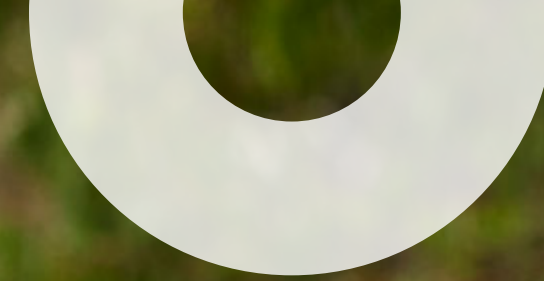


# Healthy waterways and environmental protection: What we've heard

Sydney  
**WATER**





## Acknowledgement of Country

Sydney Water respectfully acknowledges the Traditional Custodians of the lands where we work, live and learn. Their lore, traditions and customs nurtured and continue to nurture the waters, both saltwater and freshwater, in our operating area, creating wellbeing for all. We pay our deepest respect to Elders, past and present. We acknowledge their deep connections to the land and waters.

Our rivers have carried our stories and our waterways are like the story of Australia.

We have a job as managers of Country but we are also part of Country – and with water, that idea is very close to us.

If the waters of the Country aren't well, then we aren't well either.

So, when we talk of reconciliation, it's not just reconciliation with people, it's reconciliation with Country, too.

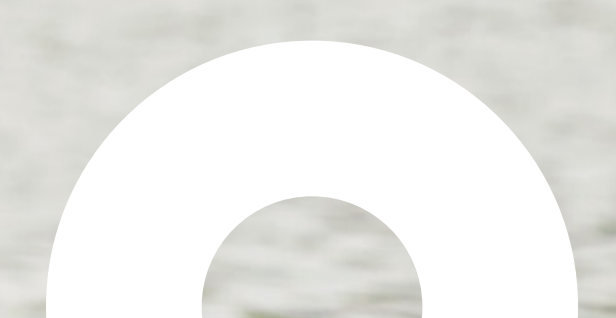
We all drink from the one water. We have to work together to look after our water and waterways. It's not just about us – it's for the descendants of all of us.

We have ancestral responsibilities to look after Country. It's not an option for us to fail. We can't do it alone. We need everyone on board.

The river that I grew up with is cleaner than it was 30 years ago. Let's continue to look forward and work together for the benefit of our waterways.

Reconciliation is about working together for a brave future. Thank you for walking with us.

**Chris Tobin,  
Darug Elder**



# Waterways and natural environments shape our lifestyle and culture in Sydney, the Illawarra and the Blue Mountains.

Try to imagine Sydney without its harbours and estuaries; Parramatta, Liverpool and Penrith without their rivers, the Illawarra without its lakes and beaches, or the Blue Mountains without its pristine bushland streams.

Our customers, our stakeholders and our partners have told us that waterways and nature are fundamental for communities in our region. When we talked to key stakeholders, including you and other leaders from your organisation, you told us that our key priority for healthy waterways and environmental protection is preventing pollution.

You told us we should continue to expand the role of recycled water, and recognise the importance of healthy waterways and green spaces for community wellbeing. You also told us we should strengthen our existing partnerships, take more visible leadership of waterways, and be empowered by the role we can play in bringing Government, Councils, and customers together.

Over 130 years, Sydney Water has built an incredible network of water, wastewater, recycled water and stormwater services to protect public health and the environment. Clean, fresh drinking water is piped into the city, and treated wastewater is piped out to waterways, including rivers, coasts and oceans. Rainwater is drained away from streets and buildings in hard drains and channels.

Our action areas for healthy waterways and environmental protection address the ways Sydney Water relies upon, interacts with, and impacts waterways and natural environments to provide our world class water services. Our action areas also respond to the way we all want to experience and celebrate our waterways. The commitments in this document have been shaped and tested with your organisation and nearly two years of customer engagement.



Over the past two years, Sydney Water has listened to thousands of customers and hundreds of our stakeholders.

I have heard first hand just how important waterways and natural environments are to so many of us in Sydney, the Illawarra and the Blue Mountains. Sydney Water has used your input to refine our commitments to healthy waterways and environmental protection. Our commitments are detailed in this document.

We have reflected them in our long term capital and operating plan, and they will be embedded into the price proposal we will take to the Independent Pricing and Regulatory Tribunal (IPART) later this year.

I look forward to working in partnership with you to implement actions for healthy waterways and environmental protection.

