to 12 gigalitres), prior to trading to third parties any unused allocations obtained on account of water access entitlements on its South Australian River Murray licences."

In accordance with the requirements of *Treasurer's Instructions (Accounting Policy Statements)* covering valuation of intangible assets, the water rights are valued at cost. The water rights have an indefinite useful life and as such are not subject to amortisation.

13 Non-current assets - Intangible assets (continued)

Easements

In accordance with the *Treasurer's Instructions (Accounting Policy Statements)* and *AASB 138 Intangible Assets*, easements have been classified as an intangible asset and valued at cost. Easements gifted to the Corporation are not valued.

Application software

Application software is valued at cost as per AASB 138. The useful life is reviewed annually and has been assessed at 5 years. The software is amortised using the straight-line method.

Software-as-a-Service (SaaS) arrangements

SaaS arrangements are service contracts providing the Corporation with the right to access the cloud provider's application software over the contract period. Costs incurred to configure or customise, and the ongoing fees to obtain access to the cloud provider's application software, are generally recognised as operating expenses when the services are received.

Where some of the costs incurred are for the development of software code that enhances, modifies or creates additional capability to existing on-premise systems and meets the recognition criteria for an intangible asset, these costs are recognised as intangible software assets and amortised over the useful life of the software on a straight-line basis.

ADP intangible asset

An intangible asset exists in relation to the network connection agreement between SA Water and SA Power Networks. The agreement grants the Corporation the legal right to connect to the SA Power Networks substation constructed at Port Stanvac and thus acquire electricity for the Adelaide Desalination Plant (ADP) at the rates specified in the agreement.

In accordance with AASB 138, this right was recognised in 2012/13 as an intangible asset and is measured at the construction cost of the SA Power Networks' substation.

The useful life is based on the average useful life of the ADP assets belonging to SA Water upon which the intangible asset is dependent as per AASB 138. As with other non-current assets, the useful life of the intangible asset is assessed annually and is currently 41.75 years. The ADP intangible asset is amortised using the straight-line method.

14 Non-current assets - Infrastructure, plant and equipment

	Work in progress Water & Sewerage	Work in progress Renewable energy $'000	Land $'000	Renewable energy $'000	Plant and equipment $'000	System infrastructure assets $'000	Other property, plant and equipment $'000	Tota $'00
Year ended 30 June 2023								
Opening net book amount	658,900	87,955	377,266	219,191	29,641	11,887,523	72,053	13,332,529
Additions*	558,371	3,555	1,673	85,740	6,035	327,362	6,553	989,289
Transfers	(316,497)	(91,510)	-	-	-	-	-	(408,007)
Depreciation charge	-	-	-	(10,252)	(3,834)	(287,379)	(20,178)	(321,643)
Asset write-down	(2,871)	-	-	-	-	-	-	(2,871)
Disposals	-	-	(5,145)	-	(450)	-	-	(5,595)
Revaluation increase/(decrease)	-	-	5,111	(22,100)	-	(1,913,485)	-	(1,930,474)
Closing net book amount	**897,903**	**-**	**378,905**	**272,579**	**31,392**	**10,014,021**	**58,428**	**11,653,228**
At 30 June 2023								
Cost or fair value	897,903	-	378,905	288,130	72,307	18,095,895	379,462	20,112,602
Accumulated depreciation	-	-	-	(15,551)	(40,915)	(8,081,874)	(321,034)	(8,459,374)
Net book amount	**897,903**	**-**	**378,905**	**272,579**	**31,392**	**10,014,021**	**58,428**	**11,653,228**

*Additions include transfers from work in progress.

14 Non-current assets - Infrastructure, plant and equipment (continued)

	Land $'000	Renewable energy $'000	Plant and equipment $'000	System Infrastructure assets $'000	Other property, plant and equipment $'000	Total $'000
Year ended 30 June 2022						
Opening net book amount	405,059	139,815	25,898	12,433,441	89,235	13,742,757
Additions*	-	105,163	7,583	254,768	2,871	833,822
Transfers	-	-	-	-	-	(351,700)
Depreciation charge	-	(6,542)	(3,566)	(297,084)	(20,053)	(327,245)
Asset write-down	-	-	-	-	-	(6,495)
Disposals	(6,523)	-	(274)	-	-	(6,797)
Revaluation decrease	(21,270)	(19,245)	-	(503,602)	-	(551,813)
Closing net book amount	**377,266**	**219,191**	**29,641**	**11,887,523**	**72,053**	**13,332,529**
At 30 June 2022						
Cost or fair value	377,266	225,750	68,470	21,285,405	372,909	23,076,655
Accumulated depreciation	-	(6,559)	(38,829)	(9,397,882)	(300,856)	(9,744,126)
Net book amount	**377,266**	**219,191**	**29,641**	**11,887,523**	**72,053**	**13,332,529**

	Work in progress Water & Sewerage $'000	Work in progress Renewable energy $'000
Year ended 30 June 2022		
Opening net book amount	457,471	191,838
Additions*	452,326	11,111
Transfers	(246,061)	(105,639)
Depreciation charge	-	-
Asset write-down	(4,836)	(1,659)
Disposals	-	-
Revaluation decrease	-	(7,696)
Closing net book amount	**658,900**	**87,955**
At 30 June 2022		
Cost or fair value	658,900	87,955
Accumulated depreciation	-	-
Net book amount	**658,900**	**87,955**

*Additions include transfers from work in progress.

14 Non-current assets - Infrastructure, plant and equipment (continued)

Infrastructure, plant and equipment

(a) *Carrying amounts that would have been recognised*

If revalued assets were stated on the historical cost basis less accumulated depreciation, the amounts would be as follows:

	Land $'000	Renewable energy assets $'000	System infrastructure assets $'000	Other property, plant and equipment $'000	Total $'000
Revalued assets based on cost model					
Cost	**56,942**	**356,875**	**8,856,224**	**304,137**	**9,574,178**
Accumulated depreciation	**-**	**(18,976)**	**(3,126,786)**	**(252,299)**	**(3,398,061)**
At 30 June 2023 net carrying amount	**56,942**	**337,899**	**5,729,438**	**51,838**	**6,176,117**
Revalued assets based on cost model					
Cost	**52,816**	**253,389**	**8,563,062**	**297,600**	**9,166,867**
Accumulated depreciation	**-**	**(7,508)**	**(2,960,994)**	**(233,861)**	**(3,202,363)**
At 30 June 2022 net carrying amount	**52,816**	**245,881**	**5,602,068**	**63,739**	**5,964,504**

Acquisition

Items of infrastructure, plant and equipment are initially recorded at cost in accordance with *AASB 116 Property, Plant and Equipment*, and are depreciated as outlined above in expenses (note 6). Assets acquired under BOOT agreements are brought to account when commissioned as right-of-use assets, ownership is transferred to SA Water once the lease expires.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Corporation and the cost of the item can be measured reliably. All other repairs and maintenance are charged to the statement of comprehensive income during the financial period in which they are incurred.

Valuations

The Corporation has adopted the revaluation method for measuring and reporting infrastructure assets and renewable energy assets in the statement of financial position in accordance with *AASB 13 Fair Value Measurement* and *AASB 116 Property, Plant and Equipment*. Refer note 15 for disclosures regarding fair value level hierarchy.

The application of the income approach means the assets are valued using a discounted cash flow methodology which is based on the discounted value of the future cash flows expected to be generated from the use of SA Water's assets under the environment in which the Corporation operates as a for profit entity. Future cashflows generated from the use of these assets are considered the primary factor that a market participant would consider when pricing these assets. An independent valuation was performed in June 2023 by KPMG Financial Advisory Services (Australia) Pty Ltd and was used to complete the valuation.

Revaluations undertaken during each reporting period are effective from 30 June. Depreciation for the year is based on the carrying value of assets prior to revaluation.

System infrastructure assets

Includes all the Corporations network assets, its treatment plants for both water and sewerage, storage related assets and buildings and depots. These assets deliver water, sewerage and recycled water to and from the customer through its integrated network of assets. The network of assets are assessed as an integrated network because of the interdependent nature of their operations.

14 Non-current assets - Infrastructure, plant and equipment (continued)

Infrastructure, plant and equipment (continued)
System infrastructure assets (continued)

The income approach has been adopted by SA Water to determine the fair value of system infrastructure assets, as there is generally no active market for assets of such a specialised nature. As a for-profit entity, any expected transaction price for the Corporation's assets would be based on the income that the assets derive.

The income approach calculates the future net cashflows from the whole of the integrated network of system infrastructure assets held by the Corporation, which are discounted to their present value.

The Corporation aligns its approach in determining the future cash flows with the methodology applied by the Essential Services Commission of South Australia (ESCOSA). In addition to the cash flows for regulated assets under this approach, the Corporation's fair value calculations also include estimated cash flows from non-regulated assets excluding non-regulated renewable energy assets.

The fair value of system infrastructure assets is determined by calculating the total value of all SA Water assets that contribute to the generation of future cashflows and then deducting asset classes that have been valued using the market or cost approach.

Renewable energy assets

Includes all renewable energy assets that were delivered as part of the Corporation's zero-cost energy future program (ZCEF). The Corporation has installed solar panels and battery storage on some of its existing land and facilities, to offset its electricity needs and reduce operating costs. Any excess electricity is sold back to the wholesale energy market. As there is an accessible active market for the sale of this electricity, these renewable energy assets have been classified as a separate cash generating unit from that of the corporation's sewerage and water cash generating unit.

The income approach has been adopted by SA Water to determine the fair value of renewable energy assets. Estimated cashflows for renewable energy assets are based on independently modelled electricity market and renewable energy certificate pricing estimates applied to the generation profiles and capacities of assets installed under the program. The revenues forecast include benefits from energy generation, renewable certificate production and savings on network charges as well as participation in market ancillary services.

Land

Land is independently valued using the market approach by the State Valuer-General. The Valuer-General uses site values of generically similar allotments to arrive at a unit rate used to assign a value to individual parcels. Rates depend on whether the site is residential, industrial or commercial.

Land is valued separately from any structures or improvements residing on it. It is acquired and held principally for continued use. Land has an unlimited useful life and is not a depreciable asset.

Plant and equipment

Includes operating plant and machinery, vehicles and office equipment. These are valued at cost which is deemed to be fair value.

Costs associated with this class include construction cost or purchase price, installation costs and attributable labour.

Other property, plant and equipment

Includes telemetry, leasehold improvements and assets that do not fall into the above categories.

Until 2018/19 assets in this class were recognised at fair value under the cost approach using a directors valuation based on the Producer Price Index for 'Road and Bridge Construction in South Australia' (ABS Index 3101). Assets acquired since then are valued at cost which is deemed to be fair value.

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14 Non-current assets - Infrastructure, plant and equipment (continued)

Infrastructure, plant and equipment (continued)
Work in progress

Work in progress (WIP) is split out between the Corporation's water and sewer cash generating unit (CGU) and the renewable energy CGU. The CGUs include their respective capital projects that are currently under construction.

The Corporation's water and sewerage CGU WIP is recognised at cost which is deemed to be fair value at 30 June 2023.

Due to the long construction timeframe of the ZCEF program, fair value for the renewable energy CGU including the assets that remain in WIP, has been based on the income approach. Revaluation decrement for the renewable energy CGU has been apportioned to the ZCEF WIP assets to ensure all assets within the CGU reflect fair value.

14 Non-current assets - Infrastructure, plant and equipment (continued)

Infrastructure, plant and equipment (continued)
Fair value model

A discounted cash flow model is used to determine fair value for all assets classes valued under the income approach. Determining fair value under this approach is highly dependent on the assumptions and inputs used to estimate the future cashflows.

The significant judgement and estimate of assumptions and inputs used in the Corporation's fair value model (primarily level 3 inputs) are tabled below. Each input is detailed in relation to its particular cash generating unit (CGU), and whether it relates to water and sewerage(W&S) or the renewable energy assets (ZCEF).

Input	Impact on fair value measurement	For 30 June 2023 (W&S CGU)	For 30 June 2023 (ZCEF CGU)
Discount rate	Asset value would increase as the discount rate decreases.	Nominal post-tax Weighted Average Cost of Capital (WACC) of 4.60% (2022: 4.52%).	Nominal post-tax Weighted Average Cost of Capital (WACC) of 5.24% (2022: 4.97%).
Perpetual growth rate	Asset value would increase as the perpetual growth rate increases.	2.50%	N/A
CPI rate	Asset value would increase as CPI increases.	2023/24 is based on the 2023/24 State Budget Outcome approved CPI increase. 2024/25 and 2025/26 is based upon RBA inflation forecast and 2026/27 onwards utilises a glide path to a long term rate of 2.50%	2023/24 is based on the 2023/24 State Budget Outcome approved CPI increase. 2024/25 and 2025/26 is based upon RBA inflation forecast and 2026/27 onwards utilises a glide path to a long term rate of 2.50%
Period of discounting	Asset value would increase as period of discounting increases.	5 years (with an estimate of terminal value).	28 years (with a defined future point of 2051, in line with the cash-flow period for ZCEF)
Cash inflows:			
Service and usage revenue	Asset value would increase if future revenue increases.	Estimates of future revenues were based the SA Water Regulatory Determination 2020 and expected revenue over succeeding regulatory periods.	N/A
Other non-regulated revenue	Asset value would increase if non-regulated revenue increases.	Non-regulated revenue is based on forward estimates. Investment and interest income is excluded.	Revenue is based on independently modelled electricity market and renewable energy certificate pricing estimates applied to generation profiles and capacities of respective assets.
Cash outflows:			
Operating expenditure	Asset value would increase as operating expenditure decreases.	Operating expenditure is based on the 2023/24 State Budget Outcome and estimates of non-regulated expenditure.	Operating expenditure is based on the operating estimates and maintenance profiles of the ZCEF assets.
Capital expenditure	Asset value would increase as capital expenditure decreases.	Capital expenditure based on the 2023/24 State Budget Outcome and estimates of non-regulated Capital expenditure.	Capital expenditure is based on final state budget forward estimates.

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14 Non-current assets - Infrastructure, plant and equipment (continued)

Infrastructure, plant and equipment (continued)
Fair value model (continued)

Sensitivity analysis (W&S)

(i) Discount rate	Rate applied %	If higher +0.1%	If lower -0.1%
Nominal post-tax rate	4.60%	4.70%	4.50%
Calculated fair value of infrastructure, plant and equipment ('$000)	$11,670,200	$11,122,050	$12,272,500
Resulting change ('$000)		($548,150)	$602,300

(ii) Perpetual nominal growth rate	Rate applied %	If higher +0.1%	If lower -0.1%
Nominal Post tax rate	2.50%	2.60%	2.40%
Calculated fair value of infrastructure. plant and equipment ('$000)	$11,670,200	$12,239,250	$11,152,800
Resulting change ('$000)		$569,050	($517,400)

(iii) Sustainable Capital Expenditure	Value applied $	If higher $10.0m	If lower $10.0m
Nominal post-tax value	$407.4m	$417.4m	$397.4m
Calculated fair value of infrastructure, plant and equipment ('$000)	$11,670,200	$11,271,600	$12,068,700
Resulting change ('$000)		($398,600)	$398,500

Sensitivity analysis (ZCEF)

(i) Discount rate	Rate applied %	If higher +0.1%	If lower -0.1%
Nominal post-tax rate	5.24%	5.34%	5.14%
Calculated fair value of renewable energy assets ('$000)	$272,600	$270,100	$275,300
Resulting change ('$000)		($2,500)	$2,700

(ii) Forecast revenue	Valued applied $	If higher 10% p.a	If lower 10% p.a
Nominal post-tax rate	Varying p.a.		
Calculated fair value of renewable energy assets ('$000)	$272,600	$299,415	$245,840
Resulting change ('$000)		$26,815	($26,760)

The sensitivity analysis is being carried out on those variables which have the greatest influence over the discounted cashflow model.

