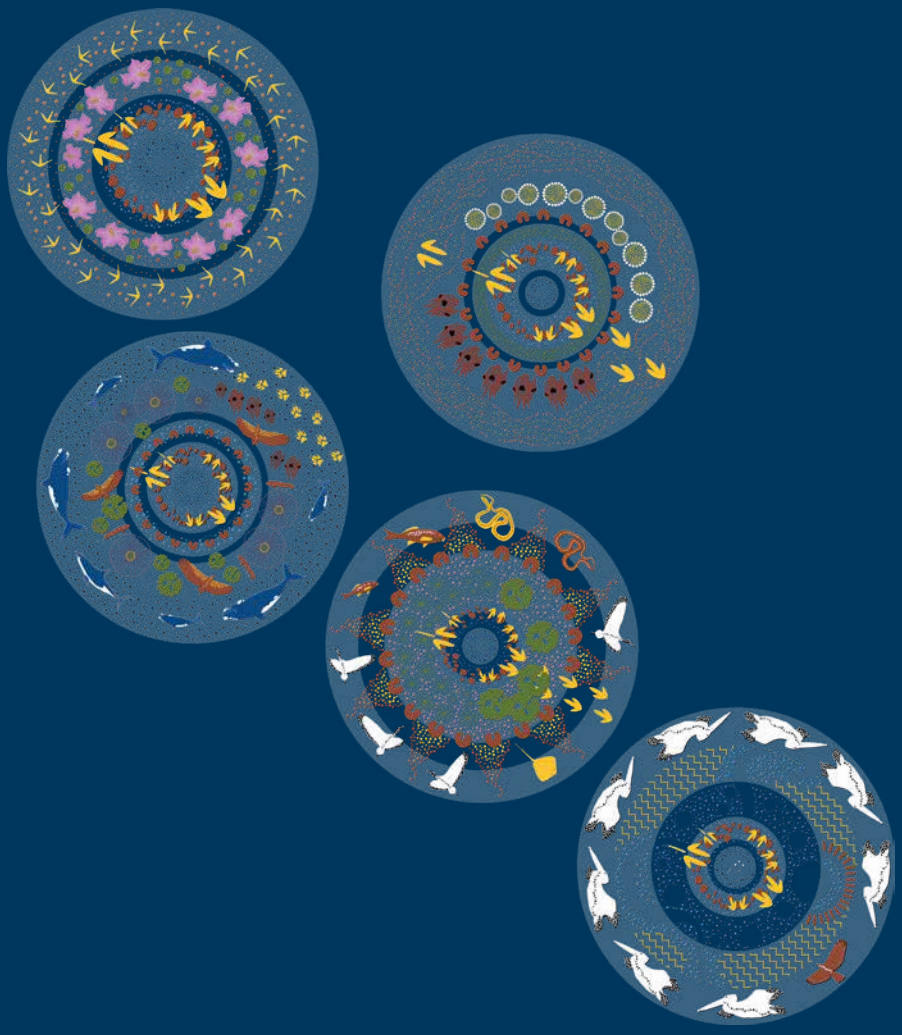
2021-22 South Australian Water Corporation Annual Report

For the year ending
30 June 2022

SA Water



Acknowledgement of Country

SA Water acknowledges the Traditional Owners of Country throughout South Australia and in other areas of Australia where we operate. We 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

Friday, 30 September 2022

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 2022.

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

A message from the incoming Chair

In ordinary circumstances, a Chair of the Board would reflect on the year past and contemplate the year ahead. Having been appointed in the new reporting year, I will rely on David Ryan as Chief Executive to provide commentary on the year in review and, more usefully, I will write about the challenges ahead.

SA Water is central to the well-being and prosperity of South Australians. It is a big business and a major employer. It provides essential water and wastewater services to almost every community in the state. SA Water is a state-owned corporation providing a financial dividend to the government. It is regulated by the Essential Services Commission of South Australia and, while it has a degree of independence in operation, it must satisfy the legitimate expectations of the government. However, it is a long-term business, and a careful balance has to be struck between the prices customers are charged, the dividend the government is paid, the investment made in infrastructure, and the service standards set and delivered. Of course, we must also concern ourselves with sustainable practice, aiming for net zero carbon emissions, and anticipating and managing the impacts of climate change. Wise investment now and prudent financial management will safeguard our operations and prepare us for an uncertain future.

An effective board will help navigate the complexities of a state-owned enterprise that has to balance these many factors in conducting its business. A good board will oversee the operations of SA Water with the main objective of ensuring the business is run properly through good strategy, sound governance, an appropriate culture, and effective relationships within and outside government.

I come to the role of Chair after a career in public service, predominantly in the management of the environment and natural resources. As a long-term Chief Executive, I understand the particular challenges of working in government, the value of trust, openness, and respect, and I look forward to contributing to this important enterprise.

The last year has provided more than its fair share of challenges. The pandemic, growing inflation rates, resource scarcity, a tight employment market, and escalation in energy costs, have all had their impacts. The future will continue to challenge us. The Commonwealth Scientific and Industrial Research Organisation (CSIRO), in its once-in-a-decade report, Our Future World, draws attention to seven megatrends that will shape our future. Almost all of these will affect the way SA Water does its business, especially adapting to climate change; moving to be leaner, cleaner, and greener (as resource constraints bite); diving into the digital; and becoming increasingly autonomous (the impact of artificial intelligence). We must embrace this future or risk failing in our business.

To conclude, I acknowledge the contribution of all Board members and thank David Ryan and his Executive team for their 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

Our business remained strong in 2021-22, despite steep increases in electricity costs and significant financial outlay for our new Adelaide Service Delivery contracts. We remain a significant contributor to the economy and government, with $208.9 million paid in 2021-22.

As we continue to deliver Our Strategy 2020-25 in this time of sustained change, our people and our business have remained strong and steady in 2021-22. I am proud of how we have continuously adapted to respond to challenges. Recognising the opportunities this transformative point in history has presented, we launched several corporate strategies, focusing on Customer and Community, Environment, Technology, and People and Safety. These corporate strategies set ambitious targets in key areas to deliver trusted water services for a sustainable and healthy South Australia, and include our commitment to net zero emissions, base load requirements operating on 100 per cent renewable energy and year on year net improvements in biodiversity on our landholdings by 2030.

We made great progress with our Stretch Reconciliation Action Plan 2020-25 and invested $7.98 million with Aboriginal businesses in 2021-22, comprising a direct spend of $1.16m and indirect spend of $6.82 million. In September 2021, we delivered a new, state-of-the-art desalination plant at Yalata on the state's far west coast which is now supplying water to local residents and businesses in the Aboriginal community. We also commissioned a replacement desalination plant and new solar installation at Kaltjiti in the Anangu Pitjantjatjara Yankunytjatjara Lands in

June 2022, making real improvements to liveability in Aboriginal communities.

Our fourth diversity employee network group, Able Together, was launched in April 2022, delivering an action committed to in our Disability Assess and Inclusion Plan. This advisory group is building a sense of community and awareness for accessibility in our workplace and community. I look forward to seeing how Able Together helps us build a more diverse and inclusive business that supports not only our people, but also the diverse access needs of our communities and customers.

On the state and national stage, we continue to be recognised as a leading utility. Among accolades received in 2021-22, we were the only major utility and the only organisation to be recognised with two awards at the National Australian Water Association Awards when our Zero Cost Energy Future program won the Infrastructure Project Innovation (metro) Award and the Our Customers Program took out the Customer Experience Award.

A year in, the successful Adelaide Service Delivery partnerships are going strong. This new way of operating for our business set high expectations for both the Production and Treatment Alliance with SUEZ and the Field Operations Metro partnership with ServiceStream. I'm pleased with its success, with consistent achievement of customer service targets, despite the expected challenges of implementing a new operating model, the ongoing COVID-19 pandemic and resulting supply chain and workforce constraints.

One of the largest government contracts for project and program management services in the state, our innovative Capital Works Plan Program model went from strength to strength in 2021-22 and continued to deliver efficiencies. Together with our joint venture partners, KBR and Aurecon, we're getting on with the business of delivering essential water projects for South Australia. From dam upgrades and water tank refurbishments to sewerage network main replacements and water and wastewater treatment upgrades, this joint venture is resulting in an adaptive, efficient, and creative team producing culturally sensitive and environmentally sustainable outcomes.

Through extreme weather events in 2021-22 our people demonstrated their commitment to our customers and communities. Fires in the south-east of South Australia and flooding across large areas of the normally arid north and west in January 2022 saw some places receiving more rain in two days than they'd normally receive in a year. Many teams across our business worked quickly, efficiently, and tirelessly to minimise impacts to our customers from these extreme events.

In all conditions, all our people work to make life flow for our customers and communities. On behalf of the Executive, thank you for your commitment to the business of ensuring we deliver for our customers right across South Australia.

I also thank Andrew Fletcher for his service and support as Chair of the SA Water Board for the past four years. I wish him well in his future endeavours.

I extend a warm welcome to Allan Holmes, our incoming Chair, whose invaluable experience will be instrumental in our continued delivery of trusted water services for a sustainable and healthy South Australia.

David Ryan
Chief Executive

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About SA Water

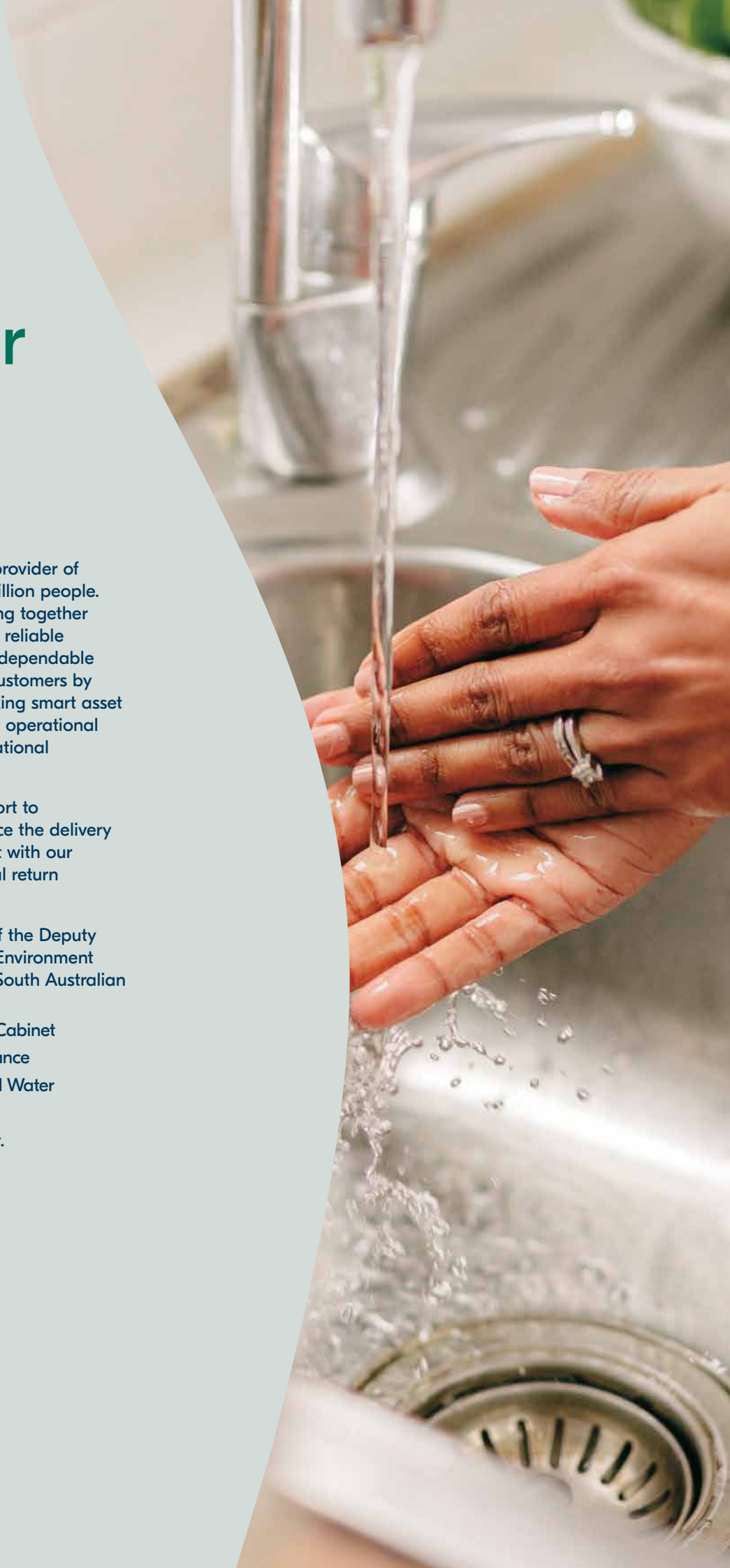
Our organisation

We are South Australia's leading provider of water services for more than 1.7 million people. For 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.

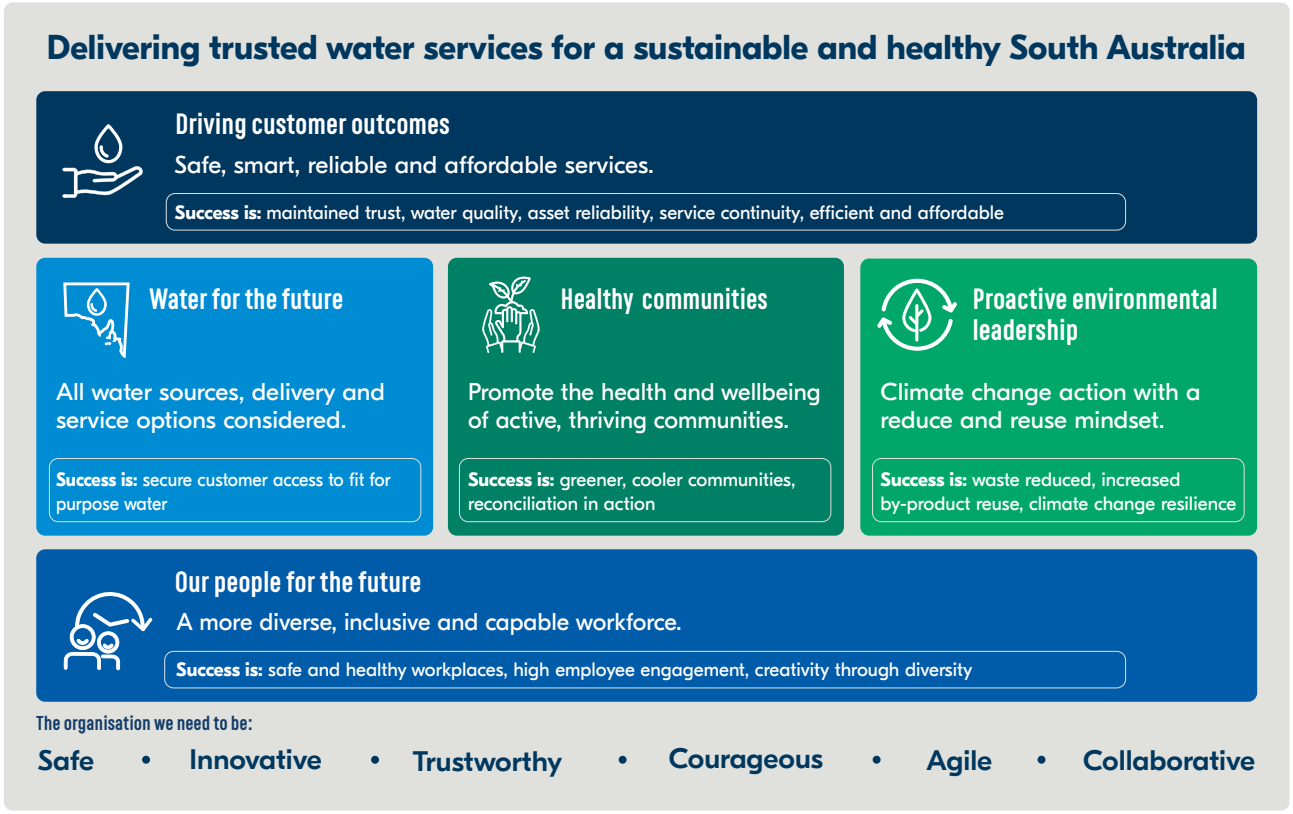


We are South Australia's leading provider of water services for more than 1.7 million people.

Our strategy

Our Strategy 2020-25 sets a clear direction and charts our course for five 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.



Our services

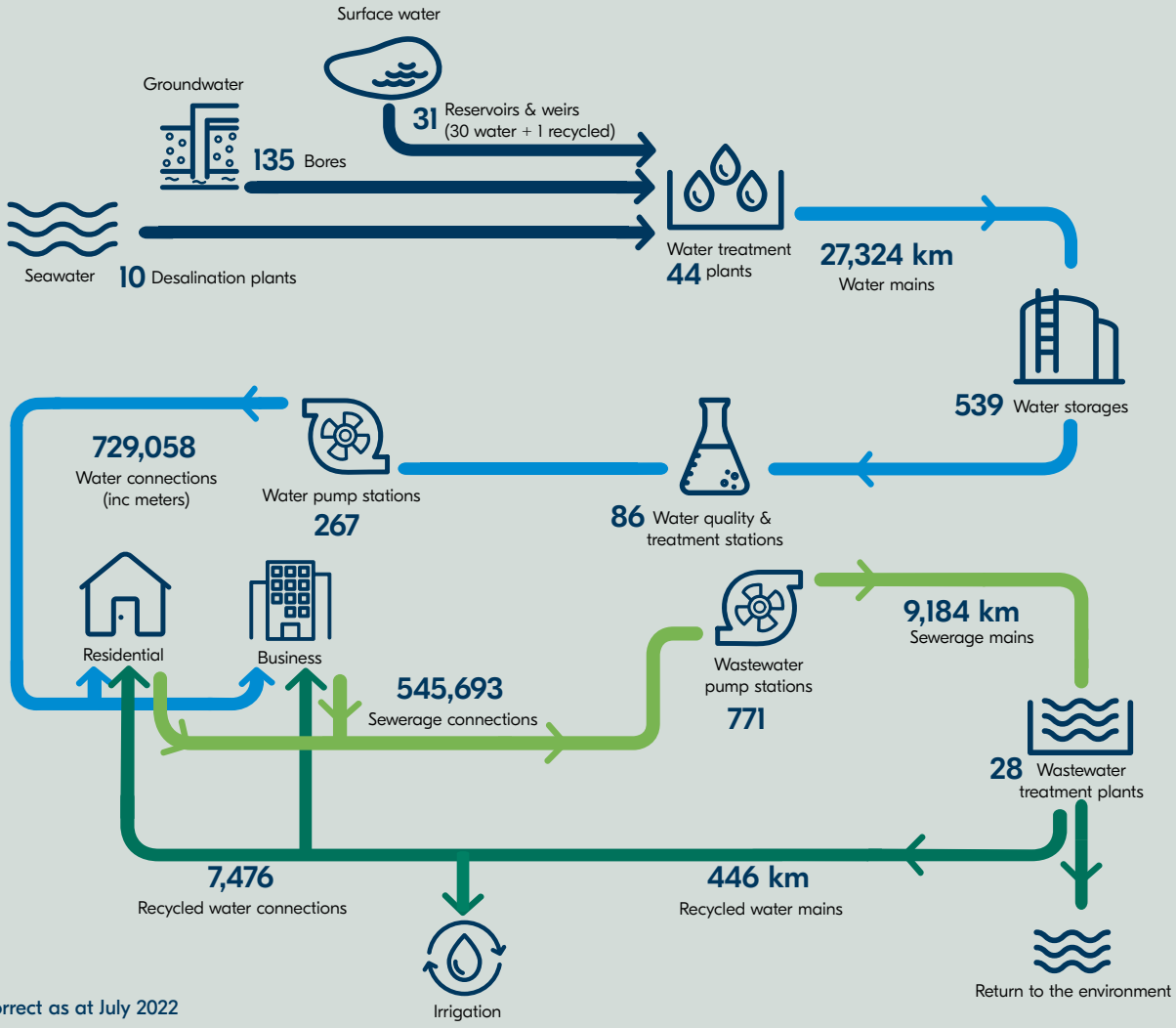
Every day, we provide essential water services to cities, suburbs and towns across South Australia.

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 on our efficiency commitment, 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.

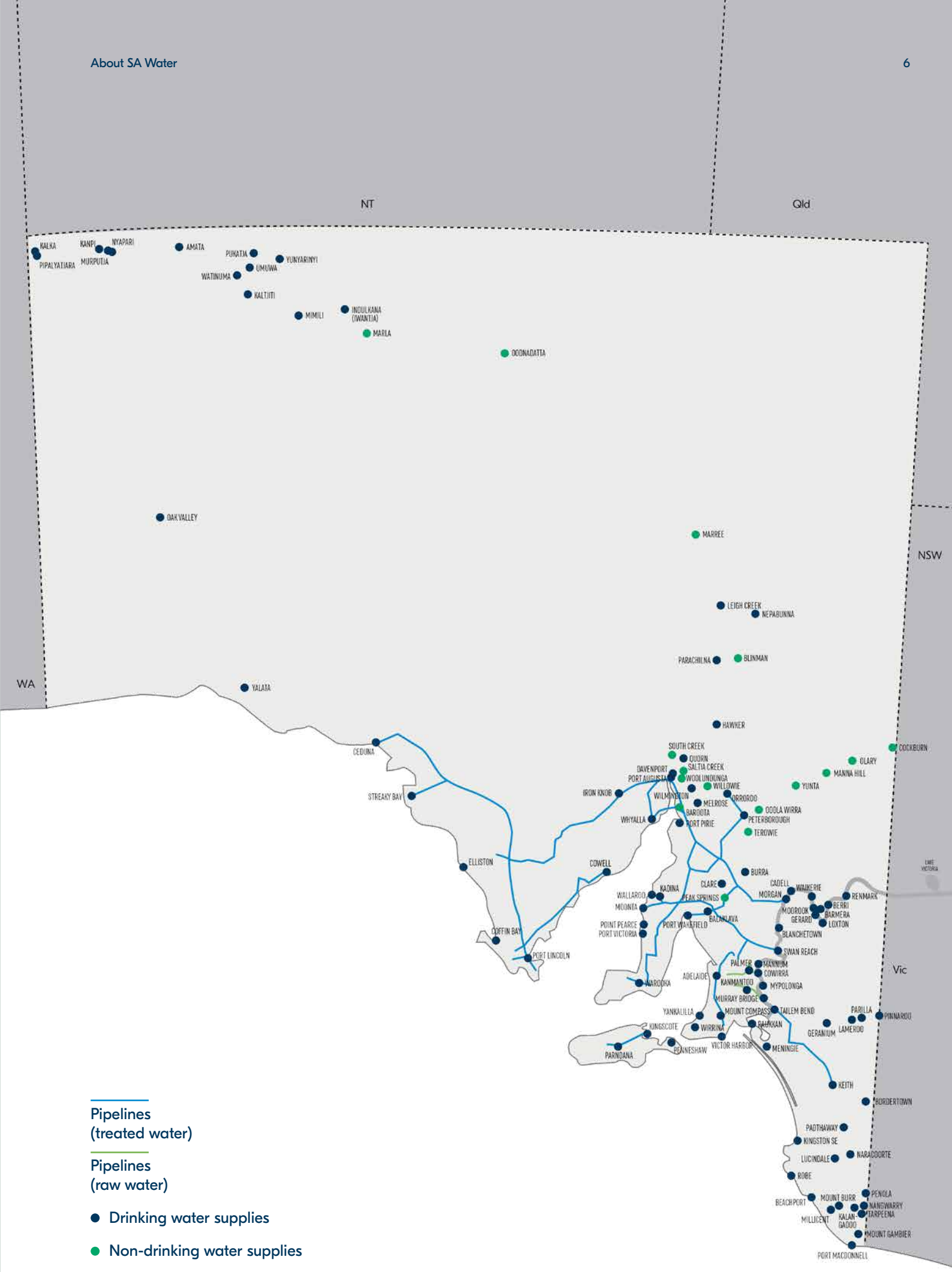
Of Australia's water utilities, we are the custodians of the longest water mains supply network at more than 27,000 kilometres. In addition, we manage more than 9,000 kilometres of sewerage mains and a 446-kilometre-long recycled water network.

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 networks and assets



Correct as at July 2022



Pipelines (treated water)

Pipelines (raw water)

- Drinking water supplies
- Non-drinking water supplies

Year in review

Highlights

206+ billion litres of water was supplied to 729,058 homes and businesses

89.6 kilometres of new water mains installed

432,000+ visitors to reservoir reserves

94% of customers satisfied with a recent service experience

3% reduction in the number of water main incidents year on year

46,068 samples collected from drinking water and analysed

$463.4 million capital investment

100% reuse of all suitable biosolids generated from our wastewater treatment plants

100% regional and 98% metropolitan water quality responsiveness

99% responsiveness to high-priority water events

124,451 megawatt hours of energy created by 194,397 new solar panels

100% compliance with our legislative and regulated environmental protection responsibilities

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.

Sustaining and expanding our networks

We continue to focus on improving our water and wastewater infrastructure assets and invest in major infrastructure projects, with a total $442.9 million investment in infrastructure in 2021-22.

As part of the total infrastructure investment and our ongoing work to maintain and sustain our pipe networks, we invested $90.1 million in our water pipe network and infrastructure, and $20.1 million in our wastewater pipe network and infrastructure.

Through our water main management program, in 2021-22 we installed approximately 89.6 kilometres of new water mains with 28.5 kilometres laid in metropolitan Adelaide and 61.1 kilometres in country areas of the state.

Our four-year, $155 million water main management program led to the install of new water mains throughout the state, including:

- 1,800 meters in Stirling North
- 1,800 meters in Redbanks
- 1,193 meters in Wokurna
- 1,000 meters in Woodchester
- 800 meters in Woodside
- 630 meters in Pooraka
- 600 meters in Port Pirie West
- 580 meters in Upper Hermitage
- 570 meters in Queenstown
- 450 meters in Ridgehaven.

Planning and procurement for a major renewal of up to 14 kilometres of our Morgan to Whyalla Pipeline began in April 2022 as part of our $62 million investment securing reliable water services for 100,000 regional customers into the future.