**Roch Cheroux,**  
**Managing Director**



# We have listened to your priorities for healthy waterways and environmental protection.

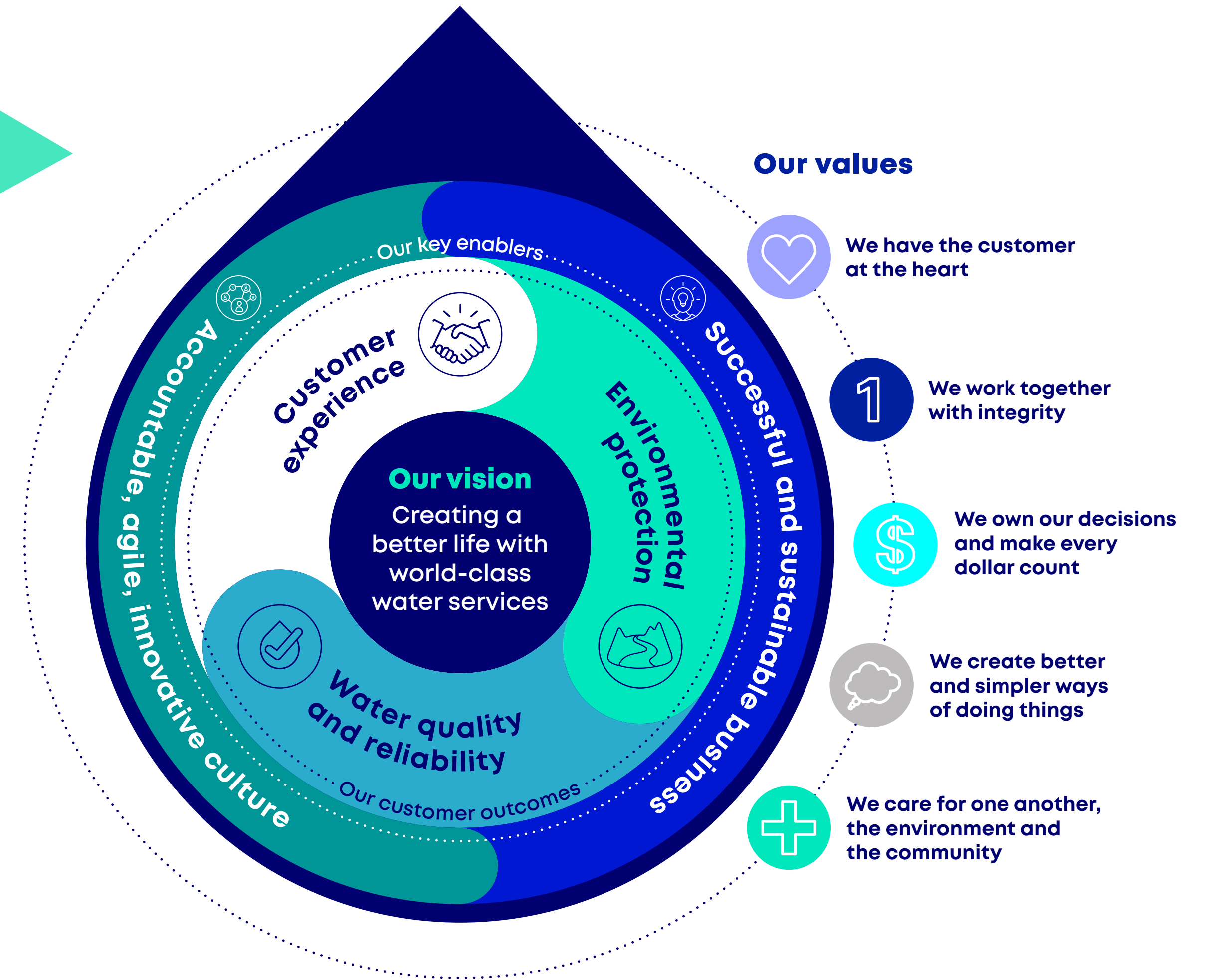
Improving our waterways and protecting the environment is a key element of Sydney Water's strategy and our vision of creating a better life for all Sydneysiders with world class water services.

We have refined our commitments to healthy waterways and environmental protection through over two years of engagement with State and Local government, Councillors and our customers.



## Our action areas for environmental protection and healthy waterways respond to the priorities we heard from our customers and our stakeholders.

- Reducing pollution from wastewater
- Maintaining clean, safe waterways and water recreation areas
- Improving natural waterways and habitats to protect the environment
- Recycling water to reduce waste and make the most of our water resources
- Improving stormwater management, to reduce water loss
- Contributing to cooler, more pleasant green spaces
- Reducing net carbon emissions
- Manage our city's water supplies by delivering community-based water saving programs



