Melbourne Water Annual Report

2022–23

VICTORIA State Government

Melbourne Water

Enhancing Life and Liveability

Our vision

Enhancing life and liveability

Water is central to life. It sustains the natural environment we live in, the communities we value, and the economy we depend on.

Acknowledgement of Country

Melbourne Water respectfully acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Owners and custodians of the land and water on which all Australians rely.

We pay our respects to Bunurong, Gunaikurnai, Taungurung, Wadawurrung and Wurundjeri Woi-wurrung peoples as the Traditional Owners and Custodians of the land and water on which we rely and operate. We pay our deepest respects to their Elders past, present and emerging.

We recognise and respect the continued cultural and spiritual connections that Aboriginal and Torres Strait Islander peoples have with the land and water they have cared for and protected for thousands of generations.

We demonstrate our ongoing commitment to reconciliation through our partnerships with Traditional Owners and the broader Aboriginal and Torres Strait Islander communities, as we work together to manage land and water now and into the future, while maintaining and respecting cultural and spiritual connections.

About this report

The *Melbourne Water Annual Report 2022-23* describes Melbourne Water activities undertaken between 1 July 2022 and 30 June 2023 to meet our customers' needs, regulatory obligations and contribute towards achieving our vision of enhancing life and liveability.

Melbourne Water is a Victorian Government-owned statutory authority.

As part of our commitment to sustainability, a limited number of copies of this report will be printed. An online version and accessible text format of this report are available on our website[1].

If you would like a copy of this report in a different accessible format, please call Melbourne Water on 131 722 (within Victoria) or (03) 9679 7100 (outside Victoria), or email **enquiry@melbournewater.com.au**.

[1] http://www.melbournewater.com.au

Cover photo: Tarago Reservoir

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The year in review

Report from the Chair and Managing Director

We are in the decade that matters. The actions we take now will define the future of greater Melbourne for generations to come. Water is essential to our way of life. Water is more than just a resource, it sustains life, liveability and our environment. Together with our communities, industry and partners, we are collaborating to create innovative solutions to support a sustainable future.

As our city grows and the impacts of climate change become more severe, we recognise our responsibility to prepare and reset how we manage a sustainable water supply. We seek to contribute to solutions, such as Integrated Water Management, the circular economy and flood management. Securing our region's water supplies through a broad portfolio of water sources, including desalination and a greater use of recycled and stormwater, will be crucial as we build a more resilient city.

The 2022-23 period has been one of evolution, where our business has undergone internal transformation to support further innovation to prepare us for a sustainable future. By engaging with our customers, empowering our people, utilising technology and continuing to deliver world-class services, we can continue to provide valued and agile services.

Supporting our communities through flood response

The heavy rainfall experienced in October 2022 was the biggest challenge faced by communities and our people this year. As a floodplain manager, we understand the impact, damage and disruption urban flooding can cause. We are committed to listening to community views and needs, and will embrace any learnings from Melbourne Water's review and the Parliamentary Inquiry.

Recognising that the frequency of extreme flood events is expected to increase due to climate change, we have expedited our program to incorporate climate impacts up to the year 2100 into our flood maps and models for all catchments. Additionally, in line with our function as a floodplain manager and under the *Water Act 1989*, we remain committed to influencing the design of our region's infrastructure and housing in partnership with local council to adapt integrated flood management practices to future challenges. More information about our work can be found in the Flood Resilience and Drainage chapter on page 22.

We aim to complete this comprehensive mapping project by 2026 to enhance the preparedness of future housing and infrastructure for flooding over the next 70 years. This proactive approach aims to better prepare communities to mitigate the impact of floods in the long term.

Collaborating for a sustainable future

Acknowledging the complexity of the challenges we face to address our city's future, it is crucial for us to collaborate with like-minded leaders. This year Melbourne Water contributed to two industry first collaborations to address issues including water scarcity, decarbonisation, urbanisation, stressed catchments, and aging infrastructure.

Our recent collaboration with South East Water, Yarra Valley Water, Greater Western Water and Barwon Water resulted in 'The Accord' which articulates a shared vision for the sector and agreed principles to working together that supports cost-effective, equitable outcomes for the future. The Accord represents a shared commitment to act in the best overall interests of our communities.

We were equally excited to announce our international partnership with Danish and UK companies Aarhus Vand and Severn Trent this year. This partnership aims to facilitate the co-creation of technologies and innovations required to address the climate impact of our wastewater treatment operations - a critical part of our aspiration to decarbonise our operations. For more information about this partnership, see page 59.

In addition, we have leveraged our long-standing research programs, established new relationships and further built networks, both within Australia and internationally, to unlock new opportunities and find effective solutions to common challenges.

We have a goal to reduce annual net carbon emissions by 50 per cent by 2024-25 and actively seek innovative approaches to achieve net zero emissions by 2029-30. See page 7 for more details on our initiatives and goals.

In line with the Victorian Government's Water for Victoria policy, we have also worked closely with the government and our partners to implement key strategies, such as the *Greater Melbourne Urban Water and System Strategy: Water for Life*. This has been a significant collaborative step forward and provides a clear avenue for the sector to work together.

Walking Country together with Traditional Owners

Our commitment to walking Country together relies on our strong relationships with Traditional Owner partners. Developing formal Partnership Agreements is vital in fostering resilient and meaningful connections.

This year, we are proud to have worked closely with the Wadawurrung Traditional Owner Aboriginal Corporation and signed a Partnership Agreement together during National Reconciliation Week. This is our second agreement following the signing with Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC) in July 2022.

These agreements are both purpose specific and outline our shared purposes, guiding principles and agreed priorities. Partnership Agreements are providing a pathway work together and each will be implemented according to both agreeing on priorities.

Building a Better Melbourne Water

As we finalise our business transformation together, we are committed to ensuring our core services of water supply, sewerage, drainage and waterway management remain strong, while also increasing our efforts to reduce our greenhouse gas emissions on our path to net zero (see page 57 for more details).

Our people are uniquely placed to make a long-term impact on the health of greater Melbourne for our customers and communities. We welcome this opportunity; our new structure allows us to further adopt creative solutions to tackle the long-term challenges of climate change, population growth, emissions reductions and water security.

Recognising the importance of this decade, Melbourne Water formulated an ambitious agenda in 2022-23 that focused on key strategic areas, including decarbonisation, circular economy, securing future water sources, Integrated Water Management and supporting Traditional Owner self-determination.

This year, we have focused on ensuring that our teams continue to be supported with a 'future-fit' culture. This involved the enhancement of learning capabilities to support and inspire our workforce to be prepared, resilient and connected to our purpose.

As a learning organisation, we have refined our vision, launched a new learning narrative for the business and refreshed our learner pathway, defining a set of core capabilities across the business to help set us up for the coming decade.

Supporting the Victorian economy

We remain focussed on running an efficient business that delivers value for money outcomes for our customers and stakeholders. Our capital investment expenditure was $746 million dollars during the year which ensures that we continue to meet the growth in demand and renew existing infrastructure to deliver the essential services our customers expect and rely on.

A more liveable, greater Melbourne

There is a lot to do, and while we are uniquely placed to deliver the valued services required, we know we cannot do it alone. We look forward to continuing to strengthen our relationships with customers and partners as we move through the decade that matters and continue to design a water-secure future and contribute further to the liveability of greater Melbourne.

In accordance with the *Financial Management Act 1994,* we are pleased to present Melbourne Water's Annual Report for the year ended 30 June 2023.