In February 2022, the City of Tea Tree Gully endorsed a plan to transition around 4,700 properties from the council-run community wastewater management scheme to our sewer network by 2028.

Lifting the lid for improved digestion

One of the largest crane lifts in our history, the successful lift of a 115 tonne digester roof, was the culmination of 12 months of planning and part of a $4.7 million upgrade of one of anaerobic digesters at Bolivar Wastewater Treatment Plant. The upgrade, expected to be completed in December 2022, will improve the digester's performance by enhancing the insulation of the cover ensuring an optimal internal environment for the digestion process.

Bolivar Wastewater Treatment Plant digester roof lift.

Keeping prices low and stable

Water use pricing for residential and business customers and minimum sewerage access charges for all customers increased by 1.1 per cent in 2021-22, aligned with the Consumer Price Index.

Statewide pricing means the majority of our customers pay the same price per kilolitre of water, no matter where they live or the actual cost of supplying that location. Sewerage prices also increased by 1.1 per cent on average in 2021-22, with actual prices based on the overall capital value of customer properties. This process ensures we do not achieve a windfall revenue gain through increasing property values, and that prices are as consistent as possible across the state.

UV lighting up water treatment at Happy Valley

Since December 2021, the southern hemisphere's largest drinking water ultraviolet (UV) disinfection system has been supplying safe, clean drinking water for nearly half a million South Australians. Secondary disinfection with UV light provides an additional layer of water quality protection against potentially harmful pathogens. As part of a $26 million upgrade, our Happy Valley Water Treatment Plant was retrofitted with four reactors with a combined 624 UV lamps, able to treat up to 600 megalitres of water each day instantaneously.

Chloramination coup for Fleurieu customers

From December 2021, water quality for 25,000 homes and businesses across the Fleurieu Peninsula was improved with chloramination.

Project Coordinator David Flaherty and Plant Supervisor Ian Holmes at Happy Valley Water Treatment Plant with UV disinfection reactor.

The disinfection process for water stored in the Myponga Reservoir and supplied to large parts of the region – from Victor Harbor and Encounter Bay through to Middleton, Goolwa and Hindmarsh Island, as well as Willunga, Sellicks Beach and parts of Aldinga Beach – now provides a better quality supply of tap water. This improvement reduces disinfection by-product levels, while ensuring bacteria and other naturally occurring harmful pathogens are destroyed within the drinking water systems.

Adelaide Service Delivery partnerships

On 1 July 2021, new contracts came into effect with Lendlease Services, now part of ServiceStream, for the delivery of field services in metropolitan Adelaide, and with SUEZ for the operation of five water treatment plants and four wastewater treatment plants.

These Adelaide Service Delivery partnerships aim to ensure stability, performance and value for money and are structured with initial four- and five-year terms respectively and extensions able to be exercised subject to the consistent achievement of customer service targets.

In 2021-22, our Production and Treatment Alliance with SUEZ has:

- delivered a record volume of biosolids to our local farmers
- improved processes through chemical optimisation across all treatment plants
- introduced real-time software solutions dedicated to the management of the performance of drinking water networks and to the preservation of water resources
- supported our capital works program and delivery of a significant amount of minor works.

The Anstey Hill Water Treatment Plant's conventional treatment of water from the River Murray or Millbrook Reservoir was also named the best in the state. Hosted by the Water Industry Operators Association of Australia in November 2021, the Ixom 2021 Best Tasting Tap Water in Australia Awards named the tap water supplied to 642,000 customers in the Adelaide region the most aesthetically pleasing in South Australia.

Our Field Operations Metro partnership with ServiceStream has also seen many successes in 2021-22, including:

- completing 105,000 workorders for customers with an average satisfaction score of 93 per cent
- more than 500 customer compliments
- the rapid mobilisation of three depots in six weeks in response to COVID-19, which enabled the safety of crews while continuing to provide a reliable service for customers.

Maintaining our sewers

We invested $1.67 million to proactively clean and inspect approximately 126 kilometres of wastewater gravity mains using closed-circuit television investigations in environmental hotspot areas.

Our tree root barrier installation program continued in 2021-22 at 12 new locations across metropolitan Adelaide to cost-effectively prevent root intrusions that cause chokes and overflows with minimal customer disruption.

Modernising customer service

At 30 June 2022, there were 272,201 properties receiving eBills, up from 235,842 the previous year and 183,878 properties were registered with mySAWater, our online account management service.

Customer-centric enhancements were made in 2021-22 to mySAWater, where customers can view bills, check water use and manage payments, with new functions introduced to increase automated services, including:

- one-time code logon capability
- viewing and exporting historic account summaries
- personalised alerts and notifications
- general and billing enquiries and refund requests
- requests for payment assistance
- allowances for high water use and leakage.

Self-service functionality, two-way communications and accessibility on our website also enhanced the customer experience in 2021-22, including:

- expanded web chat functionality for inbound customer communications
- new styling of online forms to meet best practice and improve accessibility
- new web forms, including requests for past bills and refunds
- improvements to our homepage and search functionality.

The quality of our customer data underpins our critical customer service functions such as billing, debt recovery and customer service. Use of artificial intelligence to automatically detect, prevent and merge duplicate customer records began in 2021-22.

Hundreds of thousands of records were analysed and a 40 per cent reduction of duplicate records was achieved in the first month of implementation, enabling us to be more confident in the customer data we store, and knowledgeable to improve the service provided to our customers.

The quality of our customer data underpins our critical customer service functions such as billing, debt recovery and customer service.

Customer-centric enhancements made to mySAWater benefit 183,878 properties registered for the online account management service.

Nina Rampal, Shipra Sareen and Corrina Mercure accept the Customer Experience Award at the Australian Water Association Awards.

Centenary celebration

Lock One at Blanchetown marked 100 years of service in April 2022. The lock, situated approximately 270 kilometres from the Murray Mouth, officially completed its first lockage for river traffic on 6 April 1922, which was also the first for the entire lock system.

Award winning customer service

The Our Customers Program was recognised with the Customer Experience Award at the Australian Water Association Awards in May 2022. The Program engages our people's hearts and minds, while supporting leaders to build a culture with our people and our customers at its heart. In 2021-22 our customer satisfaction result, measuring customer satisfaction with recent experience, was 94 per cent.

We were quick to respond to our customers, with:

- 87 per cent of incoming calls about faults answered within the target of 50 seconds
- 97 per cent of connection applications responded to within the target of 20 business days
- 97 per cent of new water connections actioned within the target of 25 business days for standard and 35 business days for non-standard
- 98 per cent of new sewerage connections actioned within the target of 30 business days for standard and 50 business days for non-standard.

Translation at your service

In 2021-22, we launched our Language Aide Program. More than 40 bi-lingual volunteer employees are now providing a face-to-face translation service to help South Australian customers who find it difficult to communicate in English at the redeveloped front counter at SA Water House. Our in-house interpreters are on call to speak with our customers in more than 30 languages, including French, Hindi, Italian, Mandarin and Auslan. This new program complements the free, external phone interpreter service used by around 18 customers per month, with Mandarin and Vietnamese the most requested languages.

Global recognition

In May 2022, we were recognised among the world's top water utilities, winning a distinction for Public Water Agency of the Year at the 2022 Global Water Awards in Spain.

The only Australian organisation shortlisted at the annual event, we were commended particularly for our net zero emissions efforts, work done to provide safe, clean water and education activities to Aboriginal communities around South Australia, and our industry-leading Zero Cost Energy Future initiative.

Timely response to service interruptions

Across our 27,000 km water network, there were 3,517 water main leaks and breaks in 2021-22, representing a three per cent reduction in the number of water main incidents year on year.

The Bureau of Meteorology's National performance report 2020-21: urban water utilities, released in February 2022, shows we performed favourably among our peers, particularly with a reduction in the number of water main leaks and breaks, from 13.5 per 100 kilometres of main in 2019-20 to 13.3 in 2020-21, which is below the national average of 18.9.

In 2021-22, our crews attended 99 per cent of high priority water network breaks and leaks within target timeframes, in both metropolitan and regional areas.

In metropolitan areas, our crews attended 99 per cent of sewer events within target timeframes, and in regional areas they attended 100 per cent within target timeframes.

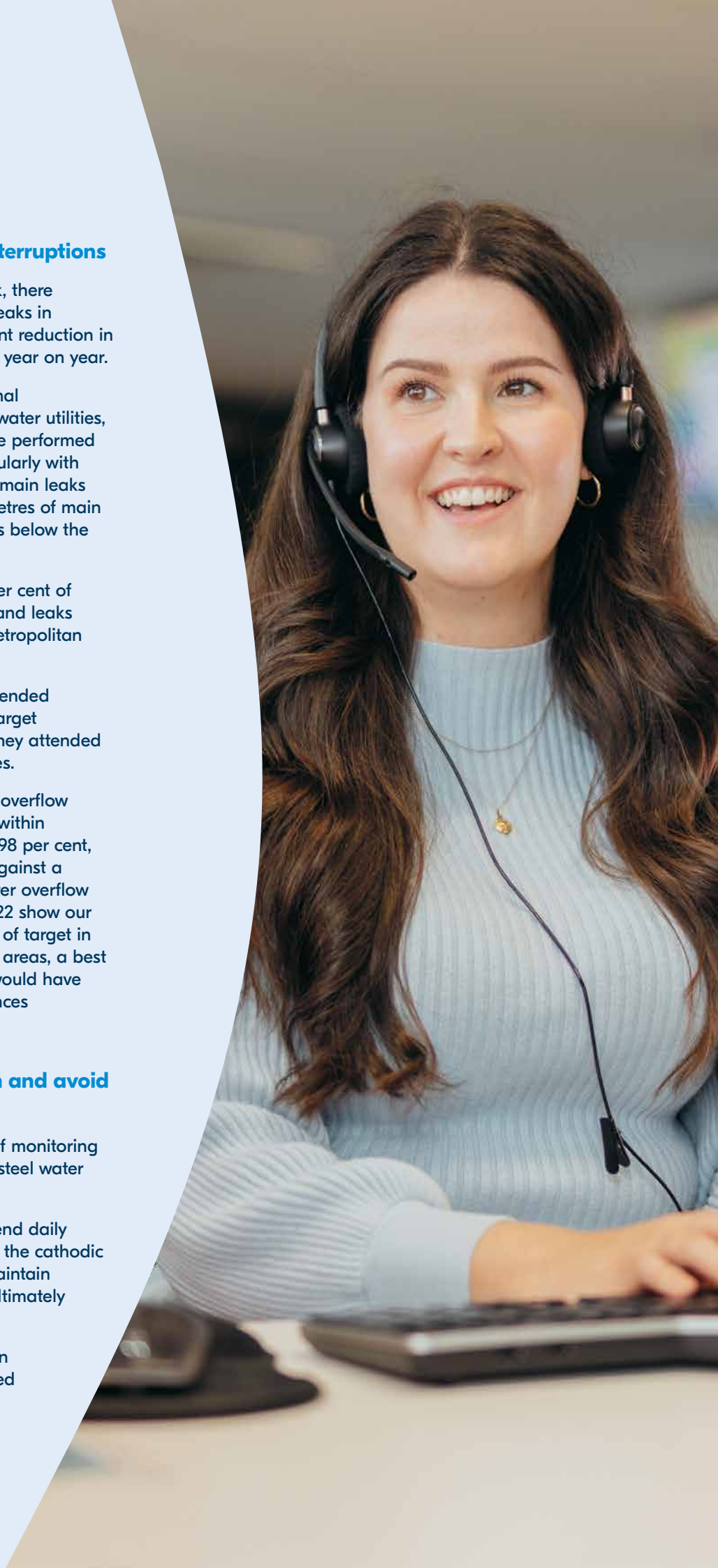
We completed 97 per cent of sewer overflow clean-ups in the metropolitan area within target timelines against a target of 98 per cent, and 98 per cent in regional areas against a target of 99 per cent. While our sewer overflow clean-up timeliness results for 2021-22 show our performance to be within 1 per cent of target in both the metropolitan and regional areas, a best endeavours assessment shows we would have met the target except for circumstances beyond our control.

Smart tech to track corrosion and avoid water main pipe breaks

In 2021-22, we commenced testing of monitoring devices installed on points along a steel water pipe in Happy Valley.

These 10 test points measure and send daily data relating to the performance of the cathodic protection system, allowing us to maintain effective corrosion protection and ultimately avoid water main breaks.

A full trial of the Cathodic Protection Maintenance project will be launched in 2022-23.



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.

Sustainable solutions for remote communities

A new, state-of-the-art desalination plant began operations at Yalata on the state's far west coast in September 2021. It delivered more than five million litres of water to local residents and businesses in the Aboriginal community during its first three months of operation while reducing power consumption by around 400 per cent compared with its predecessor.

A combination of more efficient pumps, economies of scale and scheduling production for times of peak solar radiance, has seen energy consumption fall from an average of 10,000 kilowatt hours per quarter to just over 2,000 kilowatt hours.

At Kaltjiti in the Anangu Pitjantjatjara Yankunytjatjara Lands, a replacement desalination plant and new solar installation was commissioned in June 2022, helping ensure reliable and sustainable drinking water for the community.

Kaltiji Desalination Plant with solar panels.

Improved water security for Kangaroo Island

A new, two-megalitre-a-day capacity seawater desalination plant and distribution network on Kangaroo Island will provide additional water security for the island, improve water quality management and expand the network. Water produced from the new plant will supplement the existing Penneshaw facility and the Middle River Reservoir, supplying the island through a connected drinking water network.

The new distribution network will have capacity to provide new connections to Baudin Beach, Island Beach, Sapphiretown and American River, with the first 14 kilometres of the new trunk main installed in 2021-22.

The new plant and distribution network will also aid firefighting capabilities, with fire plugs installed every two kilometres along the trunk main and every 400 metres along the new pipelines in the newly connected communities. These fire plugs will provide the Country Fire Service with access for firefighting purposes.

Joining forces for a sustainable supply

In February 2022, we entered into a Memorandum of Understanding with the Government of South Australia, BHP and OZ Minerals to investigate the merit of the Northern Water Supply Project. Infrastructure SA is leading the project which will consider the infrastructure investment to create a new sustainable water supply for the far north and Upper Spencer Gulf of South Australia.

Working towards a statewide water resource plan

We engaged with the Department of Environment and Water throughout 2021-22 on the development of South Australia's Water Security Statement, the Urban Water Directions Statement and the Barossa Water Security Strategy, ensuring strategic alignment for healthy, thriving communities and sustainable economic growth for the state.

Engagement with the Goyder Institute's Stormwater Experts Panel Project and involvement in the Stormwater Stakeholder Reference Group ensure our role in the governance, funding, policy arrangements and technical considerations of future options for stormwater in South Australia.

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.

We support stronger Aboriginal and Torres Strait Islander communities by helping to create economic opportunities.

Nicole Zacher, Natasha Wojcik and Sandra Ricci participate in a smoking ceremony at SA Water House for National Reconciliation Week 2022.

National Reconciliation Week 2022 event at the Kadina depot.

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. In 2021-22, we:

- **Supported economic opportunities**
  - We 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. ServiceStream, our metropolitan field operations services provider, recorded 3.64 per cent Aboriginal employment.
  - We spent more than $7.98 million (1.05 per cent of all expenditure) with Aboriginal businesses, comprising a direct spend of $1.16 million and indirect spend of $6.82 million, exceeding our target by almost $2 million.
  - Aboriginal-owned project management business, Zancott Knight, delivered $600,000 of water storage tank upgrades, refurbishing our 28-metre-high concrete elevated water storage in Millicent and upgrading our elevated steel tank in Marla in the state's far north, with the steel structure and platform floor refurbished, external pipework recoated, and the tank's access infrastructure restored.
- **Built a culturally respectful workplace**
  - We continued to provide cultural awareness training for our people with 72 per cent having completed the training as at 30 June 2022.
  - We marked National Reconciliation Week and NAIDOC Week with events in Adelaide, Kadina, Woodside and Murray Bridge, and participated in the Reconciliation Week Breakfast and the NAIDOC Ball. We also supported the NAIDOC Week Family Day with the Quench Bench, our portable drinking water trailer used at community events.
- **Delivered services to improve liveability in Aboriginal and Torres Strait Islander communities**
  - We partnered with three grassroots Aboriginal community organisations through our Reconciliation Partnerships Program, Pirku-Itya (the Kaurna word meaning 'for community'). This year Pirku-Itya supported an Aboriginal cultural garden at Berri Regional Secondary College, the installation of a water play park in Point Pearce and a series of 'Southern Deadly Fun Runs' in metro Adelaide and Pitjantjatjara Country.
  - Our Finger Point Wastewater Treatment Plant cultural burn initiative was recognised with an Australian Water Association South Australia state award for organisational excellence in November 2021. Working collaboratively with Aboriginal communities and government agencies to deliver the prescribed burn, the initiative incorporated cultural knowledge and enabled Aboriginal communities to manage land using traditional ecological knowledge. It set a benchmark for cultural inclusion in future prescribed burns.

Workers from Aboriginal-owned recruitment service, RAW, replaced 22.5km of pipeline between Copley and Lyndhurst.

Recreation at our reservoir reserves

In 2021-22, our 11 reservoir reserves welcomed 432,453 visitors. Since Myponga Reservoir Reserve opened in April 2019, we have recorded 658,649 visitors at all reservoir reserves, supporting the health and wellbeing of active thriving communities.

Activating reservoirs for healthy communities was acknowledged at the Parks and Leisure South Australia 2022 Award of Excellence in May 2022 when we were awarded Community Based Initiative of the Year.

We continued the Reservoir Volunteer program, partnering directly with like-minded community members at reservoir reserves on conservation activities such as revegetation and bush care, fish stocking activities, and community events at Myponga, Happy Valley, Mount Bold, Hope Valley, Warren, South Para and Barossa Reservoir Reserves.

This year, we opened Little Para Reservoir Reserve to the public in October 2021 and Happy Valley Reservoir Reserve in December 2021.

We continued to enhance the visitor offerings at reservoir reserves already opened to the public:

- The first guided tours hosted by Reservoir Rangers were run at Hope Valley Reservoir Reserve in June 2022, providing information about the reservoir, its role in providing drinking water, and the local wildlife and plants which call the reserve home.
- More than 10 kilometres of new trail opened at Bundaleer Reservoir Reserve in November 2021, enabling access to an additional 200 hectares. Improved visitor facilities, including a new picnic shelter, table and bench seating were also installed.
- A new trail network and lookout opened to the public at Mount Bold Reservoir Reserve in December 2021.
- Barossa Reservoir Reserve's Whispering Wall visitor area underwent a refresh in December 2021, including car park resurfacing and redesign, improved paths, fully accessible dam wall and whisper stations, and a new nature play area and landscaping.
- Gas barbeque facilities were installed at Hope Valley Reservoir Reserve in May 2022.
- New toilet facilities were opened at Myponga Reservoir Reserve in February 2022.

Visitors enjoying the inaugural guided tour of Hope Valley Reservoir Reserve.

Happy Valley Bush Care's Olly and Damian.

Visitors at Happy Valley Reservoir Reserve experience augmented reality through smart frames.

Community Partner, the Botanic Gardens and State Herbarium host the Horticultural Therapy Program.

New map app to navigate reservoir reserves

Visitors to South Australia's reservoir reserves can now access the most up-to-date and accurate information about walking trails, via the free Avenza maps app. Comprehensive, georeferenced maps of trails at every reservoir reserve open to the public were launched in December 2021, using visitors' smartphone GPS to navigate even when out of range of a network or internet connection.

Reservoirs Partnership Program

In April 2022, three community groups were selected to share around $20,000 in funding as part of the Reservoirs Partnership Program, helping community groups host events or projects at South Australia's reservoir reserves open for recreational access. A new naturebased education program for home school families, a habitat improvement project for local fish and birdlife, and kayak training and tours for youth volunteers all demonstrated events and programs that champion environmental conservation, encourage recreation, and help educate communities on the importance of our natural environment and water sources.

A recipient of the 2021 funding round, Southern Barossa Alliance, hosted their 'Reservoir Outdoor Adventure Race' at Warren Reservoir Reserve in October 2021.

Getting appy at Happy Valley

Since January 2022, visitors at Happy Valley Reservoir Reserve have been using their smartphones to discover hidden treasures with the free 'Explore Water' app.

Using the power of augmented reality to bring the environment to life, a geocaching trail guides users to interact with smart frames to play interactive games and learn about our water supply and rich natural environment in an engaging and fun way.

Community education, events, support and engagement

While participation in our education and community programs continued to be lower than usual due to the COVID-19 pandemic, in 2021-22, 1,204 students and their teachers participated in our education program The Well.

This year, we supported 10 community projects through our Community Partnerships Program. The program offers small scale financial or in-kind support to not-for-profit community organisations to deliver events and projects across regional and metropolitan South Australia. The successful recipients deliver water-related events or programs and help us achieve our goal of being a partner organisation within communities.

Through our Water Talks website, more than 19,300 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's desalination plant
- Kangaroo Island's new seawater desalination plant
- planning for 2024-2028.

Our Quench Benches and vintage caravan, Miss Isla, got around in 2021-22, delivering 82,463 litres of safe, clean drinking water at 78 community events including:

- NAIDOC Week Family Day
- WOMAD
- Lucky Dumpling Market
- Christmas Pageant
- Tasting Australia
- Festival of Cycling.

Knowledge sharing for world-class wastewater testing

In October 2021, we began working with several interstate health agencies to undertake COVID-19 wastewater testing over the border, and to share our expertise in wastewater monitoring for coronavirus with international authorities in Cambodia, Thailand and Vietnam. Our experts provided technical guidance on sampling and analytical techniques and produced training material to help the countries establish surveillance programs.

Right trees in the right places

To further support urban cooling and tree canopy coverage, our 2021 Tree Planting Guide was released. The guide helps customers plant the right tree in the right place by providing information on where trees can be planted. It outlines what species are suitable as well as provides proactive measures such as tree root barriers to protect our underground infrastructure when planting new trees.

The Healthy Pipes online tool, also launched in 2021-22, is a new wastewater network mapping tool to ensure customer plantings do not adversely impact our underground water and wastewater mains.

Brand Ambassadors delivering fruit-infused safe, clean drinking water from Miss Isla.

The tool also supports local councils with information on where they can plant trees in the public realm while still protecting our infrastructure as part of their own efforts to increase tree canopy.

Greening our communities

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

We supported the City of West Torrens and local community groups, including the Adelaide Sailing Club, as part of a project to undertake a sand dune restoration project adjacent to the Glenelg Wastewater Treatment Plant. We prepared the site by providing a water supply, irrigation and woody weed removal to improve amenity and reduce erosion. A community planting day was then held on 22 May 2022 with the Minister for Climate, Environment and Water joining around 60 volunteers in the planting of around 6,000 native plants.

Native garden demonstration sites were developed at our Naracoorte, Woodside and Port Pirie depots in 2021-22, featuring indigenous plant species to improve amenity, streetscape and biodiversity outcomes.

Nicola Murphy, Senior Manager Supply Chain.

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.

Continued pursuit of a Zero Cost Energy Future

Renewable energy continues to make a positive environmental impact and supports us in delivering ongoing operational savings. Throughout 2021-22, we continued to pursue a Zero Cost Energy Future with the energisation of a further 11 sites with 194,397 panels, producing an estimated 124,451 megawatt hours of energy per year and creating 13,568 kilowatt hours of on-site battery storage, including:

- 3,996 solar panels at Aldinga Wastewater Treatment Plant in January 2022. Together with more than 1,000 kilowatt hours of on-site battery storage, the fixed tilt solar array has a generation capacity of 2,439 megawatt hours of clean, green solar energy per year.
- More than 2,000 solar panels at the Myponga Depot generating 1,238 megawatt hours of energy each year. The large-scale solar array combines with around 352 kilowatt hours of on-site battery storage.
- Around 2,900 solar photovoltaic panels at Balhannah's 490 million-litre capacity Summit water storage and treatment plant, combined with 528 kilowatt hours of on-site battery energy storage.

Our Zero Cost Energy Future program continued to collect accolades in 2021-22. At the National Australian Water Association Awards in May 2022, the program won the Infrastructure Project Innovation (metro) Award and in June 2022, at the iTnews Benchmark Awards in Sydney, our Zero Cost Energy Future energy management system was named Best State Government Project.

Conservation and restoration of reservoir reserves

In 2021-22, we continued to restore the watercourse within Myponga Reservoir Reserve, along with Victoria Creek in the South Para River catchment. Revegetation projects using local provenance native woodland species were completed at Myponga and Hope Valley, and we successfully re-introduced native grasses at Warren, Myponga, South Para and Hope Valley Reservoir Reserves.

Weed control programs were active across all reservoir reserves in 2021-22, targeting declared and environmental weed species, such as Erica baccans at Mount Bold Reservoir Reserve. We continue to partner with other government agencies to expand priority feral animal control programs across land tenure, with more than 1,300 feral animals removed from the reservoir reserves in 2021-22.

A new 10-hectare conservation area within Myponga Reservoir Reserve was announced in June 2022 to improve the habitat and provide sanctuary for some of the most threatened wetland birds on the Fleurieu Peninsula, including the Australasian Bittern and Southern Emu-wren. More than 14,000 seedlings had been planted at 30 June 2022, with customised marker buoys deployed to establish the area at the eastern end of the reservoir, and fencing installed to protect the young plants from kangaroos.

Circular solutions for Port Lincoln Wastewater Treatment Plant

In partnership with Aurecon, we designed and delivered a bespoke circular solution for the Port Lincoln Wastewater Treatment Plant which was awarded an Infrastructure Project Innovation Award Regional at the Australian Water Association South Australia Awards in November 2021. By replacing the sludge lagoons with a mechanical thickening, anaerobic digestion and mechanical dewatering process, the new treatment infrastructure has reduced methane emissions and improved odour management, while achieving a suitable biosolids by-product for beneficial reuse by local farmers. The unique design aims to minimise onsite manual handling and is adaptable to future needs, including increased capacity.