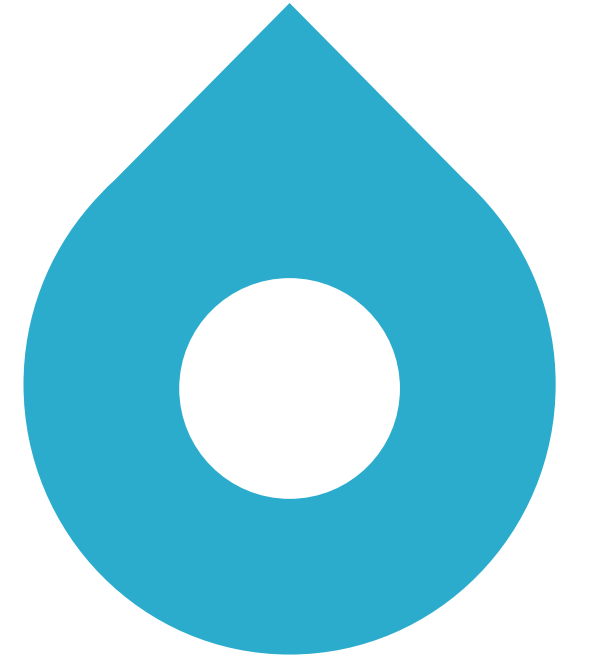
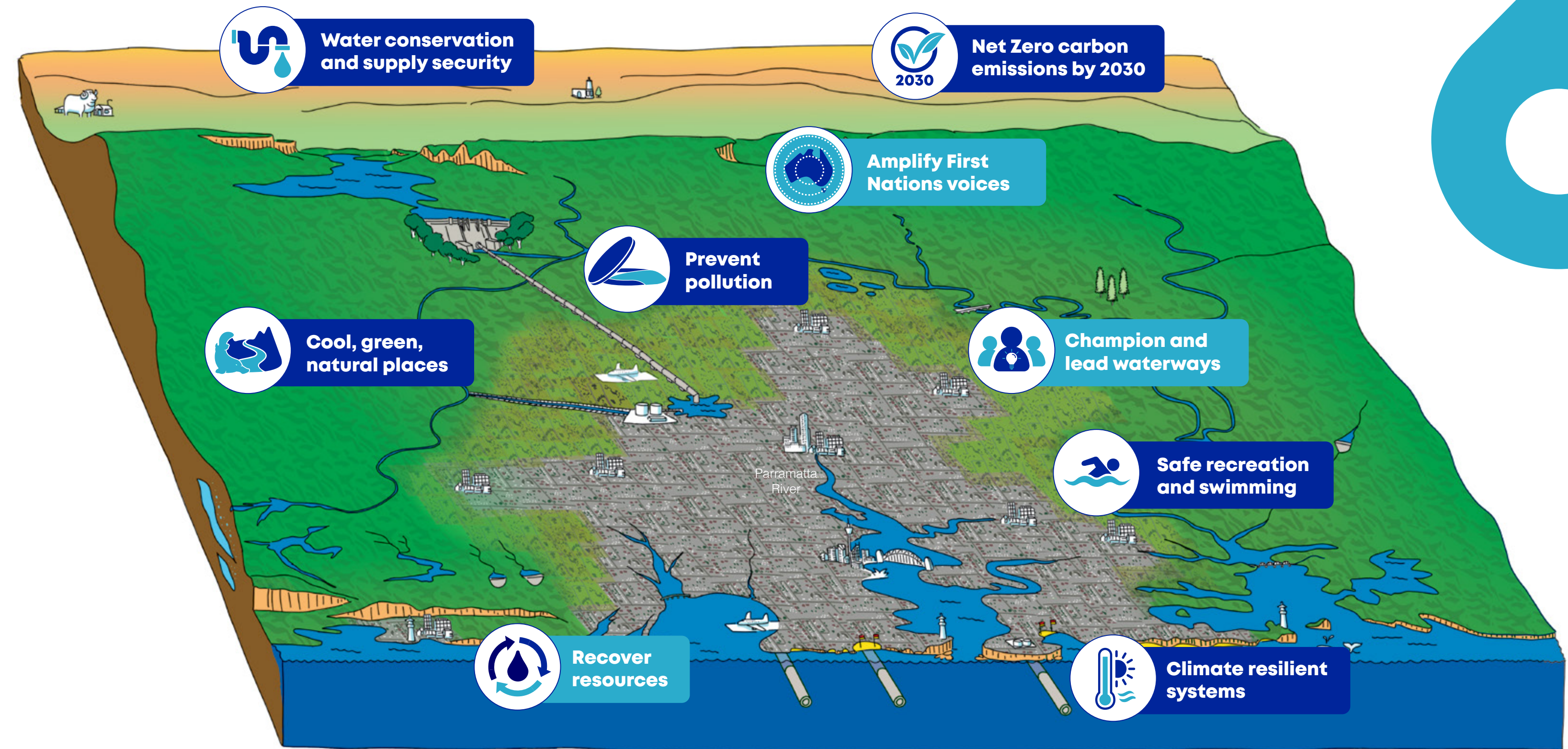
# Our action areas for healthy waterways and environment

This document outlines our commitments to healthy waterways and environmental protection, while maintaining our existing world class water services.

This document outlines where Sydney Water will work, take action, invest and collaborate with others.

We have developed our action areas by considering all the ways we interact with waterways in Sydney:

- where we source our drinking water;
- where we provide services to customers and operate our systems;
- where our treated wastewater goes;
- and where our customers and community like to use waterways and appreciate nature.
- we've considered our role as a large organisation, that works across Greater Sydney, the Illawarra and the Blue Mountains, with over 8000ha of land and a very large asset base.



**Rivers downstream of dams are thriving and inviting**



**Urban streams are valued, accessible and healthy**



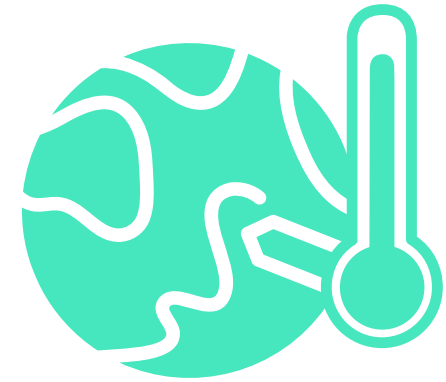
**Coasts and estuaries are resilient and swimmable**



**Landscapes and nature are protected, connected and enjoyed**

# What is our case for change

Our city is facing challenges. We need to do things differently if we are to maintain our environment, improve our waterways and continue to enjoy reliable water services in Sydney.



## Climate change

Climate change is making severe droughts, floods, heatwaves and fires more likely. Sea levels will rise and water temperatures are already increasing. Climate change will put more pressure on our water supplies and wastewater systems. It will also affect the health of our waterways and the plants and animals that rely on them.



## Our growing city

As our city grows, we will need more cool, green and connected spaces to enjoy outdoor recreation. Our customers and communities are telling us they want more access to healthy local waterways to connect with nature and enjoy the environment. More of us want to swim, paddle in and walk next to beautiful waterways near our homes.