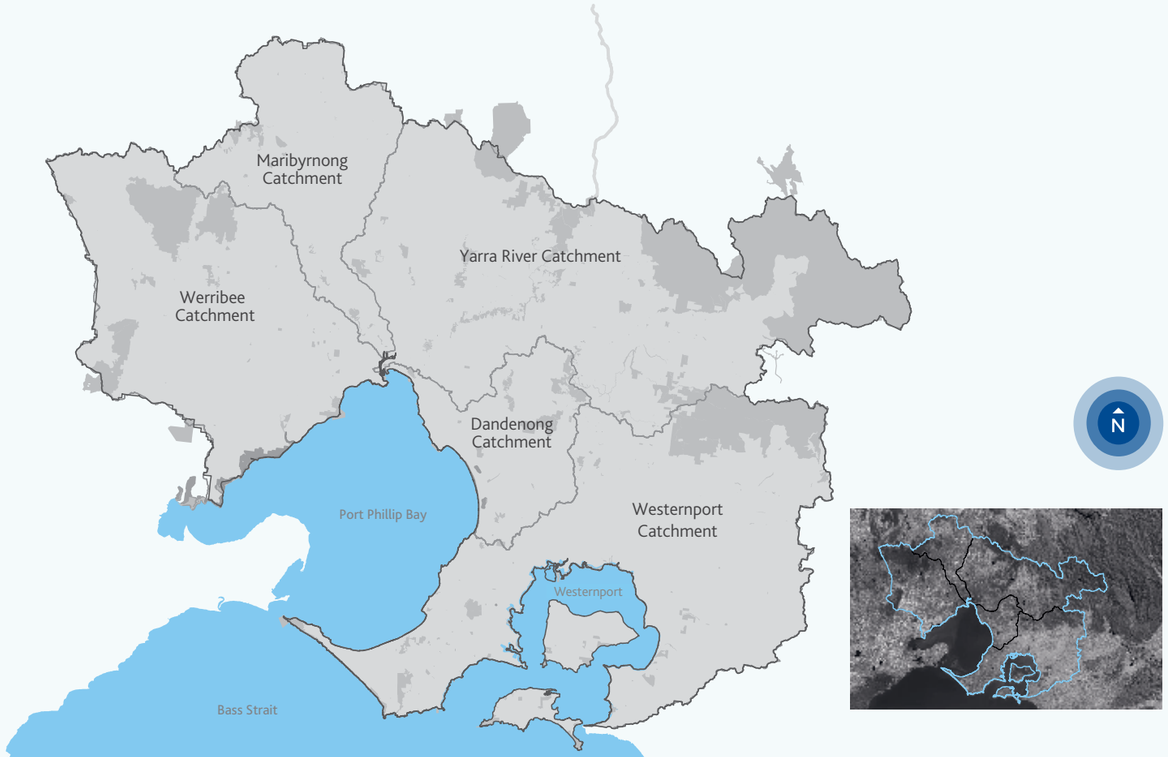
John Thwaites
Chair

26 August 2023

Nerina Di Lorenzo
Managing Director

26 August 2023

Melbourne Water's operating area



Who we are and how we work

Melbourne Water is owned by the Victorian Government and is the supplier of wholesale water, sewerage, drainage and waterway management services for greater Melbourne.

About us

> For over 130 years, we have been committed to enhancing life and liveability for the greater Melbourne region through proactive planning and infrastructure development for a sustainable future.

As prescribed by the *Water Act 1989* and in our role as floodplain manager, our responsibilities include the management of water supply catchments, treatment and distribution of drinking and recycled water, sewage treatment and removal, and the oversight of catchments, waterways and major drainage systems in the Port Phillip and Westernport regions.

We are owned by the Victorian Government and, since 2022, we have also assumed the role of Catchment Management Authority in the Port Phillip and Westernport region.

The enduring use of much of the infrastructure created during our long history is a testament to the visionary thinking and ingenuity of our predecessors. In line with this legacy, we continue to build new and resilient infrastructure, including Integrated Water Management (IWM) practices, to effectively address present and future challenges.

Guided by our vision of 'Enhancing Life and Liveability,' our passionate team of experts strive to make greater Melbourne an exceptional place to live. Water is essential to our way of life and so is the work we do to enhance the natural environment we live in and the communities we are part of. This work includes ensuring affordable access to clean water for households, gardens and businesses, maintaining a clean city and promoting community wellbeing through efficient sewerage services, and fostering opportunities for recreational activities and enjoyment of the land and waterways under our stewardship.

Recognising the impacts of climate change, which include extremes of both hotter and wetter weather, more severe bushfires, and unpredictable storms and floods, we acknowledge that the present decade holds tremendous significance. This is the decade that matters, where the actions we take now will shape our future. That is why Melbourne Water is actively engaged in managing and safeguarding the resources essential to our way of life.

Through the provision of clean drinking water, adoption of resource recovery practices in sewage treatment, collaborative efforts within our community to mitigate flood risks, and preservation of the health of Melbourne's extensive network of rivers, creeks and catchments, spanning over 25,000 kilometres, we demonstrate our genuine care for, management of and protection of every aspect of the water cycle.

In pursuit of our vision, Melbourne Water recognises that we cannot operate in isolation. We actively engage and collaborate with a wide range of partners, including Melbourne's retail water companies, councils, developers, contractors, Traditional Owners, the community and government agencies, to deliver services that are valued by our customers.

Together, our focus extends beyond delivering exceptional and affordable essential services to the people of greater Melbourne today. We are committed to securing a sustainable and thriving community for generations to come.

Our vision and strategic direction

Enhancing life and liveability

Melbourne Water's vision is to enhance life and liveability across greater Melbourne and the surrounding region. We know that water is central to life. Water sustains the natural environment we live in, the communities we value and the economy we depend on.

We do this by focusing on three pillars:

Healthy People: by providing safe, affordable, world-class drinking water and sewage treatment, and supporting Melburnians to live healthy lifestyles, we protect public health and strengthen the wellbeing of our community.

Healthy Places: by managing the impacts of climate change, building our resilience to flooding across the region, and partnering to deliver sustainable land and water management, we create more desirable places to live.

Healthy Environment: by being innovative with resource recovery, reducing our emissions, improving the quality of waterways and engaging with the community, we enhance biodiversity and help protect our natural assets.

Our Values

Our values of care, integrity and courage are integral to the way we do business and treat one another. They are intrinsically linked to our vision of enhancing life and liveability, and guide all that we do.

Care: we put safety and wellbeing first at all times, and seek the best for our colleagues, community, customers and environment.

Integrity: we are open and transparent in everything we do, treating people with respect and taking full responsibility for our words and actions.

Courage: we empower each other to believe in ourselves, speak up, innovate and learn from our mistakes to continuously improve how we do things and achieve the best possible outcomes.

Greenvale Reservoir

Our operating environment

We operate within a dynamic landscape where we must be prepared to confront the challenges posed by population growth, extreme weather events, climate change and the disruptive influence of digital technologies such as AI and automation. These impacts are revolutionising every aspect of our lives and business, requiring our focused attention and a proactive response.

This year, our biggest operating challenge was rainfall, which fell at 21 per cent above the 30-year average. When added to a third consecutive year of a La Niña event, streamflow into Melbourne's catchments increased to a 66-year high.

Increased urbanisation across greater Melbourne also meant that rainwater flowed faster off hard surfaces instead of filtering into soils, increasing flooding along waterways and on low-lying land. Urbanisation and climate change will continue to increase flood risk as the intensity of rainfall events increases, severe storms become more common and the sea level rises.

The extreme rainfall and subsequent flooding that occurred on 13 October 2022 was unprecedented in its intensity. This extreme weather event, coupled with the impacts of climate change and an evolving urban landscape, have prompted Melbourne Water to fast-track new flood modelling across Melbourne.

Working with our Local Government Area partners, the modelling work, which commenced in 2021, will re-map the Port Phillip and Westernport Catchments (both riverine and overland flow models) to incorporate climate change projections to 2100 by 2026.

Increased rainfall has also meant our water storages have been in the best position since 1996, with current storage levels across the majority of our storage reservoirs and dams at very high.

The Thomson Reservoir in West Gippsland, Melbourne's largest water storage reservoir, reached capacity for the first time in 26 years, with Melbourne's water storage levels reaching over 98 per cent full in November 2022.

However, despite the current high storage levels, our region is experiencing population growth and is vulnerable to a drier climate ahead. We cannot rely on rain alone to meet greater Melbourne's growing needs. Planning for alternative water sources, such as recycled water and desalination, is becoming increasingly important as part of our long-term resilience preparation.

Delivering the Victorian Government's plan for water

Water for Victoria is the Victorian Government's statewide water plan. The plan identifies priorities for managing water across the state, including the Melbourne region. The plan drives improved outcomes for communities in the way water is managed and delivers shared benefits, while also addressing challenges such as climate change and population growth.

We work closely with government to deliver our services, which have been crucial in supporting Melbourne to grow into the city it is today. This Annual Report outlines our achievements in 2022-23 to meet the changing needs of the Melbourne region and addresses priorities detailed in *Water for Victoria*.

Letter of Expectations

We are further guided by the Minister for Water's Letter of Expectations, which this year focused on:

- climate change
- customer and community outcomes
- water for Aboriginal cultural, spiritual and economic values
- resilient and liveable cities and towns
- recognising recreational values
- leadership and culture
- performance and financial sustainability
- compliance.

Our future focus

Our strategic goals speak to ambitions for the future. They outline the major areas of focus we must address to enable our community and the environment to thrive and prosper over the next five years and beyond.