A new 10-hectare conservation area within Myponga Reservoir Reserve was announced in June 2022 to improve the habitat and provide sanctuary for some of the most threatened wetland birds on the Fleurieu Peninsula, including the Australasian Bittern and Southern Emu-wren.

Port Lincoln Wastewater Treatment Plant Project team at the Australian Water Association South Australia Awards.

Southern Emu Wren at Myponga Reservoir Reserve.

Change in the pipeline

A pipe offcut recycling program was successfully trialled in 2021-22. Our regional depots dispose an estimated 1.5 tonnes of waste to landfill per week, with much of this waste consisting of polyvinyl chloride (PVC) pipe offcuts. PVC pipe is purchased in standard six-metre lengths and our field technicians regularly require four-metre lengths to repair damaged sections of pipe with the surplus two-metre offcuts ending up in landfill.

In collaboration with our supply chain, we trialled shorter pipe lengths as a standard offering and implemented a statewide recycling solution to recycle our PVC waste. The program reduces disposal costs and is projected to save an estimated 65 per cent of total landfill waste from our regional depots and reduce overall carbon emissions from pipe production by an estimated 25 per cent.

Recycling PVC offcuts would make us one of the first water utilities in Australia to do so, highlighting our commitment to being a leader in environmentally sustainable practices.

Electric feel

Eight electric vehicles were introduced to our fleet of pool cars at a variety of work sites in August 2021. In addition, we increased the number of our sites with charging points as we begin the shift to our light fleet being fit-for-purpose electric vehicles, reducing air pollution and greenhouse gas emissions.

Reduce, reuse, recycle

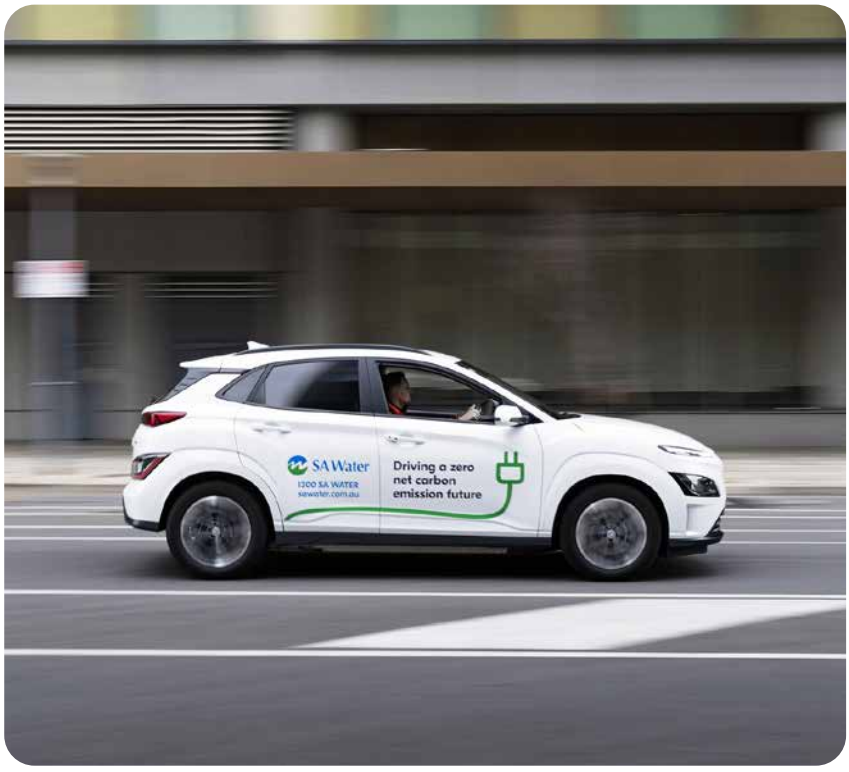
In 2021-22, we created a Waste Initiative Working Group to progress the prevention and reduction of emissions and waste across the business, and to improve recycling and reuse.

We worked with the Environmental Protection Authority to maximise the reuse of construction and demolition waste from decommissioning projects. A Circular Procurement Project, funded by Green Industries SA, investigated our procurement practices and made recommendations for the increased use of recycled materials and recycled content products across the business.

Current spoil management practices and future requirements were assessed in a review of our depot sites, with a view to recover and reuse greater volumes of waste spoil. A review of regional biosolids management practices is now enabling more flexibility for land application that maximises nutrient value.

We recycled 27.5 per cent of water from our wastewater treatment plants, slightly below our target of 28 per cent. Demand for recycled water was slightly lower in 2021-22, due to increased rainfall across much of the state.

Reuse of suitable biosolids generated from our wastewater treatment plants reached 100 per cent. Used as fertiliser to improve soil quality for dry land crops like cereals, or irrigated permanent crops such as citrus or vines, 89,000 tonnes of biosolids were collected from our wastewater treatment plants in 2021-22. Demand from the state's farming sector continues to grow for this organic, high-quality biosolid matter.



Electric vehicle fleet car.


100 per cent of biosolids from our wastewater treatment plants are reused.


PVC pipe manufactured using material from recycled PVC.

New standard for bushfire resilience

Advanced 3D modelling and drone technology was used in a 2021-22 audit of 280 sites to deliver our technical standard for bushfire resilience.

The first to be adopted for water and wastewater infrastructure in Australia, the standard is now integrated into design, build and site selection processes for new assets.

Upgrades to existing sites including fire resistant structural upgrades to doors, windows, and the installation of ember guard mesh on external vents. Further upgrades at our wastewater pump station in Stirling and several assets at Happy Valley are readying us for the upcoming bushfire season.

3D modelling and drone technology is improving resilience against bushfires, like those at Cherry Gardens near Mount Bold.

Mount Gambier local Ash Pasquazzi filling up her reusable water bottle.

Communal springs

As part of our initiative to make tap water more accessible in the community, 25 drinking water fountains were installed at locations across the state including at the Blue Lake in August 2021 and at Two Wells' Village Green in October 2021.

More than 325,000 litres of safe, clean drinking water was delivered across our entire network of drinking fountains in 2021-22.

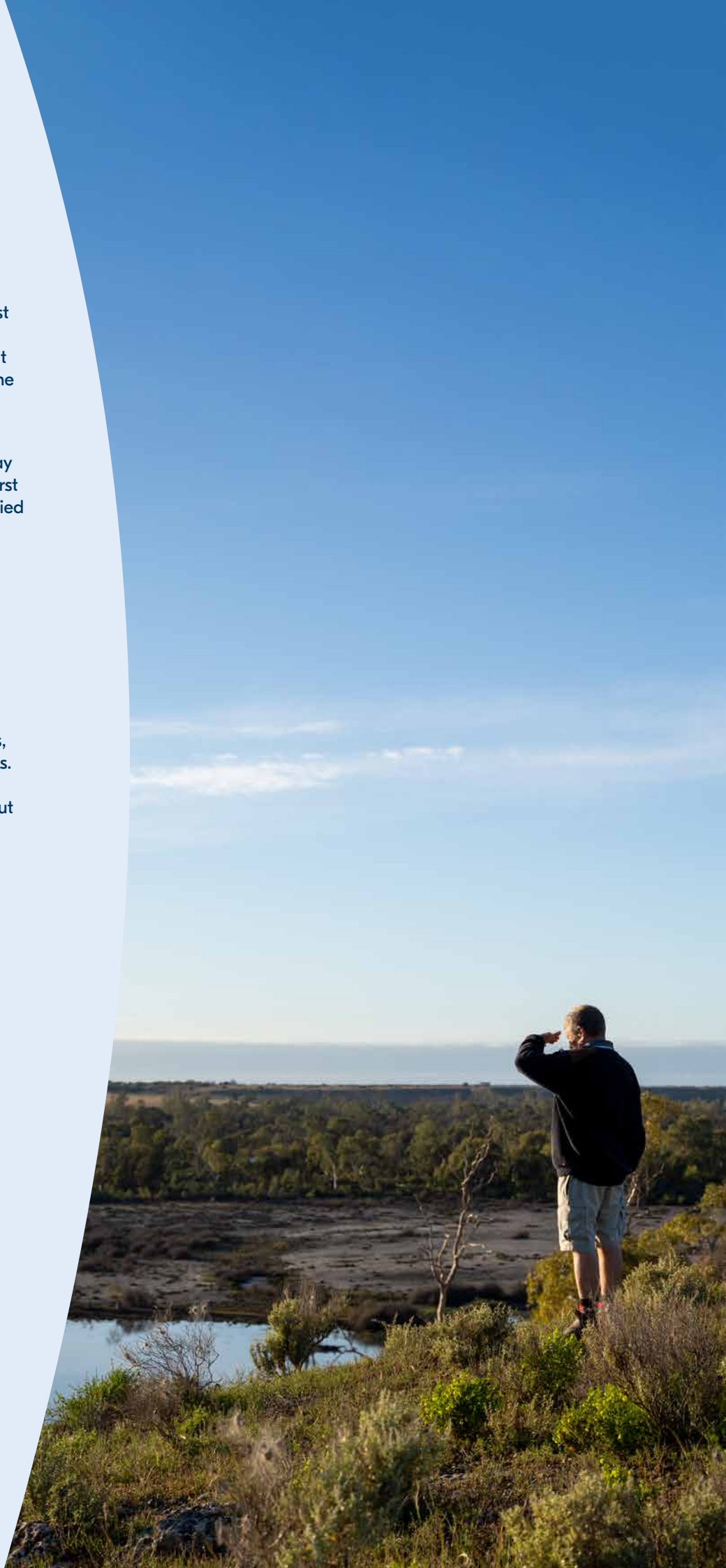
Riverland reserve restored

Acquired as part of a vegetation offset requirement for our Zero Cost Energy Future initiative, more than 360 hectares of historic wetlands at the Murbpook Nature Reserve in the Riverland are being restored.

As an area of cultural significance, the First Peoples of the River Murray Mallee visited the reserve for the first time In September 2021 and identified a number of sensitive areas.

In April 2022, the wetland received its first environmental watering of 73 megalitres and the boundary fence was delivered in June 2022, with respect for cultural heritage preservation recommendations.

Fifteen fauna species have been identified, including echidnas, wombats, snakes and sleepy lizards. November 2021's inaugural guided bird walk saw visitors on the lookout for the 61 bird species recorded at the wetlands to date, including the vulnerable Regent Parrot.



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 safety and wellbeing

To deliver on our Health and Safety Improvement Plan, risk management continued to be a focus in 2021-22. By focusing on quality incident management and assurance activities, we reduced our ongoing risk exposure and began improving our management systems to deliver practical and safe systems of work for all high-risk activities, reporting a total injury frequency rate of 6.2 per cent, which is below our target for the year.

Taking a harm-based approach to safety, we focus on the potential outcome of an incident as well as the actual outcome. Our resources are prioritised and focused on high potential incidents to prevent a recurrence. A re-focus on high potential incidents and near misses as a learning opportunity has resulted in strong collaboration with our workforce, contractors and industry. This has resulted in safer outcomes for our people with actions associated with the investigations being shared across multiple forums. We have also reinvigorated a contractor forum, which allows collaboration and sharing of initiatives among our contractors.

In June 2022, we finalised lead Health and Safety indicators across the business to drive a proactive health and safety culture. By focusing on leading indicators, we expect to deliver a future reduction in our traditional health and safety statistics. These indicators will be monitored to track effectiveness and drive our safety maturity.

In September 2021, we launched our Support Crew – a confidential peer support network providing wellbeing guidance and emotional and practical support to our people through the sharing of similar experiences. We have recruited and trained 23 people as part of the Support Crew team and are currently in the process of onboarding new members in both metropolitan and regional areas.

The Be Well wellbeing program was launched in May 2022, providing 62 participants, as at 30 June 2022, with the tools to develop a personalised mental health and wellbeing strategy tailored to their individual psychological health profile and life circumstances to help deal with stress, build wellbeing and resilience.

Strength in diversity and inclusion

Our Diversity and Inclusion Plan outlines four priorities, and in 2021-22, we delivered a range of activities and outcomes to achieve our diversity and inclusion targets:

- **Women at SA Water**
  At 30 June 2022, women held 46.82 per cent of leadership positions, up by four per cent year on year. Inclusion targets for women in leadership were written into contracts for our Adelaide Services Delivery, and major and minor capital delivery framework partners.
- **Aboriginal and Torres Strait Islander employment and retention**
  Our Aboriginal and Torres Strait Islander Employment and Retention Plan is helping to achieve sustainable employment pathways for future and existing Aboriginal employees by creating development opportunities within our business. In 2021-22, Aboriginal employment was at 2.46 per cent of total workforce, peaking at 2.85 per cent in November 2021. A new partnership with the Clontarf Foundation is providing opportunities to support pathways to employment for Aboriginal students.
  In 2021-22, we committed to providing three traineeships for Clontarf participants, two regional and one metro, to build professional skills and personal confidence on their journey towards a successful career.
- **Flexible and inclusive workforce**
  Able Together, the network that directly supports the actions and initiatives in our Disability Access and Inclusion Plan, was launched in April 2022. Enabling our ongoing work to provide a deeper understanding of what our customers, our people and our community experience, we are proactively building a more diverse and inclusive business that reflects the people we serve. The fourth diversity employee network group established to support our people, Able Together joins Together for Women, Pride Together and our Aboriginal and ally group, Kauwi miyurna.
- **Emerging workforce**
  We provide a variety of employment opportunity programs, including water industry traineeships, our graduate program, technical cadetships and work experience and vocational placements. In 2021-22, 26 people participated in our employment opportunity programs, with 46 per cent female graduates and undergraduates. Diversity in our apprentice programs continues to grow with 40 per cent of the intake in 2021-22 being female or Aboriginal people.
  As at 30 June 2022:
  - 40 per cent of our trainees were Aboriginal
  - 42 per cent of our apprentices were Aboriginal or female
  - 25 per cent of our cadets were Aboriginal or female.

  Sponsorship of the University of Adelaide's Women in STEM Careers Program, which supports 100 women studying in the STEM fields, continued in 2021-22. The program gives students the opportunity to connect with industry professionals and learn about career options following their graduation, including those in our business. Currently, four alumni are employed through our graduate program.

Enterprising first

In May 2022, Barkuma, Mobo Group, Community Concierge SA, Orana, Jigsaw, SA Group Enterprises, Wesley Social Enterprises and CBS Inc. joined our major framework partners for a South Australian first 'meet the buyer' event as part of our Delivering Capital Together Social Enterprise Initiative.

Directly supporting our Disability Access and Inclusion Plan, the initiative identified practical ways we can build diversity and inclusion in our business by partnering with and supporting these enterprises through our supply chain and delivery of our capital program.

Training recognised

In August 2021, we were named Large Employer of the Year at the SA Training Awards, going on to be a finalist at the National Australian Training Awards in November 2021. These awards recognise large businesses and enterprises that have achieved excellence in the provision of nationally recognised training to their employees.

Celebrating innovation and excellence

The 2021 Innovation and Excellence Awards celebrated some of the incredible people who made a significant difference in our business and improved customer experience across our business.

- **Innovation**
  To prevent quality older assets from becoming scrap, an asset refurbishment program was created. Large valves retired from service are now inspected, stored, refurbished, and put back into service through our capital projects. The asset refurbishment has environmental benefits and helps ensure high quality, reliable infrastructure that is independent of supply chains.

Kelly Benetta accepted the Courageous award for supporting a mental health initiative at the 2021 Innovation and Excellence Awards.

- **Safety**
  Field safety alerts were introduced to enable our field teams to identify high risk work situations through the Work Order App, with safety risks and hazards such as aggressive dogs appearing as on-screen alerts for teams managing or working on the job. Scheduling and dispatch processes for high-risk work situations were also modified, so risks could be appropriately mitigated before work even started.
- **Trustworthy**
  About 3,000 customers in Yankalilla, Normanville and Carrickalinga were smoothly transitioned to drinking water disinfected through chloramination in March 2021. The significant stakeholder engagement process ensured more than 1,700 customers were directly engaged, building Fleurieu customers' trust and confidence in our services.
- **Agile**
  A multi-disciplinary team developed robust methods to detect the COVID-19 virus in wastewater and established a monitoring program using sewage sampling. Our testing became an integral part of SA Health's COVID-19 response to keep South Australians safe.
- **Diversity and Inclusion**
  A user-friendly GIS system is enabling us to work closely and effectively with the Barkindji–Maraura Elders Council to identify and record cultural heritage at Lake Victoria, protecting and managing cultural heritage material.
- **Collaborative**
  To improve the quality of water from our Millicent Wastewater Treatment Plant for reuse for irrigation by a local farmer, teams mobilised to install, commission and establish a new chlorine gas dosing system and storage hut. This water chlorination and re-use initiative has enabled irrigation using recycled water to be maximised on neighbouring grazing and cropping land, and the quantity of reuse water discharged into nearby Lake Bonney to be limited.
- **Courageous**
  TradeMutt high-vis workwear was made available as part of our uniform, for our people look good and feel good at work while starting conversations about mental health. The eye-catching workwear is designed to help make sometimes invisible issues impossible to ignore, including suicide among men as a significant male health issue in Australia.
- **Inspirational leadership**
  Mark Lewis provided the Adelaide Service Delivery Project team with clear strategic direction in a complex and ambiguous environment. With a down-to-earth, people-orientated approach, Mark brought together a large number of stakeholders to ensure the project balanced a commercial focus with the need to deliver the best outcomes for our customers, both now and into the future.

Performance management

We have an annual performance appraisal and development cycle aligned to the financial year which includes setting goals, supporting our people's development and having performance discussions. In 2021-22, 94 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 2021-22, SA Water collected 46,101 samples from drinking water supplies throughout the state. Samples were analysed for compliance with the Australian Drinking Water Guidelines (2011) (ADWG) and results 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, 99.93 per cent of country samples and 100 per cent of remote Aboriginal community samples. Overall compliance with the ADWG for healthrelated parameters was 99.99 per cent for metropolitan systems, 99.93 per cent for country areas and 99.56 per cent for remote Aboriginal community supplies.

The total number of incidents notified by SA Water during 2021-22 (136) was higher than in 2020-21 (103) but most of this was due to an increase in Type 2 incidents. There were no Priority Type 1 incidents during 2021-22.

A treatment plant failure at Gerard required substantial refurbishment and upgrading of operational monitoring. While this is being undertaken the community is being supplied with carted drinking water through the existing distribution system.

High rainfall events led to an increase in the detections of enteric protozoa (Cryptosporidium and Giardia) in drinking water catchments and source waters. There were five Type1 incidents involving detection of enteric protozoa at the inlets to drinking water treatment plants (two samples) or in treated product water (three samples). However, the protozoa detected in the treated water samples were not human infectious.

Protozoa were not detected in follow up samples. No faults were detected from the continuous monitoring of treatment plant performance during the periods when the protozoa were detected.

There was an increase in the detections of elevated cyanobacteria concentrations in drinking water reservoirs but these were managed appropriately to prevent risks to drinking water quality.

One third of Type 1 incidents were due to unauthorised recreational activities at drinking water reservoirs. The number of recreational use incidents was slightly lower than in 2020-21. 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 2021-22. These were isolated low-level detections, with follow up samples clear of E. coli. 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. Other than Gerard 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 accredited laboratories for sample testing
- reporting of water quality test results to SA Health and providing consumers with
- drinking water quality information.

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, country and remote community water supplies on a monthly basis with results showing a very high level of compliance.

In April 2022, the eighth independent audit, as required by the Act, was undertaken, with several representative drinking water supplies included.

The audit determined that we comply with the requirements of the Act and that the drinking water in the schemes audited is managed in accordance with the intent of the ADWG. The auditor commented that, "SA Water (and the partner organisations) have technically skilled and highly competent staff who demonstrated a strong commitment to the production and provision of safe drinking water", and noted the following:

- There is a comprehensive water risk management plan in place.
- The structure and strength of our partnership with the Production and Treatment Alliance. While the relationship is still new, it has been set up to achieve an almost seamless operation. This is highly commendable and testament to the willingness of all parties to ensure appropriate outcomes are achieved.
- Similarly, the relationship with TRILITY, which operates and maintains 10 water treatment plants, is one of cooperation. There is a very strong relationship and the efforts to include variations to the original contract to include requirements not originally envisaged is applauded.
- A ServiceStream field crew were observed by an auditor, while conducting a mains repair. This crew did not know an auditor would arrive but demonstrated that industry best practices to ensure hygienic mains repairs are embedded within these teams.

Overall, there was a very high level of compliance and the identified improvement actions, and non-conformances did not represent an immediate and imminent risk to the safety of the drinking water supply. However, 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, country and remote Aboriginal communities within South Australia.

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 the requirements of the National Association of Testing Authorities.

Drinking water quality and performance

In 2021-22, we demonstrated robust management of water quality by consistently providing safe, clean drinking water to our customers.

We analysed 46,101 routine test analytes from our drinking water supplies (customer tap sample locations) throughout South Australia to determine health-related compliance. We achieved 99.94 per cent E. coli compliance across customer tap sample locations with exceptions in one metropolitan and two country systems. Compliance with ADWG healthrelated parameters across customer tap sample locations was above target at 99.94 per cent.

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 appropriate responses and corrective actions were implemented in all cases and these mitigated any risks to public health.

In December 2021, we successfully completed the final stage of changing the disinfection process for the Myponga system on the Fleurieu Peninsula from chlorination to chloramination. This change was made to overcome water quality challenges due to high levels of natural organics in the source water, the long pipelines in the region and the subsequent formation of disinfection by-products such as trihalomethanes and challenges maintaining a secondary disinfection residual.

Number of sample locations and test analytes – statewide, metropolitan, country and remote Aboriginal communities water supply systems, 2021-22

Drinking water systems	Statewide	Metropolitan	Country	Remote Aboriginal communities
Supply systems	85	7	60	18
Customer tap sample locations	512	173	319	20
Catchment to tap sample locations*	1,495	347	1015	133
Catchment to tap routine test analytes	382,956	68,359	307,421	7,176

*Includes customer tap sample locations

Statewide, metropolitan, country and remote Aboriginal communities drinking water supply systems health-related performance, 2021-22

Health-related parameters	Statewide systems (number of test analytes)	Metropolitan systems (number of test analytes)	Country systems (number of test analytes)	Remote Aboriginal communities (number of test analytes)
Samples free from E. coli	99.94% (10,125)	99.97% (3,154)	99.93% (6,841)	100% (130)
Samples compliant with ADWG health parameters*	99.94% (46,101)	99.99% (12,908)	99.93% (32,512)	99.56% (681)
	Target: 99.90%	Target: 100%	Target: 99.80%	Target: 99.80%

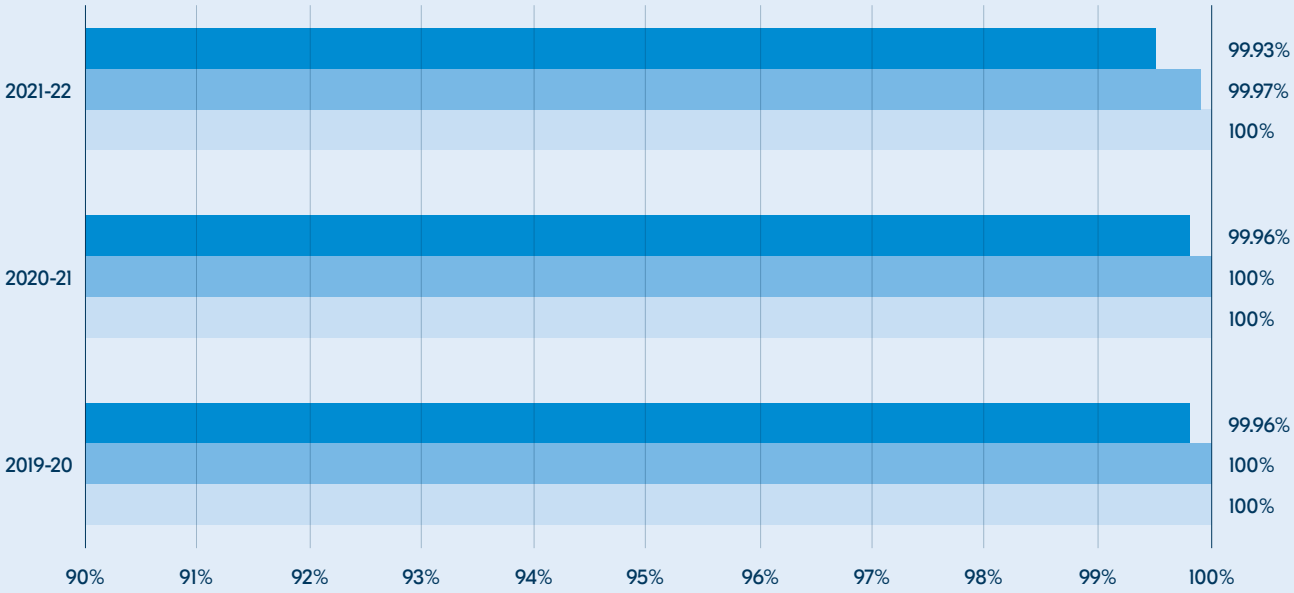
* Percentage of routine results at customer tap sample locations within drinking water systems which comply with the ADWG health limits (including E. coli). Direct exceedances of the ADWG were used rather than the 95th percentiles for compliance of individual chemical parameters. Prior to calculating 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).

Since the implementation of this change, disinfection by-products have reduced significantly within this system to below the ADWG health guidelines and residual disinfection is more stable throughout the system.

With substantial rainfall across the Murray Darling basin interstate, the treatability of the raw water in the River Murray declined from November 2021. These conditions presented significant challenges to water treatment and maintaining the integrity of the drinking water systems fed directly from the river. We drew on our experience from previous events and minimised the impact on our drinking water customers in several ways:

1. Water treatment process changes to reduce risks of nitrification and disinfection byproduct formation.
2. Network modifications such as setting up temporary booster dosing facilities and reducing the water age.
3. Communication channels were established between interstate agencies, including upstream Victorian water treatment plants, the Production and Treatment team and South Australian water treatment plants, to rapidly share operational water quality information.
4. Enhanced water quality monitoring within the river, water treatment plants and distribution systems.