14 Non-current assets - Infrastructure, plant and equipment (continued)

Infrastructure, plant and equipment (continued)
Impairment of assets

AASB 136 Impairment of Assets requires for-profit entities, at each reporting date, to undertake an assessment for impairment indicators for its non-current assets including infrastructure, plant and equipment. Where there is an indication of impairment, an impairment test is undertaken for a CGU and the recoverable amount is estimated. SA Water has two CGUs being the water & wastewater CGU and the renewable energy CGU. Recoverable amount is determined as the higher of fair value less cost of disposal and value-in-use.

An amount by which the asset's carrying amount exceeds the recoverable amount is recorded as an impairment loss. For revalued assets, any impairment loss is offset against the relevant asset revaluation surplus until fully extinguished with any remaining amount expensed in the statement of comprehensive income.

SA Water, in accordance with AASB 136, has sound impairment monitoring processes where management assess whether there are any "impairment Indicators" being present from external and internal sources prior to each reporting date. External and internal sources include but are not limited to market conditions, technology changes or asset obsolescence.

For the year ending 30 June 2023, SA Water has undertaken a discounted cashflow asset valuation to determine fair value using current market data to inform assumptions. There are no further indications, for either the water and wastewater CGU or the renewable energy CGU, that the carrying value is not reflective of fair value or would constitute an impairment indicator against the fair value measurement.

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15 Fair value measurements

The Corporation measures and recognises the following financial liabilities and non-financial assets at fair value on a recurring basis:

- Other financial liabilities (note 22);
- Land (note 14);
- System infrastructure assets (note 14);
- Plant and equipment (note 14);
- Other property, plant and equipment (note 14); and
- Renewable energy (note 14).

(a) *Fair value measurements*

AASB 13 Fair Value Measurement requires disclosure of fair value measurements by level of the following fair value measurement hierarchy (consistent with the hierarchy applied to financial assets and financial liabilities):

(a) quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1);

(b) inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly or indirectly (level 2); and

(c) inputs for the asset or liability that are not based on observable market data (unobservable inputs) (level 3).

The following table presents the Corporation's financial liabilities and non-financial assets measured and recognised at fair value at 30 June 2023.

(i) Recognised fair value measurements

30 June 2023	Notes	2023 $'000	Level 1 $'000	Level 2 $'000	Level 3 $'000
Recurring fair value measurements					
Financial liabilities					
Electricity Swap		**289**	**289**	**-**	**-**
Total financial liabilities		**289**	**289**	**-**	**-**
Non-financial assets	14				
Land		**378,905**	**-**	**378,905**	**-**
System infrastructure assets		**10,014,021**	**-**	**-**	**10,014,021**
Renewable energy assets		**272,579**	**-**	**-**	**272,579**
Plant and equipment and other		**89,820**	**-**	**-**	**89,820**
Total non-financial assets		**10,755,325**	**-**	**378,905**	**10,376,420**

15 Fair value measurements (continued)

(a) *Fair value measurements (continued)*
(i) *Recognised fair value measurements (continued)*

30 June 2022	Notes	2022 $'000	Level 1 $'000	Level 2 $'000	Level 3 $'000
Recurring fair value measurement					
Non-financial assets	14				
Land		**377,266**	**-**	**377,266**	**-**
System infrastructure assets		**11,887,523**	**-**	**-**	**11,887,523**
Renewable energy assets		**219,191**	**-**	**-**	**219,191**
Plant and equipment and other		**101,694**	**-**	**-**	**101,694**
Total non-financial assets		**12,585,674**	**-**	**377,266**	**12,208,408**
Total recurring non-financial assets		**12,585,674**	**-**	**377,266**	**12,208,408**

There were no transfers between levels for recurring fair value measurements during the period.

The Corporation's policy is to recognise transfers into and transfers out of fair value hierarchy levels as at the end of the reporting period.

(ii) Disclosed fair values

The Corporation has a number of assets and liabilities which are not measured at fair value, but for which fair values are disclosed in the notes.

The carrying amounts of cash and cash equivalents, trade receivables, payables and other current liabilities are assumed to approximate their fair values due to their short-term nature.

The fair value of financial instruments that make up the long term borrowings disclosed in note 2(d)(i) have been deemed to be level 2 in the fair value hierarchy. The valuation is based on SAFA bond rates (market observable) which reflects the cost of funds. The carrying amount of short term borrowings approximates its fair value, as the impact of discounting is not significant.

(b) *Valuation techniques used to derive level 3 fair values*

(i) Recurring fair value measurements

The valuation techniques used to derive level 3 fair values are described in note 14.

There were no changes in the valuation techniques during the reporting period.

The amounts shown as comparatives for fair value in note 15 are disclosed according to the fair value definitions that apply or applied in each relevant reporting period. When categories of assets are revalued based on the income approach, the gross carrying amount and any existing accumulated depreciation or amortisation are proportionately adjusted to equal the carrying amount of the revalued asset.

South Australian Water Corporation
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(continued)

15 Fair value measurements (continued)

(b) *Valuation techniques used to derive level 3 fair values (continued)*
(ii) Non-recurring fair value measurements

SA Water has no non-recurring fair value measurements.

(iii) Valuation inputs and relationships to fair value

Refer to note 14 for information relating to unobservable inputs and valuation processes.

(c) *Fair value measurements using significant unobservable inputs (level 3)*

The recurring fair value measurements for those asset classes using significant unobservable inputs (level 3) is disclosed under note 14.

16 Non-current assets - Right-of-use asset

	Land $'000	Buildings $'000	Plant and equipment $'000	Infrastructure assets $'000	Total $'000
Year ended 30 June 2023					
Opening balance at 1 July 2022	527	63,163	4,889	98,279	166,858
Additions	-	109	3,184	-	3,293
Lease liability remeasurement	25	(1)	-	1,754	1,778
Derecognition	-	(57)	-	-	(57)
Depreciation	(21)	(5,814)	(3,090)	(11,002)	(19,927)
Closing net book amount at 30 June 2023	531	57,400	4,983	89,031	151,945
At 30 June 2023					
Cost	612	82,002	18,369	117,752	218,735
Accumulated depreciation	(81)	(24,602)	(13,386)	(28,721)	(66,790)
Net book value	531	57,400	4,983	89,031	151,945

	Land $'000	Buildings $'000	Plant and equipment $'000	Infrastructure assets $'000	Total $'000
Year ended 30 June 2022					
Opening balance at 1 July 2021	547	68,904	5,436	96,289	171,176
Additions	-	-	2,825	-	2,825
Lease liability remeasurement	-	-	-	8,041	8,041
Depreciation	(20)	(5,741)	(3,337)	(6,051)	(15,149)
Disposals	-	-	(35)	-	(35)
Closing net book amount at 30 June 2022	527	63,163	4,889	98,279	166,858
At 30 June 2022					
Cost	587	81,951	15,185	115,998	213,721
Accumulated depreciation	(60)	(18,788)	(10,296)	(17,719)	(46,863)
Net book value	527	63,163	4,889	98,279	166,858

16 Non-current assets - Right-of-use asset (continued)

The Corporation has entered into a number of leases:

A Memorandum of Lease has been entered into with Adelaide Airport Limited for the use of land for the purpose of storm water capture, management and treatment. The term of the lease is 29 years with monthly rental payments which are increased annually by the higher of 4% and CPI. As at 30 June 2023 there is 25 years left remaining on the lease.

A Memorandum of Administrative Arrangement has been entered into with the Department for Infrastructure and Transport for the lease of its office accommodation in Adelaide CBD. The initial recognition of the right-of-use asset was calculated in accordance with the transitional requirements of AASB 16. The carrying amount of the right-of use asset for the office in the CBD has been calculated at the commencement date of the lease, but discounted using the incremental borrowing rate at 1 July 2019. The lease is paid monthly and increased annually by a fixed amount of 3%.

SA Water has motor vehicle leases with the South Australian Government Financing Authority (SAFA). Motor vehicle leases are non-cancellable, with rental payments paid monthly in arrears. Motor vehicle lease terms can range from 1 year up to 5 years and up to 10 years by exception on approval. The lease term can also range in duration from 60,000km up to 100,000km and 200,000km by exception. No contingent rental provisions exist within the lease agreements and no options exist to renew the leases at the end of their term.

At the commencement date of the lease, where the Corporation is not reasonably certain of exercising any lease extension options, the additional term/s have not been included in the measurement of the right-of-use asset and remaining lease liability.

The Corporation has previously entered into BOOT agreements for a number of infrastructure facilities. These BOOT agreements include the requirement for an ongoing availability tariff, as escalated over time by certain indices, for the term of the agreement. In accordance with AASB 16 lease payments included in the measurement of the lease liability include variable lease payments that depend on an index or a rate.

At 30 June 2023 the remaining lease liability has been remeasured using the indexes applicable at this date.

17 Other non-current assets

	2023 $'000	2022 $'000
Prepayments	**2,391**	1,226

18 Current liabilities - Payables

	2023 $'000	2022 $'000
Interest payable	**60,127**	61,423
Trade creditors	**135,133**	110,100
Other creditors	**13,695**	14,189
	208,955	**185,712**

Liabilities, whether or not yet billed to the Corporation, are recognised as amounts to be paid in the future for goods and services received, including any related GST. Trade accounts payable are normally settled within 30 days.

19 Current liabilities - Financial liabilities/borrowings

	2023 $'000	2022 $'000
Lease liabilities	**20,282**	18,780
Short term borrowings	**42,700**	30,774
	62,982	**49,554**

The Corporation has a $150m short term borrowing facility with SAFA, bearing interest at SAFA's daily cash rate.

(a) *Risk exposures*

Information regarding interest rate risk and liquidity risk exposure is set out in note 2.

(b) *Fair value disclosures*

Information about the security relating to each of the secured liabilities and the fair value of each of the borrowings is provided in note 2.

Due to the short term nature of these interest bearing liabilities, their carrying value is assumed to approximate their fair value. Refer to note 2.

20 Current liabilities - Tax liabilities/(receivables)

	2023 $'000	2022 $'000
Provision for current income tax movements during the year were as follows:		
Opening balance at 1 July	**4,341**	2,454
Income tax paid	**(17,736)**	(29,979)
Income tax refunded	**33,103**	-
Current year's income tax provision	**6,262**	32,181
Amounts over provided in prior years	**(31,921)**	(315)
	(5,951)	**4,341**

21 Current liabilities - Provisions

	2023 $'000	2022 $'000
Employee benefits	**19,039**	19,957
Asset disposal	**16,015**	13,897
Lease make good	**200**	-
Damages and claims	**360**	606
Workers compensation	**1,015**	1,130
	36,629	**35,590**

(a) *Movements in provisions*

Movements in each class of provision during the financial year, other than employee benefits, are set out below:

2023 Current	Asset disposal $'000	Lease make good $'000	Damages and claims $'000	Workers compensation $'000	Total $'000
Opening balance at 1 July	13,897	-	606	1,130	15,633
Provisions recognised	2,260	-	189	1,311	3,760
Payments made during year	(4,763)	-	(1,175)	(530)	(6,468)
Re-measurement adjustments	3,914	-	740	(896)	3,758
Transfer from non-current provisions	707	200	-	-	907
Closing balance at 30 June	**16,015**	**200**	**360**	**1,015**	**17,590**

Provisions are recognised when the Corporation has a present obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

Employee benefits

This includes liabilities for annual and long service leave. The annual leave and long service leave liability is expected to be payable within twelve months and is measured at the undiscounted amount for annual leave and the discounted amount for long service leave expected to be paid when the liability is settled.

Asset disposal

A provision for the disposal and abandonment of assets is recognised when there is a present obligation to undertake further work to decommission surplus assets and ensure they are safe to the public and do not cause harm to the environment.

The estimated costs of site rehabilitation and decommissioning non-current assets are based on past experience and current market prices.

Damages and claims

A provision is recognised for claims against the Corporation relating to property damage, personal injury and civil liability.

21 Current liabilities - Provisions (continued)

Damages and claims (continued)

The amounts measured and recorded for claims are based on estimates of specified claims and the probability that the Corporation will be required to settle the obligation. Previous claims history and the Crown Solicitor's Office advice is used in the determination of the liability.

SA Water is insured under the South Australian Government's insurance and risk management arrangements with SAFA. Under this agreement between SAFA and SA Water, SAFA will meet the cost of any civil liability claim made against SA Water subject to SA Water's selected deductible.

In addition, insurance arrangements are in place for construction works, travel insurance, and director and officer liabilities.

Workers compensation

The Corporation is registered with ReturnToWorkSA as a government self-insurer and is responsible for the management and liability of all workers' compensation claims. The provision is for the estimated cost of ongoing payments to employees as required under current legislation. The Corporation's provision is an actuarial estimate of the outstanding liability as at 30 June 2023 provided by KPMG Financial Services Consulting Pty Ltd.

22 Current liabilities - Other financial liabilities

	2023 $'000	2022 $'000
Derivative financial instruments - at fair value		
Electricity swaps	**289**	-

Details of derivative financial instruments are provided in note 2(a)(i) and note 6.

23 Current liabilities - Other current liabilities

	2023 $'000	2022 $'000
Government grants	**11,248**	10,421
Unearned income	**13,501**	7,492
Deposits from customers	**3,244**	2,906
Contract liabilities	**7,982**	6,483
	35,975	**27,302**

24 Non-current liabilities - Payables

	2023 $'000	2022 $'000
Employment on-costs	**1,863**	2,478

Employment on-costs include payroll tax and superannuation contributions and are settled when the respective employee benefits that they relate to are discharged. These on-costs relate to the balance of long service leave owing to employees. Estimates as to the proportion of long service leave estimated to be taken as leave, rather than paid on termination, affects whether superannuation on-costs are recognised as a consequence of long service leave liabilities.

25 Non-current liabilities - Financial liabilities/borrowings

	2023 $'000	2022 $'000
Lease liabilities	**97,612**	113,622
Long term borrowings	**7,289,000**	7,159,000
	7,386,612	**7,272,622**

The Corporation has a long term and short term borrowing facility with the South Australian Government Financing Authority (SAFA). The loans are denominated in Australian dollars and carry both fixed and floating interest rates. The floating interest rates only apply to short term borrowings (refer note 19). The Government provides a guarantee in respect of these borrowings pursuant to the provisions of the *Public Finance and Audit Act 1987*.

SA Water's debt portfolio is managed in line with the requirements outlined in the Treasury Risk Management Policy. The policy is approved by the State Treasurer and the SA Water Board. SA Water's Treasury Risk Management Committee (TRMC) is responsible for the management of the debt portfolio within the requirements of this policy. Under a Client Service Agreement between SAFA and SA Water, SAFA is a member of this Committee and executes debt transactions on behalf of SA Water.

25 Non-current liabilities - Financial liabilities/borrowings (continued)

The movements in the lease liability (current and non-current) relating to the right-of-use asset are set out below:

30 June 2023	Land $'000	Buildings $'000	Plant and equipment $'000	Infrastructure assets $'000	Total $'000
Opening balance at 1 July 2022	**588**	**96,832**	**4,910**	**30,072**	132,402
Interest expense	**22**	**3,206**	**97**	**3,017**	6,342
Additions	**-**	**104**	**3,187**	**-**	3,291
Remeasurement	**25**	**(1)**	**-**	**1,754**	1,778
Lease payments	**(23)**	**(9,510)**	**(3,168)**	**(13,218)**	(25,919)
Closing net book amount at 30 June 2023	**612**	**90,631**	**5,026**	**21,625**	**117,894**

30 June 2022	$'000	$'000	$'000	$'000	Total $'000
Opening balance at 1 July 2021	**589**	**102,596**	**5,483**	**30,603**	139,271
Interest expense	**20**	**3,390**	**55**	**3,882**	7,347
Additions	**-**	**-**	**2,825**	**-**	2,825
Remeasurement	**-**	**-**	**-**	**8,041**	8,041
Write off on disposal	**-**	**-**	**(32)**	**-**	(32)
Lease payments	**(21)**	**(9,154)**	**(3,421)**	**(12,454)**	(25,050)
Closing net book amount at 30 June 2022	**588**	**96,832**	**4,910**	**30,072**	**132,402**

The lease payments included in the measurement of the lease liability comprise fixed payments (including in-substance fixed payments) and variable lease payments that depend on an index or rate less any lease incentives.