Our strategic goals are:

- keeping our core services strong today, building resilience for future changes
- we will walk Country together
- boldly progress towards decarbonisation and become leaders in climate change mitigation, adaptation, and planning
- embed Integrated Water Management
- focus on new water and enhancing the value created
- step beyond resource recovery to a central role in the waste sector, driving resource recovery and using more recycled water.

Our enabling goals are:

- managing and governing our business to support a high performing organisation
- financial strength
- building influential relationships.

Our service portfolio

Our strategic goals work hand in hand with our service portfolio. Our service portfolio is our business of today and outlines the critical services we provide to our customers and community and our measure of success.

Since Melbourne Water's service portfolio was first introduced in 2019, we have assumed new functions including catchment management and coastal management, and we have re-negotiated the value we provide to customers through our Price Submission. Our updated service portfolio reflects these updated roles and responsibilities and supports discussions around how we deliver value to customers.

Building a Better Melbourne Water

We have an exciting future ahead of us. Population growth and climate change are challenges that require us to think differently and to take new, bold approaches to ways of working to meet them. This year, we have transitioned to a new operating model and structure with new portfolios as part of our 'Building a Better Melbourne Water' program.

The Building a Better Melbourne Water program provides our organisation with an opportunity to reset our operating model and set of ambitions to achieve tangible and achievable goals over the next five years that will ensure we are prepared for the future.

Through this process we have identified our top five priority transformation projects based on the outcomes of the operating model review. Progress continues with their scoping and delivery. These five priorities do not replace our strategic goals. Rather, they have been developed to support us to achieve our goals. The five priorities are as follows:

- **Management operating system:** developing and implementing a series of tools, rhythms and behaviours to align and prioritise our work, and to ensure that we are on track to achieve our business objectives.
- **Risk management uplift:** improving our risk management maturity and approach.
- **Urban planning and development improvement:** delivering an enterprise-wide program that provides improved customer and regulatory outcomes.
- **Strategy to execution:** streamlining how the business translates strategies into actions, improving visibility, alignment and role clarity.
- **Culture and capability:** ensuring our people are future ready, resilient and motivated.

Our commitment to sustainability

At Melbourne Water, our commitment to sustainability means delivering services that endeavour to improve environmental, social, cultural and economic resilience for both current and future generations.

It is critical for our services and our community that our business remains resilient in the face of ongoing and emerging challenges, as our services rely on and are acutely impacted by phenomena such as a warming climate, fires, floods and droughts.

Our production methods are carbon intensive; therefore, we need to also consider product stewardship and evaluate life cycle impacts across all areas of our operations.

We have a significant opportunity as a business to make a tangible impact on the community by leveraging the potential of the circular economy and effectively managing our extensive land and assets.

Aligning with our mission is our commitment as signatory to the United Nations Global Compact, the world's largest sustainability initiative, which encompasses Sustainable Development Goals (SDGs).

We acknowledge our responsibility to advance the SDGs, both through our direct actions and by fostering partnerships with customers, stakeholders and suppliers. These collaborations enable us to make a meaningful impact on a broad range of sustainability challenges.

The SDGs provide a shared framework for Melbourne Water, our customers, the community and key stakeholders to collaborate effectively. Together, we strive to enhance community wellbeing and create a sustainable and well-managed environment for future generations.

Western Treatment Plant

KEY ACHIEVEMENTS FOR 2022-23

ENHANCING LIFE AND LIVEABILITY

Healthy People, Healthy Places, Healthy Environment

WHAT WE DO

Our strategic pillars	Water	Sewerage	Drainage	Waterways	Catchment management
Operating context	This year, a third consecutive La Niña event led to significant rainfall and record-high streamflow, leading to an operational focus on effective management of high storage levels in Melbourne. Our longer-term strategic focus remains on planning for alternative water sources to cater for population growth, increasing water demands and a changing climate.	Responding to the impacts of climate change was a focus, including the operational management of a number of significant rainfall events that impacted our sewerage services throughout 2022-23. Building service resilience in the longer term was supported by significant investments across our treatment systems in response to sustained growth in Melbourne's population.	We have maintained a strong operational focus on responding to flooding caused by significant rainfall events across the urban catchment in the second quarter. We have also continued enhancement of our flood modelling approaches to incorporate climate change projections out to 2100.	Delivering on targets and initiatives set in the *Healthy Waterways Strategy* and working closely with Traditional Owners to achieve each of these was a focus for 2022-23. In addition, we also worked to support and prioritise our natural wetlands, improve methods of monitoring water quality and assess the impacts of a changing climate on waterway health.	In our first full fiscal year as the Catchment Management Authority for the Port Phillip and Westernport Region, we were proud to lay the foundations of the next decade through the *Regional Catchment Strategy*. The strategy provides actions to continue the successful projects already underway and future projects.
Our results	**453 billion** litres delivered **36,500** megalitres recycled water delivered	**384 billion** litres of sewage treated **29,359** dry tonnes biosolids reused from the Western Treatment Plant on 44 paddocks over six farms, contributing to the circular economy	**25,000** new homes delivered by the development industry supported by Melbourne Water	**9.7 billion** litres of water released for the environment	**$485,750** provided in Victorian Landcare grants
Key initiatives and projects	• won the Ixom Best Tasting Tap Water award for Healesville supply • Celebrated the launch of the *Central and Gippsland Region Sustainable Water Strategy* and *Greater Melbourne Urban Water and System Strategy*. • Continued construction of the Yan Yean Water Treatment Plant upgrade and progressed installation of a new service reservoir at Bald Hill, supporting Melbourne's growing outer north-west.	• Completed piling and shaft construction as part of the Hobsons Bay sewer upgrade - a multi-year project to enhance capacity and resilience in the sewerage network.	• Entered into a new collaboration with the Bureau of Meteorology and the Victoria State Emergency Service to improve the flood warning system across greater Melbourne.	• The Reimagining Tarralla Creek project won the Landscape Architecture Award from the Australian Institute of Landscape Architecture. • Partnered with the University of Melbourne in the Melbourne Waterway Research-Practice Partnership to conduct research as part of our *Healthy Waterways Strategy* objectives.	• Achieved Minister approval for the refreshed *Port Phillip and Westernport Regional Catchment Strategy*. • Celebrated 20 years of Grow West, a collaborative environmental program working to rejuvenate degraded landscapes in the Upper Werribee Catchment. • Continued to support the powerful work of the Port Phillip and Westernport region Landcare movement. • Planted more than 10,000 mangrove seedlings at priority sites across the catchment to enhance marine restoration of the area.

WHO WE ARE AND HOW WE WORK

KEY ACHIEVEMENTS FOR 2022-23

ENHANCING LIFE AND LIVEABILITY

Healthy People, Healthy Places, Healthy Environment

WHAT WE DO

	Customers and Community	Safe and Inspired People	Continuous Improvement	Business Sustainability
Operating context	Collaboration and establishing partnerships with our customers and communities set the tone for our work throughout 2022-23. We continue our commitment to act in the best interests of the communities we serve, every day.	Ongoing transformation towards 'Building a Better Melbourne Water' continued throughout the year, seeking to prepare and inspire our workforce to face the dynamic operating environment of the future. Whole-of-business initiatives and cross-discipline collaboration led the way as we worked together to define our principles and pathway forward.	Increasing our capability in automation of data across our network through visual dashboards and information collection has continued to inspire and engage our people, advancing Melbourne Water's processes and systems. Enhancing our compliance practices has been a key feature of our data automation efforts, where we have embedded better reporting and further driven capability uplift.	We remained focused on driving an efficient business that delivers value for money outcomes for our customers and shareholders. Maintaining our financial strength is a key enabler for our strategic business goals that will help us to meet future challenges and deliver on the commitment we made to customers in our 2021 Price Determination. Our procurement initiatives ensure that we leverage our buying power to enhance the social, economic and environmental value we can create in the broader Victorian economy.
Our results	**75.9** reputation score remains strong	**42 per cent** female gender balance	**$5.9 million** invested in research programs, driving innovation	**42 MWh** additional megawatt generation in renewable energy forecast through new solar program
Key initiatives and projects	• Our Customer Service Centre ranked second in the country for call quality and customer experience. • Western Treatment Plant abuzz again following COVID years with record numbers attending the site for face-to-face tours. • Established 'The Accord' between Melbourne's urban retailers.	• More than 270 team members and leaders actively engaged in learning organisation development opportunities • Launch of our 'Mind on the Drive' campaign in May 2023 that encourages the reduction in vehicle-related incidents. • Development of a mental health and wellbeing framework reflecting that a mentally healthy workplace sees increased employee engagement, high employee attraction and retention.	• Launched HydroNET visualisation tool which allows users to access meteorological data, rainfall and tide information. • Trials using sugar to control weeds without the need for herbicides conducted at grasslands in Laverton.	• Embedded social procurement outcomes into our Hobsons Bay Main Sewer upgrade, including purchasing from Aboriginal-owned businesses, providing employment to Victorians with a disability and reaching gender equality outcomes with 50 per cent of the engineering team being female. • Renewal of our Field Services Panel to deliver increased customer and community value.