E. coli compliance at metropolitan, country and remote Aboriginal communities drinking water supply system customer tap sample locations since 2019-20 (customer tap sample location tests free from E. coli)



Incident management

We apply the ADWG Framework for Management of Drinking Water Quality which includes two 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 three types of health-related incident classifications based on a precautionary approach:

- **1 Priority Type 1 incident notification**
  An incident that, without immediate appropriate response or intervention, could cause serious risk to human health and is likely to require immediate interagency meetings to consider responses. Procedures for Type 1 incident notifications also apply.
- **2 Type 1 incident notification**
  An incident that, without appropriate response or intervention, could cause serious risk to human health.
- **3 Type 2 incident notifications**
  An incident that, without appropriate response or intervention, represents a low risk to human health.

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 2021-22, there were no Priority Type 1 incidents reported.

The number of Type 1 incidents increased and is largely attributed to an increase in chemical detections, disinfection failures and increased rainfall leading to enteric protozoa challenges.

There was an increase in Type 2 incidents due to poor source water quality in the River Murray leading to an increase in bacteriological detections, cyanobacteria and disinfection by-products. There was also an increase in disinfection failures, tank contaminations identified through preventative maintenance, and increased rainfall leading to enteric protozoa detections in source water.

In 2021-22, 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 detection and management of risks continued during 2021-22. 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, including reporting, initial response and longer-term preventive measures. The overall 2021-22 strategic target for the IRI is 85 per cent compliance.

Statewide drinking water supplies number of incidents (metropolitan, country and remote Aboriginal communities)

Reporting period	Priority Type 1	Type 1	Type 2
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.

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

Incident reported to relevant agencies by phone immediately (less than one hour)	Overall strategic 2021-22 target: 85%
Incident entered into the incident management system in less than two hours	
Initial effective response taken within three hours	
Written report to Minister for Climate, Environment and Water by 3pm next business day	
Root cause analysis completed within 10 working days	
Preventive actions implemented within agreed timeframes	

The Incident Response Index achieved for metropolitan, country and remote Aboriginal communities for 2021-22

System	2021-22
Metropolitan	99%
Country	98%
Remote Aboriginal communities	61%

Effective governance

Effective governance

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

- *Public Corporations Act 1993*
- *Water Industry Act 2012*
- *Safe Drinking Water Act 2011*
- *South Australian Public Health Act 2011*
- *Work, Health and Safety Act 2012*
- *Environment Protection Act 1993*
- *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 SA Water 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 2021-22:

- Andrew Fletcher AO, Chair (to 30 June 2022)
- John Bastian AM
- 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 to approve procurements of up to $15 million and expenditure up to $4 million on any one project.

A charter prepared by the Minister and the Treasurer, in consultation with the Board, was in place for 2021-22 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 2021-22, no director had an interest in any contract or proposed contract with SA Water, other than contracts in the ordinary course of business. No benefits were received by any director of SA Water by virtue of a contract that was made with SA Water, other than in normal course of business as set out in the financial statements.

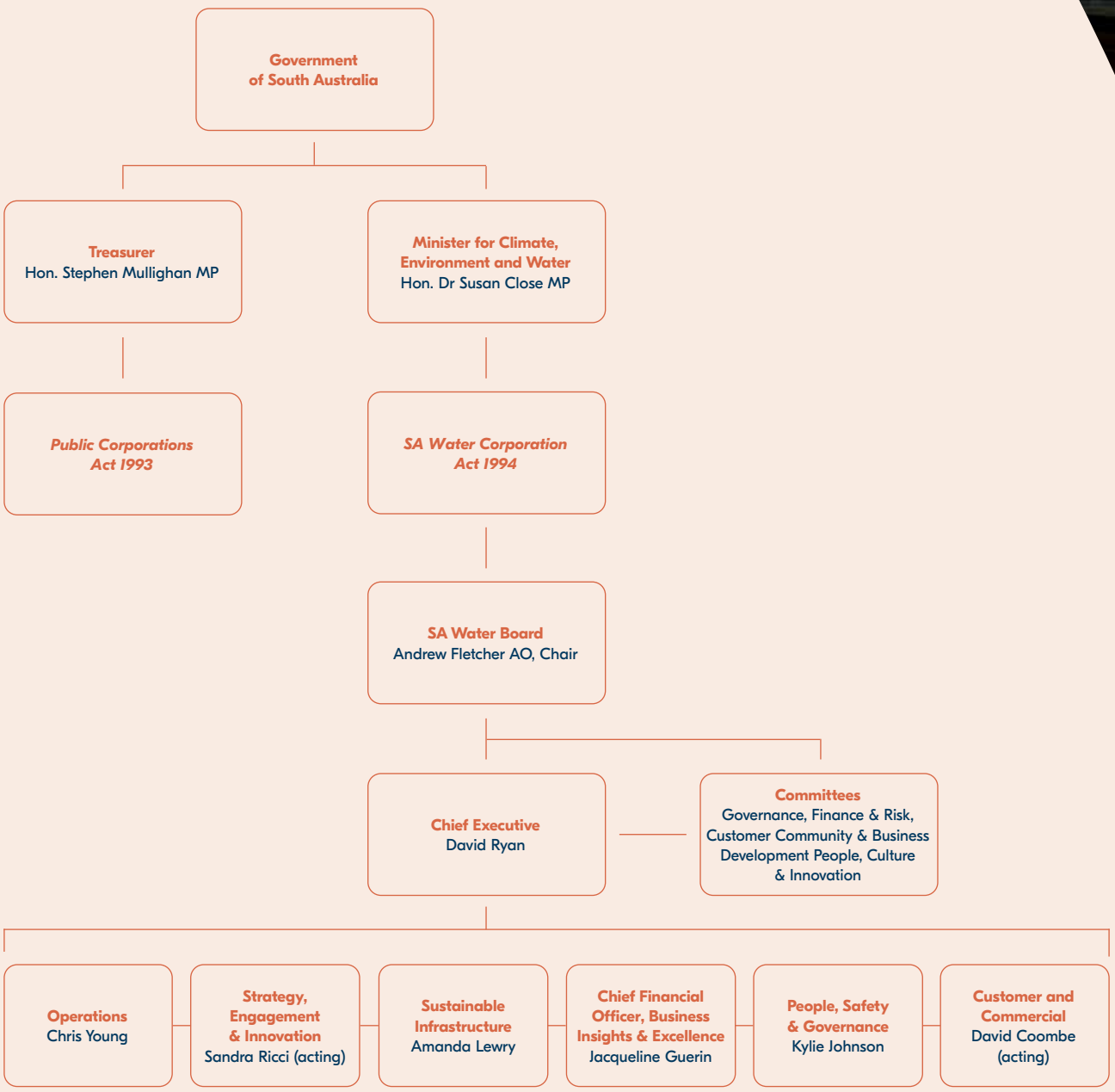
Board committees

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

- **Governance, Finance and Risk Committee**
  Supports the Board in fulfilling its 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, Community and Business Development Committee**
  Assists the Board's oversight of customer and community needs, interactions and outcomes, to ensure they are aligned with business and brand strategy.
- **People, Culture and Innovation Committee**
  Supports 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.

Organisation Structure

As at 30 June 2022



Financial performance

Financial performance

In the 2021-22 financial year, we recorded year-end profit before tax of $48.1 million.

Revenue was $1.36 billion. Some of the contributors to this were:

- strong water sales due to warm weather conditions, particularly over the summer months
- significant contributed assets arising from mains extensions contributions, infrastructure assets gifted to us from developers and capital contributions to us for work we perform, as a result of strong development activities across the state
- profit on sale of surplus assets that were not required for ongoing operations.

Total expenses were $1.31 billion. Some of the contributors to this were:

- high pumping volumes and a significant spike in the price of electricity, resulting in high electricity costs
- costs in relation to the Adelaide Service Delivery contracts for production and treatment and field services
- changes to the interpretation of the intangible asset accounting standard that resulted in costs relating to cloud computing being incurred as an operating, rather than capital, expense.

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 $208.9 million was paid in 2021-22.

This saw $72.3 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, $95 million was paid to the South Australian Financing Authority as guarantee fees and margins. An income tax equivalent of $11.7 million and a dividend of $29.9 million were also paid.

Capital expenditure

This year, we spent $463.4 million on capital expenditure, with $20.5 million spent on information technology and $442.9 million on infrastructure. 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 improving our water and wastewater infrastructure assets and invest in major infrastructure projects, all of which have a positive impact on our customers and/or the state. In 2021-22 these included:

- Kangaroo Island Desalination Plant $18.1 million
- Tea Tree Gully Sustainable Sewers $13.0 million
- Morgan to Whyalla pipeline replacement $11.5 million
- Zero Cost Energy Future $11.1 million.

Contributions to government	2021-22 actuals $'000
External fees and charges	54,294
Contract services provided	992
Operational taxes and tax equivalents	16,990
Total contained within operating expenses	**72,276**
As a percentage of total operating expenses	11.0%
Interest Expense – guarantee fees*	90,670
South Australia Government Financing Authority margin fees	4,295
Additional interest paid to owner	**94,965**
Income tax equivalents	11,742
Dividends at 100% of profit after tax	29,882
Total amounts paid to government	**208,865**

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

Consultants

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

Consultants	Amount $	Description/purpose
Less than $10,000		
TonyMac Consulting Pty Ltd	5,093.75	Advice on the preparation of analysis and framework for enterprise agreement negotiations.
Frontier	7,392.00	Chris 21 health check audit.
Between $10,000 and $50,000		
VUCA Pty Ltd	14,500.00	Independent review of the SA Water Board performances.
Greater than $50,000		
KPMG	103,605.00	Independent reviewing of the regulatory revenue model.
PricewaterhouseCoopers	75,465.85	Review of current business practices in payroll team, and tax advice of the application of the national tax equivalent regime.
Workforce Insight	266,773.49	Organisational review and change plan delivery and support.
Red Wagon Workplace Solutions	58,864.90	Advisory service used by Human Resources team.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Supplementary reporting items

Supplementary reporting items

Fraud

There were two instances of potential fraud reported in 2021-22. One matter was reported to the Ombudsman and assessed by the Ombudsman and the Officer for Public Integrity (OPI) as being appropriately dealt with by us. The other matter was referred to the Independent Commission Against Corruption South Australia from the OPI and closed following assessment of our internal review which concluded that the allegations did not have any merit. One matter from the previous financial year was closed in 2021-22, following completion of an investigation that found the allegation was unsubstantiated.

We are committed to creating an honest and ethical business environment with zero tolerance of fraud or corruption in any form and perform a range of activities to prevent, detect and respond to fraud and corruption.
Key activities include:

- 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 undertaken 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, report matters of concern and the protections provided to them in the *Public Interest Disclosure Act 2018.*

Public interest disclosure

There were no matters disclosed to a responsible officer of the agency under the *Public Interest Disclosure Act 2018* during 2021-22. One matter disclosed in May 2021 was investigated by the OPI and closed in July 2021.

Risk management

Strategic risk management supports our forward planning and critical thinking to enable well-informed decision-making across our operations. We work to the principles of risk management as set out in the international risk management standard AS ISO 31000:2018 Risk Management – Guidelines.

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 2021-22, we received 2.94 complaints per 1,000 customers, up from 1.99 complaints per 1,000 customers in 2020-21. Almost one third (29.28 per cent) of all complaints received were recorded as first contact resolution complaints. We responded to 98 per cent of complaints within target times, with 6.14 per cent of complaints escalated to the Ombudsman.

We continue to track well below the national median of 4.2 complaints per 1,000 customers for major utilities, as reported by the Bureau of Meteorology in its National performance report 2020-21: urban water utilities.

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 customer experience.

The most common complaint types received in 2021-22 related to:

- water quality
- repairs and maintenance of infrastructure in the metropolitan area
- costs incurred for high water consumption.

In 2021-22, the Energy and Water Ombudsman of South Australia (EWOSA) received 144* complaints about us on a range of issues, which is a decrease from 163 in 2020-21. The highest complaint type remains costs incurred for high water use, which is consistent with complaints in 2020-21.

This year, 83 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
- estimated billing procedures.

In 2021-22, 587 new customers joined our Customer Assist Program. The program helps residential customers with a payment plan to help pay their bills. At 30 June 2022, 1,657 residential customers had participated in a financial hardship program with a $2,938 average bill balance. The program connects customers with support to help them better manage their bills, and in 2021-22, 570 residential customers successfully exited the program.

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

Ministerial direction

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 section 6 of the *South Australian Water Corporation Act 1994*, the South Australian Water Corporation (SA Water) is subject to control and direction by its Minister.

2. The *South Australian Water Corporation Act 1994* is committed to the Minister for Environment and Water (the Minister) as per gazettal notice dated 22 March 2018 (p. 1256).

3. Beetaloo Reservoir reserve comprises approximately 5,055 hectares in the southern Flinders Ranges. The majority of this land is under the care and control of SA Water pursuant to dedication under the *Crown Land Management Act 2009*. Ministerial discretion will be exercised to revoke the dedication over the Crown Land at Beetaloo Reservoir, returning the land to unalienated Crown Land which is to be managed by the Department for Environment and Water (DEW).

4. Given SA Water's technical and operational expertise, it is appropriate that SA Water has ongoing responsibility for the maintenance of the Beetaloo Reservoir dam wall and associated water infrastructure. This will ensure that national dam management guidelines are followed in the intertest of public safety.

5. SA Water and DEW will enter into a Memorandum of Administrative Arrangement that will detail future obligations between the parties regarding Beetaloo Reservoir, including access and other agreed matters.

DIRECTION

I, David Speirs MP, Minister for Environment and Water, direct SA Water:

1. To maintain responsibility for the ongoing and future maintenance of the Beetaloo Reservoir dam wall and associated water infrastructure (including pipes and pumps) to meet Australian National Committee on Large Dams obligations using regulated resources into the future, in the interest of public safety.

Hon David Speirs MP

MINISTER FOR ENVIRONMENT AND WATER

06 / 02 / 2022

Appendices


SA Water
Delivering trusted water services for a sustainable and healthy South Australia
Government of South Australia

Government of South Australia
Auditor-General's Department

Level 9
State Administration Centre
200 Victoria Square
Adelaide SA 5000
Tel +618 8226 9640
Fax +618 8226 9688
ABN 53 327 061 410
audgensa@audit.sa.gov.au
www.audit.sa.gov.au

Audited financial statements

To the Chair
South Australian Water Corporation

Opinion

I have audited the financial report of South Australian Water Corporation for the financial year ended 30 June 2022.

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 2022, 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 2022
- a Statement of Financial Position as at 30 June 2022
- a Statement of Changes in Equity for the year ended 30 June 2022
- a Statement of Cash Flows for the year ended 30 June 2022
- notes, comprising material accounting policies 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 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 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 are 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* section 32(4) of the *Public Corporation's Act 1993*, I have audited the financial report of South Australian Water Corporation for the financial year ended 30 June 2022.

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

20 September 2022

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;
  - comply with relevant Treasurer's instructions;
  - 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 over its financial reporting and its preparation of the financial statements have been effective throughout the financial year.

.....
Jacqueline Guerin
Chief Financial Officer

.....
David Ryan
Chief Executive

.....
Allan Holmes
Chair

Date 16/9/2022

South Australian Water Corporation
Statement of comprehensive income
For the year ended 30 June 2022

	Notes	2022 $'000	2021* $'000
Income			
Revenue from ordinary activities	4	**1,355,499**	1,344,710
Other income	5	**7,048**	8,942
Total income		**1,362,547**	**1,353,652**
Expenses			
Depreciation and amortisation expense	6	**(368,405)**	(353,588)
Borrowing costs	6	**(286,185)**	(298,749)
Electricity expense		**(73,475)**	(52,392)
Services and supplies	6	**(178,463)**	(183,454)
Operational and service contracts		**(232,495)**	(208,756)
Employee benefits expense	6	**(141,431)**	(140,411)
Other expenses	6	**(34,038)**	(23,559)
Total expenses		**(1,314,492)**	**(1,260,909)**
Profit before income tax equivalents		**48,055**	**92,743**
Income tax expense	7	**(11,742)**	(23,794)
Profit after income tax equivalents		**36,313**	**68,949**
Other comprehensive income			
Items that will not be reclassified to net result			
(Loss)/gain on revaluation of infrastructure, plant and equipment assets	29(a)	**(526,385)**	439,079
Income tax relating to items of other comprehensive income	7(c)	**148,143**	(130,202)
Other comprehensive income for the year, net of tax		**(378,242)**	**308,877**
Total comprehensive result		**(341,929)**	377,826
Total comprehensive result for the year is attributable to:			
The SA Government as owner		**(341,929)**	377,826

* Restated. Refer to Note 1 for detailed information on restatement of comparatives

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 2022

	Notes	**2022** **$'000**	2021* $'000
ASSETS			
Current assets			
Cash and cash equivalents	26	**7,176**	3,870
Receivables	8	**187,818**	193,889
Inventories	9	**10,098**	9,978
Other current assets	10	**17,998**	13,858
Total current assets		**223,090**	**221,595**
Non-current assets			
Finance lease receivable		**1,469**	3,579
Deferred tax assets	11	**88,953**	84,658
Intangible assets	12	**151,982**	171,372
Infrastructure, plant and equipment	13	**13,332,529**	13,742,757
Right-of-use assets	15	**166,858**	171,176
Other non-current assets	16	**1,226**	1,351
Total non-current assets		**13,743,017**	**14,174,893**
Total assets		**13,966,107**	**14,396,488**
LIABILITIES			
Current liabilities			
Payables	17	**185,712**	197,667
Financial liabilities/borrowings	18	**49,554**	45,618
Tax liabilities	19	**4,341**	2,454
Provisions	20	**35,590**	37,679
Other current liabilities	21	**27,302**	21,628
Total current liabilities		**302,499**	**305,046**
Non-current liabilities			
Payables		**2,478**	2,579
Financial liabilities/borrowings	22	**7,272,622**	7,167,527
Deferred tax liabilities	23	**1,296,722**	1,460,694
Provisions	24	**34,651**	36,247
Other non-current liabilities	25	**325,675**	334,952
Total non-current liabilities		**8,932,148**	**9,001,999**
Total liabilities		**9,234,647**	**9,307,045**
Net assets		**4,731,460**	**5,089,443**
EQUITY			
Contributed equity		**238,147**	224,319
Asset revaluation surplus	29(a)	**4,207,847**	4,597,921
Retained earnings	29(b)	**285,466**	267,203
Total equity		**4,731,460**	**5,089,443**

* Restated. Refer to Note 1 for detailed information on restatement of comparatives

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 2022

	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	29	-	(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		-	(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	33	-	-	(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**

* Restated. Refer to Note 1 for detailed information on restatement of comparatives

**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 changes in equity
For the year ended 30 June 2022
(continued)

	Notes	Contributed equity $'000	Asset revaluation surplus $'000	Retained* earnings $'000	Total $'000
Balance at 1 July 2020		**213,372**	**4,299,115**	**281,949**	**4,794,436**
Adjustment for change in accounting policy		-	-	(11,673)	(11,673)
Deferred income tax finance lease		-	-	44	44
Restated total equity at the beginning of the financial year		**213,372**	**4,299,115**	**270,320**	**4,782,807**
Profit for the year		-	-	68,949	68,949
Gain/(loss) on revaluation on infrastructure, plant and equipment assets	29	-	439,079	-	439,079
Transfer to retained profits on (disposal)/transfer from asset revaluation surplus	29	-	(10,027)	10,027	-
Income tax relating to components of other comprehensive income	7(c)	-	(130,246)	-	(130,246)
Total comprehensive result for the period		**-**	**298,806**	**78,976**	**377,782**
Transactions with the SA Government in their capacity as owners:					
Contributions of equity**		10,947	-	-	10,947
Dividends provided for or paid	33	-	-	(82,093)	(82,093)
		10,947	**-**	**(82,093)**	**(71,146)**
Balance at 30 June 2021		**224,319**	**4,597,921**	**267,203**	**5,089,443**

* Restated. Refer to Note 1 for detailed information on restatement of comparatives

**In 2020/21, SA Water received the following contributions of equity;
- $3.250m from the SA Government to partially fund the opening of South Australian reservoirs for recreational use;
- $2.288m to partially fund key works completed for the Kangaroo Island Desalination Plant;
- $5.409m was received to fund completion of the Angle Vale Super School Augmentation project.

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

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 2022

	Notes	**2022 $'000**	2021* $'000
Cash flows from operating activities			
Receipts from customers		**1,276,511**	1,274,213
Payments to suppliers and employees		**(743,706)**	(644,485)
Interest received		**117**	126
Receipts from community service obligations		**138,837**	141,027
Receipts from contributions		**14,839**	15,538
Receipts from government grants		**1,767**	1,359
Borrowing costs paid		**(286,054)**	(298,250)
Income tax equivalents paid		**(29,979)**	(51,951)
Net cash inflow from operating activities	**27**	**372,332**	**437,577**
Cash flows from investing activities			
Payments for construction and purchase of infrastructure, plant and equipment		**(442,532)**	(439,729)
Payments for intangible assets		**(20,442)**	(18,202)
Proceeds from sale of intangible assets		**-**	1,616
Proceeds from sale of infrastructure, plant and equipment		**8,006**	9,885
Net cash (outflow) from investing activities		**(454,968)**	**(446,430)**
Cash flows from financing activities			
Proceeds from borrowings		**783,100**	867,800
Repayment of borrowings		**(667,200)**	(760,900)
Proceeds from equity contributions		**17,627**	10,947
Dividends paid	33	**(29,882)**	(82,093)
Repayments of finance lease liability		**(17,703)**	(27,875)
Net cash inflow from financing activities		**85,942**	**7,879**
Net increase/(decrease) in cash and cash equivalents		**3,306**	(974)
Cash and cash equivalents at the beginning of the financial year		**3,870**	4,844
Cash and cash equivalents at end of period	**26**	**7,176**	**3,870**

*Restated. Refer to Note 1 for detailed information on restatement of comparatives

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

South Australian Water Corporation
Notes to the financial statements
30 June 2022

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

During the year ended 30 June 2022, the Corporation revised its accounting policy in relation to configuration and customisation costs incurred in implementing software-as-a service (SaaS) arrangements with cloud providers. The change in accounting policy resulted from the implementation of agenda decisions issued by the IFRS Interpretations Committee (IFRIC) clarifying its interpretation of how current accounting standards apply to these types of 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 recognised as operating expenses when the services are received.

The Corporation's previous accounting policy has been to capitalise all costs related to SaaS arrangements as intangible assets in the Statement of Financial Position. The adoption of the agenda decisions has resulted in a reclassification of these intangible assets as an expense in the Statement of Comprehensive Income, impacting both the current and prior periods presented. The new accounting policy is presented in Note 12.

The change in accounting policy has been retrospectively applied and comparative information has been restated, as follows:

South Australian Water Corporation
Notes to the financial statements
30 June 2022
(continued)

1 Summary of significant accounting policies (continued)

(a) *Basis of preparation (continued)*

Impact on previous reporting periods

	2021 $'000	2020 $'000
Impact on equity - increase/(decrease) in equity		
Deferred tax assets	**14**	68
Intangible assets	**(2,448)**	(3,254)
Infrastructure, plant and equipment	**(4,015)**	(10,323)
Total assets	**(6,449)**	(13,509)
Tax liabilities	**1,925**	1,837
Total liabilities	**1,925**	1,837
Net assets	**(4,524)**	(11,672)
Retained earnings	**(4,524)**	(11,672)
Total equity	**(4,524)**	(11,672)
Impact on statement of comprehensive income - increase/(decrease) in profit		
Depreciation and amortisation expense	**1,312**	
Services and supplies	**(3,007)**	
Operational and service contracts	**(3,414)**	
Employee benefits expense	**(1,354)**	
Income tax expense	**1,939**	
Profit after income tax equivalents	**(4,524)**	
Statement of cash flows - (increase)/decrease		
Payments to suppliers and employees	**(7,495)**	
Net cash outflow from operating activities	**(7,495)**	
Payments for construction and purchase of infrastructure, plant and equipment	**19**	
Payments for intangible assets	**7,476**	
Net cash (outflow) from investing activities	**7,495**	

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*

The Corporation did not voluntarily change any of its accounting policies during 2021/22.

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 2022.

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. As part of a Treasury Risk Management Policy review, the permissible duration range is 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.

At 30 June 2022 it has been assumed that a reasonable possible shift in interest rates over the next reporting period could be 1.5% upwards and -1.0% downwards.

		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)**

		Interest rate risk			
		-0.75%		**+1.0%**	
30 June 2021	Carrying amount $'000	Profit $'000	Equity $'000	Profit $'000	Equity $'000
Financial assets					
Cash and cash equivalents	3,870	(20)	(20)	27	27
Financial liabilities					
Short term borrowings	(29,874)	157	157	(209)	(209)
Total increase/(decrease)		**137**	**137**	**(182)**	**(182)**

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.

Sensitivity analysis is based on electricity price risk exposures in existence at balance date assuming all other variables are held constant.

At 30 June 2021 and 30 June 2022 a sensitivity analysis was not applicable as no electricity derivatives were held.

(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.

(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 reviewed on a daily basis.

Contractual maturities

The table below analyses the Corporation's financial liabilities into the relevant groupings based on the remaining period at the reporting date 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.

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)

(c) *Liquidity risk (continued)*

	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
At 30 June 2021					
Non-derivatives					
Non-interest bearing liabilities*	120,653	-	-	-	120,653
Fixed rate borrowings	503,705	663,680	2,902,018	4,332,439	8,401,842
Floating rate borrowings	29,918	-	-	-	29,918
Unrecognised fixed rate loan commitments**	1,617	2,880	8,642	117,285	130,424
Lease liabilities	22,148	20,886	43,533	85,822	172,389
Total non-derivatives	**678,041**	**687,446**	**2,954,193**	**4,535,546**	**8,855,226**

* 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 2021, 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:

	2022		2021	
	Carrying amount $'000	**Fair value $'000**	Carrying amount $'000	Fair value $'000
Long term borrowings (note 22)	**7,159,000**	**6,736,814**	7,044,000	7,511,570

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 20);
- Asset valuation methodology and useful lives of assets (refer note 13);
- Impairment of assets (refer note 13);
- Unbilled water sales (refer note 4);
- Provision for long service leave (refer note 24); and
- Provision for workers compensation (refer note 20).