26 Non-current liabilities - Deferred tax liabilities

	2023 $'000	2022 $'000
The balance comprises temporary differences attributable to:		
Prepayments	**1,755**	1,725
Lease incentive asset	**84**	84
Infrastructure, plant and equipment	**(63,404)**	(86,464)
Right-of-use asset	**(17,130)**	(12,111)
Finance lease receivable	**(863)**	(248)
	(79,558)	**(97,014)**
Amounts recognised directly in equity		
Revaluation of infrastructure, plant and equipment	**784,114**	1,356,461
Right-of-use asset - initial adoption of AASB 16	**27,449**	27,449
Finance lease receivable - initial adoption of AASB 16	**1,321**	1,321
Leased infrastructure assets	**7,192**	6,666
Lease incentive asset	**(84)**	(84)
	819,992	**1,391,813**
Recognition of new leases	**3,786**	2,798
Lease liability remeasurement	**(10)**	-
Amounts under/(over) provided in prior years	**23,925**	(875)
	27,701	**1,923**
Total deferred tax liabilities	**768,135**	**1,296,722**

	2023 $'000	2022 $'000
Movements:		
Opening balance	**1,296,722**	1,460,694
Credited to the Statement of Comprehensive Income (note 7)	**17,432**	(17,000)
Charged to equity (note 32(a) & 32(b))	**(571,822)**	(148,080)
Recognition of new leases - AASB 16	**1,013**	848
Lease remeasurement	**(10)**	-
Amounts under provided in prior years	**24,800**	260
Closing balance at 30 June	**768,135**	**1,296,722**
Deferred tax liabilities to be settled within 12 months	**2,213**	2,358
Deferred tax liabilities expected to be settled after more than 12 months	**765,922**	1,294,364
	768,135	**1,296,722**

27 Non-current liabilities - Provisions

	2023 $'000	2022 $'000
Employee benefits	**23,813**	27,091
Workers compensation	**2,501**	2,763
Asset disposal	**2,443**	3,150
Lease make good	**1,447**	1,647
	30,204	**34,651**

(a) *Movements in provisions*

Movements in each class of provision during the financial year, other than employee benefits, are set out below:

2023 Non-current	**Workers compensation $'000**	**Asset disposal $'000**	**Lease make good $'000**	**Total $'000**
Opening balance at 1 July	2,763	3,150	1,647	7,560
Transfer to current provisions	-	(707)	(200)	(907)
Re-measurement adjustments	(262)	-	-	(262)
Closing balance at 30 June	**2,501**	**2,443**	**1,447**	**6,391**

Employee benefits

AASB 119 Employee Benefits contains the calculation methodology for long service leave.

The long service leave liability is measured as the present value of expected future payments to be made in respect of services provided by employees up to the reporting date. Consideration is given to anticipated future wage and salary levels, experience of employee departures and periods of service. Expected future payments are discounted using interest rates on negotiable government guaranteed securities with terms of maturity that match, as closely as possible.

AASB 119 Employee Benefits requires the use of the yield on long-term Commonwealth Government Bonds as the discount rate in the measurement of the long service leave liability. The yield on long term Commonwealth Government Bonds has increased from 3.63% in 2022 to 4.14% in 2023. The increase in the bond yield, which is used as the rate to discount future long service leave cash flows, results in a decrease in the reported long service leave liability.

The net financial effect of the changes to actuarial assumptions in the current financial year is a decrease in the long service leave liability of $2.84m and employee benefit expense of $2.84m. The impact on future periods is impracticable to estimate as the long service leave liability is calculated using a number of demographical and financial assumptions - including the long-term discount rate. The actuarial assessment undertaken has left the salary inflation rate unchanged from the 2022 rate of 3.5%. As a result, there is no net financial effect resulting from changes in the salary inflation rate.

The Corporation's long service leave liability for 30 June 2023 was valued by KPMG Financial Services Consulting Pty Ltd.

Lease make good

The opening balance of the lease make good provision stems from recognising leases in accordance now with AASB 16. It is the expected cost of returning the properties to their original condition.

28 Non-current liabilities - Other non-current liabilities

	2023 $'000	2022 $'000
Government grants	**314,484**	323,781
Unearned income*	**1,894**	1,894
	316,378	**325,675**

*Adelaide Desalination Plant CSO funding received in advance under the Water for Fodder program.

29 Reconciliation of cash

	2023 $'000	2022 $'000
Cash and cash equivalents as at the end of the financial year as shown in the statement of cash flows is reconciled to the items in the statement of financial position as follows:		
Cash and cash equivalents	**5,571**	7,176

Cash on hand and at bank is stated at nominal value. For the purposes of the statement of cash flows, cash includes cash on hand and at bank.

(a) *Fair Value*

Due to the short term nature of cash and cash equivalents, their carrying value is assumed to approximate their fair value.

30 Reconciliation of profit after income tax to net cash inflow from operating activities

	2023 $'000	2022 $'000
Net profit for the year	**52,054**	36,313
Add/(less) non-cash items:		
Depreciation and amortisation	**364,717**	368,405
Amortisation of government grant revenue from liabilities	**(10,689)**	(10,676)
Gifted assets	**(28,156)**	(25,522)
Net (gain) on disposal of infrastructure, plant and equipment	**(914)**	(5,008)
Infrastructure, plant and equipment revaluation decrement reversal	**(500)**	(2,122)
Infrastructure, plant and equipment revaluation decrement	**24,698**	27,550
Write-off in value of infrastructure, plant and equipment and capital WIP	**2,871**	6,495
Gain on derecognition of right-of-use-asset	**(22)**	-
Change in assets and liabilities:		
Decrease in receivables	**2,640**	8,182
(Increase) in inventories	**(673)**	(121)
Decrease/(Increase) in prepayments	**165**	(2,833)
(Increase) in other operating assets	**(4,018)**	(1,173)
Decrease/(increase) in deferred tax assets	**(4,924)**	(3,384)
(Increase) in income tax receivable	**(5,951)**	-
Increase in income tax equivalents refunded	**33,103**	-
Increase/(decrease) in trade creditors	**15,616**	(10,722)
(Decrease)/increase in provision for employee benefits	**(4,196)**	480
(Decrease) in provision for workers compensation	**(377)**	(2,097)
Increase in other operating liabilities	**10,431**	3,718
Increase in derivative financial liability	**289**	-
Increase in government grants	**2,135**	1,767
Increase)/(decrease) in other provisions	**1,163**	(2,068)
Increase/(decrease) in deferred tax liabilities	**17,432**	(17,000)
(Decrease)/increase in income tax payable	**(5,519)**	2,148
Net cash inflow from operating activities	**461,375**	**372,332**

31 Capital risk management

Capital is managed within the parameters outlined in the financial ownership framework for SA Water, which encompasses the Corporation's relationship with its owner in respect of capital structure, community service obligations and dividends.

When managing capital, management's objective is to ensure the Corporation continues as a going concern as well as maintaining optimal returns to the State Government (as sole shareholder).

The gearing ratios based on continuing operations at 30 June 2023 and 30 June 2022 were as follows:

	2023 $'000	2022 $'000
Interest bearing borrowings (note 19 & 25)	**7,449,594**	7,322,176
Less: cash and cash equivalents (note 29)	**(5,571)**	(7,176)
Net debt	**7,444,023**	7,315,000
Total assets	**12,266,611**	**13,966,107**
Gearing ratio	60.7%	52.4%

SA Water is required by the SA Government to adjust its borrowings each year prior to 30 June, to maintain a debt/asset gearing ratio of at least 45%. This commenced from the year ended 30 June 2017, and requires SA Water to make an additional return to the State Government, transacted as a specified dividend, as directed by the Treasurer, of an amount equivalent to the required incremental increase in borrowings.

There was no specified dividend to be paid for the year ended 30 June 2023 or the year ended 30 June 2022, in recognition that SA Water 's debt/asset gearing ratio was maintained above the predetermined minimum gearing target of 45%.

32 Asset revaluation surplus and retained earnings

(a) *Asset revaluation surplus*

	2023 $'000	2022 $'000
Revaluation surplus - infrastructure, plant and equipment	**2,868,715**	4,207,847
	2,868,715	**4,207,847**

Movements:

Infrastructure, plant and equipment revaluation surplus		
Opening balance at 1 July	**4,207,847**	4,597,921
Revaluation of infrastructure, plant and equipment*	**(1,906,277)**	(526,385)
Movements in deferred tax liability (note 26)	**572,348**	150,492
Transfer to retained profits on disposal	**(12,912)**	(14,244)
Movements in deferred tax assets (note 12)	**52**	63
Movements in income tax liability (receivable)	**7,657**	-
Closing balance at 30 June	**2,868,715**	**4,207,847**

*The 2022/23 revaluation decrease (16%) is attributable to the revaluation of system infrastructure assets that includes SA Water's network assets, treatment plants for both water and wastewater, storage related assets and buildings and depots.

*The 2021/22 revaluation decrease (3%) is attributable to the revaluation of system infrastructure assets that includes SA Water's network assets, treatment plants for both water and wastewater, storage related assets and buildings and depots.

(b) *Retained earnings*

Movements in retained earnings were as follows:

Opening balance at 1 July	**285,466**	267,203
Profit for the year	**52,054**	36,313
Dividends (note 36)	**(49,824)**	(29,882)
Transfers from asset revaluation surplus	**12,912**	14,244
Movement in deferred tax liability (note 26)	**(526)**	(2,412)
Closing balance at 30 June	**300,082**	**285,466**

(c) *Nature and purpose of other asset revaluation surplus*

(i) Infrastructure plant and equipment revaluation surplus

The infrastructure, plant and equipment revaluation surplus is the cumulative balance of asset revaluation increments and decrements.

33 Commitments and contingencies

(a) *Capital commitments*

Capital expenditure contracted for at the balance date but not recognised as liabilities in the financial statements, are committed as follows:

	2023 $'000	2022 $'000
Within one year	**258,436**	165,406
Later than one year but not later than five years	**9,717**	3,317
	268,153	**168,723**

The capital commitments relate to the Corporation's capital program in delivering water and sewer infrastructure, property, plant & equipment assets.

(b) *Other expenditure commitments*

	2023 $'000	2022 $'000
Future other expenditure commitments not provided for in the financial statements are committed as follows:		
Within one year	**200,935**	207,866
Later than one year but not later than five years	**337,476**	476,216
Later than five years	**565,295**	596,020
	1,103,706	**1,280,102**

Other expenditure commitments include commitments pursuant to contracts to:

- Operate, manage and maintain the Adelaide metropolitan water and sewer networks and treatment plants.
- Operate, maintain and provide energy for the Adelaide Desalination Project.
- Other expenditure commitments reported are based on minimum contracted amounts payable at balance date and include an estimate for escalation of charges.

(c) *Other contingencies*

At balance date there were no other known contingent assets or liabilities.

34 Joint Operation

Jointly controlled operations

The Corporation held an interest of 50% in the output of the Jointly controlled operation named SA Water/Lofty Ranges Power - Jointly controlled operation whose principal activity is the generation of electricity from the use of water energy stored in and by the Corporation's infrastructure at Hope Valley.

The Corporation's jointly controlled operation was brought to account by including its proportionate share of the operation's assets, liabilities, expenses and revenues on a line by line basis.

At the conclusion of the 20 year joint operation agreement between SA Water and Lofty Ranges Power Pty Ltd it was agreed that SA Water would take full ownership of the Hope Valley terminal storage mini hydro asset by acquiring the 50% interest held by Lofty Ranges Power Pty Ltd. On 30 September 2022 the joint operation agreement was terminated by SA Water paying a commercially negotiated amount to Lofty Ranges Power Pty Ltd. The fair values of the assets and liabilities of the 50% interest in SA Water/Lofty Ranges Power operation as at the date of acquisition was $1.30m. The mini hydro asset is now 100% owned by SA Water and included in Infrastructure, plant and equipment.

Included in the assets and liabilities of the Corporation are the following items which represent the Corporation's interest in the assets and liabilities employed in the Jointly controlled operation, recorded under the following classifications:

	2023 $'000	2022 $'000
Current assets		
Cash and cash equivalents	**-**	23
Non-current assets		
Infrastructure, plant and equipment	**-**	1,320
Total assets	**-**	**1,343**
Current liabilities		
Payables	**-**	3
Total liabilities	**-**	**3**
Net assets	**-**	**1,340**

35 Remuneration of auditors

	2023 $'000	2022 $'000
Audit fees paid/payable:		
SA Water annual Public Finance and Audit Act audit	**539**	473
SA Water Regulatory financial statements audit*	**12**	12
Total	**551**	**485**

* Pursuant to *Water Industry Guideline Number 2* and confirmation from ESCOSA, a full Audit Opinion Certificate on the Corporation's special purpose (regulatory) financial statements is not required. An 'Agreed Upon Procedures Report' has been determined to be the appropriate audit assurance to SA Water's Board and Management.

36 Dividends

	2023 $'000	2022 $'000
Dividend paid	**49,824**	29,882
	49,824	**29,882**

Dividends paid and payable are recognised in the reporting period in which the dividends are declared or have been specifically determined and approved by the Treasurer in consultation with the Corporation's Minister.

Dividend paid to the South Australian (SA) Government has been in accordance with the Financial Ownership Framework where the dividend paid is based on the recommendation of the Board and approved by the Treasurer pursuant to section 30 of the Public Corporations Act 1993.

SA Water is required by the SA Government to adjust its borrowings each year prior to 30 June, to maintain a debt/asset gearing ratio of a minimum of 45%. This is transacted as a specified dividend.

There was no specified dividend to be paid for the year ended 30 June 2022 and the year ended 30 June 2023, in recognition that SA Water 's debt/asset gearing ratio was maintained above the predetermined minimum gearing target of 45% (refer to note 31).

37 Remuneration of employees

	Current employees 2023	Ex-Employees 2023	Current employees 2022*	Ex-Employees 2022*
The number of employees whose remuneration paid and payables falls within the following bands is:				
$157,001 - 160,000**	**-**	**-**	10	-
$160,001 - 180,000	**74**	**6**	69	6
$180,001 - 200,000	**34**	**8**	27	2
$200,001 - 220,000	**10**	**2**	11	1
$220,001 - 240,000	**4**	**2**	7	1
$240,001 - 260,000	**6**	**1**	5	-
$260,001 - 280,000	**4**	**1**	-	-
$280,001 - 300,000	**1**	**-**	2	1
$300,001 - 320,000	**1**	**-**	-	-
$320,001 - 340,000	1	**-**	-	1
$340,001 - 360,000	**-**	**1**	-	-
$400,001 - 420,000	**-**	**-**	1	-
$420,001 - 440,000	**3**	**-**	4	-
$440,001 - 460,000	**1**	**-**	-	-
$580,001 - 600,000	**1**	**-**	1	-
Total	**140**	**21**	**137**	**12**

* Prior year comparatives have been restated

**This band has been included for the purpose of reporting comparative figures based on the executive base level remuneration for 2021-22.

The table includes all employees who received remuneration equal to or greater than the base executive remuneration level during the year. Remuneration of employees reflects all costs of employment including salaries and wages, payments in lieu of leave, superannuation contributions, salary sacrifice benefits and fringe benefits, and any fringe benefits tax paid or payable in respect of those benefits. The total remuneration received by these employees for the year was $32.0m (2022: $29.1m).

	2023 $'000	2022 $'000
Targeted voluntary separation packages (TVSPs)		
Amount paid during the reporting period to separated employees:		
TVSPs	**-**	49
Annual leave and long service leave paid to those employees	**-**	33
Net cost to SA Water	**-**	**82**

The number of employees who received TVSPs during the reporting period was Nil ([2022: 1).