Cardinia Reservoir

Delivering value to our customers and the community

Melbourne Water is committed to enhancing the value of our services by supplying high-quality drinking water, providing reliable sewerage services and integrating drainage systems. We also endeavour to build system resilience to flooding and enhance our waterways and land for greater community use and environmental benefit.

Supply of water products

A safe and secure water supply is essential to our way of life.

Yan Yean Reservoir

Our approach

To ensure Melbourne's water supply remains secure, Melbourne Water manages catchments, water storages and the water transfer network to meet the needs of a growing city and surrounding region. With our variable climate we prepare for droughts, floods, bushfires and other weather events.

Melbourne Water supplies, treats and transfers this drinking water to the city's three metropolitan retail water companies and four other regional water businesses, which in turn provide it to households and businesses across the greater Melbourne and neighbouring region.

Melbourne is one of only a few cities in the world that draws over half of its drinking water from protected catchments. These forested mountain catchments throughout the Yarra Ranges act as a vast natural filter. The water harvested from these protected catchments needs minimal treatment, providing a high-quality, low-cost source that underpins the affordability of our drinking water.

On average over the past 10 years, about a quarter of Melbourne's drinking water has come from open catchments, which incorporate mixed land uses like houses and farms instead of being used exclusively to harvest water.

This water undergoes additional treatment processes to ensure it meets the same quality standards as water from protected catchments. Melbourne's water system also includes the Victorian Desalination Project, which complements our catchments by providing a secure source of high-quality water independent of rainfall. The plant can provide up to 150 billion litres of drinking water each year and is a key component in ensuring long-term water security by building a buffer in our storages and taking pressure off our reservoirs during drier periods and droughts.

Central and Gippsland Region Sustainable Water Strategy

Melbourne Water welcomes the development of the Central and Gippsland Region Sustainable Water Strategy (CGRSWS), led by the Department of Energy, Environment and Climate Action (DEECA). This strategy stablishes the path towards greater use of manufactured water, the delivery of more water for the environment, an increased uptake of Integrated Water Management (IWM) and the creation of water entitlements for Traditional Owners.

This year, we have continued to participate in actions to secure more water for the environment and have worked closely with state and local governments to enable IWM at a city scale, which will help to protect waterways from stormwater pollution while retaining more water for the urban natural environment.

Greater Melbourne Urban Water and System Strategy

To prepare for our needs over the next 50 years, Melbourne Water and the three metropolitan retail water corporations launched the *Greater Melbourne Urban Water and System Strategy - Water for Life* in early 2023.

The strategy is a significant step forward for industry collaboration, where a shared, whole-of-system approach now sits within a single strategy, providing greater benefit to the broader water network and community.

The strategy identifies the best mix of actions to supply water to our towns and cities via an adaptive plan that includes several short and long-term options and pathways to manage the water supply deficit by incorporating climate resistant or manufactured water.

The adaptive plan demonstrates it is likely that new water supplies will need to be added to our existing system within the next 10 years, as well as several system augmentations over the next 50 years. As most options take years of planning and investment, Melbourne Water is already planning for, and undertaking, readiness activities now in alignment with the 'new water' goal. The implementation of actions in Water for Life are aligned with those in the CGRSWS and will require a coordinated delivery effort.

Drinking water quality improvement

Melbourne's safe and trusted water supply system is central to our customers' experience and perceptions of Melbourne Water. Our obligations are set out in the *Safe Drinking Water Act 2003* (Vic), and the *Safe Drinking Water Regulations 2015* and are enforced by the Department of Health.

As a provider of essential services that helps to enhance life and liveability for the greater Melbourne population, Melbourne Water takes its responsibility for public health extremely seriously, and continually seeks to improve our water system and quality management controls.

Opportunities to improve our system controls are underway or in planning; these consider future climate and other resilience pressures so our system can adapt. To ensure a coordinated and risk-driven response, these opportunities have been collated into a single Drinking Water Quality Improvement Program, spanning Melbourne Water's planning, delivery and safety groups. Focus areas include improvements in foundational activities, core business processes, short and long-term risk interventions and emergency response.

In addition, Melbourne Water continues to work in collaboration with the Department of Health, DEECA and metropolitan water corporations on a joint action plan, enabling a sector-wide approach to drinking water quality improvements and ensuring public health is protected.

During the year, we finalised and published our new Drinking Water Quality Strategy. Building on the previous strategy of the same name, which shaped and enabled significant improvements in drinking water quality risk management over the last five years, this strategy outlines an approach that maintains and builds on the achievements and legacy assets of the past while planning approaches and solutions suitable for the future.

In line with this approach, effective catchment protection remains a cornerstone of our approach to managing drinking water quality risks for our existing water supply catchments.

However, going forward, our reliance on sophisticated engineered treatment barriers will grow over time as we source increasingly large volumes of manufactured water as climate change, a growing population and other factors drive an evolution in our supply sources.

To ensure we are prepared for the challenges and opportunities of the future, the strategy describes four strategic goals:

- **Continuity of supply:** We continuously improve our systems, processes, people and infrastructure to enable us to do the basics of drinking water quality risk management brilliantly.
- **Source management:** We take a robust multiple barrier approach to managing drinking water quality risks, ensuring that drinking water from all existing and potential future sources are equally safe.
- **Trust, innovation and leadership:** Our customers, stakeholders, and regulators value and trust our leadership and innovation in managing our drinking water supplies.
- **Resilience of safe supply:** Potential threats are anticipated, and appropriate measures are in place to enable supply to continue during and after extreme events with minimised impacts on customers.

Best tasting tap water

Melbourne Water is proud to have taken out top honours at the Ixom Best Tasting Tap Water in Australia competition in November 2022.

The prestigious prize was awarded to a sample from our Cresswell Water Treatment Plant at the Water Industry Operators Association of Australia's competition.

The Cresswell plant produces drinking water for the Healesville area and is an example of the world-class water Melbourne Water produces right throughout Melbourne.

While Melbourne Water manages the water supply catchments, major water storages and operates the treatment plant, Yarra Valley Water distributes the award-winning water to the Healesville community.

453 BILLION LITRES DELIVERED

Building system resilience to bushfire risk

Our protected, forested water supply catchments provide safe, affordable drinking water to the majority of Melbourne without the need for mechanical filtration treatment. Bushfire represents a key risk in these catchments, potentially leading to impacts such as debris flows into reservoirs that can raise the turbidity (water that is cloudy with sediment) of stored water for weeks or months. As part of our current Drinking Water Quality Strategy, we continued investigating the resilience of our water supply system to the potential impacts of bushfires on water quality and explored further options to enhance it.

Managing water supply

In July 2022, Melbourne's 10 storages were 86.9 per cent full (1574 billion litres) in total. They climbed to 98.4 per cent (1782 billion litres) on 5 November 2022, their highest since 14 October 1996 (98.6 per cent full based on the current storages). By June 2023, they were at 91.6 per cent (1660 billion litres) and well above the low of 26 per cent (453 billion litres) experienced in 2009 (see Figure 1).

The year 2022-23 was the third consecutive one to experience a La Niña event, with above average rainfall and streamflow in Melbourne's storage catchments. In 2022, winter/spring saw both catchment rainfalls (up 35.0 per cent) and inflows (up 85.9 per cent) above the 30-year average. Winter/spring catchment rainfalls were the highest in 48 years. The monthly average rainfall chart shows that monthly rainfall across Melbourne's catchments varied from a low of 23 millimetres in January (2023) to a high of 186 millimetres in both October and November (2022). The total rainfall of 1273 millimetres for the 12-month period was 21 per cent above the 30-year average.

The 2022-23 total inflow to Melbourne's four major harvesting storages (Thomson, Upper Yarra, Maroondah and O'Shannassy) of 881 billion litres was the highest at these sites since 1956, noting that the Thomson dam was not completed until 1984, and 83 per cent above the 482 billion litres average of the last 30 years. This was 92 per cent above average for the period since 1997, which is a DEECA scenario for future water resources planning to represent recent streamflow conditions. It was also 44 per cent above the long-term average of 613 billion litres for the pre-Millennium Drought period (1913-14 to 1996-97).