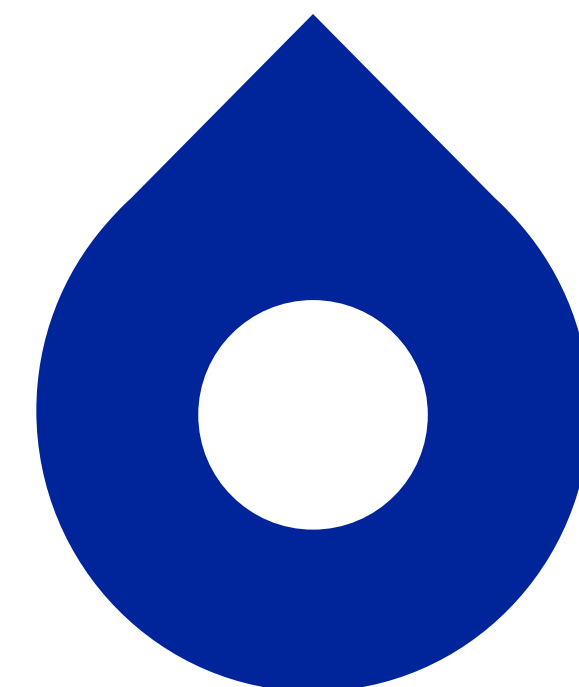
## The state of our assets

Many of the pipes, pumps and plants that deliver our services are getting older - while also serving more people. As our assets reach the end of their service life, we need to update them, and incorporate more modern ways of delivering water services. We must continually improve our environmental performance and keep assets reliable in the face of climate change threats like higher sea levels and urban heat.



## We love our waterways

Waterways are beloved community assets. While there are many different organisations who have a part to play in managing waterways and stormwater, nobody has formal responsibility for ensuring waterways are healthy and accessible. Sydney Water operates across all of Sydney, the Blue Mountains and the Illawarra so we have an important role in collaborating and co-ordinating action.



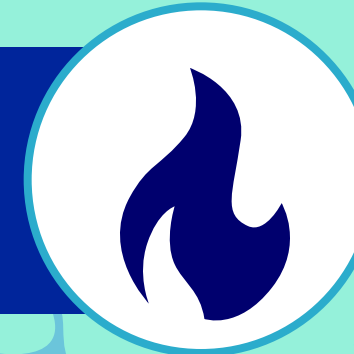
# We have considered climate change when setting our action areas for waterways and environmental protection



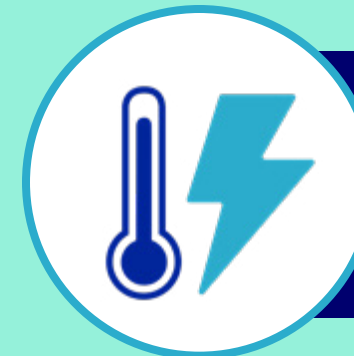
Heatwaves will increase demand for water, for essential personal cooling and community greening.



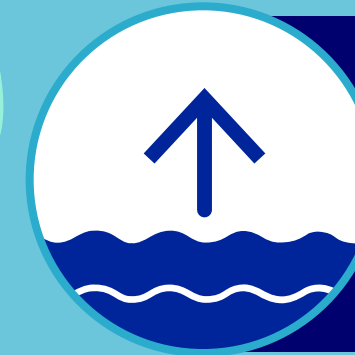
More intense storms will make riverine and urban flooding more common and more severe.



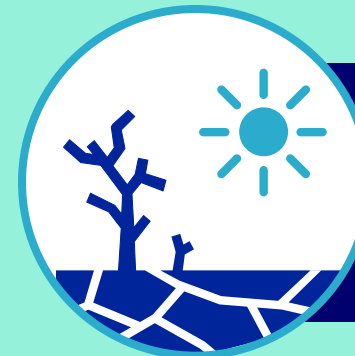
**Bushfires** will become more common and more intense. They will threaten our assets and our customers.



Heatwaves may affect essential energy supply, electrical equipment as well as workers' health and safety.



Assets near the coast like pumping stations, treatment plants and stormwater drains will be affected by storm surge, rising sea levels, and more urban runoff.



Increased frequency of severe drought will affect our water supplies.



More rapid, frequent runoff will damage streams and reduce waterway health.



Heatwaves have high health impacts for some customers.



In **estuaries**, water is warmer and low tides are higher. This can cause new water quality issues and ecological change.

# Our action areas in detail

## 1 Prevent pollution

*“Preventing pollution is the biggest immediate priority for Sydney Water” \**

Customers and stakeholders reiterated the importance of maintaining our systems to prevent pollution of waterways and continually improve water quality, while doing more work to reduce visual pollution like litter.

We will prevent wastewater pollution by upgrading and proactively managing our wastewater systems, including our largest pipes and the plants that treat our wastewater and produce recycled water and biosolids.

For example, we are upgrading our water resource recovery facilities in the north west of Sydney, to improve the quality of wastewater we discharge into the Hawkesbury/Dyarubbin-Nepean River, improve recovery of biosolids and improve the integrated management of systems in western Sydney.

We are reducing wet weather overflows by fixing our pipes in our system and on customers' properties to stop water getting into our wastewater system during wet weather. We have

demonstrated that this method is as effective – and far less costly – than building big wet weather storage facilities.