4 Revenue from ordinary activities

	2022 **$'000**	2021 $'000
Revenue from contracts with customers		
Water and sewer rates and charges	**1,061,441**	1,040,522
Recoverable works	**52,909**	54,472
Fees and charges	**54,385**	58,103
Contributed assets	**40,215**	46,499
	1,208,950	**1,199,596**
Other revenue		
Community service obligations	**133,511**	132,351
Government grants	**10,676**	9,896
Rents	**2,151**	2,583
Miscellaneous	**91**	160
Interest	**38**	32
Interest - finance leases	**82**	92
	146,549	**145,114**
Total	**1,355,499**	**1,344,710**

Water and sewer rates and charges

SA Water sets its water and sewer 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 in line with 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 sewer 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).

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.

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. It is at this point that customer bills are raised.

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.

The CSO revenue is recognised as the services are provided.

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 over 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. The contribution recognised is equivalent to the fair value of these assets that is estimated using the depreciated modern equivalent replacement cost.

The performance obligation for assets that are constructed by developers and gifted to SA Water for nil value, is satisfied and contributed asset revenue 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, and when the asset is practically complete.

(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.

Revenue is recognised when the works are practically completed, and the customer is billed for costs incurred on the project.

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.

4 Revenue from ordinary activities (continued)

Fees and charges

This includes ancillary services that are associated with the provision of water and sewer 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 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**

30 June 2021	Water $'000	Wastewater $'000	Total $'000
Revenue from contracts with customers			
Water and sewer rates and charges	719,691	320,831	1,040,522
Recoverable works	51,524	2,948	54,472
Fees and charges	33,647	24,456	58,103
Contributed assets	19,775	26,724	46,499
Total revenue from contracts with customers	**824,637**	**374,959**	**1,199,596**

5 Other income

	2022	2021
	$'000	$'000
Net gain on disposal of infrastructure, plant and equipment	**4,926**	6,617
Gain on derecognition of right-of-use asset*	**-**	407
Net gain on disposal of water allocations	**-**	1,595
Reversal of prior year infrastructure, plant and equipment revaluation decrement**	**2,122**	323
Total	**7,048**	**8,942**

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 2021 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.

South Australian Water Corporation
Notes to the financial statements
30 June 2022
(continued)

6 Expenses

	Notes	**2022 $'000**	2021* $'000
Depreciation and amortisation			
Infrastructure, plant and equipment	13	**327,245**	311,930
Intangible assets	12	**26,011**	25,988
Right-of-use assets	15	**15,149**	15,670
Total depreciation and amortisation		**368,405**	**353,588**
Borrowing costs			
Interest paid/payable on short term and long term borrowings		**278,836**	290,647
Interest expense on lease liabilities		**7,349**	8,102
Total borrowing costs		**286,185**	**298,749**
Services & supplies			
Consultancy costs		**531**	614
Cost of goods sold		**33,214**	30,175
External fees and charges		**55,374**	53,559
Licences		**21,899**	21,394
Materials and chemicals		**22,152**	21,006
Other services and supplies		**44,110**	56,060
Short-term leases		**1,183**	646
Total services & supplies		**178,463**	**183,454**
Employee benefits			
Salaries and wages		**106,236**	111,036
Long service leave		**2,696**	2,205
Annual leave		**14,436**	11,785
Workers compensation		**442**	801
Superannuation contribution		**17,621**	14,584
Total employee benefits		**141,431**	**140,411**
Other expenses			
Net bad and doubtful debts		**(7)**	24
Write-off in value of infrastructure, plant and capital WIP		**6,495**	5,479
Infrastructure, plant and equipment revaluation decrement		**27,550**	18,021
Net loss from electricity derivatives at fair value through P&L		**-**	35
Total other expenses		**34,038**	**23,559**
Consultancy costs			
Less than $10,000 (Number 2022: #2; 2021: #6)		**12**	23
Between $10,000 and $50,000 (Number 2022: #1; 2021: #6)		**15**	166
Greater than $50,000 (Number 2022: #4; 2021: #2)		**504**	425
		531	**614**

* Comparative information has been restated to reflect the change in accounting policy detailed in Note 1.

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 the *Treasurer's Instructions (Accounting Policy Statements)* and *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.

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.

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.

Consistent with SA Water's treasury and energy policies, derivative financial instruments are transacted as economic hedges of cash flow exposures and are not held for speculative purposes.

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 for leases for which the underlying asset is of low value can be made on a lease-by-lease basis. 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*

	2022 **$'000**	2021* $'000
Current tax on profits for the year	**32,181**	44,664
Deferred tax	**(20,384)**	(20,870)
Amounts over provided in prior years	**(55)**	-
	11,742	**23,794**
Deferred income tax included in income tax expense comprises:		
(Increase) in deferred tax assets (note 11)	**(3,384)**	(8,287)
(Decrease) in deferred tax liabilities (note 23)	**(17,000)**	(12,583)
	(20,384)	**(20,870)**

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

	2022 **$'000**	2021* $'000
Profit from continuing operations before income tax expense	**48,055**	92,742
Tax at the Australian tax rate of 30.0% (2021: 30.0%)	**14,417**	27,823
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	**(104)**	(43)
Gain on sale of land	**(407)**	(1,877)
	11,797	**23,794**
Amounts over provided in prior years	**(55)**	-
Income tax expense	**11,742**	**23,794**

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

	2022 **$'000**	2021 $'000
(Loss)/gain on revaluation of infrastructure, plant and equipment (note 23 & 11)	(150,555)	130,246
Leased infrastructure assets (note 23)	2,412	(44)
	(148,143)	**130,202**

*Comparative information has been restated to reflect the change in accounting policy detailed in Note 1.

8 Current assets - Trade and other receivables

	2022 **$'000**	2021 $'000
Receivables		
Rates receivable (water and sewer)	**131,061**	135,925
Sundry debtors*	**36,485**	36,674
Allowance for doubtful debts	**(119)**	(137)
	167,427	**172,462**
Other receivables		
Finance lease receivable	**2,110**	2,010
Community service obligations	**18,281**	19,417
	187,818	**193,889**

*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 doubtful debts 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 doubtful debts 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 doubtful debts are as follows:

	2022 **$'000**	**2021** **$'000**
Opening balance at 1 July	**137**	193
Increase in the allowance	**30**	31
Amounts written off	**(11)**	(80)
Amounts reversed	**(37)**	(7)
Closing balance at 30 June	**119**	**137**

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)*

	2022	2021
	$'000	$'000
At 30 June the ageing of rates receivable is as follows:		
Not past due	**88,823**	84,028
Past due 22 - 60 days	**20,158**	24,213
Past due 61 - 90 days	**3,153**	6,906
Past due 91 - 120 days	**865**	1,417
Past due > 120 days	**18,062**	19,361
	131,061	**135,925**

	2022	2021
	$'000	$'000
At 30 June the ageing of sundry debtors is as follows:		
Not past due	**32,392**	33,022
Past due 31 - 60 days	**3,274**	1,202
Past due 61 - 90 days	**363**	432
Past due 91 - 120 days	**187**	428
Past due > 120 days	**269**	1,590
	36,485	**36,674**

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.

8 Current assets - Trade and other receivables (continued)

(b) *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*:

	2022 **$'000**	2021 $'000
Undiscounted finance lease payments receivable		
Less than 1 year	**2,155**	2,092
Between 1 and 2 years	**1,476**	2,155
Between 2 and 5 years	**-**	1,476
Total undiscounted finance payments receivable	**3,631**	**5,723**
Less unearned finance income	**(52)**	(134)
Total finance lease receivables	**3,579**	**5,589**

The Corporation subleases two floors of its office building located in Adelaide CBD. One floor is subleased to the South Australian Tourism Commission. During 2020-21 another floor was subleased to the Department for Trade, Tourism and Investment. The remaining term of each of the subleases is 1.75 years, which aligns to the head lease. Consequently, 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.

Operating leases

The following table is a maturity analysis of lease payments, showing the undiscounted operating lease payments to be received after the reporting date.

	2022 **$'000**	2021 $'000
Undiscounted operating lease payments		
Less than 1 year	**-**	40
Total	**-**	**40**

(c) *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

	2022 **$'000**	2021 $'000
Raw materials and stores	**10,155**	9,476
Allowance for obsolete stock	**(377)**	(282)
Work in progress	**320**	784
	10,098	**9,978**

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

	2022 **$'000**	2021 $'000
Interest receivable	**7**	4
Prepayments	**15,152**	12,194
Renewable Energy Certificates*	**2,723**	1,465
Australian carbon credits	**116**	195
	17,998	**13,858**

*SA Water generates and purchases Renewable Energy Certificates (RECs) in order to meet Green House Gas (GHG) emission targets. Unused RECs accumulated as at 30 June are recorded at their fair value and expected to be utilised in satisfying the Corporation's GHG emission targets.

11 Non-current assets - Deferred tax assets

	Notes	**2022** **$'000**	2021* $'000
The balance comprises temporary differences attributable to:			
Doubtful debts		**(4)**	2
Obsolete stock		**113**	85
Infrastructure, plant and equipment		**22,170**	16,770
Pooled assets		**72**	47
Payables		**1,504**	1,626
Audit fee payable		**146**	151
Government grants		**10,598**	10,761
Employee benefits		**14,115**	13,971
Deferred lease incentives		**173**	173
Lease liability - right-of-use assets		**(8,333)**	(5,584)
Unearned customer contributions		**(390)**	(641)
Unearned income		**3,160**	1,298
Provision for asset disposal		**5,114**	5,795
Provision for workers compensation		**189**	789
		48,627	**45,243**
Amounts recognised directly in equity:			
Unearned customer contributions		**2,335**	2,335
Revaluation of Infrastructure, plant and equipment	29	**(342)**	(405)
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
		37,528	**37,465**
Recognition of leases - AASB 16			
Recognition of new leases		**2,798**	1,950
		2,798	**1,950**
Total deferred tax assets		**88,953**	**84,658**

	2022 **$'000**	2021 $'000
Movements:		
Opening balance at 1 July*	**84,658**	75,436
Charged to the statement of comprehensive income	**3,384**	8,287
Charged to equity (note 29(a) & 29(b))	**63**	-
Recognition of new leases - AASB 16	**848**	935
Closing balance at 30 June	**88,953**	**84,658**
Deferred tax assets expected to be recovered within 12 months	**18,668**	17,797
Deferred tax assets expected to be recovered after more than 12 months	**70,285**	66,861
	88,953	**84,658**

* Comparative information has been restated to reflect the change in accounting policy detailed in Note 1.

12 Intangible assets

	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**

*Comparative information has been restated to reflect the change in accounting policy detailed in Note 1.

12 Intangible assets (continued)

	Easements $'000	Prescription rights $'000	Computer software* $'000	ADP intangible $'000	Purchased water rights $'000	Total $'000
Year ended 30 June 2021						
Opening net book amount	6,213	4,500	64,262	56,174	41,159	172,308
Additions	434	-	24,618	-	-	25,052
Amortisation charge	-	-	(24,287)	(1,701)	-	(25,988)
Closing net book amount	6,647	4,500	64,593	54,473	41,159	171,372
At 30 June 2021						
Cost	6,647	4,500	285,613	70,982	41,159	408,901
Accumulated amortisation	-	-	(221,020)	(16,509)	-	(237,529)
Net book amount	**6,647**	**4,500**	**64,593**	**54,473**	**41,159**	**171,372**

*Comparative information has been restated to reflect the change in accounting policy detailed in Note 1.

12 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 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.

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.

12 Intangible assets (continued)

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.

13 Non-current assets - Infrastructure, plant and equipment

	Work in progress Water & Sewerage* $'000	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	Total $'000
Year ended 30 June 2022								
Opening net book amount	457,471	191,838	405,059	139,815	25,898	12,433,441	89,235	13,742,757
Additions***	452,326	11,111	-	105,163	7,583	254,768	2,871	833,822
Transfers	(246,061)	(105,639)	-	-	-	-	-	(351,700)
Depreciation charge	-	-	-	(6,542)	(3,566)	(297,084)	(20,053)	(327,245)
Asset write-down	(4,836)	(1,659)	-	-	-	-	-	(6,495)
Disposals	-	-	(6,523)	-	(274)	-	-	(6,797)
Revaluation surplus/(decrement)	-	(7,696)	(21,270)	(19,245)	-	(503,602)	-	(551,813)
Closing net book amount	**658,900**	**87,955**	**377,266**	**219,191**	**29,641**	**11,887,523**	**72,053**	**13,332,529**
At 30 June 2022								
Cost or fair value	658,900	87,955	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	**658,900**	**87,955**	**377,266**	**219,191**	**29,641**	**11,887,523**	**72,053**	**13,332,529**

*Comparative information has been restated to reflect the change in accounting policy detailed in Note 1.
**The renewable energy asset class created in the 2020/21 financial year reflects all assets delivered as part of the Corporation's Zero- Cost Energy Future program of works.
***Additions include transfers from work in progress.

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

	Work in progress Water & Sewerage* $'000	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	Total $'000
Year ended 30 June 2021								
Opening net book amount	373,667	222,331	400,375	-	23,861	12,044,408	98,485	13,163,127
Additions**	341,395	130,249	2,929	148,227	5,117	242,412	11,226	881,555
Transfers	(252,112)	(150,537)	-	-	-	-	-	(402,649)
Depreciation charge	-	-	-	(626)	(3,080)	(287,748)	(20,476)	(311,930)
Asset write-down	(5,479)	-	-	-	-	-	-	(5,479)
Disposals	-	-	(3,248)	-	-	-	-	(3,248)
Revaluation surplus/(decrement)	-	(10,205)	5,003	(7,786)	-	434,369	-	421,381
Closing net book amount	**457,471**	**191,838**	**405,059**	**139,815**	**25,898**	**12,433,441**	**89,235**	**13,742,757**
At 30 June 2021								
Cost or fair value	457,471	191,838	405,059	140,408	62,324	21,951,287	370,194	23,578,581
Accumulated depreciation	-	-	-	(593)	(36,426)	(9,517,846)	(280,959)	(9,835,824)
Net book amount	**457,471**	**191,838**	**405,059**	**139,815**	**25,898**	**12,433,441**	**89,235**	**13,742,757**

*Comparative information has been restated to reflect the change in accounting policy detailed in Note 1.
**Additions include transfers from work in progress.

13 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	**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**
Revalued assets based on cost model					
Cost	**52,816**	**148,227**	**8,345,329**	**294,868**	**8,841,240**
Accumulated depreciation	**-**	**(626)**	**(2,783,753)**	**(214,659)**	**(2,999,038)**
At 30 June 2021 net carrying amount	**52,816**	**147,601**	**5,561,576**	**80,209**	**5,842,202**

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 in the statement of financial position in accordance with *AASB 13 Fair Value Measurement* and *AASB 116 Property, Plant and Equipment.* Refer note 14 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 valuer was not 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.

13 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 computing equipment, leasehold improvements and assets that do not fall into the above categories.

On initial recognition costs associated with this asset class include construction cost or purchase price, installation costs and attributable labour. These assets are subsequently revalued. Our methodology for measuring fair value is the cost approach within AASB 13 using the directors valuation to measure fair value. The Directors' valuation is performed using the Produce Price Index (PPI) or current contract rates. PPI measures changes over time in the process of new construction outputs. The PPI used is the Australian Bureau of Statistics Index Number 3101 "Road and Bridge Construction South Australia" The Corporation assess whether the carrying value is materially consistent with fair value on an annual basis and appropriately update using indexation where required.

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

Infrastructure, plant and equipment (continued)
Other property, plant and equipment (continued)

Work in progress

In the 2020/2021 financial year work in progress (WIP) was split out between the Corporation's water and sewer cash generating unit (CGU) and the renewable energy CGU. The CGU's include their respective capital projects that are currently under construction.

The Corporation's water and sewerage CGU WIP is recognised at fair value based on the cost approach at 30 June 2022.

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.

13 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 2022 (W&S CGU)**	**For 30 June 2022 (ZCEF CGU)**
Discount rate	Asset value would increase as the discount rate decreases.	Nominal post-tax Weighted Average Cost of Capital (WACC) of 4.52%.	Nominal post-tax Weighted Average Cost of Capital (WACC) of 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.	2022/23 is based on the 2022/23 State Budget Outcome approved CPI increase. 2023/24 onwards utilises a glide path to a long term rate of 2.50%	2022/23 is based on the 2022/23 State Budget Outcome approved CPI increase. 2023/24 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).	29 years (with a defined future point of 2050, 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 2022/23 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 2022/23 State Budget Outcome and estimates of non-regulated Capital expenditure.	Capital expenditure is based on final state budget forward estimates.

13 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	4.52%	4.62%	4.42%
Calculated fair value of infrastructure, plant and equipment ('$000)	$13,344,200	$12,652,900	$14,045,900
Resulting change ('$000)		($691,300)	$701,700

(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)	$13,344,200	$14,040,300	$12,713,900
Resulting change ('$000)		$696,100	($630,300)

(iii) Sustainable Capital Expenditure	**Value applied $**	**If higher $10.0m**	**If lower $10.0m**
Nominal post-tax value	$395.5m	$405.5m	$385.5m
Calculated fair value of infrastructure, plant and equipment ('$000)	$13,344,200	$13,035,800	$13,652,600
Resulting change ('$000)		($308,400)	$308,400

Sensitivity analysis (ZCEF)

(i) Discount rate	**Rate applied %**	**If higher +0.1%**	**If lower -0.1%**
Nominal post-tax rate	4.97%	5.07%	4.87%
Calculated fair value of renewable energy assets ('$000)	$307,300	$303,700	$310,700
Resulting change ('$000)		($3,600)	$3,400

(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)	$307,300	$337,000	$277,600
Resulting change ('$000)		$29,700	($29,700)

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

13 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 CGU's 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 2022, 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.

14 Fair value measurements

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

- Land (note 13);
- System infrastructure assets (note 13);
- Plant and equipment (note 13);
- Other property, plant and equipment (note 13); and
- Renewable energy (note 13).

(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 non-financial assets measured and recognised at fair value at 30 June 2022.

(i) Recognised fair value measurements

30 June 2022	Notes	**2022 $'000**	**Level 1 $'000**	**Level 2 $'000**	**Level 3 $'000**
Recurring fair value measurements					
Non- Financial Assets	13				
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**

14 Fair value measurements (continued)

(a) *Fair value measurements (continued)*

(i) Recognised fair value measurements (continued)

30 June 2021	Notes	**2021 $'000**	**Level 1 $'000**	**Level 2 $'000**	**Level 3 $'000**
Recurring fair value measurement					
Non-financial assets	13				
Land		**405,059**	**-**	**405,059**	**-**
System infrastructure assets		**12,433,441**	**-**	**-**	**12,433,441**
Renewable energy assets		**139,815**	**-**	**-**	**139,815**
Plant and equipment and other		**115,133**	**-**	**-**	**115,133**
Total non-financial assets		**13,093,448**	**-**	**405,059**	**12,688,389**
Total recurring non-financial assets		**13,093,448**	**-**	**405,059**	**12,688,389**

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. SA Water does not hold any trade receivables.

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 13.

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

The amounts shown as comparatives for fair value in note 14 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, any existing accumulated depreciation or amortisation is eliminated against the gross carrying amount of the asset and the net amount is restated to the revalued amount of the asset.

14 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 13 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 13.

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

	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 or fair value	**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**

	Land $'000	Buildings $'000	Plant and equipment $'000	Infrastructure assets $'000	Total $'000
Year ended 30 June 2021					
Opening balance at 1 July 2020	**567**	**78,144**	**5,888**	**102,267**	186,866
Additions	**-**	**-**	**3,115**	**-**	3,115
Lease liability remeasurement	**-**	**-**	**-**	**(147)**	(147)
Derecognition		**(2,903)**			(2,903)
Depreciation	**(20)**	**(6,337)**	**(3,482)**	**(5,831)**	(15,670)
Disposals	**-**	**-**	**(85)**	**-**	(85)
Closing net book amount at 30 June 2021	**547**	**68,904**	**5,436**	**96,289**	**171,176**
At 30 June 2021					
Cost or fair value	**587**	**81,951**	**12,396**	**107,957**	202,891
Accumulated depreciation	**(40)**	**(13,047)**	**(6,960)**	**(11,668)**	(31,715)
Net book value	**547**	**68,904**	**5,436**	**96,289**	**171,176**

15 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 2022 there is 26 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 and at Berri. 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. While the right-of-use asset for the office accommodation at Berri was calculated as the amount equal to the remaining lease liability 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.

In accordance with the transitional provisions of AASB 16, the Corporation was able to recognise the fair value of BOOT leased infrastructure assets recognised at 30 June 2019 as the carrying value of the right-of-use asset at 1 July 2019. After initial recognition, the Corporation was required to adopt the application of AASB 16 to measure the remaining lease liability, which included the impact of any future escalation. This resulted in an increase in the lease liability of $17.9m and a corresponding increase in the carrying value of the right-of-use asset at 30 June 2021 (refer note 22).

At 30 June 2022 the remaining lease liability has been remeasured using the indexes applicable at this date.

16 Other non-current assets

	2022 **$'000**	2021 $'000
Prepayments	**1,226**	1,351

17 Current liabilities - Payables

	2022 **$'000**	2021 $'000
Interest payable	**61,423**	61,292
Trade creditors	**110,100**	120,394
Other creditors	**14,189**	15,981
	185,712	**197,667**

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.

18 Current liabilities - Financial liabilities/borrowings

	2022 **$'000**	2021 $'000
Lease liabilities	**18,780**	15,744
Short term borrowings	**30,774**	29,874
	49,554	**45,618**

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.

19 Current liabilities - Tax liabilities

	2022	2021*
	$'000	$'000
Provision for current income tax movements during the year were as follows:		
Opening balance at 1 July	**2,454**	8,607
Income tax paid	**(29,979)**	(51,951)
Current year's income tax provision	**32,181**	44,664
Amounts (over)/under provided in prior years	**(315)**	1,134
	4,341	**2,454**

*Comparative information has been restated to reflect the change in accounting policy detailed in Note 1.

20 Current liabilities - Provisions

	2022	2021
	$'000	$'000
Employee benefits	**19,957**	18,085
Asset disposal	**13,897**	16,174
Damages and claims	**606**	397
Workers compensation	**1,130**	3,023
	35,590	**37,679**

(a) *Movements in provisions*

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

2022 **Current**	**Asset disposal** **$'000**	**Damages and claims** **$'000**	**Workers compensation** **$'000**	**Total** **$'000**
Opening balance at 1 July	16,174	397	3,023	19,594
Provisions recognised	-	236	1,334	1,570
Payments made during year	(4,375)	(1,341)	(2,081)	(7,797)
Re-measurement adjustments	2,098	1,314	(1,146)	2,266
Closing balance at 30 June	**13,897**	**606**	**1,130**	**15,633**

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 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.

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.

20 Current liabilities - Provisions (continued)

Damages and claims (continued)

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 2022 provided by KPMG Actuarial Pty Ltd. SA Water is committed to early intervention and supportive of early return to work programs for our people.

21 Current liabilities - Other current liabilities

	2022	2021
	$'000	$'000
Government grants	**10,421**	10,301
Unearned income	**7,492**	3,298
Deposits from customers	**2,906**	2,385
Contract liabilities	**6,483**	5,644
	27,302	**21,628**

22 Non-current liabilities - Financial liabilities/borrowings

	2022	2021
	$'000	$'000
Lease liabilities	**113,622**	123,527
Long term borrowings	**7,159,000**	7,044,000
	7,272,622	**7,167,527**

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 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.

22 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 2022	**Land $'000**	**Buildings $'000**	**Plant and equipment $'000**	**Infrastructure assets $'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**

30 June 2021	**$'000**	**$'000**	**$'000**	**$'000**	**Total $'000**
Opening balance at 1 July 2020	**588**	**107,926**	**5,931**	**49,822**	164,267
Interest expense	**21**	**3,561**	**89**	**4,431**	8,102
Additions	**-**	**-**	**3,115**	**-**	3,115
Remeasurement	**-**	**-**	**-**	**(147)**	(147)
Write off on disposal	**-**	**-**	**(89)**	**-**	(89)
Lease payments	**(20)**	**(8,891)**	**(3,563)**	**(23,503)**	(35,977)
Closing net book amount at 30 June 2021	**589**	**102,596**	**5,483**	**30,603**	**139,271**

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.

23 Non-current liabilities - Deferred tax liabilities

	2022 **$'000**	2021 $'000
The balance comprises temporary differences attributable to:		
Prepayments	**1,725**	1,691
Lease incentive asset	**84**	84
Infrastructure, plant and equipment	**(86,464)**	(73,631)
Right-of-use asset	**(12,111)**	(8,514)
Finance lease receivable	**(248)**	356
	(97,014)	**(80,014)**
Amounts recognised directly in equity		
Revaluation of infrastructure, plant and equipment	**1,356,461**	1,506,952
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	**6,666**	4,254
Lease incentive asset	**(84)**	(84)
	1,391,813	**1,539,892**
Recognition of new leases	**2,798**	1,950
Amounts over provided in prior years	**(875)**	(1,134)
	1,923	**816**
Total deferred tax liabilities	**1,296,722**	**1,460,694**

	2022 **$'000**	2021 $'000
Movements:		
Opening balance	**1,460,694**	1,343,275
Credited to the Statement of Comprehensive Income (note 7)	**(17,000)**	(12,583)
Charged to equity (note 29(a) & 29(b))	**(148,080)**	130,202
Recognition of new leases - AASB 16	**848**	934
Amounts under/(over) provided in prior years	**260**	(1,134)
Closing balance at 30 June	**1,296,722**	**1,460,694**
Deferred tax liabilities to be settled within 12 months	**2,358**	2,294
Deferred tax liabilities expected to be settled after more than 12 months	**1,294,364**	1,458,400
	1,296,722	**1,460,694**

24 Non-current liabilities - Provisions

	2022 **$'000**	2021 $'000
Employee benefits	**27,091**	28,483
Workers compensation	**2,763**	2,967
Asset disposal	**3,150**	3,150
Lease make good	**1,647**	1,647
	34,651	**36,247**

(a) *Movements in provisions*

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

2022 **Non-current**	**Workers compensation $'000**	**Asset disposal $'000**	**Lease make good $'000**	**Total $'000**
Opening balance at 1 July	2,967	3,150	1,647	7,764
Re-measurement adjustments	(204)	-	-	(204)
Closing balance at 30 June	**2,763**	**3,150**	**1,647**	**7,560**

Employee benefits

Liabilities that are not expected to be settled within 12 months are 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, the estimated future cash flows. The related on costs have been recognised in the statement of financial position as payables.