Intense and continuous rainfall during winter/spring over the Thomson Reservoir catchment resulted, in October 2022, in overflows from the Thomson Reservoir spillway for the first time in 26 years. Throughout this time, Melbourne Water carefully managed the high storage levels across the system via planned, safe and monitored water movement between our reservoirs. This is standard practice for Melbourne Water as we manage dam safety, water security and the environmental flows in our rivers.

Preparing for Melbourne's water future

Yan Yean to Bald Hill Pipeline

Construction is underway for a new 20-kilometre pipeline from the Yan Yean Water Treatment Plant to the Bald Hill, Kalkallo tank site, with $8.2 million in upgrades delivered this year from the $108.7 million project budget. The new pipeline has been designed and timed to meet growing water demands and improve supply reliability in the northern suburbs, while freeing up capacity to transfer more water to the west.

Construction has also progressed on the Yan Yean pumping station with civil and structural works underway. This year, $12.3 million in upgrades were delivered from the $26.1 million project budget. The pump station will enable bulk water transfer from the treatment plant to the Bald Hill reservoir tanks via the new Yan Yean to Bald Hill pipeline scheduled for completion in mid-2024.

Winneke UV Treatment Plant

To enhance the safety and quality of drinking water at the Winneke Water Treatment Plant, an additional investment of $24.8 million was made in 2022-23 to fund the construction of an advanced ultraviolet disinfection system, which serves as an extra microbial treatment barrier. Our total project budget is $58.9 million, with the upgrade expected to be completed in June 2024.

This system will allow additional resilience at the plant to continue to reliably deliver safe drinking water and meet our microbial health-based targets. These targets provide a quantitative measure of the microbial safety of drinking water.

Maroondah Tower

A preliminary business case was approved in 2022-23 to replace the Maroondah Tower and its associated aqueduct, with works scheduled to commence in 2025. The project will ensure timely replacement of the outlet tower and piping of the aqueduct to provide security of future water supply.

Water main renewals to enhance resilience

This year we began preliminary works to replace corroded sections of the water main between Dunrossil Drive, Kilsyth, to Yarraduct Place, Croydon South. The M54, M55 and M56 water mains in this area are 80 to 110 years old and reaching the end of their service life.

Other significant programs underway include the renewal of ageing water mains between Mitcham and Syndal as part of the M22 and M46 water main renewal program.

Our water network depends on these mains to transport and distribute water between the Olinda and Mitcham reservoirs. Replacement works are essential to ensure a safe and reliable water supply for customers and the wider community.

Figure 1: Monthly average rainfall at Melbourne's major harvesting reservoirs

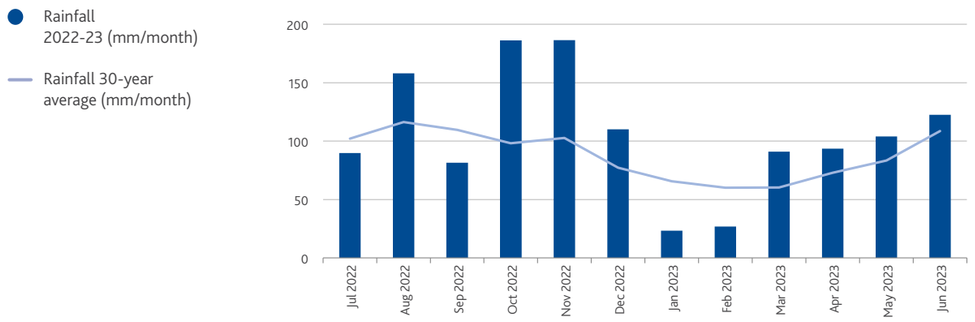


Figure 2: Monthly average inflow at Melbourne's major harvesting reservoirs

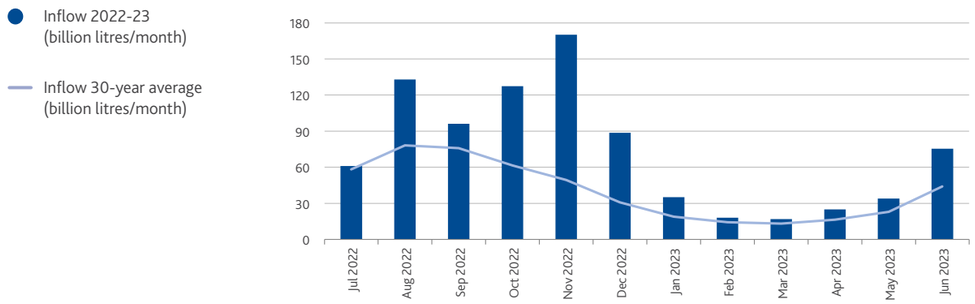


Figure 3: Long-term inflow to Melbourne's major harvesting storages (Thomson, Upper Yarra, Maroondah & O'Shannassy reservoirs)

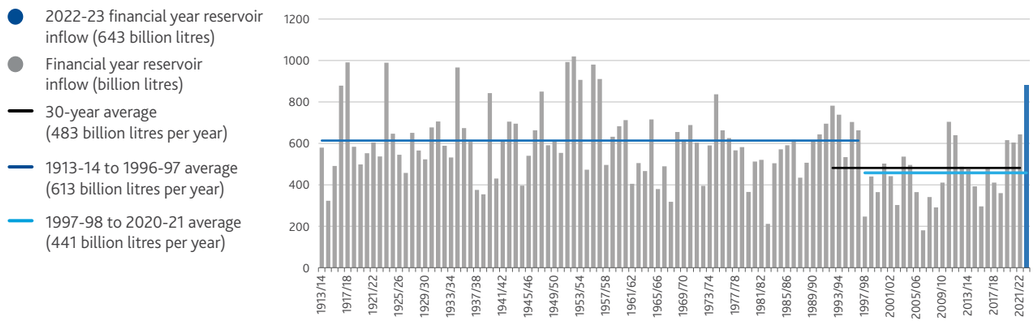


Figure 4: Melbourne water storage

Water from the Victorian Desalination Plant

For 2022-23, 15 billion litres were ordered from the Victorian Desalination Plant (VDP), with 4.2 billion litres delivered. Based on the high storage levels, projected weather patterns, including a third consecutive La Niña event, water demand and the resultant risk of potential overflows from storages at the time, the Victorian Government accepted Melbourne Water's advice to cease the remainder of the 2022-23 desalination order in September 2022.

Following above-average rainfall, and based on greater Melbourne's continuing high storage levels, projected weather patterns, and demand, the government announced in April 2023 that there was no requirement for a desalination order for the 2023-24 period.

Since 2017, 455 billion litres of water have been supplied from the VDP. Without regular desalination orders, Victoria would not be able to meet the growth in demand over the longer term. In a severe drought, storage levels can drop by 20 per cent in a year, which is why Victoria's water supply must be responsibly managed to avoid challenging water restrictions like those in place during the Millennium Drought.

The VDP provides a critical element of operational flexibility during significant events, such as storms or bushfires, when parts of the system may be taken offline to manage water quality and protect the delivery of essential services. Despite the wet year of 2022-23, changes in population growth and climate mean desalinated water is part of the long-term strategy to help prepare the water supply system for future dry periods and increased demand.

Supplying our customers

Melbourne Water supplied 453 billion litres of water in 2022-23, which is one per cent more than the previous year, to meet customer demand for water.

Water consumption

Despite the high rainfall, permanent water saving rules still apply across Victoria to ensure we use water wisely. Melbourne's residential water use in 2022-23 was 160[1] litres per person per day which is 10 litres more than the Victorian Government's new target of 150 litres.

This usage six litres less than last year's consumption and two litres less than the five-year average. Melburnians averaged use of 1.2 billion litres of water per day this year – equal to the last five-year average. This is despite growth in population over the five-year period. While water consumption has been generally increasing over the past 10 years, it is seven per cent lower than in the 1990s.