We are managing dry weather overflows by installing sensors that can give us early alerts of problems, and allow us to respond before there are overflows into the environment. We have increased the amount of active maintenance we do. We are aware that dry weather increases the risk of dry weather overflows, and we are adapting our maintenance and inspection programs to meet the need. We will offset nutrient pollution in the Hawkesbury/Dyarubbin-Nepean River by restoring riverbanks.

We continue to control the quality of wastewater entering our systems by enhancing our business customer programs, continuing customer education and awareness and improving monitoring in our systems. We will work with our regulators and industry partners to better control some pollutants at source.

### Measure

#### Quality of treated wastewater discharged

Aim: We will continue to upgrade and renew treatment plants to improve the quality of treated wastewater, as measured by our compliance with EPA standards for concentration.

#### Number of environmental harm incidents

Aim: We will stabilise the number of incidents, including wastewater network overflows, even as weather conditions become more variable and our networks expand to serve more customers.

\* quotes recorded at stakeholder engagement workshops





## 2 Water conservation and supply security

*"We'd like to see other parts of Sydney do their part in water efficiency/conservation....our community is reasonably used to and comfortable with things like purified recycled water" \**

We'll support the water needs of our city and our waterways by supporting water conservation and diversifying supply sources.

We will continue to contribute to achieving Greater Sydney Water Strategy water conservation targets of 49 GL of water savings a year by 2040. We will do this by delivering new water efficiency programs for customers, investigating new water saving technologies and use data insights to target savings. We will improve leak management. We will also make significant investments in digital meters, and improve availability of recycled water.

We will continue community water cycle education so we all have a better understanding of how our city's demand for water services interacts with our waterways.

We've opened our Purified Recycled Water Demonstration Plant and Discovery Centre at Quakers Hill, to demonstrate how treatment technology for recycled water works. It's helping to build community understanding and acceptance of purified recycled water and support discussions about the viability of purified recycled water as a cost-effective bulk water supply option for Sydney.

We are also planning other rainfall independent water supplies including desalination.

Water is a precious resource and customers and stakeholders want water wastage addressed. Sydney Water will make a customer commitment to reduce leakage from our systems. This will save water and reduce some operational costs.

### Measure

#### Residential drinking water use per person per day

Aim: Reduce per person residential use by 2 percent by 2030 by implementing customer and community efficiency, behaviour change and education programs.

#### Reduce water leakage

Aim: Reduce the volume of water lost from our system by 12 percent by 2030.

Left and centre images: Our Purified Recycled Water Discovery Centre has recently opened.



### 3 Recover resources

*"We expect to see more recycled water. We like the concept of recovering resources for the environment." \**

Every year, Sydney Water manages more than 450GL of our city's wastewater to protect public health and the environment. Wastewater is also full of resources, and we are improving our recovery of water, nutrients, energy and organics. This will also support development of a circular economy in Sydney.

Upgrades to our water resource recovery facilities are improving production of high quality biosolids, reducing power demand, and increasing energy recovery. They also deliver other benefits such as reduced odour and improved reliability.

Most of Sydney's wastewater is released to the ocean, after being treated at big facilities at North Head, Malabar and Bondi. As our city grows and some of our assets get older, we will need newer ways to manage wastewater, while recovering more resources. We are planning

how we make significant changes to our big coastal wastewater systems, treat wastewater to a higher standard closer to source, and improve availability of recycled water.

In Western Sydney, our new Advanced Water Recycling Centre at Upper South Creek will start treating customers' wastewater from 2026. Advance treated water from the plant will provide high quality replacement flows to the Nepean River. We are also planning Australia's largest stormwater harvesting project in Western Sydney. We will capture excess urban stormwater, treat it, and use it to support cool, green open spaces.

You also told us that you expect us to make it easier for Councils and private companies to recycle water, including by improving processes that support sewer mining and stormwater harvesting from our systems.