The Corporation's long service leave liability for 30 June 2022 was valued by KPMG Actuarial 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.

25 Non-current liabilities - Other non-current liabilities

	2022	2021
	$'000	$'000
Contract liabilities for Government grants	**323,781**	333,052
Unearned income*	**1,894**	1,900
	325,675	**334,952**

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

26 Reconciliation of cash

	2022	2021
	$'000	$'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	**7,176**	3,870

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.

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

	2022 $'000	2021 $'000
Net profit for the year	**36,313**	68,949
Add/(less) non-cash items:		
Depreciation and amortisation	**368,405**	353,588
Amortisation of government grant revenue from liabilities	**(10,676)**	(9,896)
Gifted assets	**(25,522)**	(32,489)
Net (gain) on disposal of infrastructure, plant and equipment	**(5,008)**	(6,617)
Net (gain) on disposal of temporary water allocations	**-**	(1,616)
Infrastructure, plant and equipment revaluation decrement reversal	**(2,122)**	(323)
Infrastructure, plant and equipment revaluation decrement	**27,550**	18,021
Write-off in value of infrastructure, plant and equipment and capital WIP	**6,495**	5,479
Gain on derecognition of right-of-use-assets	**-**	(407)
Change in assets and liabilities:		
Decrease in receivables	**8,182**	31,791
(Increase) in prepayments	**(2,833)**	(223)
(Increase) in inventories	**(121)**	(1,051)
(Increase)/decrease in other operating assets	**(1,173)**	86
(Increase) in deferred tax assets	**(3,384)**	(8,288)
(Decrease)/increase in trade creditors	**(10,722)**	7,089
Increase/(decrease) in provision for employee benefits	**480**	(999)
(Decrease)/increase in provision for workers compensation	**(2,097)**	1,137
Increase in other operating liabilities	**3,718**	15,778
Increase in government grants	**1,767**	1,359
(Decrease)/increase in other provisions	**(2,068)**	16,080
(Decrease) in deferred tax liabilities	**(17,000)**	(12,583)
Increase/(decrease) in income tax payable	**2,148**	(7,288)
Net cash inflow from operating activities	**372,332**	**437,577**

28 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 2022 and 30 June 2021 were as follows:

	2022	2021
	$'000	$'000
Interest bearing borrowings (note 18, 22)	**7,322,176**	7,213,145
Less: cash and cash equivalents (note 26)	**(7,176)**	(3,870)
Net debt	**7,315,000**	7,209,275
Total assets	**13,966,107**	**14,396,488**
Gearing ratio	52.4%	50.0%

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 2022 or the year ended 30 June 2021, in recognition that SA Water 's debt/asset gearing ratio was maintained above the predetermined minimum gearing target of 45%.

29 Asset revaluation surplus and retained earnings

(a) *Asset revaluation surplus*

	2022	2021
	$'000	$'000
Revaluation surplus - infrastructure, plant and equipment	**4,207,847**	4,597,921
	4,207,847	**4,597,921**

Movements:

Infrastructure, plant and equipment revaluation surplus		
Opening balance at 1 July	**4,597,921**	4,299,115
Revaluation of infrastructure, plant and equipment*	**(526,385)**	439,079
Movements in deferred tax liability (note 23)	**150,492**	(130,246)
Transfer to retained profits on disposal	**(14,244)**	(10,027)
Movements in deferred tax assets (note 11)	**63**	-
Closing balance at 30 June	**4,207,847**	**4,597,921**

*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.

*The 2020/21 revaluation increase (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	**267,203**	270,276
Profit for the year	**36,313**	68,949
Dividends (note 33)	**(29,882)**	(82,093)
Transfers from asset revaluation surplus	**14,244**	10,027
Movement in deferred tax liability (note 23)	**(2,412)**	44
Closing balance at 30 June	**285,466**	**267,203**

(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.

30 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:

	2022 **$'000**	2021 $'000
Within one year	**165,406**	114,051
Later than one year but not later than five years	**3,317**	21,798
Later than five years	**-**	7,253
	168,723	**143,102**

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

(b) *Other expenditure commitments*

	2022 **$'000**	2021 $'000
Future other expenditure commitments not provided for in the financial statements are committed as follows:		
Within one year	**207,866**	170,249
Later than one year but not later than five years	**476,216**	522,807
Later than five years	**596,020**	622,777
	1,280,102	**1,315,833**

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.

31 Joint Operation

Jointly controlled operations

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

The jointly controlled operation between SA Water and Lofty Ranges Power will conclude on 24 July 2022. At the time the financial statements were authorised for issue the Corporation is in discussion with Lofty Ranges Power to acquire the operations outright for an amount of $1.26m. These discussions are on going however it is expected that this transaction will be finalised in the next 12 month period. The transaction will not have a material impact on the financial statements as a whole.

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:

	2022	2021
	$'000	$'000
Current assets		
Cash and cash equivalents	**23**	34
Receivables	**-**	10
Total current assets	**23**	**44**
Non-current assets		
Infrastructure, plant and equipment	**1,320**	1,382
Total assets	**1,343**	**1,426**
Current liabilities		
Payables	**3**	32
Total liabilities	**3**	**32**
Net assets	**1,340**	**1,394**

32 Remuneration of auditors

	2022	2021
	$'000	$'000
Audit fees paid/payable:		
SA Water annual Public Finance and Audit Act audit	**473**	486
SA Water Regulatory financial statements audit*	**12**	12
Total	**485**	**498**

* 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.

33 Dividends

	2022	2021
	$'000	$'000
Dividend paid	**29,882**	82,093
	29,882	**82,093**

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 2021 and 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% (refer to note 28).

34 Remuneration of employees

	Current employees 2022	**Ex-Employees 2022**	Current employees 2021	Ex-Employees 2021
The number of employees whose remuneration paid and payables falls within the following bands is:				
$154,001 - 157,000*	**-**	**-**	13	1
$157,001 - 177,000	**75**	**7**	56	1
$177,001 - 197,000	**33**	**1**	32	2
$197,001 - 217,000	**9**	**1**	8	1
$217,001 - 237,000	**10**	**1**	6	2
$237,001 - 257,000	**3**	**-**	3	1
$257,001 - 277,000	**2**	**-**	2	-
$277,001 - 297,000	**1**	**-**	1	-
$297,001 - 317,000	**1**	**1**	1	1
$317,001 - 337,000	**-**	**1**	-	-
$337,001 - 357,000	**-**	**-**	1	1
$377,001 - 397,000	**-**	**-**	-	1
$397,001 - 417,000	**1**	**-**	2	1
$417,001 - 437,000	**2**	**-**	1	-
$437,001 - 457,000	**2**	**-**	-	-
$537,001 - 557,000	**-**	**-**	1	-
$617,001 - 637,000	**1**	**-**	-	-
Total	**140**	**12**	**127**	**12**

*This band has been included for the purpose of reporting comparative figures based on the executive base level remuneration for 2020-21.

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 $29.8m (2021: $27.3m).

	2022 $'000	2021 $'000
Targeted voluntary separation packages (TVSPs)		
Amount paid during the reporting period to separated employees:		
TVSPs	**49**	706
Annual leave and long service leave paid to those employees	**33**	372
Net cost to SA Water	**82**	**1,078**

The number of employees who received TVSPs during the reporting period was 1 (2021: 5).

35 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 34 and 36.

35 Remuneration of directors (continued)

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

	2022 Number of directors	2021 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:		
$20,000 - $39,999	**1**	1
$40,000 - $59,999	**4**	4
$80,000 - $99,999	**1**	1
	6	**6**

The total remuneration paid and payable for those directors was $0.31m (2021: $0.31m) which includes superannuation contributions.

36 Related party disclosures

(a) *Directors*

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

Mr A.V Fletcher AO; Mr J.J Bastian AM; Ms S.M Filby; Ms J.M.H Finlay; Mr C.J Ford, Ms F.A Hele; and Mr D.A Ryan.

Mr Fletcher ceased his position as Chair of the Board on 30 June 2022. He is a non-executive director of Justin Pty Ltd and associated companies, director/shareholder of Andrew Fletcher and Associates Pty Ltd and associated companies, and the chair of QuantX Labs Pty Ltd (formerly Cryoclock Pty Ltd).

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.

Ms Filby is a facilitator for Behind Closed Doors. Ms Filby ceased her position as a volunteer at Calvary Health Care in March 2022.

Ms Finlay is a director of Leveque Consulting Pty Ltd and associated entities, member of the Libraries Board SA, member of the University of Adelaide Council, commissioner of the South Australian National Football League Inc, board member of Helping Hand Aged Care Inc and director of Adelaide Oval Stadium Management Authority Limited. In December 2021, Ms Finlay ceased her position as director with St John Ambulance Australia SA Incorporated.

Ms Hele is a director and shareholder of the Sealink Travel Group, director for Celsus Securitisation Pty Ltd, board member of the Adelaide Venue Management Corporation, director and shareholder of Hele Investments Pty Ltd.

Mr Ford is a senior executive with the SA Power Networks and Enerven.

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.

36 Related party disclosures (continued)

(b) *Key management personnel*

Key management personnel compensation for the years ended 30 June 2022 and 2021 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
2022*	**18**	**3,393**	**257**	**79**	**-**	**3,729**
2021*	**17**	**3,218**	**250**	**75**	**66**	**3,609**

*Both 2022 and 2021 include an overlap of the senior leadership team members.

Due to the additional disclosures on related party transactions with key management personnel as required by Department of Treasury and Finance, from 1 July 2016 the value of leave liabilities accrued are no longer included as part of compensation - leave is recognised as it is paid.

Drinking water quality data

Table 1
2021-22 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 (456nm) [HU]	12	6	40	25	12	14	43	25
Dissolved Organic Carbon [mg/L]	52	3.5	11.4	7.3	51	4.1	9.1	7.1
Fluoride [mg/L]	12	<0.10	0.21	0.15	12	0.21	0.25	0.23
Hardness - Total [mg/L]	13	89	103	93	13	112	132	122
Nitrate as Nitrogen [mg/L]	26	<0.003	0.191	0.087	26	<0.003	0.208	0.060
pH [pH units]	12	7.1	7.8	7.5	12	7.5	8.2	7.9
Phosphorus - Total [mg/L]	26	0.025	0.110	0.042	26	0.011	0.130	0.023
Total Dissolved Solids [mg/L]	12	86	324	192	12	259	343	299
Turbidity [NTU]	12	7.1	130	47	12	0.49	3.0	1.6

	Happy Valley WTP			
Colour - True (456nm) [HU]	12	17	52	35
Dissolved Organic Carbon [mg/L]	52	4.9	8.2	7.4
Fluoride [mg/L]	12	0.17	0.24	0.21
Hardness - Total [mg/L]	13	75	92	87
Nitrate as Nitrogen [mg/L]	26	<0.003	0.128	0.029
pH [pH units]	12	7.5	8.4	8.0
Phosphorus - Total [mg/L]	26	0.017	0.106	0.041
Total Dissolved Solids [mg/L]	12	212	263	241
Turbidity [NTU]	12	3.2	21	8.0

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

Table 2
2021-22 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	-	221	<0.1	1.5	0.3	100
Chlorine Residual - Free [mg/L]	-	≤ 0.6	221	<0.1	1.5	0.3	84.2
Colour - True [HU]	-	≤ 15	4	<1	2	1	100
E. coli [per cfu/100mL]	++	-	221	0	0	0	100
Fluoride [mg/L]	≤ 1.5	-	4	<0.10	0.92	0.29	100
Hardness - Total [mg/L]	-	≤ 200	4	43	88	67	100
Iron - Total [mg/L]	-	≤ 0.3	4	0.0037	0.0074	0.0052	100
Manganese - Total [mg/L]	≤ 0.5	-	4	0.0003	0.0013	0.0006	100
Manganese - Total [mg/L]	-	≤ 0.1	4	0.0003	0.0013	0.0006	100
pH [pH units]	-	6.5 - 8.5	12	7.0	7.4	7.2	100
Total Dissolved Solids [mg/L]	-	≤ 600	4	114	193	166	100
Trihalomethanes - Total [µg/L]	≤ 250	-	54	36	151	92	100
Turbidity [NTU]	-	≤ 5	12	<0.10	0.27	<0.10	100
Barossa Metro System							
Chlorine Residual - Free [mg/L]	≤ 5	-	100	<0.1	0.9	0.4	100
Chlorine Residual - Free [mg/L]	-	≤ 0.6	100	<0.1	0.9	0.4	84.0
Colour - True [HU]	-	≤ 15	4	<1	2	1	100
E. coli [per cfu/100mL]	++	-	100	0	0	0	100
Fluoride [mg/L]	≤ 1.5	-	4	0.28	0.82	0.53	100
Hardness - Total [mg/L]	-	≤ 200	4	80	88	85	100
Iron - Total [mg/L]	-	≤ 0.3	4	0.0006	0.0064	0.0035	100
Manganese - Total [mg/L]	≤ 0.5	-	4	0.0001	0.0016	0.0006	100
Manganese - Total [mg/L]	-	≤ 0.1	4	0.0001	0.0016	0.0006	100
pH [pH units]	-	6.5 - 8.5	12	7.0	7.3	7.1	100
Total Dissolved Solids [mg/L]	-	≤ 600	4	276	283	280	100
Trihalomethanes - Total [µg/L]	≤ 250	-	42	104	153	125	100
Turbidity [NTU]	-	≤ 5	12	<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	-	1159	<0.1	1.7	0.3	100
Chlorine Residual - Free [mg/L]	-	≤ 0.6	1159	<0.1	1.7	0.3	81.5
Colour - True [HU]	-	≤ 15	24	<1	2	1	100
E. coli [per cfu/100mL]	++	-	1159	0	2	0	99.9
Fluoride [mg/L]	≤ 1.5	-	24	0.11	1.0	0.63	100
Hardness - Total [mg/L]	-	≤ 200	24	91	128	102	100
Iron - Total [mg/L]	-	≤ 0.3	24	<0.0005	0.0898	0.0114	100
Manganese - Total [mg/L]	≤ 0.5	-	24	0.0001	0.0116	0.0013	100
Manganese - Total [mg/L]	-	≤ 0.1	24	0.0001	0.0116	0.0013	100
pH [pH units]	-	6.5 - 8.5	74	7.0	7.8	7.3	100
Total Dissolved Solids [mg/L]	-	≤ 600	24	231	307	260	100
Trihalomethanes - Total [µg/L]	≤ 250	-	204	61	174	125	100
Turbidity [NTU]	-	≤ 5	71	<0.10	0.18	<0.10	100
East Metro System							
Chlorine Residual - Free [mg/L]	≤ 5	-	512	<0.1	1.5	0.3	100
Chlorine Residual - Free [mg/L]	-	≤ 0.6	512	<0.1	1.5	0.3	88.3
Colour - True [HU]	-	≤ 15	25	<1	2	<1	100
E. coli [per cfu/100mL]	++	-	512	0	0	0	100
Fluoride [mg/L]	≤ 1.5	-	25	<0.10	0.94	0.51	100
Hardness - Total [mg/L]	-	≤ 200	25	48	105	91	100
Iron - Total [mg/L]	-	≤ 0.3	25	0.0015	0.1857	0.0220	100
Manganese - Total [mg/L]	≤ 0.5	-	25	0.0002	0.0147	0.0013	100
Manganese - Total [mg/L]	-	≤ 0.1	25	0.0002	0.0147	0.0013	100
pH [pH units]	-	6.5 - 8.5	73	7.0	7.8	7.3	100
Total Dissolved Solids [mg/L]	-	≤ 600	25	141	293	236	100
Trihalomethanes - Total [µg/L]	≤ 250	-	104	38	189	127	100
Turbidity [NTU]	-	≤ 5	73	<0.10	0.60	<0.10	100
North Metro System							
Chlorine Residual - Free [mg/L]	≤ 5	-	565	<0.1	1.4	0.3	100
Chlorine Residual - Free [mg/L]	-	≤ 0.6	565	<0.1	1.4	0.3	84.4
Colour - True [HU]	-	≤ 15	25	<1	2	1	100
E. coli [per cfu/100mL]	++	-	563	0	0	0	100
Fluoride [mg/L]	≤ 1.5	-	25	<0.10	0.90	0.53	100
Hardness - Total [mg/L]	-	≤ 200	25	45	113	87	100
Iron - Total [mg/L]	-	≤ 0.3	25	0.0020	0.0132	0.0065	100
Manganese - Total [mg/L]	≤ 0.5	-	25	0.0002	0.0020	0.0007	100
Manganese - Total [mg/L]	-	≤ 0.1	25	0.0002	0.0020	0.0007	100
pH [pH units]	-	6.5 - 8.5	73	7.0	8.0	7.2	100
Total Dissolved Solids [mg/L]	-	≤ 600	84	122	321	258	100
Trihalomethanes - Total [µg/L]	≤ 250	-	103	39	175	111	100
Turbidity [NTU]	-	≤ 5	73	<0.10	0.21	<0.10	100

Table 2 continued

Parameter	Health Guideline	Aesthetic Guideline	Samples	Min	Max	Ave*	% Compliance#
South Metro System							
Chlorine Residual - Free [mg/L]	≤ 5	-	92	<0.1	1.1	0.3	100
Chlorine Residual - Free [mg/L]	-	≤ 0.6	92	<0.1	1.1	0.3	83.7
Colour - True [HU]	-	≤ 15	4	<1	1	<1	100
E. coli [per cfu/100mL]	++	-	91	0	0	0	100
Fluoride [mg/L]	≤ 1.5	-	4	0.20	0.86	0.65	100
Hardness - Total [mg/L]	-	≤ 200	4	96	109	102	100
Iron - Total [mg/L]	-	≤ 0.3	4	0.0030	0.0073	0.0049	100
Manganese - Total [mg/L]	≤ 0.5	-	4	0.0002	0.0012	0.0007	100
Manganese - Total [mg/L]	-	≤ 0.1	4	0.0002	0.0012	0.0007	100
pH [pH units]	-	6.5 - 8.5	11	7.1	7.5	7.3	100
Total Dissolved Solids [mg/L]	-	≤ 600	4	234	306	265	100
Trihalomethanes - Total [µg/L]	≤ 250	-	35	99	208	136	100
Turbidity [NTU]	-	≤ 5	11	<0.10	0.11	<0.10	100
West Metro System							
Chlorine Residual - Free [mg/L]	≤ 5	-	619	<0.1	1.4	0.2	100
Chlorine Residual - Free [mg/L]	-	≤ 0.6	619	<0.1	1.4	0.2	91.0
Colour - True [HU]	-	≤ 15	25	<1	3	1	100
E. coli [per cfu/100mL]	++	-	508	0	0	0	100
Fluoride [mg/L]	≤ 1.5	-	25	0.10	0.95	0.63	100
Hardness - Total [mg/L]	-	≤ 200	25	79	130	105	100
Iron - Total [mg/L]	-	≤ 0.3	25	0.0017	0.0210	0.0108	100
Manganese - Total [mg/L]	≤ 0.5	-	25	0.0002	0.0037	0.0011	100
Manganese - Total [mg/L]	-	≤ 0.1	25	0.0002	0.0037	0.0011	100
pH [pH units]	-	6.5 - 8.5	73	7.0	7.7	7.2	100
Total Dissolved Solids [mg/L]	-	≤ 600	313	154	347	263	100
Trihalomethanes - Total [µg/L]	≤ 250	-	122	64	206	135	100
Turbidity [NTU]	-	≤ 5	73	<0.10	0.30	<0.10	100

Table 2 continued

Parameter	Health Guideline	Aesthetic Guideline	Samples	Min	Max	Ave*	% Compliance#
Metropolitan Adelaide - Total Distribution System							
Chlorine Residual - Free [mg/L]	≤ 5	-	3268	<0.1	1.7	0.3	100
Chlorine Residual - Free [mg/L]	-	≤ 0.6	3268	<0.1	1.7	0.3	85.2
Colour - True [HU]	-	≤ 15	111	<1	3	1	100
E. coli [per cfu/100mL]	++	-	3154	0	2	0	99.9
Fluoride [mg/L]	≤ 1.5	-	111	<0.10	1.0	0.56	100
Hardness - Total [mg/L]	-	≤ 200	111	43	130	95	100
Iron - Total [mg/L]	-	≤ 0.3	111	<0.0005	0.1857	0.0118	100
Manganese - Total [mg/L]	≤ 0.5	-	111	0.0001	0.0147	0.0010	100
Manganese - Total [mg/L]	-	≤ 0.1	111	0.0001	0.0147	0.0010	100
pH [pH units]	-	6.5 - 8.5	328	7.0	8.0	7.2	100
Total Dissolved Solids [mg/L]	-	≤ 600	458	114	347	260	100
Trihalomethanes - Total [µg/L]	≤ 250	-	664	36	208	123	100
Turbidity [NTU]	-	≤ 5	325	<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 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
2021-22 country source water quality

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	71	234	123	-	-	-	3.4	11.6	7.6	7.4	8.2	7.8
Barossa WTP	270	279	275	77	89	84	5.4	6.9	6.3	7.4	7.9	7.6
Beachport IRP	655	689	670	259	280	270	0.9	1.0	1.0	7.4	7.7	7.5
Berri WTP	62	187	114	-	-	-	2.9	11.8	7.7	7.1	8.4	7.7
Blanchetown WTP	78	229	136	-	-	-	3.2	11.6	7.5	7.4	8.0	7.7
Bordertown	369	633	489	235	282	250	0.6	3.8	0.9	7.1	7.3	7.2
Cadell WTP	75	190	130	-	-	-	3.0	11.5	7.3	6.9	8.1	7.7
Coffin Bay	344	496	393	211	227	218	0.4	2.2	1.3	7.5	7.8	7.7
Cowirra WTP	82	186	137	-	-	-	3.1	11.3	7.2	6.7	8.0	7.5
Elliston	577	1060	718	263	352	294	0.5	0.5	0.5	7.3	7.6	7.5
Eyre South	438	1340	673	209	525	290	0.4	0.9	0.6	7.0	7.8	7.3
Geranium	1380	1550	1450	540	569	555	0.9	1.1	1.0	6.8	7.3	7.1
Glossop WTP	62	187	114	-	-	-	2.9	11.8	7.7	7.1	8.4	7.7
Happy Valley WTP	212	263	241	75	92	87	4.9	8.2	7.4	7.5	8.4	8.0
Hawker Desalination WTP	2210	2600	2410	984	984	984	0.5	0.5	0.5	7.3	7.5	7.3
Kalangadoo IRP	528	550	541	350	354	352	1.2	1.2	1.2	7.1	8.1	7.5
Kanmantoo WTP	88	201	139	31	78	55	3.3	11.5	7.5	7.0	8.9	7.5
Kingston SE IRP	750	1040	878	208	253	226	0.8	1.0	0.9	7.3	7.7	7.5
Lameroo IRP	924	1020	965	228	239	234	0.4	0.6	0.5	7.2	7.8	7.5
Leigh Creek WTP	1740	5010	3130	592	1,510	891	0.4	1.2	0.7	6.9	7.6	7.3
Loxton WTP	69	179	119	-	-	-	2.8	12.0	7.6	7.2	8.1	7.8
Lucindale IRP	806	846	829	302	307	305	2.2	2.4	2.3	7.2	7.5	7.4
Mannum WTP	83	188	136	32	77	54	3.1	12.4	7.7	7.2	7.9	7.6
Melrose	1260	1780	1520	272	420	346	0.4	0.4	0.4	7.2	7.5	7.4
Middle River WTP	344	711	541	57	115	90	8.4	13.2	10.4	6.8	7.6	7.2
Millicent	605	683	631	353	368	361	1.3	1.5	1.4	7.5	7.7	7.6
Moorook WTP	72	233	125	-	-	-	3.3	11.6	7.7	7.3	8.1	7.8
Morgan WTP	77	195	130	28	77	53	3.4	12.4	7.6	7.4	8.2	7.8
Mt Burr	408	498	453	290	319	305	0.5	0.6	0.6	7.3	7.8	7.4
Mt Compass	119	199	162	41	60	50	<0.3	<0.3	<0.3	5.9	6.6	6.3
Mt Gambier	352	650	559	174	308	243	0.7	1.4	1.0	7.4	8.3	7.9
Mt Pleasant WTP	83	188	136	32	77	54	3.1	12.4	7.7	7.2	7.9	7.6
Murray Bridge WTP	88	201	139	31	78	55	3.3	11.5	7.5	7.0	8.9	7.5
Mypolonga WTP	88	191	137	-	-	-	3.5	11.0	7.4	7.0	8.6	7.5
Myponga WTP	364	411	384	120	132	125	11.4	14.4	12.8	7.6	8.0	7.8
Nangwarry	513	711	608	320	320	320	1.1	1.3	1.2	7.1	7.5	7.3
Naracoorte	1250	1320	1280	311	322	317	1.5	1.8	1.7	7.7	8.1	7.8
Padthaway	1390	1700	1610	586	627	607	0.9	0.9	0.9	7.0	7.7	7.3