38 Remuneration of directors

The Board of SA Water was established under the *South Australian Water Corporation Act 1994* and consists of up to seven members including the Chief Executive. Note: Although a member of the Board, the Chief Executive does not receive additional remuneration as a Board member. The remuneration of the Chief Executive is included in notes 37 and 39.

38 Remuneration of directors (continued)

Remuneration of Directors (excluding the Chief Executive) is shown in the table below.

	2023 Number of directors	2022 Number of directors
The number of Directors of the Corporation (excluding the Chief Executive) whose remuneration paid and payable falls within the following bands is:		
$0 - $19,999	**1**	-
$20,000 - $39,999	**-**	1
$40,000 - $59,999	**3**	4
$60,000 - $79,999	**2**	-
$80,000 - $99,999	**-**	1
	6	**6**

The total remuneration paid and payable for those directors was $0.29m (2022: $0.31m) which includes superannuation contributions.

39 Related party disclosures

(a) *Directors*

The following persons held the position of director of the Corporation during the financial year:

Mr A.N Holmes; Mr J.J Bastian, Ms S.M Filby; Ms J.M.H Finlay; Mr C.J Ford, Ms F.A Hele; and Mr D.A Ryan.

Mr Holmes is the Chairman of the Board for Arid Recovery Pty Ltd, member of the Nature Foundation SA, member of Bush Heritage and sole practitioner of Allan Holmes Consulting.

Mr Bastian is the chair of Techgrow Agriculture, syndicate chair of the CEO Institute, owner and irrigation customer of SA Water for Bastian's Block - Clare Valley Vineyard and a member of the Women's and Children's Local Health Network Board. Mr Bastian ceased his position as a director of the Corporation on 2 August 2022.

Ms Filby is a facilitator for Behind Closed Doors.

Ms Finlay is a member of the Libraries Board SA, member of the council of the University of Adelaide, commissioner of the South Australian National Football League Inc, director of Helping Hand Aged, Adelaide Oval Stadium Management Authority Limited and Leveque Consulting Pty Ltd and associated entities.

Ms Hele is a director and shareholder of the Kelsian Group Limited (formerly Sealink Travel Group), board member of the Adelaide Venue Management Corporation, director and shareholder of Hele Investments Pty Ltd and non-executive director of Argo Global Listed Infrastructure Limited. In February 2023, Ms Hele ceased her position as director with Celsus Securitisation Pty Ltd.

Mr Ford is a senior executive with the SA Power Networks and Enerven, a member of the School of Mathematical Sciences Advisory Board for the University of Adelaide and a member of the SAP Australia and New Zealand Customer Advisory Council.

Mr Ryan holds the position of Chief Executive and director of the Corporation. He is currently a director of the Water Services Association of Australia.

39 Related party disclosures (continued)

(a) *Directors (continued)*
(b) *Key management personnel*

Key management personnel compensation for the years ended 30 June 2023 and 2022 is set out below. The key management personnel are the directors of the Corporation (including the Chief Executive) and the Executive Leadership Team who have responsibility for the strategic direction and management of the Corporation.

The Minister for Climate, Environment and Water is also considered a member of the key management personnel of the Corporation by virtue of the Minister's power to control and direct the Corporation pursuant to the *Public Corporations Act 1993*. No remuneration has been included in this note disclosure for the Minister as they are not directly remunerated by the Corporation.

	Number of key management personnel	Short-term benefits $'000	Post-employment benefits $'000	Long-term benefits $'000	Termination benefits $'000	Total $'000
2023*	**18**	**3,382**	**259**	**-**	**-**	**3,641**
2022*	**18**	**3,331**	**257**	**79**	**-**	**3,667**

*Both 2023 and 2022 include an overlap of the senior leadership team members.

(c) *Transactions with other related parties*

All SA Government entities are related parties, significant transactions with SA Government entities are identifiable throughout this financial report.

Appendix B — Drinking water quality data

Table 1

2022-23 metropolitan Adelaide source water quality — inlets to water treatment plants (WTP)

Parameter	Samples	Min	Max	Ave*	Samples	Min	Max	Ave*
	Anstey Hill WTP				Hope Valley WTP			
Colour — true (456 nm) [HU]	12	14	94	44	12	10	60	39
Dissolved organic carbon [mg/L]	52	6.3	17.3	10.5	52	5.0	13.5	9.3
Fluoride [mg/L]	12	0.10	0.25	0.16	12	0.19	0.28	0.25
Hardness — total [mg/L]	13	87	106	98	13	112	167	146
Nitrate as nitrogen [mg/L]	26	<0.003	0.090	0.040	26	<0.003	0.216	0.055
pH [pH units]	12	7.3	7.8	7.5	12	7.9	8.4	8.1
Phosphorus — total [mg/L]	26	0.021	0.111	0.043	26	<0.005	0.061	0.030
Total dissolved solids [mg/L]	12	78	308	191	12	256	385	329
Turbidity [NTU]	12	6.9	110	45	12	1.1	3.6	1.9
	Barossa WTP				Little Para WTP			
Colour — true (456 nm) [HU]	12	13	54	35	7	27	58	42
Dissolved organic carbon [mg/L]	52	6.1	13.3	10.1	32	8.0	10.9	10.0
Fluoride [mg/L]	12	0.24	0.31	0.27	7	0.25	0.28	0.27
Hardness — total [mg/L]	13	82	95	90	13	106	137	124
Nitrate as nitrogen [mg/L]	26	<0.003	0.068	0.016	26	0.053	0.201	0.112
pH [pH units]	12	7.3	7.7	7.5	7	7.5	7.9	7.8
Phosphorus — total [mg/L]	26	0.009	0.050	0.018	26	0.016	0.069	0.034
Total dissolved solids [mg/L]	12	257	275	271	7	280	307	298
Turbidity [NTU]	12	0.34	2.2	1.2	7	3.8	14	8.0
	Happy Valley WTP							
Colour — true (456 nm) [HU]	12	34	71	55				
Dissolved organic carbon [mg/L]	52	7.6	12.3	10.3				
Fluoride [mg/L]	12	0.22	0.27	0.25				
Hardness — total [mg/L]	13	93	130	109				
Nitrate as nitrogen [mg/L]	26	<0.003	0.215	0.066				
pH [pH units]	14	7.1	8.2	7.8				
Phosphorus — total [mg/L]	26	0.020	0.082	0.046				
Total dissolved solids [mg/L]	14	217	302	270				
Turbidity [NTU]	12	1.6	19	7.8				

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

Table 2

2022-23 metropolitan Adelaide distribution system — customer tap water quality against Australian Drinking Water Guidelines

Parameter	Health guideline	Aesthetic guideline	Samples	Min	Max	Ave*	% Compliance#
Anstey Hill metro system							
Chlorine residual — free [mg/L]	≤ 5	-	220	<0.1	1.5	0.2	100
Chlorine residual — free [mg/L]	-	≤ 0.6	220	<0.1	1.5	0.2	86.4
Colour — true [HU]	-	≤ 15	4	<1	2	1	100
E. coli [per cfu/100 mL]	++	-	220	0	0	0	100
Fluoride [mg/L]	≤ 1.5	-	4	0.25	0.78	0.63	100
Hardness — total [mg/L]	-	≤ 200	4	77	115	98	100
Iron — total [mg/L]	-	≤ 0.3	4	0.0048	0.0093	0.0070	100
Manganese — total [mg/L]	≤ 0.5	-	4	0.0004	0.0019	0.0010	100
Manganese — total [mg/L]	-	≤ 0.1	4	0.0004	0.0019	0.0010	100
pH units	-	6.5 - 8.5	12	7.1	7.4	7.3	100
Total dissolved solids [mg/L]	-	≤ 600	4	171	324	254	100
Trihalomethanes — total [µg/L]	≤ 250	-	54	54	203	133	100
Turbidity [NTU]	-	≤ 5	12	<0.10	0.13	<0.10	100
Barossa metro system							
Chlorine residual — free [mg/L]	≤ 5	-	111	<0.1	1.1	0.4	100
Chlorine residual — free [mg/L]	-	≤ 0.6	111	<0.1	1.1	0.4	82.0
Colour — true [HU]	-	≤ 15	4	1	2	2	100
E. coli [per cfu/100 mL]	++	-	111	0	0	0	100
Fluoride [mg/L]	≤ 1.5	-	4	0.12	0.90	0.60	100
Hardness — total [mg/L]	-	≤ 200	4	88	126	111	100
Iron — total [mg/L]	-	≤ 0.3	4	0.0029	0.0049	0.0038	100
Manganese — total [mg/L]	≤ 0.5	-	4	0.0004	0.0039	0.0015	100
Manganese — total [mg/L]	-	≤ 0.1	4	0.0004	0.0039	0.0015	100
pH units	-	6.5 - 8.5	11	7.0	7.3	7.2	100
Total dissolved solids [mg/L]	-	≤ 600	16	274	362	317	100
Trihalomethanes — total [µg/L]	≤ 250	-	41	91	188	153	100
Turbidity [NTU]	-	≤ 5	11	<0.10	<0.10	<0.10	100

Table 2 continued

Parameter	Health guideline	Aesthetic guideline	Samples	Min	Max	Ave*	% Compliance#
Central metro system							
Chlorine residual — free [mg/L]	≤ 5	-	1165	<0.1	1.6	0.3	100
Chlorine residual — free [mg/L]	-	≤ 0.6	1165	<0.1	1.6	0.3	78.6
Colour — true [HU]	-	≤ 15	33	<1	2	1	100
E. coli [per cfu/100 mL]	++	-	1164	0	1	0	99.9
Fluoride [mg/L]	≤ 1.5	-	24	<0.10	0.76	0.57	100
Hardness — total [mg/L]	-	≤ 200	24	83	146	125	100
Iron — total [mg/L]	-	≤ 0.3	24	0.0011	0.0551	0.0143	100
Manganese — total [mg/L]	≤ 0.5	-	24	0.0003	0.0037	0.0017	100
Manganese — total [mg/L]	-	≤ 0.1	24	0.0003	0.0037	0.0017	100
pH units	-	6.5 - 8.5	72	7.0	7.8	7.2	100
Total dissolved solids [mg/L]	-	≤ 600	25	179	352	301	100
Trihalomethanes — total [µg/L]	≤ 250	-	204	59	242	168	100
Turbidity [NTU]	-	≤ 5	81	<0.10	0.19	<0.10	100
East metro system							
Chlorine residual — free [mg/L]	≤ 5	-	505	<0.1	1.6	0.3	100
Chlorine residual — free [mg/L]	-	≤ 0.6	505	<0.1	1.6	0.3	89.5
Colour — true [HU]	-	≤ 15	24	<1	2	1	100
E. coli [per cfu/100 mL]	++	-	505	0	0	0	100
Fluoride [mg/L]	≤ 1.5	-	24	<0.10	0.78	0.53	100
Hardness — total [mg/L]	-	≤ 200	24	69	147	119	100
Iron — total [mg/L]	-	≤ 0.3	24	0.0021	0.5556	0.0575	91.7
Manganese — total [mg/L]	≤ 0.5	-	24	0.0003	0.0055	0.0017	100
Manganese — total [mg/L]	-	≤ 0.1	24	0.0003	0.0055	0.0017	100
pH units	-	6.5 - 8.5	72	6.8	7.5	7.2	100
Total dissolved solids [mg/L]	-	≤ 600	24	167	332	292	100
Trihalomethanes — total [µg/L]	≤ 250	-	102	55	258	173	99.0
Turbidity [NTU]	-	≤ 5	72	<0.10	0.60	0.11	100

Table 2 continued

Parameter	Health guideline	Aesthetic guideline	Samples	Min	Max	Ave*	% Compliance#
North metro system							
Chlorine residual – free [mg/L]	≤ 5	-	563	<0.1	1.2	0.2	100
Chlorine residual – free [mg/L]	-	≤ 0.6	563	<0.1	1.2	0.2	87.7
Colour – true [HU]	-	≤ 15	24	<1	2	1	100
E. coli [per cfu/100 mL]	++	-	563	0	0	0	100
Fluoride [mg/L]	≤ 1.5	-	24	<0.10	0.85	0.38	100
Hardness – total [mg/L]	-	≤ 200	24	69	152	113	100
Iron – total [mg/L]	-	≤ 0.3	24	0.0023	0.0180	0.0075	100
Manganese – total [mg/L]	≤ 0.5	-	24	0.0003	0.0045	0.0012	100
Manganese – total [mg/L]	-	≤ 0.1	24	0.0003	0.0045	0.0012	100
pH units	-	6.5 - 8.5	72	7.0	7.5	7.2	100
Total dissolved solids [mg/L]	-	≤ 600	122	156	344	298	100
Trihalomethanes – total [µg/L]	≤ 250	-	102	56	216	156	100
Turbidity [NTU]	-	≤ 5	72	<0.10	0.24	<0.10	100
South metro system							
Chlorine residual – free [mg/L]	≤ 5	-	100	<0.1	0.9	0.3	100
Chlorine residual – free [mg/L]	-	≤ 0.6	100	<0.1	0.9	0.3	91.0
Colour – true [HU]	-	≤ 15	4	<1	1	<1	100
E. coli [per cfu/100 mL]	++	-	100	0	0	0	100
Fluoride [mg/L]	≤ 1.5	-	4	0.20	0.75	0.60	100
Hardness – total [mg/L]	-	≤ 200	4	110	141	124	100
Iron – total [mg/L]	-	≤ 0.3	4	0.0039	0.0056	0.0048	100
Manganese – total [mg/L]	≤ 0.5	-	4	0.0004	0.0023	0.0011	100
Manganese – total [mg/L]	-	≤ 0.1	4	0.0004	0.0023	0.0011	100
pH units	-	6.5 - 8.5	12	7.1	7.6	7.3	100
Total dissolved solids [mg/L]	-	≤ 600	4	263	329	289	100
Trihalomethanes – total [µg/L]	≤ 250	-	36	101	251	168	100
Turbidity [NTU]	-	≤ 5	12	<0.10	0.14	<0.10	100

Table 2 continued

Parameter	Health guideline	Aesthetic guideline	Samples	Min	Max	Ave*	% Compliance#
West metro system							
Chlorine residual – free [mg/L]	≤ 5	-	505	<0.1	1.8	0.3	100
Chlorine residual – free [mg/L]	-	≤ 0.6	505	<0.1	1.8	0.3	85.3
Colour – true [HU]	-	≤ 15	24	<1	3	2	100
E. coli [per cfu/100 mL]	++	-	504	0	0	0	100
Fluoride [mg/L]	≤ 1.5	-	24	0.10	0.83	0.63	100
Hardness – total [mg/L]	-	≤ 200	24	92	189	136	100
Iron – total [mg/L]	-	≤ 0.3	24	0.0025	0.0659	0.0168	100
Manganese – total [mg/L]	≤ 0.5	-	24	<0.0001	0.0075	0.0017	100
Manganese – total [mg/L]	-	≤ 0.1	24	<0.0001	0.0075	0.0017	100
pH units	-	6.5 - 8.5	75	6.8	7.6	7.2	100
Total dissolved solids [mg/L]	-	≤ 600	322	171	445	313	100
Trihalomethanes – total [µg/L]	≤ 250	-	120	79	258	182	99.2
Turbidity [NTU]	-	≤ 5	72	<0.10	0.23	<0.10	100
Metropolitan Adelaide – total distribution system							
Chlorine residual – free [mg/L]	≤ 5	-	3169	<0.1	1.8	0.3	100
Chlorine residual – free [mg/L]	-	≤ 0.6	3169	<0.1	1.8	0.3	84.1
Colour – true [HU]	-	≤ 15	117	<1	3	1	100
E. coli [per cfu/100 mL]	++	-	3167	0	1	0	99.97
Fluoride [mg/L]	≤ 1.5	-	108	<0.10	0.90	0.54	100
Hardness – total [mg/L]	-	≤ 200	108	69	189	122	100
Iron – total [mg/L]	-	≤ 0.3	108	0.0011	0.5556	0.0219	98.2
Manganese – total [mg/L]	≤ 0.5	-	108	<0.0001	0.0075	0.0015	100
Manganese – total [mg/L]	-	≤ 0.1	108	<0.0001	0.0075	0.0015	100
pH units	-	6.5 - 8.5	326	6.8	7.8	7.2	100
Total dissolved solids [mg/L]	-	≤ 600	517	156	445	307	100
Trihalomethanes – total [µg/L]	≤ 250	-	659	54	258	166	99.7
Turbidity [NTU]	-	≤ 5	332	<0.10	0.60	<0.10	100

++*E. coli* should not be detected in samples of drinking water. While we aim for 100 per cent compliance all the time, the ADWG recognises exceedances in test results can happen occasionally. Any detection is immediately investigated and corrective action can be taken, in conjunction with SA Health.