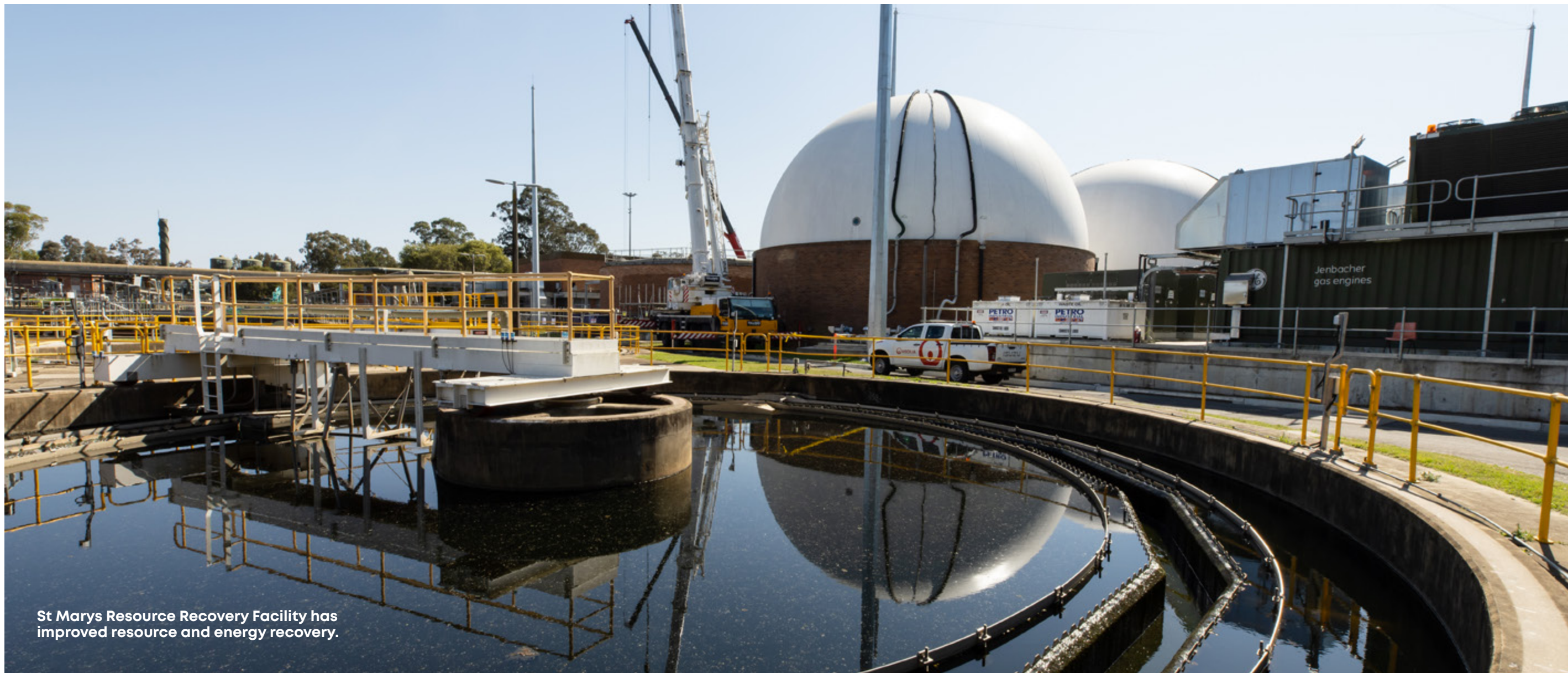
#### Measure

##### Volume of recycled water available (GL/year)

Aim: More than double the volume of recycled water available by 2030. This includes water recycled from wastewater and harvested stormwater.



We aim to more than double the volume of recycled water available by 2030. This includes water recycled from wastewater and harvested stormwater.



St Marys Resource Recovery Facility has improved resource and energy recovery.



We provide advance treated recycled water to provide beneficial river flows.

## 4 Climate resilient systems

*"We need to improve city's resilience.. All levels of government need to face cost of climate change. Everything from potholes in roads from increased rain to sea level rises"..[Sydney Water can] show leadership with community about the costs of climate change mitigation and remediating impacts..." \**

Sydney Water has a vast network of assets that deliver our water, stormwater and wastewater services. Climate change will affect all parts of our operations: droughts and floods affect the availability and quality of raw water for drinking, while extreme temperatures, storms, bushfires and rising sea levels affect how reliably our water, wastewater and stormwater systems operate.

We have adopted an "intermediate" climate change scenario of RCP4.5 that assumes greenhouse gas emissions stabilise in the future, but concentrations of carbon dioxide in the atmosphere still lead to a 2 degree increase in global temperatures. We are using this scenario

to guide our planning and ensure that new and renewed assets can continue to operate despite the likely threats that climate change poses. We're collaborating with partners to develop consistent approaches to managing and adapting to climate change risks. We have developed our Climate Change Adaptation Guidebook.

Sydney Water has adopted the NSW Government's Climate Risk Ready Guide recommendation that NSW Government organisations meet a minimum systematic level of climate risk management maturity.

### Measure

#### Climate risk maturity health

Aim: Improve our level of climate risk maturity from "repeatable" to "advanced" by 2030.