Figure 5: 2022-23 retail water consumption

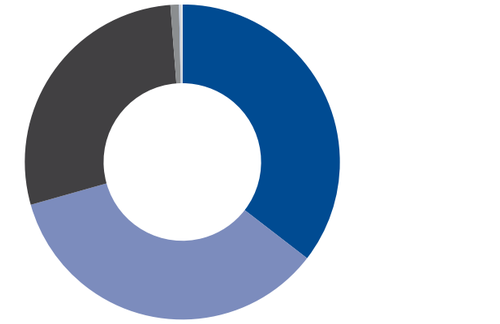
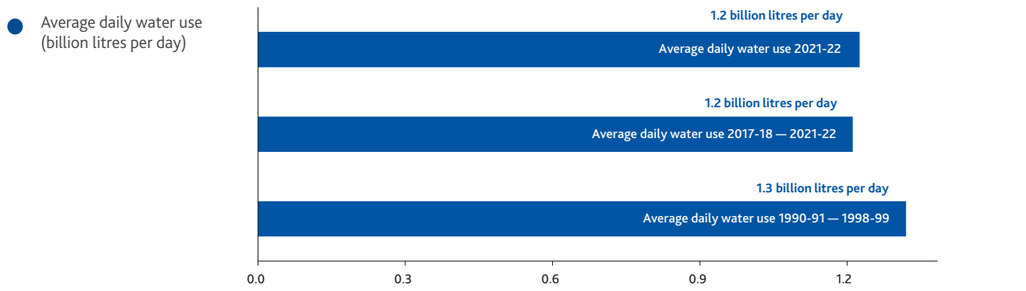
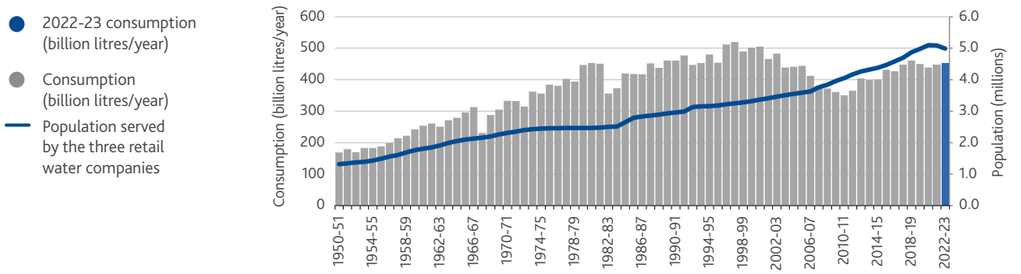


Figure 6: Average daily total water use for Melbourne including non-residential



[1] This figure is preliminary only and based on an estimate for Q4 (April–June 2023) as actuals were not yet available at the time of preparing this report. Customers are billed three months in arrears and therefore Q4 customer usage isn't known until early October. The proportional allocation of consumption between residential and non-residential customers following the coronavirus (COVID-19) pandemic continues to add some uncertainty to the Q4 estimates.

Figure 7: Long-term total consumption including non-residential by financial year



Driving water conservation

Melbourne Water, together with the urban water retail companies run water efficiency programs, including the recently refreshed Target 150, which encourages Melburnians to limit their water use to 150 litres per person per day. The new target links to the industry's long-term plan outlined in Water for Life and the CGRSWS.

The focus of the campaign is on educating the community about all aspects of the water cycle to improve water-saving habits.

In 2022-23, the campaign was put on hold due to high water storages and La Niña. However, the community awareness program over time has contributed to Melburnians using much less water per person than they did approximately 20 years ago:- down from 247 litres per person per day in 2000-01 to 159 litres per person per day in 2020-21.

Recycled water and reliability

Melbourne Water produces recycled water at the Western Treatment Plant (WTP) and the Eastern Treatment Plant (ETP), providing recycled water to customers for a range of non-drinking purposes.

Class A recycled water reliability was impacted at both ETP and WTP during the year. The impact on reliability at ETP was predominantly due to the significant wet weather event that occurred in October 2022. These events were managed in accordance with Environmental Protection Authority guidelines and consultation with customers.

An enhanced monitoring program has been established to support research and investigation on seasonal algae blooms that can impact recycled water production as part of our WTP Algae Management Plan. We continue to explore new opportunities to increase recycled water use at both the ETP and WTP to provide a sustainable water supply for greater Melbourne. Recycled water volumes used onsite and supplied to our customers in 2022-23 are shown in Table 1.

Table 1: Recycled water produced for 2022-23

	Volume (ML)
Western Treatment Plant	
Agricultural Supply (On-site MPH use)	9,093
Non - Agricultural Supply	87
Sub-Total	9,180
Supply to Southern Rural Water	
Werribee Irrigation District	3,126
Werribee Tourist Precinct	61
Sub-Total	3,187
Supply to City West Water	
Werribee Employment Precinct	0
MacKillop College	32
Water tankers / standpipes	0
WWDS (non-residential)	0
WWDS (residential/commissioning)	623
Sub-Total	655
Western Treatment Plant Total	**13,022**
Eastern Treatment Plant	
Onsite recycling	8,432
Supply to Water Infrastructure Group	
Eastern Irrigation Scheme	3,740
Supply to South East Water	
South Eastern Outfall	1,212
Eastern Treatment Plant Total	**13,384**
Total recycled	**26,406**
Treated wastewater available for recycling	384,241
Conservation flows at Western Treatment Plant	10,095
Total incl. conservation flow	**36,501**

Sewerage management

Ensuring the health and wellbeing of Melbourne's population and environment is dependent upon a safe and reliable sewerage system. Significant rainfall and increased flows experienced in the 2022-23 period impacted the way we managed discharges across our system.


Eastern Treatment Plant

Our Approach

The reliability of Melbourne's sewerage system significantly contributes to the city's liveability. Since its establishment in the 1890s, the system has expanded and adapted with Melbourne to ensure ongoing protection of public health, wellbeing and the environment.

Melbourne Water's system is distinguished by two prominent treatment plants: the Western Treatment Plant (WTP) in Werribee and the Eastern Treatment Plant (ETP) in Bangholme. These facilities, coupled with an extensive network of 400 kilometres of sewers and nine sewage pumping stations, efficiently transport substantial volumes of sewage across the city to be treated at these plants.

In our long-term investment planning, we are carefully considering external factors such as population growth and climate change to ensure the continuous evolution of our sewerage system.

The *Melbourne Sewerage Strategy* describes a 50-year transformation in our sewerage system from a mostly one-way process, which views sewage as a waste that must be collected, treated and discharged, to a circular process focused on the recovery, re-use and recycling of valuable resources like water, energy and nutrients, while ensuring Melbourne's sewerage service continues to protect public health and the environment.

In 2022-23, we invested $303.7 million to safely manage the sewage generated by a growing city. Significant investments included the continued construction of a $200 million project that will duplicate the Hobsons Bay Main Sewer Yarra River crossing as well as commencement of a $333 million treatment capacity upgrade at the WTP.

The 'wet year' and our treatment plants

In mid-October 2022, intense rainfall and subsequent flooding impacted upon Melbourne's sewerage system. The following outlines our approach and management of our treatment plants during and after this event, as well as our response over the 'wet year'.

Western Treatment Plant

The WTP received 604 megalitres per day on average in 2022-23, which was eight per cent higher than the average for 2021-22. The highest amount of flow was received between October to December 2022, which was 13 per cent higher compared to the same quarter last year.

As part of the Port Phillip Bay Environmental Management Plan (2017-2027) and Environmental Reference Standard (2021), the WTP has a three-year rolling average limit of 3,100 tonnes per annum of total nitrogen that can be discharged to Port Phillip Bay.

At 30 June 2023, Melbourne Water's three-year rolling average nitrogen discharge was recorded at 3,553 tonnes. This increase is attributable to higher nitrogen loads into the plant above current treatment capacity during extreme wet weather events, such as October 2022, and growth in the sewerage catchment.

Planned capital works are underway to support reducing nitrogen loads discharged from the WTP over the next decade. A new nutrient removal plant is currently under construction to remove nitrogen from the treatment process further. The new plant is expected to be operational by mid-2025, with benefits set to be seen by 2025-26. As the population grows and climate changes, further investment will be required to build additional resilience and continue managing increased nitrogen loads to the WTP.

Eastern Treatment Plant

The ETP received 449 megalitres per day flow on average in 2022-23, 11 per cent higher than throughout 2021-22.

The highest amount of flow was received in quarter two, 20 per cent higher compared to the same quarter last year.

Significant rainfall, in mid-October 2022, resulted in the plant being unable to treat sewage to its normal standard. The plant is designed to handle most regular rainfall events but unprecedented rainfall, with the added pressure of floodwaters entering our sewerage system, exceeded the capacity of our onsite treated wastewater storage basins. While the ETP has experienced bigger individual wet weather events, the sustained wet conditions over October and November resulted in plant inflows being the highest on record for 10 to 120 day running totals.