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

#Prior to calculating compliance for health-related chemicals, individual water sample test results are rounded to the same number of significant figures as the ADWG value (as prescribed in the ADWG and endorsed by SA Health).

Table 3

2022-23 regional source water quality — country systems

System	Total dissolved solids [mg/L]			Hardness — total [mg/L]			Dissolved organic carbon [mg/L]			pH [pH units]		
	Min	Max	Ave*	Min	Max	Ave*	Min	Max	Ave*	Min	Max	Ave*
Barmera WTP	97	321	187	-	-	-	6.2	18.5	11.1	7.2	8.6	7.8
Barossa WTP	257	275	271	82	95	90	6.1	13.3	10.1	7.3	7.7	7.5
Beachport IRP	655	678	668	255	285	270	0.9	0.9	0.9	7.3	7.8	7.6
Berri WTP	87	312	175	-	-	-	6.1	18.9	11.2	6.9	8.3	7.7
Blanchetown WTP	97	339	196	-	-	-	6.2	17.4	11.1	7.2	8.4	7.7
Bordertown	422	661	493	225	283	252	0.5	0.8	0.6	7.2	7.6	7.4
Cadell WTP	97	355	196	-	-	-	6.3	17.5	11.2	7.1	8.5	7.7
Coffin Bay	343	500	401	213	238	229	0.3	0.4	0.4	7.5	7.8	7.7
Cowirra WTP	98	339	197	-	-	-	5.9	16.9	10.8	7.0	7.9	7.5
Elliston	571	1040	725	268	362	304	0.5	0.6	0.5	7.3	7.7	7.5
Eyre South	434	1350	678	215	564	287	0.4	0.9	0.6	7.0	7.6	7.3
Geranium	1390	1500	1440	589	617	603	0.7	0.8	0.8	6.8	7.0	6.9
Glossop WTP	87	312	175	-	-	-	6.1	18.9	11.2	6.9	8.3	7.7
Happy Valley WTP	217	302	270	93	130	109	7.6	12.3	10.3	7.1	8.2	7.8
Hawker Desalination WTP	2170	2620	2430	1060	1140	1100	0.6	0.6	0.6	7.2	7.8	7.5
Kalangadoo IRP	527	550	542	353	353	353	1.2	1.2	1.2	7.2	7.6	7.4
Kanmantoo WTP	103	347	201	49	134	85	6.7	19.1	11.7	7.0	8.1	7.6
Kingston SE IRP	745	1030	875	190	235	216	0.9	0.9	0.9	7.4	7.8	7.6
Lameroo IRP	913	1010	955	234	256	245	0.5	0.6	0.6	7.5	7.6	7.5
Leigh Creek WTP	733	5510	3100	588	1430	923	0.4	1.1	0.8	7.2	7.7	7.5
Loxton WTP	86	311	178	-	-	-	6.3	18.1	11.3	7.2	8.4	7.8
Lucindale IRP	812	840	832	281	311	296	2.3	2.4	2.4	7.4	8.0	7.7
Mannum WTP	99	364	197	45	135	85	6.5	19.6	11.7	7.0	8.2	7.6
Melrose	1240	1780	1530	282	424	353	0.5	0.5	0.5	7.2	7.5	7.3
Middle River WTP	199	739	442	31	117	76	9.5	14.2	11.1	6.9	7.6	7.3
Millicent	605	683	641	363	380	372	1.1	1.6	1.4	7.5	7.9	7.7
Moorook WTP	94	313	186	-	-	-	6.1	19.8	11.6	7.1	8.5	7.7
Morgan WTP	81	354	193	41	134	83	6.3	19.6	11.6	7.2	8.4	7.8
Mt Burr	409	492	451	293	308	301	0.4	0.5	0.5	7.2	7.8	7.6
Mt Compass	119	224	170	39	54	47	<0.3	<0.3	<0.3	6.3	7.4	6.5
Mt Gambier	347	644	541	177	317	238	0.8	2.0	1.1	7.4	8.4	8.0
Mt Pleasant WTP	99	364	197	45	135	85	6.5	19.6	11.7	7.0	8.2	7.6
Murray Bridge WTP	103	347	201	49	134	85	6.7	19.1	11.7	7.0	8.1	7.6
Mypolonga WTP	101	340	199	-	-	-	6.4	17.6	11.0	7.0	7.9	7.5
Myponga WTP	359	420	383	111	135	125	11.4	16.4	14.3	7.6	8.0	7.8
Nangwarry	511	705	617	317	406	362	0.9	1.1	1.0	7.1	7.6	7.4
Naracoorte	1250	1310	1280	329	399	357	1.5	1.8	1.7	7.7	8.0	7.8
Padthaway	1450	1700	1610	599	616	608	0.8	0.9	0.9	7.2	7.9	7.4

Table 3 continued

System	Total dissolved solids [mg/L]			Hardness — total [mg/L]			Dissolved organic carbon [mg/L]			pH [pH units]		
	Min	Max	Ave*	Min	Max	Ave*	Min	Max	Ave*	Min	Max	Ave*
Palmer WTP	99	364	197	45	135	85	6.5	19.6	11.7	7.0	8.2	7.6
Parachilna	817	834	828	345	345	345	0.3	0.3	0.3	7.6	8.1	7.8
Parilla IRP	638	717	657	180	192	186	0.4	0.5	0.5	7.6	7.8	7.7
Penneshaw WTP	37100	39500	38300	-	-	-	0.5	1.0	0.8	7.6	8.2	7.9
Penola IRP	650	672	661	321	345	333	1.3	3.1	2.2	7.2	7.7	7.6
Pinnaroo IRP	566	756	702	252	266	258	0.4	0.5	0.5	7.4	7.6	7.5
Port MacDonnell	694	711	700	21	26	24	1.2	1.2	1.2	8.2	8.4	8.3
Quorn	1100	1390	1240	473	538	502	0.6	1.0	0.8	7.0	7.8	7.5
Renmark WTP	83	291	173	38	122	79	6.2	22.0	11.9	6.9	8.4	7.7
Robe IRP	622	986	749	76	151	126	0.8	1.0	0.9	7.5	7.9	7.7
Summit WTP	-	-	-	-	-	-	6.2	16.7	10.4	0.0	8.5	7.8
Swan Reach Town WTP	99	342	198	-	-	-	6.1	17.0	11.1	7.1	8.3	7.7
Swan Reach WTP	99	338	196	40	131	84	6.6	19.8	11.9	7.2	8.4	7.7
Tailem Bend WTP	66	344	204	47	133	87	6.6	19.3	11.8	6.9	8.2	7.6
Tarpeena IRP	638	750	696	396	429	413	0.8	1.1	1.0	7.2	7.6	7.4
Waikerie WTP	97	367	195	-	-	-	6.4	20.1	11.9	7.1	8.5	7.8
Wilmington	293	324	304	88	115	102	<0.3	0.4	<0.3	6.4	6.9	6.7
Wirrina Cove WTP	247	1090	615	-	-	-	16.4	26.7	22.6	7.4	8.8	7.8
Woolpunda WTP	97	350	193	-	-	-	6.2	17.5	11.2	7.2	8.5	7.7

System	Turbidity [NTU]			Colour — true (456 nm) [HU]			Nitrate as nitrogen [mg/L]			Phosphorous — total [mg/L]		
	Min	Max	Ave*	Min	Max	Ave*	Min	Max	Ave*	Min	Max	Ave*
Barmera WTP	6.9	120	49	6	127	47	-	-	-	-	-	-
Barossa WTP	0.34	2.2	1.2	13	54	35	<0.003	0.068	0.016	0.009	0.050	0.018
Beachport IRP	1.5	3.8	2.7	<1	2	<1	<0.003	<0.003	<0.003	0.039	0.041	0.040
Berri WTP	14	120	50	12	127	48	-	-	-	-	-	-
Blanchetown WTP	7.1	120	42	12	127	45	-	-	-	-	-	-
Bordertown	<0.10	0.36	<0.10	<1	1	<1	<0.003	0.483	0.149	<0.005	0.017	0.009
Cadell WTP	7.4	130	42	13	124	46	-	-	-	-	-	-
Coffin Bay	<0.10	<0.10	<0.10	<1	1	<1	0.174	1.047	0.695	<0.005	0.010	0.007
Cowirra WTP	8.0	160	46	14	120	42	-	-	-	-	-	-
Elliston	<0.10	0.13	<0.10	<1	<1	<1	2.657	3.367	3.060	0.006	0.009	0.007
Eyre South	<0.10	2.7	0.11	<1	2	<1	0.631	6.646	3.369	<0.005	0.024	0.009
Geranium	<0.10	0.11	<0.10	<1	<1	<1	<0.003	0.026	0.014	0.034	0.035	0.035
Glossop WTP	14	120	50	12	127	48	-	-	-	-	-	-
Happy Valley WTP	1.6	19	7.8	34	71	55	<0.003	0.215	0.066	0.020	0.082	0.046
Hawker Desalination WTP	3.0	14	9.6	<1	<1	<1	<0.003	<0.003	<0.003	0.014	0.017	0.016
Kalangadoo IRP	1.1	8.9	3.2	<1	<1	<1	<0.003	<0.003	<0.003	0.018	0.018	0.018
Kanmantoo WTP	8.3	140	55	14	123	44	-	-	-	<0.005	0.536	0.185

Table 3 continued

System	Turbidity [NTU]			Colour – true (456 nm) [HU]			Nitrate as nitrogen [mg/L]			Phosphorous – total [mg/L]		
	Min	Max	Ave*	Min	Max	Ave*	Min	Max	Ave*	Min	Max	Ave*
Kingston SE IRP	0.45	20	7.5	<1	2	<1	<0.003	0.010	0.004	<0.005	0.010	<0.005
Lameroo IRP	1.8	5.2	3.0	<1	1	<1	<0.003	<0.003	<0.003	0.045	0.055	0.050
Leigh Creek WTP	<0.10	1.8	0.46	<1	2	<1	0.339	2.027	0.987	<0.005	0.021	0.013
Loxton WTP	13	130	53	12	132	48	<0.003	0.211	0.032	0.101	0.330	0.189
Lucindale IRP	0.27	8.9	4.1	<1	2	1	<0.003	<0.003	<0.003	0.024	0.029	0.027
Mannum WTP	8.6	150	53	14	124	44	<0.003	0.287	0.026	0.089	0.411	0.204
Melrose	<0.10	0.50	0.10	<1	<1	<1	0.290	0.650	0.470	0.009	0.017	0.013
Middle River WTP	4.0	45	8.8	47	143	99	0.008	0.267	0.092	0.012	0.168	0.036
Millicent	0.17	45	2.2	2	4	3	0.047	0.104	0.076	0.045	0.242	0.144
Moorook WTP	7.1	120	44	12	124	47	<0.003	0.411	0.049	0.093	0.359	0.180
Morgan WTP	12	120	51	13	123	46	-	-	-	0.063	0.377	0.184
Mt Burr	<0.10	0.13	<0.10	<1	<1	<1	0.360	1.227	0.794	0.021	0.024	0.023
Mt Compass	<0.10	19	1.1	<1	<1	<1	0.075	0.076	0.076	0.014	0.028	0.021
Mt Gambier	<0.10	15	1.6	<1	3	1	<0.003	3.211	2.161	<0.005	0.036	0.011
Mt Pleasant WTP	8.6	150	53	14	124	44	<0.003	0.287	0.026	0.089	0.411	0.204
Murray Bridge WTP	8.3	140	55	14	123	44	-	-	-	<0.005	0.536	0.185
Mypolonga WTP	6.8	120	43	14	116	42	-	-	-	-	-	-
Myponga WTP	0.88	2.0	1.4	38	91	65	<0.003	0.077	0.021	0.024	0.828	0.086
Nangwarry	<0.10	0.64	0.11	<1	1	<1	0.278	3.377	1.828	0.012	0.058	0.035
Naracoorte	0.18	1.6	0.42	4	5	5	<0.003	<0.003	<0.003	0.056	0.063	0.059
Padthaway	<0.10	2.7	0.49	<1	1	<1	0.075	0.141	0.108	0.011	0.014	0.013
Palmer WTP	8.6	150	53	14	124	44	<0.003	0.287	0.026	0.089	0.411	0.204
Parachilna	<0.10	0.12	<0.10	<1	<1	<1	1.127	1.127	1.127	0.019	0.019	0.019
Parilla IRP	0.87	4.4	3.2	<1	3	<1	0.013	0.027	0.020	0.029	0.034	0.032
Penneshaw WTP	0.12	3.5	0.67	-	-	-	-	-	-	<0.005	0.031	0.017
Penola IRP	6.3	18	9.6	1	3	2	<0.003	0.005	0.003	0.018	0.096	0.057
Pinnaroo IRP	1.2	5.0	2.9	<1	2	1	<0.003	<0.003	<0.003	0.031	0.047	0.039
Port MacDonnell	<0.10	8.5	1.3	2	13	5	<0.003	<0.003	<0.003	0.180	0.459	0.320
Quorn	<0.10	2.0	0.30	<1	<1	<1	0.099	0.146	0.116	0.019	0.026	0.022
Renmark WTP	18	160	68	12	134	49	<0.003	0.239	0.025	0.143	0.443	0.237
Robe IRP	0.11	2.2	0.92	<1	1	<1	<0.003	0.020	0.009	0.037	0.057	0.044
Summit WTP	3.3	120	41	14	107	39	<0.003	0.255	0.054	0.060	0.534	0.174
Swan Reach Town WTP	11	130	48	13	129	46	-	-	-	-	-	-
Swan Reach WTP	10	120	45	13	120	46	<0.003	0.139	0.024	0.086	0.430	0.211
Tailem Bend WTP	9.7	120	49	14	121	44	-	-	-	<0.005	0.341	0.179
Tarpeena IRP	0.11	18	6.3	<1	1	<1	<0.003	0.146	0.074	0.034	0.057	0.046
Waikerie WTP	11	130	47	12	125	47	<0.003	0.158	0.025	0.092	0.405	0.193
Wilmington	<0.10	0.56	0.26	<1	1	<1	0.213	0.254	0.234	0.055	0.111	0.083
Wirrina Cove WTP	2.7	36	11	40	271	178	-	-	-	0.067	0.191	0.130
Woolpunda WTP	11	160	53	12	124	46	-	-	-	-	-	-

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

Table 4

2022-23 regional drinking water distribution systems – country customer tap water quality against Australian Drinking Water Guidelines