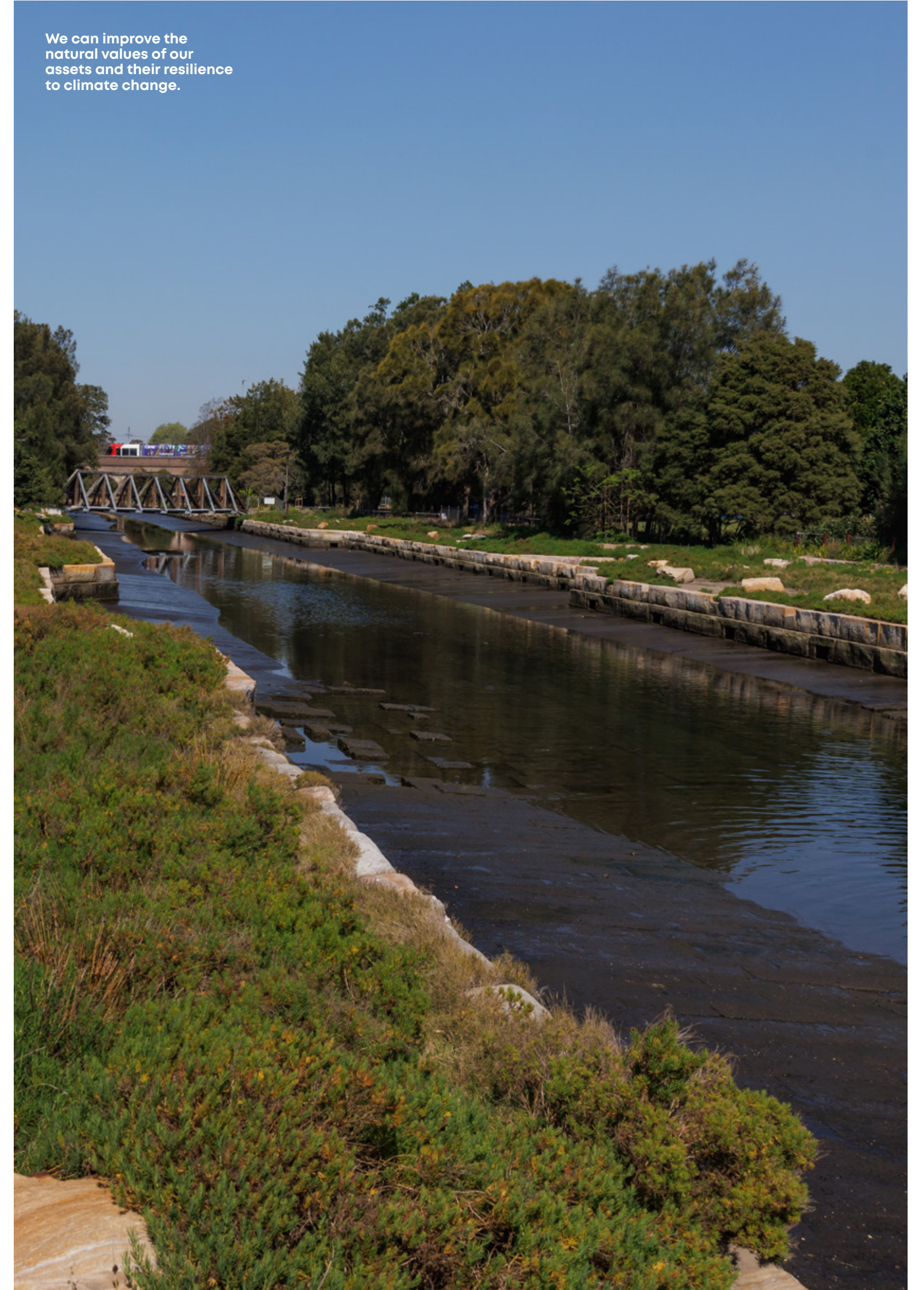


Sydney Desalination Plant.



Climate change is increasing risks for our assets.

We can improve the natural values of our assets and their resilience to climate change.



## 5 Net zero carbon emissions

Sydney Water has “a responsibility to do this as a big energy user.” \*

We have an existing public commitment to achieve net zero carbon emissions across our business by 2030 and our supply chain by 2040. This is part of our drive to achieve zero waste and consistent with our circular economy approach.

To deliver net zero, we are improving our energy efficiency. We are also operating and delivering renewable energy programs, including solar, hydro, bio-methane and co-generation schemes.

We are updating our technical specifications so we can use more recovered resources in our projects. We are guiding our planners with a cost-of-carbon tool, and improving our carbon reporting.

Diversifying our water supply system also helps us reduce future carbon

emissions, because recycled water uses less energy than desalination, and has less embedded energy than new dams.

We also know that some of the activities we do to provide our services and manage our natural assets – such as providing biosolids for farmland, rehabilitating vegetation and waterways and improving soil condition via irrigation – can improve the carbon stored in our landscapes. We’ll continue to investigate the opportunity for robust, durable carbon offsets and purchase some offsets from credible external projects.

In our targets, we also assume that NSW’s electricity grid will continue to decarbonise.

### Measure

#### Tonnes of carbon dioxide equivalent emitted by Sydney Water

Aim: Achieve net zero emissions from our operations from 2030.



We've improved biosolids handling and energy recovery at St Marys Water Resource Recovery Facility.



We naturalise and rehabilitate waterways.



Our large coastal wastewater plants recover resources and generate electricity through co-digestion.

## 6 Cool, green natural places

*“We need to provide a liveable place for animals and flora.” \**

Sydney Water has a role in improving natural conditions and enhancing biodiversity through the land we manage, the waterways we own, and the way we develop and maintain assets. Our customers have told us that this is a priority for them, and we should continue to work with partners to improve cool, green, natural places.

Sydney Water owns over 1300 hectares of operational and drainage land with natural values. This is about 15 percent of our total land holdings – and it will grow in the future as we start managing Western Sydney drainage land.

We have active bushland management contracts, and two large sites are covered by biodiversity trust agreements. Some of our large Upper South Creek’s Advanced Water Treatment Centre site has important natural and waterway values, and we’re developing plans to protect natural and open space values.

We can enhance waterway values. In some suitable areas we can naturalise waterways when we replace aging stormwater canals. We have naturalised parts of the Cooks River, and Johnston’s Creek and Powells Creek, and we are completing the naturalisation of Muddy Creek, near Botany Bay. In Rouse Hill, we manage large areas of natural waterways and green infrastructure, as part of a holistic water cycle management approach.

We are also working with Councils to improve waterway health. At Milson Park in Westmead and Parkside Drive in Kogarah we have built wetlands to retain water in the landscape, create beautiful landscapes and improve opportunities for public access. Naturalisation and waterway health improvement programs are helping to revitalise underused public spaces, provide more public amenities and access, and create beautiful water sensitive urban design features to improve water quality and enliven the landscape.