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	83	188	136	32	77	54	3.1	12.4	7.7	7.2	7.9	7.6
Parachilna	823	840	832	312	312	312	0.5	0.5	0.5	7.6	7.7	7.7
Parilla IRP	616	694	648	181	183	182	0.4	0.5	0.5	7.5	7.8	7.7
Penneshaw WTP	37600	39500	38700	-	-	-	1.1	1.3	1.2	7.7	8.1	7.9
Penola IRP	650	683	666	330	343	337	1.4	2.9	2.2	7.2	7.5	7.4
Pinnaroo IRP	644	801	716	257	257	257	0.4	0.4	0.4	7.2	7.6	7.4
Port MacDonnell	683	711	698	20	22	21	1.0	1.3	1.2	8.2	8.3	8.2
Quorn	1070	1420	1250	482	491	487	0.5	1.2	0.8	6.9	7.8	7.3
Renmark WTP	65	165	110	29	74	49	3.4	13.7	8.0	7.2	8.0	7.6
Robe IRP	638	975	750	73	146	122	0.9	1.1	1.0	7.5	8.0	7.7
Summit WTP	-	-	-	-	-	-	3.0	10.8	6.9	7.4	8.8	7.8
Swan Reach Town WTP	77	187	131	-	-	-	2.9	11.4	7.3	6.8	8.2	7.8
Swan Reach WTP	72	188	131	30	77	53	3.2	12.2	7.7	7.2	8.1	7.8
Tailem Bend WTP	91	212	147	33	81	57	3.4	12.0	7.5	7.0	8.3	7.6
Tarpeena IRP	650	750	718	406	406	406	1.3	1.3	1.3	7.1	7.6	7.3
Waikerie WTP	76	222	126	-	-	-	3.3	12.0	7.7	7.3	8.6	7.8
Wilmington	290	320	304	90	115	103	<0.3	0.6	0.4	6.2	6.7	6.4
Wirrina Cove WTP	773	1070	922	-	-	-	16.0	20.6	17.9	7.4	8.7	8.0
Woolpunda WTP	74	228	125	-	-	-	2.8	11.8	7.6	7.4	8.1	7.8
Barmera WTP	43	140	81	7	55	32	-	-	-	-	-	-
Barossa WTP	0.36	0.77	0.55	10	15	13	<0.003	0.016	0.004	0.007	0.046	0.015
Beachport IRP	1.1	4.0	2.9	<1	2	<1	<0.003	0.005	0.003	0.036	0.044	0.040
Berri WTP	41	150	84	8	58	33	-	-	-	-	-	-
Blanchetown WTP	15	180	88	6	48	29	-	-	-	-	-	-
Bordertown	<0.10	0.67	0.12	<1	2	<1	<0.003	0.571	0.181	0.005	0.011	0.009
Cadell WTP	26	160	86	6	52	30	-	-	-	-	-	-
Coffin Bay	<0.10	0.12	<0.10	<1	<1	<1	0.059	1.077	0.717	0.009	0.012	0.011
Cowirra WTP	13	130	54	6	47	27	-	-	-	-	-	-
Elliston	<0.10	0.15	<0.10	<1	<1	<1	2.897	4.007	3.475	0.006	0.012	0.009
Eyre South	<0.10	4.9	0.15	<1	2	<1	0.449	6.687	3.534	<0.005	0.025	0.010
Geranium	<0.10	0.27	<0.10	<1	1	<1	<0.003	<0.003	<0.003	0.019	0.034	0.027
Glossop WTP	41	150	84	8	58	33	-	-	-	-	-	-
Happy Valley WTP	3.2	21	8.0	17	52	35	<0.003	0.128	0.029	0.017	0.106	0.041
Hawker Desalination WTP	5.2	14	9.9	<1	<1	<1	<0.003	<0.003	<0.003	0.040	0.040	0.040
Kalangadoo IRP	1.4	5.2	3.0	<1	5	2	<0.003	<0.003	<0.003	0.023	0.024	0.024
Kanmantoo WTP	9.7	140	68	6	54	27	-	-	-	0.041	0.267	0.158
Kingston SE IRP	0.73	14	7.2	<1	3	<1	<0.003	0.007	<0.003	0.007	0.153	0.045
Lameroo IRP	1.4	5.8	3.3	<1	2	<1	<0.003	<0.003	<0.003	0.068	0.153	0.111

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

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
Leigh Creek WTP	<0.10	2.0	0.55	<1	1	<1	0.258	1.487	0.659	0.009	0.025	0.017
Loxton WTP	34	160	87	6	56	32	<0.003	0.148	0.018	0.059	0.271	0.171
Lucindale IRP	0.17	8.5	4.4	<1	2	2	<0.003	<0.003	<0.003	0.035	0.037	0.036
Mannum WTP	6.9	240	78	6	44	27	<0.003	0.247	0.024	0.057	0.490	0.180
Melrose	<0.10	1.2	0.15	<1	<1	<1	0.161	0.554	0.358	0.012	0.013	0.013
Middle River WTP	3.4	18	6.3	39	127	79	<0.003	0.522	0.113	0.013	0.047	0.027
Millicent	0.14	0.40	0.26	2	4	3	<0.003	<0.003	<0.003	0.014	0.016	0.015
Moorook WTP	36	150	82	6	57	32	<0.003	0.133	0.019	0.070	0.301	0.159
Morgan WTP	0.13	150	80	6	57	29	-	-	-	0.019	0.525	0.156
Mt Burr	<0.10	<0.10	<0.10	<1	<1	<1	0.245	1.127	0.686	0.037	0.043	0.040
Mt Compass	<0.10	0.65	0.13	<1	3	<1	<0.003	0.073	0.051	0.008	0.032	0.022
Mt Gambier	<0.10	61	2.7	<1	3	1	<0.003	2.975	1.846	<0.005	0.042	0.019
Mt Pleasant WTP	6.9	240	78	6	44	27	<0.003	0.247	0.024	0.057	0.490	0.180
Murray Bridge WTP	9.7	140	68	6	54	27	-	-	-	0.041	0.267	0.158
Mypolonga WTP	7.8	130	65	7	47	28	-	-	-	-	-	-
Myponga WTP	0.57	2.7	1.2	36	70	50	<0.003	0.117	0.016	0.013	0.209	0.062
Nangwarry	<0.10	0.15	<0.10	<1	3	1	0.209	3.963	2.086	0.013	0.019	0.016
Naracoorte	0.18	0.58	0.30	4	6	5	<0.003	0.003	<0.003	0.057	0.066	0.062
Padthaway	<0.10	2.8	0.67	<1	<1	<1	<0.003	<0.003	<0.003	0.018	0.020	0.019
Palmer WTP	6.9	240	78	6	44	27	<0.003	0.247	0.024	0.057	0.490	0.180
Parachilna	<0.10	<0.10	<0.10	<1	<1	<1	1.037	1.037	1.037	0.009	0.009	0.009
Parilla IRP	1.2	5.0	3.0	<1	1	<1	<0.003	<0.003	<0.003	0.025	0.034	0.030
Penneshaw WTP	<0.10	1.5	0.31	-	-	-	-	-	-	<0.005	0.007	<0.005
Penola IRP	5.3	15	9.5	2	3	3	<0.003	<0.003	<0.003	0.025	0.030	0.028
Pinnaroo IRP	1.9	10	3.7	<1	2	<1	<0.003	<0.003	<0.003	0.057	0.057	0.057
Port MacDonnell	<0.10	1.8	0.29	2	12	5	<0.003	<0.003	<0.003	0.213	0.907	0.560
Quorn	<0.10	2.8	0.36	<1	1	<1	0.012	0.138	0.084	0.017	0.027	0.021
Renmark WTP	40	150	83	8	61	33	<0.003	0.151	0.010	0.075	3.29	0.254
Robe IRP	0.13	3.8	0.91	<1	2	<1	<0.003	0.003	<0.003	0.030	0.043	0.038
Summit WTP	5.1	120	53	6	43	25	<0.003	0.265	0.022	0.035	0.235	0.127
Swan Reach Town WTP	7.2	130	73	6	60	29	-	-	-	-	-	-
Swan Reach WTP	6.6	140	76	6	49	28	<0.003	0.161	0.017	0.044	0.654	0.197
Tailem Bend WTP	9.6	130	61	6	43	26	-	-	-	0.051	0.504	0.163
Tarpeena IRP	0.36	18	11	<1	1	<1	<0.003	<0.003	<0.003	0.038	0.038	0.038
Waikerie WTP	32	140	82	6	51	31	<0.003	0.088	0.012	0.069	0.256	0.161
Wilmington	<0.10	0.63	0.22	<1	1	<1	<0.003	0.267	0.134	0.028	0.108	0.068
Wirrina Cove WTP	1.3	9.7	3.3	48	141	89	-	-	-	0.051	0.147	0.084
Woolpunda WTP	39	200	97	9	56	32	-	-	-	-	-	-

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

Table 4
2021-22 country drinking water distribution systems - customer tap water quality against Australian Drinking Water Guidelines

System	E. coli [per cfu/100mL]		Total Dissolved Solids [mg/L]			
	Samples	Health Compliance %	Min	Max	Ave	Aesthetic Compliance %
ADWG value		++				**≤600**
Barmera WTP	56	100	121	226	167	100
Barossa WTP	405	99.5	257	296	283	100
Beachport IRP	62	100	672	683	678	0.0
Berri WTP	62	100	115	235	168	100
Blanchetown WTP	52	100	114	200	151	100
Bordertown	56	100	464	534	504	100
Cadell WTP	53	100	115	201	157	100
Coffin Bay	62	100	449	638	537	50.0
Cowirra WTP	56	100	138	203	175	100
Elliston	51	100	655	678	667	0.0
Eyre South	371	100	577	638	602	63.2
Eyre South/Morgan WTP	219	100	353	486	441	100
Geranium	52	100	1430	1570	1470	0.0
Glossop WTP	58	100	105	195	144	100
Happy Valley WTP	64	100	241	278	256	100
Hawker Desalination WTP	51	100	320	328	324	100
Kalangadoo IRP	60	100	547	555	552	100
Kanmantoo WTP	56	100	133	190	163	100
Kingston SE IRP	64	100	840	846	843	0.0
Lameroo IRP	52	100	958	992	974	0.0
Leigh Creek WTP	76	100	89	110	102	100
Loxton WTP	67	100	152	207	175	100
Lucindale IRP	64	100	829	840	836	0.0
Mannum WTP	57	100	110	217	165	100
Melrose	52	100	1520	1550	1530	0.0
Middle River WTP	140	100	414	778	613	37.5
Millicent	74	100	638	655	646	0.0
Moorook WTP	55	100	96	201	139	100
Morgan / Swan Reach WTP	435	99.3	112	239	182	100
Morgan WTP	662	100	117	260	187	100
Mt Burr	51	100	453	464	457	100
Mt Compass	56	100	234	249	244	100
Mt Gambier	148	100	354	627	372	95.7

Table 4 continued

System	E. coli [per cfu/100mL]		Total Dissolved Solids [mg/L]			
	Samples	Health Compliance %	Min	Max	Ave	Aesthetic Compliance %
ADWG value		++				**≤600**
Mt Pleasant WTP	73	100	134	173	156	100
Murray Bridge WTP	180	100	159	222	187	100
Mypolonga WTP	61	100	129	190	168	100
Myponga Metro (Chloramine)†	58	100	447	456	451	100
Myponga Metro (Chlorine)†	41	100	428	428	428	100
Myponga WTP (Chloramine) ^	197	100	430	520	458	100
Myponga WTP (Chlorine) ^	66	100	415	429	422	100
Nangwarry	63	100	543	633	601	25.0
Naracoorte	76	100	1270	1300	1280	0.0
Padthaway	51	100	1620	1670	1650	0.0
Palmer WTP	73	100	115	187	159	100
Parachilna	51	100	834	840	836	0.0
Parilla IRP	52	100	644	678	662	0.0
Penneshaw WTP	58	100	301	373	323	100
Penola IRP	64	100	661	678	671	0.0
Pinnaroo IRP	56	100	689	745	718	0.0
Port MacDonnell	63	100	711	711	711	0.0
Quorn	51	100	1160	1190	1180	0.0
Renmark WTP	188	100	124	249	169	100
Robe IRP	64	100	666	806	740	0.0
Summit WTP	393	100	79	312	198	100
Swan Reach Town WTP	58	100	131	176	158	100
Swan Reach WTP	359	100	146	224	187	100
Tailem Bend WTP	244	100	140	249	186	100
Tarpeena IRP	63	100	700	756	739	0.0
Waikerie WTP	57	100	112	206	164	100
Wilmington	52	100	312	332	319	100
Wirrina Cove WTP	52	100	868	1050	957	0.0
Woolpunda WTP	78	100	123	186	150	100

++E. coli should not be detected in samples of drinking water. While we aim for 100 per cent compliance, 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.

†In December 2021 the Myponga Metro system disinfection changed from chlorine to chloramine.

^In December 2021 the remainder of the Myponga WTP system disinfection changed from chlorine to chloramine. The townships of Myponga, Yankalilla, Normanville and Carrickalinga were chloramine for the entirety of 2021-22.

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	1.7	0.6	100	-	-	-	-
Barossa WTP	<0.1	3.3	0.7	100	-	-	-	-
Beachport IRP	0.7	1.7	0.9	100	-	-	-	-
Berri WTP	0.1	1.9	0.9	100	-	-	-	-
Blanchetown WTP	0.3	1.6	0.9	100	-	-	-	-
Bordertown	0.7	1.5	1.1	100	-	-	-	-
Cadell WTP	0.3	1.5	0.9	100	-	-	-	-
Coffin Bay	0.7	1.3	1.0	100	-	-	-	-
Cowirra WTP	0.4	2.5	1.3	100	-	-	-	-
Elliston	0.8	1.2	1.0	100	-	-	-	-
Eyre South	0.5	1.7	1.0	100	-	-	-	-
Eyre South/Morgan WTP	0.4	2.0	1.3	100	-	-	-	-
Geranium	0.5	2.1	1.2	100	-	-	-	-
Glossop WTP	<0.1	1.4	0.5	100	-	-	-	-
Happy Valley WTP	<0.1	2.0	0.4	100	-	-	-	-
Hawker Desalination WTP	1.0	1.4	1.2	100	-	-	-	-
Kalangadoo IRP	0.7	1.6	1.0	100	-	-	-	-
Kanmantoo WTP	0.2	1.4	1.0	100	-	-	-	-
Kingston SE IRP	0.6	1.2	0.9	100	-	-	-	-
Lameroo IRP	0.7	1.7	1.3	100	-	-	-	-
Leigh Creek WTP	0.2	1.4	1.0	100	-	-	-	-
Loxton WTP	<0.1	<0.1	<0.1	100	3.0	4.4	3.9	100
Lucindale IRP	0.6	1.2	0.8	100	-	-	-	-
Mannum WTP	<0.1	2.4	0.9	100	-	-	-	-
Melrose	0.9	1.8	1.4	100	-	-	-	-
Middle River WTP	<0.1	1.6	0.8	100	-	-	-	-
Millicent	0.7	1.6	1.0	100	-	-	-	-
Moorook WTP	<0.1	1.3	0.4	100	-	-	-	-
Morgan / Swan Reach WTP	<0.1	3.5	<0.1	100	<0.1	4.7	2.8	100
Morgan WTP	<0.1	2.4	0.2	100	<0.1	4.5	2.8	100
Mt Burr	0.6	1.6	0.9	100	-	-	-	-
Mt Compass	0.8	1.6	1.2	100	-	-	-	-
Mt Gambier	0.8	1.7	1.1	100	-	-	-	-
Mt Pleasant WTP	<0.1	2.1	1.2	100	-	-	-	-
Murray Bridge WTP	<0.1	5.6	1.8	99.5	-	-	-	-
Mypolonga WTP	<0.1	1.9	1.2	100	-	-	-	-
Myponga Metro††	<0.1	0.8	0.3	100	0.2	3.6	2.7	100
Myponga WTP^^	<0.1	1.3	0.4	100	0.5	4.4	2.9	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**
Nangwarry	0.4	1.2	0.8	100	-	-	-	-
Naracoorte	0.3	1.0	0.7	100	-	-	-	-
Padthaway	0.4	1.2	0.8	100	-	-	-	-
Palmer WTP	<0.1	1.6	0.7	100	-	-	-	-
Parachilna	0.2	1.0	0.7	100	-	-	-	-
Parilla IRP	0.6	1.9	1.1	100	-	-	-	-
Penneshaw WTP	0.3	2.0	1.0	100	-	-	-	-
Penola IRP	<0.1	1.5	0.8	100	-	-	-	-
Pinnaroo IRP	0.5	1.5	1.0	100	-	-	-	-
Port MacDonnell	0.7	1.5	1.1	100	-	-	-	-
Quorn	0.6	2.1	1.3	100	-	-	-	-
Renmark WTP	<0.1	3.0	1.0	100	-	-	-	-
Robe IRP	0.6	1.1	0.9	100	-	-	-	-
Summit WTP	<0.1	<0.1	<0.1	100	0.5	4.6	3.1	100
Swan Reach Town WTP	<0.1	1.7	0.8	100	-	-	-	-
Swan Reach WTP	<0.1	<0.1	<0.1	100	0.4	4.3	3.3	100
Tailem Bend WTP	<0.1	<0.1	<0.1	100	<0.1	4.8	3.1	100
Tarpeena IRP	0.6	1.6	0.9	100	-	-	-	-
Waikerie WTP	0.1	1.5	0.9	100	-	-	-	-
Wilmington	1.5	3.1	2.2	100	-	-	-	-
Wirrina Cove WTP	<0.1	1.0	0.3	100	-	-	-	-
Woolpunda WTP	<0.1	<0.1	<0.1	100	0.6	3.7	2.5	100

^Chlorinated systems only.

†Chloraminated systems only.

††In December 2021 the Myponga Metro system disinfection changed from chlorine to chloramine.

^^In December 2021 the remainder of the Myponga WTP system disinfection changed from chlorine to chloramine. The townships of Myponga, Yankalilla, Normanville and Carrickalinga were chloramine for the entirety of 2021-22.

*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	Colour – True (456nm) [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	0.23	<0.10	100
Barossa WTP	<1	2	<1	100	<0.10	1.4	0.12	100
Beachport IRP	<1	<1	<1	100	<0.10	0.38	0.10	100
Berri WTP	<1	1	<1	100	<0.10	0.19	<0.10	100
Blanchetown WTP	<1	1	<1	100	0.11	0.38	0.17	100
Bordertown	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Cadell WTP	<1	1	<1	100	<0.10	0.12	<0.10	100
Coffin Bay	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Cowirra WTP	<1	<1	<1	100	<0.10	0.12	<0.10	100
Elliston	<1	<1	<1	100	<0.10	0.10	<0.10	100
Eyre South	<1	4	<1	100	<0.10	0.58	<0.10	100
Eyre South/Morgan WTP	<1	<1	<1	100	<0.10	1.1	<0.10	100
Geranium	<1	1	<1	100	<0.10	0.19	<0.10	100
Glossop WTP	<1	1	<1	100	<0.10	0.23	0.10	100
Happy Valley WTP	<1	<1	<1	100	<0.10	0.13	<0.10	100
Hawker Desalination WTP	<1	<1	<1	100	<0.10	0.28	<0.10	100
Kalangadoo IRP	<1	<1	<1	100	<0.10	0.11	<0.10	100
Kanmantoo WTP	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Kingston SE IRP	<1	<1	<1	100	<0.10	0.17	<0.10	100
Lameroo IRP	<1	<1	<1	100	<0.10	3.5	0.38	100
Leigh Creek WTP	<1	<1	<1	100	<0.10	4.4	0.19	100
Loxton WTP	1	3	2	100	<0.10	0.11	<0.10	100
Lucindale IRP	<1	<1	<1	100	<0.10	0.11	<0.10	100
Mannum WTP	<1	2	1	100	<0.10	0.43	0.13	100
Melrose	<1	<1	<1	100	<0.10	0.12	<0.10	100
Middle River WTP	<1	<1	<1	100	<0.10	0.92	0.10	100
Millicent	<1	<1	<1	100	<0.10	0.18	<0.10	100
Moorook WTP	1	2	2	100	0.14	0.23	0.19	100
Morgan / Swan Reach WTP	<1	2	1	100	<0.10	0.82	<0.10	100
Morgan WTP	<1	2	1	100	<0.10	2.2	<0.10	100
Mt Burr	<1	<1	<1	100	<0.10	0.20	<0.10	100
Mt Compass	<1	2	<1	100	<0.10	0.21	<0.10	100
Mt Gambier	<1	<1	<1	100	<0.10	0.64	<0.10	100
Mt Pleasant WTP	<1	2	1	100	<0.10	0.10	<0.10	100
Murray Bridge WTP	<1	1	<1	100	<0.10	0.52	0.11	100
Mypolonga WTP	<1	1	<1	100	<0.10	0.18	<0.10	100
Myponga Metro (Chloramine)†	2	2	2	100	<0.10	0.13	<0.10	100
Myponga Metro (Chlorine)†	1	1	1	100	<0.10	0.15	<0.10	100

Table 4 continued

System	Colour – True (456nm) [HU]				Turbidity [NTU]			
	Min	Max	Ave*	Aesthetic Compliance	Min	Max	Ave*	Aesthetic Compliance
ADWG value				**≤ 15**				**≤ 5**
Myponga WTP (Chloramine)^	1	3	2	100	<0.10	1.5	<0.10	100
Myponga WTP (Chlorine)^	1	1	1	100	<0.10	0.34	0.12	100
Nangwarry	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Naracoorte	<1	<1	<1	100	<0.10	10	0.57	97.2
Padthaway	<1	<1	<1	100	<0.10	0.30	0.17	100
Palmer WTP	<1	<1	<1	100	<0.10	0.23	<0.10	100
Parachilna	<1	<1	<1	100	<0.10	0.12	<0.10	100
Parilla IRP	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Penneshaw WTP	<1	7	2	100	<0.10	0.10	<0.10	100
Penola IRP	<1	1	<1	100	<0.10	0.16	<0.10	100
Pinnaroo IRP	<1	<1	<1	100	<0.10	0.22	<0.10	100
Port MacDonnell	<1	<1	<1	100	<0.10	0.29	0.11	100
Quorn	<1	<1	<1	100	<0.10	0.14	<0.10	100
Renmark WTP	<1	1	<1	100	<0.10	1.4	<0.10	100
Robe IRP	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Summit WTP	<1	4	2	100	<0.10	0.32	<0.10	100
Swan Reach Town WTP	<1	1	<1	100	<0.10	0.29	0.13	100
Swan Reach WTP	<1	4	2	100	<0.10	0.19	<0.10	100
Tailem Bend WTP	1	3	2	100	<0.10	3.4	0.15	100
Tarpeena IRP	<1	<1	<1	100	<0.10	0.20	<0.10	100
Waikerie WTP	<1	2	<1	100	<0.10	0.25	0.11	100
Wilmington	<1	<1	<1	100	<0.10	0.26	0.12	100
Wirrina Cove WTP	<1	2	<1	100	0.10	0.24	0.16	100
Woolpunda WTP	1	2	2	100	<0.10	0.68	0.12	100

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

†In December 2021 the Myponga Metro system disinfection changed from chlorine to chloramine.

^In December 2021 the remainder of the Myponga WTP system disinfection changed from chlorine to chloramine. The townships of Myponga, Yankalilla, Normanville and Carrickalinga were chloramine for the entirety of 2021-22.

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	54	202	124	100
Barossa WTP	7.0	9.3	7.6	94.5	87	229	155	100
Beachport IRP	7.5	7.8	7.7	100	33	33	33	100
Berri WTP	7.1	7.8	7.5	100	56	195	111	100
Blanchetown WTP	7.4	7.7	7.5	100	46	143	92	100
Bordertown	7.1	7.4	7.3	100	14	14	14	100
Cadell WTP	7.3	7.9	7.5	100	36	129	78	100
Coffin Bay	7.5	7.9	7.7	100	20	20	20	100
Cowirra WTP	7.3	8.0	7.6	100	71	142	107	100
Elliston	7.4	7.9	7.7	100	10	10	10	100
Eyre South	7.0	8.0	7.5	100	14	28	21	100
Eyre South/Morgan WTP	7.4	8.1	7.8	100	57	261	150	97.5
Geranium	6.9	7.3	7.0	100	6	6	6	100
Glossop WTP	7.6	8.0	7.9	100	36	140	82	100
Happy Valley WTP	7.0	8.3	7.6	100	162	222	200	100
Hawker Desalination WTP	7.8	8.0	7.9	100	7	7	7	100
Kalangadoo IRP	7.2	7.4	7.3	100	42	42	42	100
Kanmantoo WTP	7.3	7.9	7.6	100	60	148	94	100
Kingston SE IRP	7.4	7.7	7.5	100	37	37	37	100
Lameroo IRP	7.5	7.9	7.7	100	24	24	24	100
Leigh Creek WTP	8.2	9.2	8.7	41.2	<4	<4	<4	100
Loxton WTP†	8.7	9.2	9.0	0.0	-	-	-	-
Lucindale IRP	7.5	7.8	7.6	100	102	102	102	100
Mannum WTP	7.2	7.7	7.4	100	43	201	105	100
Melrose	7.2	7.5	7.4	100	7	7	7	100
Middle River WTP	6.9	7.8	7.2	100	<4	237	107	100
Millicent	7.3	7.8	7.6	100	79	79	79	100
Moorook WTP	7.7	8.2	7.9	100	47	191	91	100
Morgan / Swan Reach WTP†	8.4	9.6	8.9	7.1	-	-	-	-
Morgan WTP†	7.0	9.4	8.6	32.6	47	216	126	100
Mt Burr	7.6	7.9	7.8	100	8	8	8	100
Mt Compass	7.4	8.1	7.8	100	<4	<4	<4	100
Mt Gambier	7.4	8.6	8.1	95.7	22	26	24	100
Mt Pleasant WTP	7.2	7.7	7.5	100	56	263	168	87.5
Murray Bridge WTP	7.1	8.1	7.5	100	49	253	137	100
Mypolonga WTP	7.2	7.8	7.6	100	59	204	136	100
Myponga Metro (Chloramine)††	7.5	8.9	8.4	59.0	99	136	114	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**
Myponga WTP (Chlorine)^^	7.0	7.3	7.1	100	203	280	247	68.0
Nangwarry	7.3	7.6	7.5	100	16	16	16	100
Naracoorte	7.6	7.9	7.8	100	166	207	190	100
Padthaway	7.4	7.7	7.5	100	11	11	11	100
Palmer WTP	7.7	8.5	8.0	100	76	167	123	100
Parachilna	7.8	8.3	7.9	100	6	6	6	100
Parilla IRP	7.6	8.0	7.8	100	23	23	23	100
Penneshaw WTP	7.5	8.1	7.8	100	<4	<4	<4	100
Penola IRP	7.3	7.6	7.5	100	-	-	-	-
Pinnaroo IRP	7.3	7.8	7.6	100	20	20	20	100
Port MacDonnell	7.9	8.2	8.1	100	71	71	71	100
Quorn	7.1	7.5	7.3	100	6	6	6	100
Renmark WTP	7.2	9.0	7.7	88.9	30	252	133	100
Robe IRP	7.6	8.0	7.8	100	38	38	38	100
Summit WTP†	8.1	9.1	8.7	11.0	-	-	-	-
Swan Reach Town WTP	7.2	7.8	7.5	100	47	118	83	100
Swan Reach WTP†	8.1	9.4	8.8	13.2	-	-	-	-
Tailem Bend WTP†	7.4	9.4	8.8	16.9	-	-	-	-
Tarpeena IRP	7.3	7.7	7.5	100	51	51	51	100
Waikerie WTP	7.1	7.8	7.5	100	42	186	108	100
Wilmington	6.7	7.8	7.1	100	14	14	14	100
Wirrina Cove WTP	7.4	7.8	7.6	100	121	337	231	75.0
Woolpunda WTP†	8.4	9.5	9.0	4.0	-	-	-	-

^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.