System	*E. coli* [per cfu/100 mL]		Total dissolved solids [mg/L]			
	Samples	Health compliance %	Min	Max	Ave*	Aesthetic compliance %
ADWG value		++				≤600
Barmera WTP	55	100	151	328	256	100
Barossa WTP	458	99.8	243	346	309	100
Beachport IRP	64	100	666	672	669	0.0
Berri WTP	60	100	154	373	253	100
Blanchetown WTP	52	100	148	318	238	100
Bordertown	57	100	452	525	474	100
Cadell WTP	52	100	141	335	239	100
Coffin Bay	64	100	430	622	494	75.0
Cowirra WTP	54	100	154	333	210	100
Elliston	52	100	655	678	664	0.0
Eyre South	371	99.7	540	694	594	61.1
Eyre South/Morgan WTP	218	100	340	526	464	100
Geranium	50	100	1430	1450	1440	0.0
Glossop WTP	58	100	127	293	215	100
Happy Valley WTP	63	100	265	319	290	100
Hawker Desalination WTP	52	100	320	335	328	100
Kalangadoo IRP	64	100	550	554	552	100
Kanmantoo WTP	55	100	128	338	242	100
Kingston SE IRP	64	100	834	846	839	0.0
Lameroo IRP	51	100	947	1010	979	0.0
Leigh Creek WTP	75	100	96	113	104	100
Loxton WTP	80	100	142	304	226	100
Lucindale IRP	64	100	823	840	832	0.0
Mannum WTP	54	100	171	366	262	100
Melrose	52	100	1460	1540	1500	0.0
Middle River WTP	139	100	397	761	533	87.5
Millicent	63	100	644	650	646	0.0
Moorook WTP	56	100	138	339	239	100
Morgan/Swan Reach WTP	421	100	175	485	273	100
Morgan WTP	657	100	181	388	269	100
Mt Burr	51	100	450	461	456	100
Mt Compass	57	100	234	269	247	100
Mt Gambier	150	100	352	366	358	100
Mt Pleasant WTP	79	100	118	344	207	100
Murray Bridge WTP	180	100	147	382	251	100
Mypolonga WTP	62	100	130	300	209	100
Myponga metro	113	100	424	447	438	100

Table 4 continued

System	*E. coli* [per cfu/100 mL]		Total dissolved solids [mg/L]			
	Samples	Health compliance %	Min	Max	Ave*	Aesthetic compliance %
ADWG value		++				≤600
Myponga WTP	252	100	435	482	449	100
Nangwarry	62	100	594	627	611	25.0
Naracoorte	75	100	1270	1300	1280	0.0
Padthaway	52	100	1650	1680	1660	0.0
Palmer WTP	78	100	150	349	253	100
Parachilna	51	100	823	834	830	0.0
Parilla IRP	51	100	650	666	654	0.0
Penneshaw WTP	63	100	310	357	339	100
Penola IRP	63	100	661	672	666	0.0
Pinnaroo IRP	55	100	700	722	714	0.0
Port MacDonnell	61	100	694	705	698	0.0
Quorn	51	100	1180	1220	1200	0.0
Renmark WTP	190	100	135	359	223	100
Robe IRP	64	100	683	801	739	0.0
Summit WTP	399	99.7	144	352	230	100
Swan Reach Town WTP	57	100	127	294	201	100
Swan Reach WTP	373	100	166	395	254	100
Tailem Bend WTP	249	100	162	389	266	100
Tarpeena IRP	64	100	689	705	700	0.0
Waikerie WTP	55	100	166	327	259	100
Wilmington	52	100	310	336	320	100
Wirrina Cove WTP	53	100	588	947	733	20.0
Woolpunda WTP	77	100	125	327	230	100

++*E. coli* should not be detected in samples of drinking water. While we aim for 100 per cent compliance all the time, the ADWG recognises exceedances in test results can happen occasionally. Any detection is immediately investigated and corrective action can be taken, in conjunction with SA Health.

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

Table 4 continued

System	Chlorine residual – free [mg/L]^				Chlorine residual – total [mg/L]†			
	Min	Max	Ave*	Health compliance %#	Min	Max	Ave*	Health compliance %#
ADWG value				≤ 5				≤ 5
Barmera WTP	<0.1	2.4	0.7	100	-	-	-	-
Barossa WTP	<0.1	3.2	0.6	100	-	-	-	-
Beachport IRP	0.6	1.2	0.9	100	-	-	-	-
Berri WTP	<0.1	1.7	1.0	100	-	-	-	-
Blanchetown WTP	0.3	1.6	0.9	100	-	-	-	-
Bordertown	0.6	1.8	1.2	100	-	-	-	-
Cadell WTP	0.2	1.7	1.0	100	-	-	-	-
Coffin Bay	0.7	1.4	1.0	100	-	-	-	-
Cowirra WTP	<0.1	2.2	1.1	100	-	-	-	-
Elliston	0.7	1.3	1.0	100	-	-	-	-
Eyre South	0.6	1.8	1.1	100	-	-	-	-
Eyre South/Morgan WTP	<0.1	2.4	1.3	100	-	-	-	-
Geranium	0.5	2.0	1.2	100	-	-	-	-
Glossop WTP	<0.1	2.0	0.5	100	-	-	-	-
Happy Valley WTP	<0.1	0.9	0.1	100	-	-	-	-
Hawker Desalination WTP	0.6	1.3	1.1	100	-	-	-	-
Kalangadoo IRP	0.4	1.5	1.0	100	-	-	-	-
Kanmantoo WTP	0.3	1.5	0.9	100	-	-	-	-
Kingston SE IRP	0.6	1.3	0.9	100	-	-	-	-
Lameroo IRP	1.0	2.0	1.4	100	-	-	-	-
Leigh Creek WTP	0.4	1.4	1.2	100	-	-	-	-
Loxton WTP	-	-	-	-	2.6	4.5	3.9	100
Lucindale IRP	0.5	1.3	0.8	100	-	-	-	-
Mannum WTP	0.4	2.4	1.4	100	-	-	-	-
Melrose	0.7	1.8	1.3	100	-	-	-	-
Middle River WTP	<0.1	1.4	0.7	100	-	-	-	-
Millicent	0.6	1.9	0.8	100	-	-	-	-
Moorook WTP	<0.1	1.8	0.4	100	-	-	-	-
Morgan / Swan Reach WTP	-	-	-	-	<0.1	4.2	2.8	100
Morgan WTP	<0.1	2.2	0.2	100	<0.1	4.4	2.6	100
Mt Burr	0.5	1.2	0.8	100	-	-	-	-
Mt Compass	0.6	1.5	1.1	100	-	-	-	-
Mt Gambier	0.8	1.6	1.1	100	-	-	-	-
Mt Pleasant WTP	<0.1	2.6	1.1	100	-	-	-	-
Murray Bridge WTP	<0.1	3.8	1.9	100	-	-	-	-
Mypolonga WTP	<0.1	2.7	1.1	100	-	-	-	-
Myponga metro	-	-	-	-	1.0	3.7	2.7	100
Myponga WTP	-	-	-	-	0.2	4.2	2.8	100
Nangwarry	0.4	1.9	1.0	100	-	-	-	-

Table 4 continued

System	Chlorine residual – free [mg/L]^				Chlorine residual – total [mg/L]†			
	Min	Max	Ave*	Health compliance %#	Min	Max	Ave*	Health compliance %#
ADWG value				≤ 5				≤ 5
Naracoorte	0.4	1.1	0.7	100	-	-	-	-
Padthaway	0.4	1.2	0.8	100	-	-	-	-
Palmer WTP	<0.1	1.5	0.5	100	-	-	-	-
Parachilna	0.2	1.8	0.7	100	-	-	-	-
Parilla IRP	0.8	1.8	1.3	100	-	-	-	-
Penneshaw WTP	0.5	1.7	1.1	100	-	-	-	-
Penola IRP	0.1	1.2	0.8	100	-	-	-	-
Pinnaroo IRP	0.6	1.7	1.2	100	-	-	-	-
Port MacDonnell	0.8	1.5	1.0	100	-	-	-	-
Quorn	0.7	1.6	1.2	100	-	-	-	-
Renmark WTP	<0.1	3.0	1.2	100	-	-	-	-
Robe IRP	0.5	1.2	0.8	100	-	-	-	-
Summit WTP	-	-	-	-	0.2	4.7	3.2	100
Swan Reach Town WTP	0.2	1.8	1.0	100	-	-	-	-
Swan Reach WTP	-	-	-	-	<0.1	4.4	2.9	100
Tailem Bend WTP	-	-	-	-	<0.1	4.7	2.5	100
Tarpeena IRP	0.6	1.3	0.9	100	-	-	-	-
Waikerie WTP	0.1	1.6	1.0	100	-	-	-	-
Wilmington	<0.1	2.6	1.7	100	-	-	-	-
Wirrina Cove WTP	0.1	1.4	0.4	100	-	-	-	-
Woolpunda WTP	-	-	-	-	<0.1	3.4	2.1	100

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

^Chlorinated systems only.

†Chloraminated systems only.

#Prior to calculating compliance for health-related chemicals, individual water sample test results are rounded to the same number of significant figures as the ADWG value (as prescribed in the ADWG and endorsed by SA Health).

Table 4 continued

System	Colour – true (456 nm) [HU]				Turbidity [NTU]			
	Min	Max	Ave*	Aesthetic compliance %	Min	Max	Ave*	Aesthetic compliance %
ADWG value				≤ 15				≤ 5
Barmera WTP	<1	1	<1	100	<0.10	0.33	0.14	100
Barossa WTP	<1	2	1	100	<0.10	14	0.20	99.5
Beachport IRP	<1	<1	<1	100	<0.10	0.15	<0.10	100
Berri WTP	<1	1	<1	100	<0.10	0.93	0.18	100
Blanchetown WTP	<1	1	<1	100	0.20	0.47	0.31	100
Bordertown	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Cadell WTP	<1	1	<1	100	<0.10	0.30	<0.10	100
Coffin Bay	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Cowirra WTP	<1	<1	<1	100	<0.10	0.13	<0.10	100
Elliston	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Eyre South	<1	1	<1	100	<0.10	0.20	<0.10	100
Eyre South/Morgan WTP	<1	<1	<1	100	<0.10	0.22	<0.10	100
Geranium	<1	<1	<1	100	<0.10	0.10	<0.10	100
Glossop WTP	<1	1	<1	100	<0.10	0.23	0.13	100
Happy Valley WTP	<1	1	<1	100	<0.10	2.0	0.17	100
Hawker Desalination WTP	<1	<1	<1	100	<0.10	0.13	<0.10	100
Kalangadoo IRP	<1	<1	<1	100	<0.10	1.4	0.11	100
Kanmantoo WTP	<1	<1	<1	100	<0.10	0.12	<0.10	100
Kingston SE IRP	<1	2	<1	100	<0.10	<0.10	<0.10	100
Lameroo IRP	<1	<1	<1	100	<0.10	0.16	<0.10	100
Leigh Creek WTP	<1	<1	<1	100	<0.10	0.34	<0.10	100
Loxton WTP	2	6	4	100	<0.10	0.16	<0.10	100
Lucindale IRP	<1	<1	<1	100	<0.10	0.75	<0.10	100
Mannum WTP	<1	1	<1	100	<0.10	0.90	0.21	100
Melrose	<1	<1	<1	100	<0.10	0.12	<0.10	100
Middle River WTP	<1	<1	<1	100	<0.10	0.33	<0.10	100
Millicent	<1	<1	<1	100	<0.10	0.41	<0.10	100
Moorook WTP	<1	2	1	100	0.10	0.44	0.21	100
Morgan/Swan Reach WTP	<1	4	2	100	<0.10	0.51	<0.10	100
Morgan WTP	<1	4	2	100	<0.10	3.8	0.13	100
Mt Burr	<1	<1	<1	100	<0.10	0.12	<0.10	100
Mt Compass	<1	<1	<1	100	<0.10	1.0	0.15	100
Mt Gambier	<1	<1	<1	100	<0.10	0.58	0.11	100
Mt Pleasant WTP	<1	1	<1	100	<0.10	1.4	<0.10	100
Murray Bridge WTP	<1	1	<1	100	<0.10	1.3	0.13	100
Mypolonga WTP	<1	2	1	100	<0.10	0.34	0.14	100
Myponga metro	2	4	3	100	<0.10	0.50	<0.10	100
Myponga WTP	2	4	3	100	<0.10	0.63	<0.10	100
Nangwarry	<1	<1	<1	100	<0.10	0.15	<0.10	100

Table 4 continued

System	Colour – true (456 nm) [HU]				Turbidity [NTU]			
	Min	Max	Ave*	Aesthetic compliance %	Min	Max	Ave*	Aesthetic compliance %
ADWG value				≤ 15				≤ 5
Naracoorte	<1	1	<1	100	<0.10	6.0	0.60	97.1
Padthaway	<1	<1	<1	100	0.10	1.3	0.24	100
Palmer WTP	<1	2	1	100	<0.10	0.22	0.11	100
Parachilna	<1	1	<1	100	<0.10	0.25	<0.10	100
Parilla IRP	<1	1	<1	100	<0.10	0.15	<0.10	100
Penneshaw WTP	<1	<1	<1	100	<0.10	0.15	<0.10	100
Penola IRP	<1	<1	<1	100	<0.10	0.35	<0.10	100
Pinnaroo IRP	<1	<1	<1	100	<0.10	0.23	<0.10	100
Port MacDonnell	<1	1	<1	100	<0.10	0.44	0.15	100
Quorn	<1	<1	<1	100	<0.10	0.33	<0.10	100
Renmark WTP	<1	<1	<1	100	<0.10	5.1	0.18	98.8
Robe IRP	<1	<1	<1	100	<0.10	0.12	<0.10	100
Summit WTP	<1	5	2	100	<0.10	1.1	<0.10	100
Swan Reach Town WTP	<1	1	<1	100	0.10	0.21	0.15	100
Swan Reach WTP	<1	3	2	100	<0.10	0.30	<0.10	100
Tailem Bend WTP	1	4	2	100	<0.10	0.97	<0.10	100
Tarpeena IRP	<1	<1	<1	100	<0.10	0.14	<0.10	100
Waikerie WTP	<1	2	1	100	0.12	1.6	0.24	100
Wilmington	<1	<1	<1	100	<0.10	0.14	0.11	100
Wirrina Cove WTP	<1	1	<1	100	<0.10	0.33	0.16	100
Woolpunda WTP	1	3	2	100	<0.10	0.20	<0.10	100

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

Table 4 continued

System	pH [pH units]				Trihalomethanes – total [µg/L]^			
	Min	Max	Ave*	Aesthetic compliance %	Min	Max	Ave*	Health compliance %#
ADWG value				6.5 - 8.5				≤ 250
Barmera WTP	7.5	7.8	7.6	100	95	268	166	90.9
Barossa WTP	7.0	8.6	7.5	99.3	95	274	183	98.1
Beachport IRP	7.6	8.1	7.8	100	42	42	42	100
Berri WTP	7.3	7.6	7.4	100	78	231	144	100
Blanchetown WTP	7.1	7.7	7.4	100	62	270	157	91.7
Bordertown	7.1	7.6	7.3	100	17	17	17	100
Cadell WTP	7.3	7.7	7.5	100	50	250	140	100
Coffin Bay	7.4	7.9	7.7	100	12	12	12	100
Cowirra WTP	7.4	7.7	7.5	100	70	254	165	100
Elliston	7.5	7.9	7.7	100	9	9	9	100
Eyre South	7.1	9.4	7.6	98.6	14	31	21	100
Eyre South/Morgan WTP	7.2	8.0	7.8	100	81	358	195	82.5
Geranium	7.0	7.3	7.1	100	<4	<4	<4	100
Glossop WTP	7.3	7.9	7.8	100	54	193	125	100
Happy Valley WTP	7.0	8.4	7.6	100	184	285	234	66.7
Hawker Desalination WTP	7.8	8.3	8.0	100	8	8	8	100
Kalangadoo IRP	7.2	7.7	7.4	100	67	67	67	100
Kanmantoo WTP	7.2	7.8	7.6	100	63	242	147	100
Kingston SE IRP	7.5	8.1	7.7	100	40	40	40	100
Lameroo IRP	7.6	7.8	7.7	100	15	15	15	100
Leigh Creek WTP	8.1	9.0	8.6	20.6	<4	<4	<4	100
Loxton WTP†	8.4	9.1	8.8	25.0	-	-	-	-
Lucindale IRP	7.6	8.1	7.8	100	105	105	105	100
Mannum WTP	7.2	7.6	7.3	100	89	186	135	100
Melrose	7.2	7.5	7.4	100	6	6	6	100
Middle River WTP	7.2	7.9	7.5	100	4	218	125	100
Millicent	7.5	7.8	7.6	100	81	81	81	100
Moorook WTP	7.7	8.1	7.9	100	66	186	129	100
Morgan/Swan Reach WTP†	8.0	9.3	8.8	15.3	-	-	-	-
Morgan WTP	7.0	9.2	8.4	44.1	87	286	168	87.5
Mt Burr	7.6	8.0	7.8	100	5	5	5	100
Mt Compass	7.4	8.1	7.8	100	<4	<4	<4	100
Mt Gambier	8.0	8.4	8.2	100	16	23	20	100
Mt Pleasant WTP	7.1	8.0	7.5	100	74	304	163	88.0
Murray Bridge WTP	7.1	8.0	7.6	100	79	312	199	71.7
Mypolonga WTP	7.3	7.7	7.5	100	97	337	193	66.7
Myponga metro†	7.7	9.2	8.6	28.4	-	-	-	-
Myponga WTP†	8.0	9.0	8.7	18.5	-	-	-	-
Nangwarry	7.2	8.0	7.6	100	25	25	25	100