In Western Sydney, we have newly-declared stormwater catchments in South Creek/Wianamatta. We’ll provide stormwater services in a way that helps protect waterway health, and we will develop many new green infrastructure stormwater assets, such as wetlands and bioretention basins.

Sydney Water stakeholders and customers have also told us they want public spaces planted and irrigated in a smart manner – preferably with recycled water and harvested stormwater - to maintain greenery and amenity, while keeping water use low. In drought conditions, cooler temperatures from green vegetation in the community is important. Our stormwater management approach in Western Sydney will see us develop the largest stormwater harvesting scheme in Australia.

### Measure

#### Proportion of Sydney Water land with natural values that’s actively managed

Aim: By 2030, actively manage three quarters of the land we own that has natural or green infrastructure values.



## 7 Champion and lead waterways

Collaboration and engagement are paramount to delivering on healthy waterways and environment...  
“Sydney Water is a legitimate leader for waterways, particularly in the age of climate change”. \*

Our urban waterways are some of our most-loved community places, but are under pressure from multiple impacts. Our community and our stakeholders have told us that improving waterways requires better collaboration, and more cohesive voices to champion waterways and highlight their value for the community. We have heard that Sydney Water has the opportunity to provide valued, visible leadership across Sydney, and is well positioned to advocate for the needs of waterways enable strong partnerships to implement effective waterway action. Customers have told us that improving waterway health, and providing healthy, cool environments is a priority for them, and acknowledge that we need to work together with Councils and the State Government to deliver.

Sydney Water can be an effective leader and collaborator because we can work with community members, Councils, State Government departments and other land owners, and because we operate across Sydney, the Illawarra and the Blue Mountains.

We'll continue to collaborate with community and Council-based catchment organisations to improve community awareness and care for our waterways. We're partnering with organisations such as the Parramatta River Catchment Group, Cooks River Alliance, Georges Riverkeeper, Sydney Coastal Councils and Hawkesbury Nepean Water Keepers.

We're also involved in Coastal Management Program co-ordinating groups across our area of operations.

### Measure

#### Active engagement with collaborative catchment organisations and CMPs

Aim: Maintain and improve our support of collaborative catchment groups and organisations.



## 8 Safe recreation and swimming

*“We always have to have free places to swim.” Sydney Water should also “reflect secondary contact recreation and culturally-specific waterway recreation”*

Using and enjoying natural waterways is part of Sydney’s culture and lifestyle. We love to visit our oceans, bays, rivers and streams for relaxation and water recreation, and our waterways are becoming more popular as our city grows and our summer become hotter.

There are over 100 swimming spots on the coast and in the bays of Sydney and the Illawarra that are monitored by Beachwatch and Harbourwatch. In Western and Central Sydney, Councils have been working in partnership with Sydney Water and the NSW Government to expand access to formal, managed water recreation.

Sydney Water’s [Riverwatch monitoring and predictive water quality information site](#) provides information about swimming and recreation

sites in the Parramatta River. Sydney Water is continuing our Urban Plunge program to help support more urban swimming opportunities.

We have also heard that our communities want more connected, accessible public places, and we will look for opportunities with our land holdings and stormwater areas. Already about 60 Sydney Water sites have formal licences for recreational use, and other areas are informally accessible through walking trails, access to lands adjacent to trunk drainage. We support the greater public use of other parts of our property portfolio where it won’t compromise our core operations. We’ll proactively work with government, community (including First Nations) groups, to identify priority locations for improved public access.

### Measure

#### Sites where we have contributed to improved access for swimming or recreation

Aim: Support improved public access to waterways and Sydney Water property by at least one site per year.



We are working with the Parramatta River Catchment Group to launch new swim sites.



Bayview swimming spot

## 9 Amplify First Nations voices

*"We all drink from the one water. We have to work together to look after our water and waterways. It's not just about us - it's about the descendants of all of us." \*\**

Our city's waterways have been managed and nurtured by First Nations people for more than 60,000 years. Water is an integral part of First Nation People's knowledge, community, and culture. In customer engagement, we heard that "First Nations cultural knowledge and land practices should also be a focus of any water management planning and decisions". First Nations customers "advocated strongly for dual signage at publicly accessed waterways, including use of First Nations place names".

Our Reconciliation Action Plan commits Sydney Water to improving our management of waterways using First Nations knowledge and by learning traditional practices, by engaging in deep listening with Aboriginal and Torres Strait Islander stakeholders and organisations for knowledge sharing and best practice advice on caring for waterways and Country.

We continue to commit to improving the management of our waterways by learning from the knowledge and traditional practices used by Aboriginal and Torres Strait Islander peoples. We will provide opportunities for our employees, partners and customers to learn about local First Nations peoples culture and connection to Country in our operating area. By creating the time and space to listen and learn from Aboriginal and Torres Strait Islander peoples, we aim to continue the work of our First Nations peoples to protect the water in our environment and communities.

During customer engagement in 2023, First Nations customers told us that we should install dual-language signage at publicly accessed waterways, including use of First Nations place names and First Languages in signage. They also said we should demonstrate cultural integrity and respect, including First Nations land-use approaches, and understanding local group priorities.

### Measure

#### Reconciliation Action Plan

Aim: We will update and implement our reconciliation action plan.

\*\* Chris Tobin, Darug elder



Dennis Golding created artwork for our first Reconciliation Action Plan that connects stories of both saltwater and freshwater people, land sustainability and culture.





Sydney  
**WATER**

SW 69 05/24