††In December 2021 the Myponga Metro system disinfection changed from chlorine to chloramine.

^^In December 2021 the remainder of the Myponga WTP system disinfection changed from chlorine to chloramine. The townships of Myponga, Yankalilla, Normanville and Carrickalinga were chloramine for the entirety of 2021-22.

#While we aim for 100 per cent health compliance, 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.

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	0.72	1.0	0.88	100	0.0044	0.0121	0.0080	100
Barossa WTP	0.28	0.88	0.60	100	0.0029	0.0570	0.0189	100
Beachport IRP	0.23	0.25	0.24	100	0.0010	0.4615	0.0926	77.3
Berri WTP	0.71	0.96	0.86	100	0.0104	0.3613	0.1027	75.0
Blanchetown WTP	<0.10	0.11	<0.10	100	0.0071	0.0132	0.0103	100
Bordertown	0.31	0.34	0.33	100	<0.0005	0.0080	0.0020	100
Cadell WTP	<0.10	0.12	<0.10	100	0.0024	0.0132	0.0057	100
Coffin Bay	0.46	1.2	0.97	100	<0.0005	0.0023	0.0011	100
Cowirra WTP	<0.10	0.12	<0.10	100	0.0032	0.0101	0.0062	100
Elliston	0.58	0.64	0.60	100	<0.0005	0.0012	<0.0005	100
Eyre South	0.35	0.50	0.44	100	<0.0005	0.0091	0.0017	100
Eyre South/Morgan WTP	0.54	0.66	0.61	100	0.0010	0.0055	0.0029	100
Geranium	0.92	1.1	1.0	100	0.0038	0.0104	0.0072	100
Glossop WTP	<0.10	0.12	<0.10	100	0.0111	0.0472	0.0274	100
Happy Valley WTP	0.23	0.83	0.53	100	0.0058	0.0117	0.0084	100
Hawker Desalination WTP	<0.10	<0.10	<0.10	100	<0.0005	0.0243	0.0067	100
Kalangadoo IRP	0.11	0.13	0.12	100	<0.0005	0.0153	0.0060	100
Kanmantoo WTP	<0.10	0.13	<0.10	100	<0.0005	0.0010	0.0006	100
Kingston SE IRP	0.30	0.31	0.31	100	0.0006	0.0056	0.0030	100
Lameroo IRP	0.59	0.65	0.61	100	0.0135	1.410	0.1402	91.7
Leigh Creek WTP	<0.10	<0.10	<0.10	100	0.0078	0.0232	0.0133	100
Loxton WTP	0.79	1.0	0.89	100	0.0010	0.0049	0.0030	100
Lucindale IRP	0.29	0.36	0.32	100	0.0008	0.0095	0.0045	100
Mannum WTP	0.70	1.0	0.86	100	0.0095	0.0356	0.0233	100
Melrose	1.0	1.1	1.1	100	0.0023	0.0056	0.0040	100
Middle River WTP	<0.10	<0.10	<0.10	100	0.0057	0.0444	0.0165	100
Millicent	0.92	1.0	0.97	100	0.0050	0.0563	0.0155	100
Moorook WTP	<0.10	0.13	<0.10	100	0.0024	0.0056	0.0041	100
Morgan / Swan Reach WTP	0.55	0.90	0.80	100	0.0009	0.0336	0.0079	100
Morgan WTP	0.62	0.91	0.80	100	0.0011	0.2624	0.0196	100
Mt Burr	0.20	0.28	0.25	100	0.0005	0.0406	0.0121	100
Mt Compass	0.23	0.25	0.24	100	0.0013	0.0059	0.0033	100
Mt Gambier	0.20	0.95	0.79	100	<0.0005	0.0850	0.0051	100
Mt Pleasant WTP	0.87	0.94	0.91	100	0.0006	0.0030	0.0017	100
Murray Bridge WTP	0.64	0.96	0.86	100	0.0007	0.0456	0.0133	100
Mypolonga WTP	<0.10	0.12	<0.10	100	0.0123	0.0283	0.0180	100
Myponga Metro (Chloramine)†	0.77	0.97	0.86	100	0.0026	0.0064	0.0049	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**
Myponga Metro (Chlorine)†	0.87	0.87	0.87	100	0.0227	0.0227	0.0227	100
Myponga WTP (Chloramine)^	0.72	1.0	0.86	100	0.0016	0.0981	0.0142	100
Myponga WTP (Chlorine)^	0.87	0.88	0.88	100	0.0080	0.0632	0.0356	100
Nangwarry	0.11	0.12	0.12	100	<0.0005	0.0021	0.0008	100
Naracoorte	1.2	1.2	1.2	100	0.0042	0.6448	0.0945	95.0
Padthaway	0.11	0.13	0.12	100	0.0133	0.0190	0.0164	100
Palmer WTP	<0.10	0.12	<0.10	100	0.0012	0.0097	0.0052	100
Parachilna	0.55	0.67	0.62	100	<0.0005	0.0016	0.0008	100
Parilla IRP	0.42	0.46	0.44	100	0.0014	0.0072	0.0039	100
Penneshaw WTP	<0.10	<0.10	<0.10	100	<0.0005	0.0019	0.0010	100
Penola IRP	0.13	0.20	0.17	100	0.0023	0.1038	0.0273	100
Pinnaroo IRP	0.67	0.77	0.72	100	0.0016	0.0900	0.0142	100
Port MacDonnell	0.69	0.86	0.77	100	0.0020	0.0069	0.0035	100
Quorn	0.52	0.62	0.58	100	<0.0005	0.0009	0.0005	100
Renmark WTP	0.61	1.0	0.88	100	0.0016	0.0300	0.0059	100
Robe IRP	0.29	0.31	0.30	100	0.0015	0.0100	0.0033	100
Summit WTP	0.58	1.0	0.84	100	<0.0005	0.0239	0.0069	100
Swan Reach Town WTP	<0.10	0.11	<0.10	100	0.0077	0.0290	0.0161	100
Swan Reach WTP	0.82	0.96	0.90	100	<0.0005	0.0072	0.0022	100
Tailem Bend WTP	0.69	0.93	0.87	100	0.0005	0.0094	0.0042	100
Tarpeena IRP	0.16	0.19	0.17	100	0.0058	0.1976	0.0417	100
Waikerie WTP	0.68	0.90	0.82	100	0.0060	0.0302	0.0161	100
Wilmington	0.16	0.18	0.17	100	0.0171	0.0683	0.0395	100
Wirrina Cove WTP	<0.10	0.11	<0.10	100	0.0088	0.0124	0.0107	100
Woolpunda WTP	<0.10	0.13	<0.10	100	0.0006	0.0363	0.0111	100

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

†In December 2021 the Myponga Metro system disinfection changed from chlorine to chloramine.

^In December 2021 the remainder of the Myponga WTP system disinfection changed from chlorine to chloramine. The townships of Myponga, Yankalilla, Normanville and Carrickalinga were chloramine for the entirety of 2021-22.

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	0.0011	0.0024	0.0018	100	100	34	81	57	100
Barossa WTP	0.0003	0.0024	0.0010	100	100	81	100	89	100
Beachport IRP	0.0002	0.0004	0.0003	100	100	262	276	269	0.0
Berri WTP	0.0014	0.0036	0.0027	100	100	33	79	57	100
Blanchetown WTP	0.0007	0.0009	0.0008	100	100	35	81	59	100
Bordertown	<0.0001	<0.0001	<0.0001	100	100	240	267	254	0.0
Cadell WTP	0.0004	0.0019	0.0012	100	100	33	77	53	100
Coffin Bay	<0.0001	0.0008	0.0003	100	100	232	310	265	0.0
Cowirra WTP	<0.0001	0.0004	0.0003	100	100	45	78	59	100
Elliston	<0.0001	<0.0001	<0.0001	100	100	278	284	282	0.0
Eyre South	<0.0001	0.0004	<0.0001	100	100	261	365	284	0.0
Eyre South/Morgan WTP	<0.0001	0.0004	0.0002	100	100	158	220	198	41.7
Geranium	<0.0001	0.0002	0.0001	100	100	540	574	560	0.0
Glossop WTP	0.0003	0.0009	0.0006	100	100	33	80	58	100
Happy Valley WTP	0.0002	0.0011	0.0005	100	100	94	111	101	100
Hawker Desalination WTP	<0.0001	0.0007	0.0003	100	100	89	106	95	100
Kalangadoo IRP	<0.0001	0.0002	0.0001	100	100	349	362	356	0.0
Kanmantoo WTP	0.0001	0.0007	0.0004	100	100	43	78	59	100
Kingston SE IRP	<0.0001	0.0003	0.0002	100	100	234	241	237	0.0
Lameroo IRP	0.0009	0.0019	0.0012	100	100	234	243	237	0.0
Leigh Creek WTP	0.0004	0.0013	0.0008	100	100	4	6	5	100
Loxton WTP	0.0005	0.0019	0.0013	100	100	38	72	56	100
Lucindale IRP	<0.0001	0.0003	0.0001	100	100	301	324	316	0.0
Mannum WTP	0.0023	0.0036	0.0030	100	100	33	77	55	100
Melrose	<0.0001	0.0002	<0.0001	100	100	335	349	344	0.0
Middle River WTP	0.0004	0.0034	0.0013	100	100	54	131	93	100
Millicent	0.0004	0.0005	0.0004	100	100	347	385	366	0.0
Moorook WTP	0.0008	0.0011	0.0010	100	100	33	78	55	100
Morgan/Swan Reach WTP	0.0002	0.0023	0.0009	100	100	38	83	61	100
Morgan WTP	0.0002	0.0049	0.0011	100	100	34	94	61	100
Mt Burr	<0.0001	0.0005	0.0002	100	100	293	317	302	0.0
Mt Compass	<0.0001	0.0004	0.0003	100	100	52	58	55	100
Mt Gambier	<0.0001	<0.0001	<0.0001	100	100	173	281	184	95.7
Mt Pleasant WTP	0.0001	0.0013	0.0004	100	100	42	68	56	100
Murray Bridge WTP	0.0007	0.0213	0.0047	100	100	51	87	67	100
Mypolonga WTP	0.0003	0.0007	0.0006	100	100	40	70	56	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**
Myponga Metro (Chloramine)†	0.0007	0.0012	0.0009	100	100	117	130	124	100
Myponga Metro (Chlorine)†	0.0007	0.0007	0.0007	100	100	122	122	122	100
Myponga WTP (Chloramine)^	0.0001	0.0326	0.0036	100	100	119	131	125	100
Myponga WTP (Chlorine)^	0.0007	0.0018	0.0013	100	100	120	122	121	100
Nangwarry	<0.0001	<0.0001	<0.0001	100	100	330	391	369	0.0
Naracoorte	0.0108	0.0241	0.0164	100	100	329	348	340	0.0
Padthaway	0.0004	0.0009	0.0006	100	100	592	629	603	0.0
Palmer WTP	0.0002	0.0005	0.0004	100	100	36	79	59	100
Parachilna	<0.0001	<0.0001	<0.0001	100	100	304	313	309	0.0
Parilla IRP	<0.0001	0.0002	<0.0001	100	100	176	185	182	100
Penneshaw WTP	<0.0001	0.0001	<0.0001	100	100	66	88	78	100
Penola IRP	0.0004	0.0012	0.0009	100	100	295	342	319	0.0
Pinnaroo IRP	0.0003	0.0009	0.0006	100	100	245	262	253	0.0
Port MacDonnell	0.0006	0.0009	0.0008	100	100	17	22	21	100
Quorn	<0.0001	<0.0001	<0.0001	100	100	477	509	493	0.0
Renmark WTP	0.0009	0.0035	0.0021	100	100	36	79	56	100
Robe IRP	<0.0001	0.0005	0.0002	100	100	114	136	125	100
Summit WTP	0.0018	0.0058	0.0031	100	100	43	88	62	100
Swan Reach Town WTP	0.0005	0.0008	0.0007	100	100	41	70	56	100
Swan Reach WTP	0.0002	0.0025	0.0012	100	100	43	91	68	100
Tailem Bend WTP	0.0005	0.0020	0.0012	100	100	40	86	61	100
Tarpeena IRP	0.0002	0.0065	0.0020	100	100	400	412	407	0.0
Waikerie WTP	0.0033	0.0042	0.0038	100	100	34	79	58	100
Wilmington	0.0003	0.0011	0.0005	100	100	111	115	113	100
Wirrina Cove WTP	0.0026	0.0098	0.0063	100	100	167	210	185	75.0
Woolpunda WTP	<0.0001	0.0032	0.0011	100	100	38	63	51	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).

†In December 2021 the Myponga Metro system disinfection changed from chlorine to chloramine.

^In December 2021 the remainder of the Myponga WTP system disinfection changed from chlorine to chloramine. The townships of Myponga, Yankalilla, Normanville and Carrickalinga were chloramine for the entirety of 2021-22.

Table 5
2021-22 remote Aboriginal communities source water quality

System Name	Total Dissolved Solids [mg/L]			Hardness - Total [mg/L]			pH [pH Units]		
	Min	Max	Ave	Min	Max	Ave	Min	Max	Ave
Amata	506	678	577	275	361	310	7.4	7.6	7.5
Davenport^	-	-	-	-	-	-	-	-	-
Gerard#	-	-	-	-	-	-	-	-	-
Indulkana	1450	1450	1450	500	500	500	6.7	6.7	6.7
Kalka	-	-	-	-	-	-	-	-	-
Kaltjiti	378	1230	752	109	355	283	7.6	7.8	7.7
Mimili	941	1190	1060	146	235	209	7.6	8.0	7.8
Murputja Complex	778	1280	999	230	522	356	7.4	7.8	7.6
Nepabunna+	-	-	-	-	-	-	-	-	-
Oak Valley+	-	-	-	-	-	-	-	-	-
Pipalyatjara	722	722	722	391	391	391	7.6	7.6	7.6
Pt Pearce^	-	-	-	-	-	-	-	-	-
Pukatja	387	616	484	194	270	228	7.7	8.0	7.8
Raukkan^	-	-	-	-	-	-	-	-	-
Umuwa	330	423	386	223	242	232	7.6	7.9	7.7
Watinuma	650	705	678	315	334	325	7.6	7.7	7.7
Yalata	8950	9530	9250	3170	3430	3330	6.4	7.3	6.9
Yunyarinyi	381	571	506	196	300	249	7.8	8.0	7.9

^System supplied from another SA Water supply. Refer to data in Country Source Water Quality Table 3. 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 Country Source Water Quality Table 3.

+System sourced from Rainwater.

System Name	Colour - True (456nm) [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	0.99	1.2	1.1	2.26	3.54	2.95	<0.10	0.17	<0.10
Davenport^	-	-	-	-	-	-	-	-	-	-	-	-
Gerard#	-	-	-	-	-	-	-	-	-	-	-	-
Indulkana	<1	<1	<1	0.44	0.54	0.50	5.68	7.63	6.42	0.26	0.48	0.37
Kalka	<1	<1	<1	0.81	0.81	0.81	8.15	8.15	8.15	<0.10	<0.10	<0.10
Kaltjiti	<1	<1	<1	1.2	1.6	1.4	5.97	8.96	7.62	<0.10	0.16	0.10
Mimili	<1	<1	<1	1.7	2.3	2.0	11.0	15.5	13.2	<0.10	16	2.5
Murputja Complex	<1	<1	<1	1.4	3.6	2.2	2.77	5.98	4.19	<0.10	0.19	<0.10
Nepabunna+	<1	<1	<1	-	-	-	-	-	-	0.45	0.45	0.45
Oak Valley+	<1	<1	<1	-	-	-	-	-	-	0.17	0.17	0.17

Table 5 continued

System Name	Colour - True (456nm) [HU]			Fluoride [mg/L]			Nitrate + Nitrite as Nitrogen [mg/L]			Turbidity [NTU]		
	Min	Max	Ave*	Min	Max	Ave	Min	Max	Ave	Min	Max	Ave*
Pipalyatjara	<1	<1	<1	0.71	0.71	0.71	7.26	7.26	7.26	<0.10	<0.10	<0.10
Pt Pearce^	-	-	-	-	-	-	-	-	-	-	-	-
Pukatja	<1	<1	<1	0.99	1.8	1.3	0.438	1.87	0.984	<0.10	0.18	0.11
Raukkan^	-	-	-	-	-	-	-	-	-	-	-	-
Umuwa	<1	<1	<1	0.85	0.99	0.91	2.27	5.14	3.42	<0.10	0.11	<0.10
Watinuma	<1	<1	<1	1.1	1.2	1.2	3.35	3.52	3.44	<0.10	<0.10	<0.10
Yalata	<1	1	<1	0.41	0.74	0.59	0.522	0.937	0.775	<0.10	3.5	0.81
Yunyarinyi	<1	2	1	1.5	1.7	1.6	2.35	7.75	5.69	<0.10	0.17	<0.10
Nepabunna+	<1	<1	<1	-	-	-	-	-	-	0.45	0.45	0.45
Oak Valley+	<1	<1	<1	-	-	-	-	-	-	0.17	0.17	0.17

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

^System supplied from another SA Water supply. Refer to data in Country Source Water Quality Table 3. 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 Country Source Water Quality Table 3.

+System sourced from rainwater.

Table 6
2021-22 remote Aboriginal communities drinking water distribution systems - customer tap water quality against Australian Drinking Water Guidelines

System	E. coli [per cfu/100mL]		Total Dissolved Solids [mg/L]			
	Samples	Health Compliance %	Min	Max	Ave	Aesthetic Compliance %
ADWG value		++				**≤600**
Amata	4	100	705	705	705	0.0
Davenport	12	100	124	124	124	100
Gerard	39	100	117	117	117	100
Indulkana	4	100	176	176	176	100
Kalka	3	100	533	533	533	100
Kaltjiti	4	100	503	503	503	100
Mimili	4	100	194	194	194	100
Murputja Complex	8	100	267	270	269	100
Nepabunna	4	100	54	54	54	100
Oak Valley	4	100	17	17	17	100
Pipalyatjara	3	100	705	705	705	0.0
Pt Pearce	9	100	119	119	119	100
Pukatja	4	100	498	498	498	100
Raukkan	12	100	126	126	126	100
Umuwa	4	100	368	368	368	100
Watinuma	4	100	846	857	852	0.0
Yalata	4	100	228	228	228	100
Yunyarinyi	4	100	45	45	45	100

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	3.1	1.8	100
Gerard	<0.1	1.5	0.4	100	-	-	-	-
Indulkana	-	-	-	-	-	-	-	-
Kalka	-	-	-	-	-	-	-	-
Kaltjiti	-	-	-	-	-	-	-	-
Mimili	-	-	-	-	-	-	-	-
Murputja Complex	-	-	-	-	-	-	-	-
Nepabunna	-	-	-	-	-	-	-	-
Oak Valley	-	-	-	-	-	-	-	-
Pipalyatjara	-	-	-	-	-	-	-	-
Pt Pearce	-	-	-	-	0.6	3.4	2.3	100
Pukatja	-	-	-	-	-	-	-	-
Raukkan	-	-	-	-	2.3	4.0	3.0	100
Umuwa	-	-	-	-	-	-	-	-
Watinuma	-	-	-	-	-	-	-	-
Yalata	-	-	-	-	-	-	-	-
Yunyarinyi++	-	-	-	-	-	-	-	-

Majority of the remote Aboriginal communities use UV 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 (456nm) [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	0.49	0.18	100
Gerard	12	12	12	100	0.34	10	2.2	86.8
Indulkana	<1	<1	<1	100	0.25	0.25	0.25	100
Kalka	<1	<1	<1	100	<0.10	<0.10	<0.10	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	<0.10	<0.10	100
Nepabunna	<1	<1	<1	100	34	34	34	0.0
Oak Valley	<1	<1	<1	100	0.20	0.20	0.20	100
Pipalyatjara	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Pt Pearce^	-	-	-	-	<0.10	0.15	<0.10	100
Pukatja	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Raukkan^	-	-	-	-	<0.10	0.25	0.10	100
Umuwa	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Watinuma	<1	<1	<1	100	<0.10	<0.10	<0.10	100
Yalata	1	1	1	100	0.14	0.14	0.14	100
Yunyarinyi	<1	<1	<1	100	<0.10	<0.10	<0.10	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 Country Supply Table 4. 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	7.7	7.7	7.7	100	-	-	-	-
Davenport	7.9	9.2	8.7	41.7	-	-	-	-
Gerard	7.5	8.5	8.0	100	65	200	122	100
Indulkana	7.7	7.7	7.7	100	-	-	-	-
Kalka	8.0	8.0	8.0	100	-	-	-	-
Kaltjiti	7.6	7.7	7.6	100	-	-	-	-
Mimili	7.1	7.1	7.1	100	-	-	-	-
Murputja Complex	7.6	7.8	7.7	100	-	-	-	-
Nepabunna	6.8	6.8	6.8	100	-	-	-	-
Oak Valley	6.5	6.5	6.5	100	-	-	-	-
Pipalyatjara	7.9	7.9	7.9	100	-	-	-	-
Pt Pearce	8.7	9.4	9.0	0.0	-	-	-	-
Pukatja	7.8	7.8	7.8	100	-	-	-	-
Raukkan	8.6	9.1	8.9	0.0	-	-	-	-
Umuwa	8.0	8.0	8.0	100	-	-	-	-
Watinuma	7.9	8.0	8.0	100	-	-	-	-
Yalata	7.6	7.6	7.6	100	-	-	-	-
Yunyarinyi	8.0	8.0	8.0	100	-	-	-	-

^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).

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	0.88	0.94	0.91	100	0.0050	0.0050	0.0050	100
Davenport^	-	-	-	-	-	-	-	-
Gerard	<0.10	<0.10	<0.10	100	0.1224	1.100	0.6112	50.0
Indulkana	<0.10	<0.10	<0.10	100	0.0107	0.0107	0.0107	100
Kalka	0.76	0.76	0.76	100	0.0011	0.0011	0.0011	-
Kaltjiti	0.50	0.64	0.55	100	<0.0005	0.0038	0.0020	100
Mimili	0.31	0.54	0.43	100	<0.0005	<0.0005	<0.0005	100
Murputja Complex	0.47	0.66	0.55	100	0.0014	0.0014	0.0014	100
Nepabunna	0.12	0.12	0.12	100	2.996	2.996	2.996	0.0
Oak Valley	<0.10	<0.10	<0.10	100	0.0012	0.0012	0.0012	100
Pipalyatjara	0.61	0.61	0.61	100	0.0006	0.0006	0.0006	100
Pt Pearce^	-	-	-	-	-	-	-	-
Pukatja	1.0	1.6	1.3	75.0	<0.0005	<0.0005	<0.0005	100
Raukkan^	-	-	-	-	-	-	-	-
Umuwa	0.85	0.85	0.85	100	0.0353	0.0353	0.0353	100
Watinuma	1.1	1.3	1.2	100	0.0011	0.0011	0.0011	100
Yalata	<0.1	<0.1	<0.1	100	0.0009	0.0009	0.0009	100
Yunyarinyi	<0.10	<0.10	<0.10	100	0.0046	0.0046	0.0046	100

While we aim for 100 per cent compliance, 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).

^System supplied from another SA Water Supply. Refer to data 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.

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	0.0002	0.0002	0.0002	100	100	366	366	366	0.0
Davenport^	-	-	-	-	-	-	-	-	-
Gerard	0.0095	0.0095	0.0095	100	100	29	29	29	100
Indulkana	0.0007	0.0007	0.0007	100	100	94	94	94	100
Kalka	<0.0001	<0.0001	<0.0001	100	100	315	315	315	0.0
Kaltjiti	<0.0001	<0.0001	<0.0001	100	100	81	107	94	100
Mimili	<0.0001	<0.0001	<0.0001	100	100	33	33	33	100
Murputja Complex	0.0001	0.0001	0.0001	100	100	85	100	93	100
Nepabunna	0.0202	0.0202	0.0202	100	100	16	16	16	100
Oak Valley	0.0010	0.0010	0.0010	100	100	5	5	5	100
Pipalyatjara	<0.0001	<0.0001	<0.0001	100	100	396	396	396	0.0
Pt Pearce^	-	-	-	-	-	-	-	-	-
Pukatja	<0.0001	<0.0001	<0.0001	100	100	257	257	257	0.0
Raukkan^	-	-	-	-	-	-	-	-	-
Umuwa	0.0016	0.0016	0.0016	100	100	217	217	217	0.0
Watinuma	<0.0001	<0.0001	<0.0001	100	100	451	451	451	0.0
Yalata	<0.0001	<0.0001	<0.0001	100	100	121	121	121	100
Yunyarinyi	0.0001	0.0001	0.0001	100	100	30	30	30	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. 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.

SA Water

For further details contact

SA Water Corporation
ABN 69 336 525 019

Head Office
250 Victoria Square/
Tarntanyangga
Adelaide SA 5000

Postal Address
GPO Box 1751
Adelaide SA 5000

Website
sawater.com.au

Please direct enquiries about this report to our Customer Care Centre on 1300 SA WATER or customerservice@sawater.com.au

ISSN: 1833-9980

30 September 2022

Government of South Australia