Table 4 continued

System	pH [pH units]				Trihalomethanes – total [µg/L]^			
	Min	Max	Ave*	Aesthetic compliance %	Min	Max	Ave*	Health compliance %#
ADWG value				6.5 - 8.5				≤ 250
Naracoorte	7.7	8.0	7.8	100	186	210	197	100
Padthaway	7.3	7.9	7.5	100	12	12	12	100
Palmer WTP	7.3	8.3	7.9	100	83	240	162	100
Parachilna	7.8	8.3	8.0	100	8	8	8	100
Parilla IRP	7.7	7.9	7.8	100	22	22	22	100
Penneshaw WTP	7.4	8.2	8.0	100	<4	<4	<4	100
Penola IRP	7.3	7.8	7.5	100	59	59	59	100
Pinnaroo IRP	7.6	7.8	7.7	100	17	17	17	100
Port MacDonnell	8.0	8.4	8.2	100	66	66	66	100
Quorn	7.2	7.8	7.5	100	9	9	9	100
Renmark WTP	7.1	9.1	7.6	88.9	60	312	170	91.7
Robe IRP	7.7	7.9	7.8	100	44	44	44	100
Summit WTP†	7.8	9.2	8.7	18.0	-	-	-	-
Swan Reach Town WTP	7.3	7.7	7.6	100	54	231	138	100
Swan Reach WTP†	7.7	9.0	8.6	44.6	-	-	-	-
Tailem Bend WTP†	8.0	9.4	8.8	19.4	-	-	-	-
Tarpeena IRP	7.5	7.8	7.6	100	30	30	30	100
Waikerie WTP	7.2	7.7	7.5	100	81	220	145	100
Wilmington	6.7	7.5	7.1	100	12	12	12	100
Wirrina Cove WTP	7.4	8.0	7.7	100	107	230	174	100
Woolpunda WTP†	8.1	9.4	8.7	32.0	-	-	-	-

^Chlorinated systems only.

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

#Prior to calculating compliance for health-related chemicals, individual water sample test results are rounded to the same number of significant figures as the ADWG value (as prescribed in the ADWG and endorsed by SA Health).

†Chloraminated systems are run at a higher pH to improve chlorine residual persistence.

#While we aim for 100 per cent health compliance all the time, the ADWG recognises exceedances in test results can happen occasionally. The ADWG states: "although concentrations of by-products should be kept as low as possible, efforts to achieve this should never jeopardise effective disinfection". An exceedance of the health guideline is immediately investigated and corrective action can be taken, in conjunction with SA Health.

#There was a short-term rise in trihalomethanes in several of the systems fed directly from the River Murray as a result of the flood event.

Table 4 continued

System	Fluoride [mg/L]				Iron – total [mg/L]			
	Min	Max	Ave*	Health compliance %#	Min	Max	Ave*	Aesthetic compliance %
ADWG value				≤ 1.5				≤ 0.3
Barmera WTP	0.69	0.89	0.77	100	0.0065	0.0075	0.0070	100
Barossa WTP	0.13	0.85	0.49	100	0.0054	0.0978	0.0312	100
Beachport IRP	0.23	0.25	0.24	100	0.0010	0.0244	0.0077	100
Berri WTP	0.66	0.90	0.76	100	0.0072	0.0713	0.0256	100
Blanchetown WTP	<0.10	0.14	<0.10	100	0.0117	0.0243	0.0164	100
Bordertown	0.31	0.34	0.33	100	<0.0005	0.0074	0.0019	100
Cadell WTP	<0.10	0.14	<0.10	100	0.0024	0.0046	0.0035	100
Coffin Bay	1.0	1.2	1.1	100	0.0006	0.0012	0.0008	100
Cowirra WTP	<0.10	0.13	<0.10	100	0.0031	0.0072	0.0058	100
Elliston	0.56	0.60	0.59	100	0.0006	0.0011	0.0009	100
Eyre South	0.44	1.3	0.56	100	<0.0005	0.0027	0.0011	100
Eyre South/Morgan WTP	0.50	0.64	0.56	100	0.0005	0.0187	0.0036	100
Geranium	1.1	1.1	1.1	100	0.0054	0.0082	0.0072	100
Glossop WTP	<0.10	0.13	<0.10	100	0.0045	0.0146	0.0077	100
Happy Valley WTP	0.38	0.74	0.64	100	0.0050	0.0190	0.0107	100
Hawker Desalination WTP	<0.10	<0.10	<0.10	100	0.0014	0.0019	0.0017	100
Kalangadoo IRP	0.11	0.13	0.12	100	<0.0005	0.0201	0.0080	100
Kanmantoo WTP	<0.10	0.14	<0.10	100	<0.0005	0.0011	0.0006	100
Kingston SE IRP	0.29	0.32	0.31	100	0.0009	0.0072	0.0032	100
Lameroo IRP	0.61	0.64	0.63	100	0.0099	0.0274	0.0205	100
Leigh Creek WTP	<0.10	<0.10	<0.10	100	0.0061	0.0126	0.0092	100
Loxton WTP	0.71	0.75	0.73	100	0.0005	0.0046	0.0024	100
Lucindale IRP	0.32	0.35	0.33	100	0.0012	0.0098	0.0042	100
Mannum WTP	0.68	0.81	0.76	100	0.0169	0.0285	0.0216	100
Melrose	1.0	1.1	1.1	100	0.0011	0.0124	0.0048	100
Middle River WTP	<0.10	0.10	<0.10	100	0.0081	0.0235	0.0138	100
Millicent	1.0	1.1	1.0	100	0.0045	0.1354	0.0314	100
Moorook WTP	<0.10	0.15	<0.10	100	0.0044	0.0117	0.0068	100
Morgan/Swan Reach WTP	0.42	0.78	0.64	100	0.0010	0.0191	0.0059	100
Morgan WTP	0.48	0.77	0.65	100	<0.0005	0.2590	0.0238	100
Mt Burr	0.26	0.27	0.27	100	<0.0005	0.0097	0.0033	100
Mt Compass	0.20	0.26	0.23	100	0.0011	0.0041	0.0023	100
Mt Gambier	0.72	0.78	0.76	100	<0.0005	0.0040	0.0009	100
Mt Pleasant WTP	0.83	0.99	0.93	100	0.0023	0.0041	0.0030	100
Murray Bridge WTP	0.70	0.78	0.74	100	0.0013	0.0909	0.0161	100
Mypolonga WTP	<0.10	0.14	<0.10	100	0.0079	0.0200	0.0134	100
Myponga metro	0.62	0.81	0.72	100	0.0029	0.0055	0.0043	100
Myponga WTP	0.64	0.92	0.70	100	0.0010	0.0183	0.0055	100
Nangwarry	0.11	0.12	0.12	100	<0.0005	0.0007	0.0005	100

Table 4 continued

System	Fluoride [mg/L]				Iron – total [mg/L]			
	Min	Max	Ave*	Health compliance %#	Min	Max	Ave*	Aesthetic compliance %
ADWG value				≤ 1.5				≤ 0.3
Naracoorte	1.2	1.3	1.3	100	0.0056	0.6136	0.1156	95.0
Padthaway	0.12	0.13	0.12	100	0.0103	0.0136	0.0124	100
Palmer WTP	<0.10	0.15	0.12	100	0.0026	0.0085	0.0055	100
Parachilna	0.60	0.66	0.63	100	0.0019	0.0047	0.0028	100
Parilla IRP	0.41	0.47	0.45	100	0.0013	0.0134	0.0036	100
Penneshaw WTP	<0.10	<0.10	<0.10	100	0.0006	0.0009	0.0008	100
Penola IRP	0.15	0.20	0.18	100	0.0019	0.2603	0.0465	100
Pinnaroo IRP	0.67	0.72	0.70	100	0.0015	0.0476	0.0078	100
Port MacDonnell	0.78	0.84	0.80	100	0.0014	0.0033	0.0025	100
Quorn	0.61	0.64	0.62	100	<0.0005	0.0369	0.0097	100
Renmark WTP	0.66	0.80	0.73	100	0.0013	0.0337	0.0057	100
Robe IRP	0.28	0.31	0.30	100	0.0016	0.0186	0.0043	100
Summit WTP	0.66	0.80	0.71	100	<0.0005	0.0256	0.0048	100
Swan Reach Town WTP	<0.10	0.13	<0.10	100	0.0039	0.0179	0.0099	100
Swan Reach WTP	0.46	0.91	0.72	100	0.0007	0.0052	0.0022	100
Tailem Bend WTP	0.70	0.77	0.74	100	0.0012	0.0050	0.0025	100
Tarpeena IRP	0.20	0.22	0.21	100	0.0051	0.0817	0.0137	100
Waikerie WTP	0.67	0.78	0.74	100	0.0035	0.0171	0.0096	100
Wilmington	0.16	0.18	0.17	100	0.0142	0.0490	0.0302	100
Wirrina Cove WTP	<0.10	0.28	<0.10	100	0.0047	0.0164	0.0123	100
Woolpunda WTP	<0.10	0.13	<0.10	100	0.0010	0.0060	0.0026	100

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

#Prior to calculating compliance for health-related chemicals, individual water sample test results are rounded to the same number of significant figures as the ADWG value (as prescribed in the ADWG and endorsed by SA Health).

Table 4 continued

System	Manganese – total [mg/L]					Hardness – total [mg/L]			
	Min	Max	Ave*	Health compliance %#	Aesthetic compliance %	Min	Max	Ave*	Aesthetic compliance %
ADWG value				≤ 0.5	≤ 0.1				≤ 200
Barmera WTP	0.0025	0.0048	0.0039	100	100	58	126	89	100
Barossa WTP	0.0005	0.0119	0.0026	100	100	86	137	113	100
Beachport IRP	0.0003	0.0014	0.0007	100	100	260	293	280	0.0
Berri WTP	0.0020	0.0142	0.0054	100	100	56	116	84	100
Blanchetown WTP	0.0006	0.0027	0.0020	100	100	58	128	93	100
Bordertown	<0.0001	<0.0001	<0.0001	100	100	235	283	257	0.0
Cadell WTP	0.0002	0.0047	0.0019	100	100	56	116	87	100
Coffin Bay	<0.0001	0.0002	0.0001	100	100	241	303	265	0.0
Cowirra WTP	0.0001	0.0002	0.0002	100	100	53	125	78	100
Elliston	<0.0001	<0.0001	<0.0001	100	100	261	299	284	0.0
Eyre South	<0.0001	0.0002	<0.0001	100	100	248	346	279	0.0
Eyre South/Morgan WTP	0.0001	0.0044	0.0010	100	100	146	234	209	33.3
Geranium	0.0001	0.0002	0.0001	100	100	582	600	588	0.0
Glossop WTP	0.0003	0.0021	0.0014	100	100	55	116	89	100
Happy Valley WTP	0.0002	0.0026	0.0013	100	100	107	137	120	100
Hawker Desalination WTP	0.0002	0.0004	0.0003	100	100	95	104	99	100
Kalangadoo IRP	<0.0001	0.0003	0.0002	100	100	338	369	352	0.0
Kanmantoo WTP	0.0001	0.0017	0.0007	100	100	49	133	91	100
Kingston SE IRP	<0.0001	<0.0001	<0.0001	100	100	225	239	234	0.0
Lameroo IRP	0.0005	0.0010	0.0008	100	100	237	260	246	0.0
Leigh Creek WTP	0.0003	0.0010	0.0006	100	100	3	4	4	100
Loxton WTP	0.0011	0.0427	0.0145	100	100	43	102	71	100
Lucindale IRP	<0.0001	0.0001	<0.0001	100	100	310	360	330	0.0
Mannum WTP	0.0022	0.0654	0.0208	100	100	56	126	91	100
Melrose	<0.0001	0.0001	<0.0001	100	100	322	369	347	0.0
Middle River WTP	0.0002	0.0018	0.0010	100	100	46	121	79	100
Millicent	0.0001	0.0035	0.0012	100	100	352	411	387	0.0
Moorook WTP	0.0009	0.0044	0.0021	100	100	55	118	88	100
Morgan/Swan Reach WTP	0.0005	0.0162	0.0037	100	100	51	122	85	100
Morgan WTP	0.0003	0.0101	0.0039	100	100	49	128	85	100
Mt Burr	<0.0001	0.0003	0.0001	100	100	224	306	278	0.0
Mt Compass	0.0002	0.0004	0.0003	100	100	51	60	56	100
Mt Gambier	<0.0001	<0.0001	<0.0001	100	100	172	203	189	87.5
Mt Pleasant WTP	0.0002	0.0041	0.0019	100	100	49	118	79	100
Murray Bridge WTP	0.0013	0.0327	0.0064	100	100	50	156	101	100
Mypolonga WTP	0.0007	0.0023	0.0012	100	100	49	105	77	100
Myponga mt etro	0.0007	0.0139	0.0041	100	100	117	135	128	100
Myponga WTP	0.0002	0.0204	0.0044	100	100	119	138	128	100

Table 4 continued

System	Manganese — total [mg/L]					Hardness — total [mg/L]			
	Min	Max	Ave*	Health compliance %#	Aesthetic compliance %	Min	Max	Ave*	Aesthetic compliance %
ADWG value				≤ 0.5	≤ 0.1				≤ 200
Nangwarry	<0.0001	0.0001	<0.0001	100	100	354	389	366	0.0
Naracoorte	0.0114	0.0215	0.0165	100	100	319	362	345	0.0
Padthaway	0.0002	0.0007	0.0004	100	100	553	615	596	0.0
Palmer WTP	0.0004	0.0025	0.0015	100	100	61	133	98	100
Parachilna	<0.0001	0.0010	0.0003	100	100	305	336	320	0.0
Parilla IRP	<0.0001	0.0003	0.0001	100	100	179	194	188	100
Penneshaw WTP	<0.0001	0.0002	0.0001	100	100	78	94	89	100
Penola IRP	0.0006	0.0026	0.0012	100	100	312	333	321	0.0
Pinnaroo IRP	<0.0001	0.0003	0.0002	100	100	250	263	254	0.0
Port MacDonnell	0.0007	0.0009	0.0008	100	100	19	23	22	100
Quorn	<0.0001	0.0045	0.0012	100	100	491	532	511	0.0
Renmark WTP	0.0012	0.0115	0.0044	100	100	50	125	81	100
Robe IRP	<0.0001	0.0006	0.0002	100	100	123	138	129	100
Summit WTP	0.0009	0.0197	0.0058	100	100	47	131	81	100
Swan Reach Town WTP	0.0009	0.0022	0.0015	100	100	47	106	78	100
Swan Reach WTP	0.0009	0.0115	0.0050	100	100	65	129	94	100
Tailem Bend WTP	0.0002	0.0070	0.0027	100	100	53	116	85	100
Tarpeena IRP	0.0004	0.0010	0.0006	100	100	395	415	405	0.0
Waikerie WTP	0.0049	0.0188	0.0095	100	100	56	125	91	100
Wilmington	0.0003	0.0023	0.0006	100	100	113	124	118	100
Wirrina Cove WTP	0.0025	0.0150	0.0073	100	100	105	196	147	100
Woolpunda WTP	0.0005	0.0026	0.0014	100	100	47	110	75	100

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

#Prior to calculating compliance for health-related chemicals, individual water sample test results are rounded to the same number of significant figures as the ADWG value (as prescribed in the ADWG and endorsed by SA Health).