Planned relief measures included minor discharge of partially treated wastewater to Taylors Drain, Kannanook Creek, and Carrum Beach as well as discharge of secondary treated effluent at Boags Rocks. Discharges were closely monitored and carried out in accordance with Environmental Protection Authority (EPA) requirements.

Eastern Treatment Plant

Expanding our treatment system

Melbourne Water is making significant investments to upgrade the WTP to service a growing population and incorporate new innovations into our processes. Planning for the delivery of a major package of capital projects to increase and improve the primary treatment and solids treatment capacities at the WTP has commenced.

Responding to coastal erosion

The WTP is low lying, has a flat topography and its coastal embankments are partially built on reclaimed land with only a narrow beach buffer between the site and Port Phillip Bay. This means that the site is vulnerable to coastal hazards.

Climate change impacts and sea level rise are expected to exacerbate the risk from coastal hazards to the WTP's biodiversity and sewage treatment values, if no action is taken. These impacts also pose a significant challenge for the coastal management of the WTP.

Due to strong easterly winds – likely linked to the La Niña climate pattern – the WTP coastline has experienced rapid erosion over the past year. At one location, the rate of erosion was approximately 20 times the rate of historic shoreline recession.

The erosion led to an asset integrity risk at Lake Borrie which has been addressed by two rounds of embankment stabilisation works. The first one was completed in October 2022 and the second one is currently underway. In addition, a business case to proactively address coastal erosion risk at the remaining stretch of the Lake Borrie embankment has been approved.

To proactively address future erosion risks and enable long-term climate change adaptation, a Coastal Hazard Assessment for WTP is currently underway.

The assessment will be an integral part of the Western Treatment Plant Foreshore Adaptation Plan, developing adaptive pathways for sea level rise out to 2100.

We are working closely with a range of stakeholders and agencies across Port Phillip Bay to improve our understanding and management of coastal challenges at a regional scale. This includes joining the regional and strategic partnership proposed for the western shoreline of Port Phillip Bay.

384 BILLION LITRES

SEWAGE TREATED

Circular economy - biosolids

For the past six years, Melbourne Water has safely provided biosolids from the WTP for application to suitable broad-acre farmland in Victoria's west.

The biosolids are applied sustainably as a soil supplement and can contribute nutrients, carbon and trace elements that are often scarce in Australian soils.

With annual production estimated to be 41,000 dry tonnes, three previous biosolids land application programs (2019-2022) have achieved 100 per cent reuse.

The 2023 biosolids reuse program achieved 29,359 dry tonnes of biosolids reused on 44 paddocks over six farms.

The on-farm audit results of land application during 2018-2023 have complied with EPA Biosolids Land Application requirements.

Improving infrastructure to support Melbourne's growing population

Hobsons Bay Main Sewer Upgrade

Since February 2022, the project team has established two construction sites at Scienceworks and Westgate Park to deliver critical infrastructure works on the Hobsons Bay Main Sewer.

The Hobsons Bay Main Sewer is a critical part of Melbourne's sewer network, transferring around 30 per cent of Melbourne's wastewater to the WTP. The existing sewer was first constructed in the 1960s and requires rehabilitation to extend its service life.

Diaphragm walls and piling for shaft construction are now complete and major works are continuing.

Due to the volume of sewage carried by the Hobsons Bay Main Sewer, a second sewer will be built under the Yarra River and connected into the existing sewer located at Scienceworks. This will allow sewage flows to be diverted and rehabilitation works to be undertaken on the existing sewer.

Once completed in 2024, both sewers will operate together, building resilience into this critical part of our sewage transfer network.

These critical works form part of a broader Melbourne Water sewer program on a number of ageing sewers around the city, including works to upgrade the Hawthorn Main Sewer ($52 million total cost).

Flood resilience and drainage

Extreme flood events are expected to become more likely as our climate changes over the coming decades. At Melbourne Water, we have an opportunity now to enhance Melbourne's future resilience. This relies on having flood information that takes future projections into account, and ensuring this is readily available so authorities and communities can plan.

Walking tracks of Lizard Lounge

Our approach

As the region's floodplain manager, and under the *Water Act 1989*, we play a critical role in managing flood risk through:

- land use planning and establishment of criteria for building and renovations that minimises flooding risk and drives water-oriented urban design
- constructing, maintaining and upgrading drainage including flood management infrastructure and multifunctional assets
- the provision of flood information and education.

We also plan for and respond to flooding that may impact our waterways, drainage, water supply and sewerage treatment, as well as transfer systems and services.

The Victoria State Emergency Service (VICSES) is the designated control agency for flooding in Victoria. Melbourne Water contributes flood information to inform the development of Municipal Emergency Management Plans and warning services, particularly through managing flood warning hydrographic infrastructure.

Floods are a natural part of our landscape within the Port Phillip and Westernport regions. The impacts of climate change and continuing urban development means that it is highly likely that we will see more parts of Melbourne flood in the future. As a result, flooding that we would typically only see on rare occasions, is becoming more frequent and more severe.

At Melbourne Water, it is our role is to coordinate the development and delivery of the flood management strategy for Port Phillip and Westernport and drainage services in conjunction with local and state government agencies, emergency services, the insurance and private sector and the community.

During 2022-23, $14.3 million was allocated to renewing and enhancing our drainage and flood protection assets. In addition, $181.9 million was allocated to create new drainage and stormwater quality assets (such as wetlands) to support the development of new land.

Flood management strategy

The Flood Management Strategy for Port Phillip and Westernport 2021-2031 is a 10-year strategy that aims to enhance the flood resilience of the region. It builds on our strong history of flood management, and the previous 2015 strategy, to set a path within our current circumstances.

The annual average cost of flood damage in the Port Philip and Westernport region is estimated to be $735.5 million. This cost is forecast to increase significantly over the next 80 years due to the impacts of climate change and increasing urbanisation. The strategy's 35 partner organisations are continuing to work together to plan for, avoid and reduce flood risks while supporting emergency preparation and response.

Maribyrnong River Flood Review

On Friday 14 October 2022, significant flooding occurred within the urban catchment of the Maribyrnong River.

In response, Melbourne Water established an independent review to investigate the causes and contributors in the urban catchment, including:

- any impacts of the Flemington Racecourse Flood Wall on the extent and duration of the flood event
- any impact of prior works or activities in the urban catchment on flood levels and extent during the flood event
- any other matters that may have significantly contributed to the flood event.

The review is being undertaken by an independent panel led by former Federal and Victorian Supreme Court judge, The Honourable Tony Pagone AM.

From mid-January to mid-March, flood impacted residents, community members and stakeholders were invited to participate in a two-month consultation period. Six community sessions (four in person and two online) were attended by 114 community members and 51 impacted people shared their stories. A total of 63 written submissions were received and have been published online.

Melbourne Water looks forward to receiving the panel's report and the public release in November 2023. We are committed to continuing to work in partnership with the community, state government, local councils and emergency management services to create a flood resilient city.

Parliamentary inquiry

In February 2023, the Legislative Council Environment and Planning Committee was tasked with undertaking an inquiry into the 2022 Flood Event in Victoria.

The inquiry will look into the flood event as a whole and the areas affected and consider factors such as what caused or contributed to the flood event, emergency services, government policy, flood mitigation strategies, the Flemington Racecourse flood wall and the Victoria planning framework.

Melbourne Water contributed to the whole of Victorian Government submission. We will continue to work with the Department of Energy, Environment and Climate Action (DEECA) to support participation in the Parliamentary Inquiry.

Planning for the future

A new collaboration for greater Melbourne catchments flood warnings

Melbourne Water is collaborating with the Bureau of Meteorology and VICSES to improve the flood warning system for greater Melbourne catchments.

A cross-agency group will evaluate options and work together to streamline flood forecasts and warnings. The group will focus on bringing Greater Melbourne riverine catchments into line with the rest of Australia by transferring responsibility for riverine flood forecasts and warnings to the Bureau.

Melbourne Water will continue to provide flash flood intelligence for the urban settings to VICSES to enable streamlining of flash flood warnings into the future.

Fast-tracking new flood modelling

Working with our local government area partners, Melbourne Water is fast-tracking new flood modelling across Melbourne.

The modelling work, which commenced in 2021, will re-map the Port Phillip and Westernport catchments (both riverine and overland flow models) to incorporate climate change projections to 2100. Melbourne Water is seeking to complete this work by 2026 to assist planning decision-makers and the community to enhance the flood readiness of housing and other development that is built in the coming 70 years.