Table 5

2022-23 regional source water quality — remote Aboriginal communities

System	Total dissolved solids [mg/L]			Hardness — total [mg/L]			pH [pH units]		
	Min	Max	Ave*	Min	Max	Ave*	Min	Max	Ave*
Amata	491	1100	714	282	553	392	7.3	8.0	7.8
Davenport^	-	-	-	-	-	-	-	-	-
Gerard#	-	-	-	-	-	-	-	-	-
Indulkana	874	1520	1320	316	548	456	6.7	7.3	7.0
Kalka	510	616	566	321	381	346	7.6	8.1	7.9
Kaltjiti	1050	1300	1140	294	353	320	7.7	8.0	7.8
Mimili	913	1120	1040	161	258	226	7.7	7.9	7.8
Murputja complex	750	1360	994	299	482	370	7.4	8.1	7.8
Nepabunna+	-	-	-	-	-	-	-	-	-
Oak Valley+	-	-	-	-	-	-	-	-	-
Pipalyatjara	666	745	706	400	471	436	7.8	7.8	7.8
Pt Pearce^	-	-	-	-	-	-	-	-	-
Pukatja	392	700	548	212	316	263	7.5	8.0	7.8
Raukkan^	-	-	-	-	-	-	-	-	-
Umuwa	343	424	388	232	275	250	7.6	8.2	8.0
Watinuma	834	947	891	350	521	436	7.6	7.7	7.7
Yalata	8690	9270	8970	3320	3510	3430	6.7	6.9	6.8
Yunyarinyi	360	566	464	214	302	245	7.7	7.8	7.8

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

^System supplied from another SA Water supply. Refer to data in Table 3 regional — country source water quality. Davenport supplied from Morgan WTP, Pt Pearce supplied from Morgan WTP & Swan Reach WTP and Raukkan supplied from Tailem Bend WTP.

#Refer to Loxton WTP data in Table 3 regional — country source water quality.

+System sourced from rainwater.

Table 5 continued

System	Colour – true (456 nm) [HU]			Fluoride [mg/L]			Nitrate + nitrite as nitrogen [mg/L]			Turbidity [NTU]		
	Min	Max	Ave*	Min	Max	Ave*	Min	Max	Ave*	Min	Max	Ave*
Amata	<1	<1	<1	0.60	1.2	0.94	1.15	7.28	3.42	<0.10	1.3	0.23
Davenport^	-	-	-	-	-	-	-	-	-	-	-	-
Gerard#	-	-	-	-	-	-	-	-	-	-	-	-
Indulkana	<1	1	<1	0.43	0.54	0.47	0.005	8.34	5.08	<0.10	28	7.6
Kalka	<1	1	<1	0.48	1.1	0.87	4.56	8.69	6.09	<0.10	34	5.8
Kaltjiti	<1	<1	<1	1.3	1.7	1.5	7.03	10.1	8.06	<0.10	0.11	<0.10
Mimili	<1	1	<1	1.8	2.3	2.1	5.82	15.8	13.0	<0.10	1.1	0.34
Murputja complex	<1	<1	<1	1.6	3.1	2.2	2.28	6.60	4.36	0.10	2.0	0.46
Nepabunna+	-	-	-	-	-	-	-	-	-	-	-	-
Oak Valley+	-	-	-	-	-	-	-	-	-	-	-	-
Pipalyatjara	<1	<1	<1	0.33	0.77	0.55	5.65	6.57	6.11	0.14	0.15	0.15
Pt Pearce^	-	-	-	-	-	-	-	-	-	-	-	-
Pukatja	<1	<1	<1	1.1	2.0	1.4	0.565	2.10	1.13	<0.10	0.61	0.16
Raukkan^	-	-	-	-	-	-	-	-	-	-	-	-
Umuwa	<1	<1	<1	0.85	1.0	0.91	1.84	5.62	3.78	<0.10	<0.10	<0.10
Watinuma	<1	<1	<1	1.1	1.4	1.3	3.37	3.79	3.58	<0.10	<0.10	<0.10
Yalata	<1	<1	<1	0.42	0.74	0.57	0.667	1.10	0.956	1.9	4.2	2.9
Yunyarinyi	<1	<1	<1	1.7	1.8	1.7	2.18	8.16	4.77	<0.10	0.10	<0.10

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

^System supplied from another SA Water supply. Refer to data in Table 3 regional – country source water quality. Davenport supplied from Morgan WTP, Pt Pearce supplied from Morgan WTP & Swan Reach WTP and Raukkan supplied from Tailem Bend WTP.

#Refer to Loxton WTP data in Table 3 regional – country source water quality.

+System sourced from rainwater.

Table 6

2022-23 regional drinking water distribution systems – remote Aboriginal communities customer tap water quality against Australian Drinking Water Guidelines

System	*E. coli* [per cfu/100 mL]		Total dissolved solids [mg/L]			
	Samples	Health compliance %#	Min	Max	Ave*	Aesthetic compliance %
ADWG value	-	++				≤600
Amata	4	100	739	739	739	0.0
Davenport	12	100	185	185	185	100
Gerard	51	100	238	305	264	100
Indulkana	4	100	89	89	89	100
Kalka	4	100	599	599	599	100
Kaltjiti	4	100	432	432	432	100
Mimili	4	100	257	257	257	100
Murputja complex	8	100	260	266	264	100
Nepabunna	4	100	20	20	20	100
Oak Valley	4	100	14	14	14	100
Pipalyatjara	4	100	722	722	722	0.0
Pt Pearce	13	100	201	201	201	100
Pukatja	4	100	616	616	616	0.0
Raukkan	12	100	175	175	175	100
Umuwa	4	100	359	359	359	100
Watinuma	4	100	851	851	851	0.0
Yalata	4	100	153	153	153	100
Yunyarinyi	4	100	33	33	33	100

++*E. coli* should not be detected.

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

Table 6 continued

System	Chlorine residual – free [mg/L]^				Chlorine residual – total [mg/L]†			
	Min	Max	Ave*	Health compliance %#	Min	Max	Ave*	Health compliance %#
ADWG value				≤ 5				≤ 5
Amata	-	-	-	-	-	-	-	-
Davenport	-	-	-	-	<0.1	3.0	1.3	100
Gerard	<0.1	1.6	0.5	100	-	-	-	-
Indulkana	-	-	-	-	-	-	-	-
Kalka	-	-	-	-	-	-	-	-
Kaltjiti	-	-	-	-	-	-	-	-
Mimili	-	-	-	-	-	-	-	-
Murputja complex	-	-	-	-	-	-	-	-
Nepabunna	-	-	-	-	-	-	-	-
Oak Valley	-	-	-	-	-	-	-	-
Pipalyatjara	-	-	-	-	-	-	-	-
Pt Pearce	-	-	-	-	1.2	3.4	2.3	100
Pukatja	-	-	-	-	-	-	-	-
Raukkan	-	-	-	-	1.5	3.5	2.5	100
Umuwa	-	-	-	-	-	-	-	-
Watinuma	-	-	-	-	-	-	-	-
Yalata	-	-	-	-	-	-	-	-
Yunyarinyi	-	-	-	-	-	-	-	-

The majority of remote Aboriginal communities use ultraviolet light as the mode of primary disinfection.

^Chlorinated systems only.

†Chloraminated systems only.

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

#Prior to calculating compliance for health-related chemicals, individual water sample test results are rounded to the same number of significant figures as the ADWG value (as prescribed in the ADWG and endorsed by SA Health).

Table 6 continued

System	Colour – true (456 nm) [HU]				Turbidity [NTU]			
	Min	Max	Ave*	Aesthetic compliance %	Min	Max	Ave*	Aesthetic compliance %
ADWG value				≤ 15				≤ 5
Amata	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Davenport^	-	-	-	-	0.10	0.46	0.24	100
Gerard	<1	4	2	100	0.23	4.5	1.5	100
Indulkana	<1	<1	<1	100	0.44	1.3	0.84	100
Kalka	<1	<1	<1	100	<0.10	0.92	0.27	100
Kaltjiti	<1	<1	<1	100	<0.10	0.10	<0.10	100
Mimili	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Murputja complex	<1	<1	<1	100	<0.10	0.13	<0.10	100
Nepabunna	<1	<1	<1	100	0.23	5.2	1.9	75.0
Oak Valley	<1	<1	<1	100	0.11	0.17	0.15	100
Pipalyatjara	<1	<1	<1	100	<0.10	0.10	<0.10	100
Pt Pearce^	-	-	-	-	<0.10	0.11	<0.10	100
Pukatja	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Raukkan^	-	-	-	-	<0.10	0.21	0.12	100
Umuwa	<1	<1	<1	100	<0.10	0.12	<0.10	100
Watinuma	<1	<1	<1	100	<0.10	0.18	<0.10	100
Yalata	<1	<1	<1	100	<0.10	0.20	0.11	100
Yunyarinyi	<1	<1	<1	100	<0.10	0.69	0.38	100

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

^System supplied from another SA Water supply. Refer to data in Table 4 country customer tap water quality. Davenport supplied from Morgan WTP, Pt Pearce supplied from Morgan/Swan Reach WTP and Raukkan supplied from Tailem Bend WTP.

Table 6 continued

System	pH [pH units]				Trihalomethanes – total [µg/L]^			
	Min	Max	Ave*	Aesthetic compliance %	Min	Max	Ave*	Health compliance %#
ADWG value				6.5 - 8.5				≤ 250
Amata	8.1	8.1	8.1	100	-	-	-	-
Davenport†	7.7	8.8	8.5	50.0	-	-	-	-
Gerard	7.4	8.8	7.9	96.7	83	163	126	100
Indulkana	7.5	7.5	7.5	100	-	-	-	-
Kalka	8.0	8.0	8.0	100	-	-	-	-
Kaltjiti	7.6	7.6	7.6	100	-	-	-	-
Mimili	7.6	7.6	7.6	100	-	-	-	-
Murputja complex	7.8	8.2	8.0	100	-	-	-	-
Nepabunna	7.0	7.0	7.0	100	-	-	-	-
Oak Valley	6.8	6.8	6.8	100	-	-	-	-
Pipalyatjara	7.9	7.9	7.9	100	-	-	-	-
Pt Pearce†	8.5	9.4	9.0	8.3	-	-	-	-
Pukatja	7.8	7.8	7.8	100	-	-	-	-
Raukkan†	8.4	9.0	8.8	16.7	-	-	-	-
Umuwa	8.3	8.3	8.3	100	-	-	-	-
Watinuma	7.8	7.8	7.8	100	-	-	-	-
Yalata	7.7	7.7	7.7	100	-	-	-	-
Yunyarinyi	7.8	7.8	7.8	100	-	-	-	-

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

^Chlorinated systems only.

#Prior to calculating compliance for health-related chemicals, individual water sample test results are rounded to the same number of significant figures as the ADWG value (as prescribed in the ADWG and endorsed by SA Health).

†Chloraminated systems are run at a higher pH to improve chlorine residual persistence.

Table 6 continued

System	Fluoride [mg/L]				Iron – total [mg/L]			
	Min	Max	Ave*	Health compliance %#	Min	Max	Ave*	Aesthetic compliance %
ADWG value				≤ 1.5				≤ 0.3
Amata	0.85	0.97	0.92	100	0.0024	0.0024	0.0024	100
Davenport^	-	-	-	-	-	-	-	-
Gerard	0.70	0.78	0.73	100	0.0960	0.7617	0.3906	50.0
Indulkana	<0.10	<0.10	<0.10	100	0.0487	0.0487	0.0487	100
Kalka	1.0	1.0	1.0	100	0.0298	0.0298	0.0298	100
Kaltjiti	0.50	1.5	0.77	100	<0.0005	<0.0005	<0.0005	100
Mimili	0.50	0.77	0.64	100	<0.0005	<0.0005	<0.0005	100
Murputja complex	0.58	0.77	0.68	100	0.0007	0.0007	0.0007	100
Nepabunna	<0.10	<0.10	<0.10	100	0.2628	0.2628	0.2628	100
Oak Valley	<0.10	<0.10	<0.10	100	0.0009	0.0009	0.0009	100
Pipalyatjara	0.61	0.61	0.61	100	0.0010	0.0010	0.0010	100
Pt Pearce^	-	-	-	-	-	-	-	-
Pukatja	1.0	1.6	1.4	50.0	0.0015	0.0015	0.0015	100
Raukkan^	-	-	-	-	-	-	-	-
Umuwa	0.89	0.89	0.89	100	0.0057	0.0057	0.0057	100
Watinuma	1.2	1.4	1.3	100	<0.0005	<0.0005	<0.0005	100
Yalata	<0.10	<0.10	<0.10	100	0.0013	0.0013	0.0013	100
Yunyarinyi	<0.10	1.4	0.39	100	-	-	-	-

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

#Prior to calculating compliance for health-related chemicals, individual water sample test results are rounded to the same number of significant figures as the ADWG value (as prescribed in the ADWG and endorsed by SA Health).

^System supplied from another SA Water Supply. Refer to data in Table 4 country customer tap water quality. Davenport supplied from Morgan WTP, Pt Pearce supplied from Morgan/Swan Reach WTP and Raukkan supplied from Tailem Bend WTP.

Table 6 continued

System	Manganese – total [mg/L]					Hardness – total [mg/L]			
	Min	Max	Ave*	Health compliance %#	Aesthetic compliance %	Min	Max	Ave*	Aesthetic compliance %
ADWG value				≤ 0.5	≤ 0.1				≤ 200
Amata	<0.0001	<0.0001	<0.0001	100	100	410	410	410	0.0
Davenport^	-	-	-	-	-	-	-	-	-
Gerard	0.0040	0.0249	0.0118	100	100	68	110	93	100
Indulkana	0.0014	0.0014	0.0014	100	100	58	58	58	100
Kalka	0.0197	0.0197	0.0197	100	100	369	369	369	0.0
Kaltjiti	<0.0001	<0.0001	<0.0001	100	100	118	118	118	100
Mimili	<0.0001	<0.0001	<0.0001	100	100	48	48	48	100
Murputja complex	0.0002	0.0002	0.0002	100	100	92	97	94	100
Nepabunna	0.0068	0.0068	0.0068	100	100	6	6	6	100
Oak Valley	0.0014	0.0014	0.0014	100	100	4	4	4	100
Pipalyatjara	<0.0001	<0.0001	<0.0001	100	100	418	418	418	0.0
Pt Pearce^	-	-	-	-	-	-	-	-	-
Pukatja	<0.0001	<0.0001	<0.0001	100	100	270	270	270	0.0
Raukkan^	-	-	-	-	-	-	-	-	-
Umuwa	0.0002	0.0002	0.0002	100	100	241	241	241	0.0
Watinuma	<0.0001	<0.0001	<0.0001	100	100	466	466	466	0.0
Yalata	<0.0001	<0.0001	<0.0001	100	100	109	109	109	100
Yunyarinyi	-	-	-	-	-	-	-	-	-

*Limit of reporting (LOR) values replaced with half LOR prior to calculating average.

#Prior to calculating compliance for health-related chemicals, individual water sample test results are rounded to the same number of significant figures as the ADWG value (as prescribed in the ADWG and endorsed by SA Health).

^System supplied from another SA Water Supply. Data available in Country Supply Table 4. Davenport supplied from Morgan WTP, Pt Pearce supplied from Morgan/Swan Reach WTP and Raukkan supplied from Tailem Bend WTP.

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