Flood mapping and investment

This year, we accelerated our flood mapping work to focus on six flood mapping projects with local councils across Whitehorse, Hobsons Bay, Brimbank, Casey, Stonnington and Mornington. These projects are essential to providing communities appropriate planning and development advice, supporting emergency planning and preparedness, as well as flood mitigation planning and design. The new model for the middle and lower regions of the Maribyrnong River, which will incorporate the latest information and climate change data, is expected to be ready in April 2024.

We are also using our flood mapping development framework to facilitate collaborative co-design and co-delivery of flood maps. This approach ensures that all stakeholders are actively involved in the process, promoting collaboration and shared responsibility in flood map development.

Our 2022-23 results are noted in Table 2.

Table 2: Percentage length of assets mapped for design flood magnitudes

	Total Length of MW Assets[1] (km)	% Length mapped for design flood magnitudes			
		5yr ARI	10yr ARI	20yr ARI	100yr ARI
Underground drains	1100	28%	29%	42%	55%
Natural waterways	6517	9%	10%	13%	71%
Channels	2032	N/A	N/A	N/A	83%
Total	12500	N/A	N/A	N/A	73%

[1] Excludes drainage scheme areas, forested areas and French Island.

Empowering our communities

Melbourne Water partners with the University of Melbourne to deliver a Community Engagement for Disaster Risk Reduction (CEDRR) program to empower communities to be more flood ready. This involves providing participants with information that can be used to make informed decisions and prepare for flood events. The program is delivered both online and face-to-face to residents living in flood prone areas.

We measure the program's effectiveness by assessing the changes in participants' awareness, perception of riskand intentions to mitigate flood risks following the engagement.

6703

ONLINE & IN-PERSON ENGAGEMENTS completed in 2022-23

This year, we found that 44 per cent of participants residing in flood-prone areas reported an increased awareness of flood risks, while 47 per cent acknowledged being reminded of their specific flood risk following the program. This indicates that 91 per cent of CEDRR participants can be considered as having a heightened awareness of their flood risk due to the program.

To further expand the program's reach, we have established partnerships with various local community organisations, including sports clubs, girl guides, surf life-saving associations, and 'friends of' groups. These collaborations give us an opportunity to sign up residents to participate in the CEDRR program, further enhancing community engagement and flood preparedness.

Melbourne Urban Stormwater Institutional Arrangements review

This year, the Melbourne Urban Stormwater Institutional Arrangements review has made significant progress, with a 60-hectare catchment delineation model recommended among review partners as the preferred rule to assign delivery, upgrade, ownership, and maintenance of public urban stormwater assets across the Port Phillip and Westernport region. Further review and collaboration with the government is necessary before final decisions are made.

The 60-hectare catchment delineation rule was revised in consultation with 36 councils in the Melbourne Water region from February to November 2022. The rule proposes that Melbourne Water be assigned assets that service catchments that are above 60 hectares, and councils be assigned to manage assets that service catchments below 60 hectares.

In select circumstances, an alternative ownership arrangement may be appropriate if mutually agreed between Melbourne Water and local government. Stormwater and flooding services are still being investigated with further work needed to determine the appropriate management approach.

Urban drainage sisualisation: HydroNET

This year, we released HydroNET to the business. HydroNET is a powerful tool that allows anyone to access meteorological data, rainfall and tide information from the Bureau of Meteorology, as well as real-time data from our rain gauges and hydrometric network through user-friendly dashboards.

One notable feature developed is a rainfall exceedance reporting tool, enabling us to calculate the return period of rainfall events in close to real-time. This tool empowers our staff to make informed operational decisions based on current and forecast weather conditions. Additionally, we have integrated cameras to visualise drainage grate assets, optimising our maintenance schedules.

HydroNET is particularly valuable for staff members who may not have access to specialised systems like SCADA, as it transforms our data into actionable information that supports operational decisionmaking, ultimately enhancing service outcomes for our customers.

We are also in the process of configuring alerts in HydroNET for intense rainfall forecasts, rainfall intensity, high water levels, and the operational status of our assets. Furthermore, we have secured an agreement with the City of Casey to provide them with a HydroNET licence, granting them access to data and cameras within their municipality. This data can be utilised across various areas of the council, aiding in flood planning, incident response, and future initiatives such as Integrated Water Management (IWM) and water sensitive city planning.

We are currently conducting demonstrations for other councils and water utilities as well. Looking ahead, we plan to expand HydroNET's capabilities by integrating soil moisture, wind speed and direction, temperature, and heat risk data, which can be valuable for fire management. Additionally, we aim to connect the alerts generated by the system to an Asset Capacity Alerting app, providing timely risk information to Melbourne Water, council, and State Emergency Services staff.

Land development: supporting a resilient and liveable Melbourne

More than 1100 hectares of residential development land in growth areas met Melbourne Water's requirements for planning compliance, meaning Melbourne Water supported the development industry to deliver more than 23,000 new homes in 2022-23. We provided written development advice to over 1400 landowners, developers, consultants, and community members who intend to build in flood affected areas and worked with local government to prepare for and amend existing flood hazard mapping and controls in planning schemes.

By determining over 8800 applications for statutory planning, subdivision and building applications, we assisted with the development of over 100,000 new homes, community facilities and places of work and provided advice which seeks to increase the flood resilience of these new places and spaces.

Melbourne Water delivers Development Services Schemes – a future infrastructure delivery mechanism for drainage, flood protection, stormwater quality treatment and waterway management – through Precinct Structure Plans. This year, we continued to use this service to provide water infrastructure planning across Melbourne's growth corridors for upcoming precincts such as Melton East, Devon Meadows, Casey Fields South and Croskell. We also provided input into stormwater and drainage planning for major Victorian Government infrastructure projects, including the Suburban Rail Loop, Metro Tunnel, Level Crossing Removal Projects, and Major Road Projects Victoria to ensure asset protection and achievement of mutually beneficial outcomes for the projects and community.

To get ready for the challenges of the future together with our partners, Melbourne Water is undergoing a transformation of the operating model of our Urban Planning and Development team, as well as seeking to grow our capacity by hiring additional urban planning and engineering experts in land development. More sophisticated flood overlays and Development Services Schemes are being embedded in planning scheme amendments which better consider the increased impacts of flooding and climate change to our urban environments and communities.

New Urban Planning and Development Strategic Collaboration Group

In late June 2023, Melbourne Water hosted a new industry forum, the Urban Planning and Development Strategic Collaboration Group. The purpose of this new group is to identify and overcome challenges faced by the urban planning and development sector. The group brings together many key players in this space; from industry bodies such as the Property Council of Australia and the Urban Development Industry of Australia, to government organisations, including the Department of Transport and Planning and the Victorian Planning Authority.

In the first session, the group explored a range of priority issues that could be best examined within the forums' scope of influence. This included facilitating improved strategic framework alignment and climate change readiness through new frameworks and reform, as well as better planning and building approvals across Melbourne's existing development system.

Church Street main drain renewal

In November 2022, Melbourne Water began a $3.5 million project to re-line a section of the Church Street stormwater drain in Hawthorn, ensuring the continued safe operation of the drain into the future.

The Church Street stormwater drain was initially constructed before 1900, with subsequent additions completed in the 1920s and 30s. Spanning a length of 1.3 kilometres, the drain begins at Barkers Road and discharges into the Hawthorn Main Drain. Recent assessment through CCTV footage revealed the need for an upgrade of the drain.

To carry out the necessary improvements, a new construction methodology called GeoKrete was employed. This trenchless approach involves the application of a geopolymer product onto the existing drain surface, effectively renewing it and extending its lifespan by another 50 years.

During the planning phase of the project, it was identified that dust emissions posed a significant risk in terms of community engagement. However, through collaborative efforts with our delivery partners, we mitigated this by encouraging modifications to their machinery to reduce dust emissions. This successful outcome has proven beneficial for our customers and community.

The project is scheduled for completion in early August 2023.

Waterway management

The health of Melbourne's waterways is central to the liveability of the region.


Woodlands Park

Our approach

Our waterways sustain a diversity of life, including birds, fish, frogs, platypus, macroinvertebrates and vegetation. They provide places for people to gather, exercise and relax and are important sites of cultural significance. They support our growth and prosperity as a city by providing drainage and flood mitigation. They also provide economic benefits by supplying water for agriculture, recreational fishing, commercial industries, and tourism opportunities.

Across our region, Melbourne Water is the waterway manager for over 25,000 kilometres of waterways, wetlands and estuaries and undertakes work to protect and improve conditions to support environmental and social values. This includes maintenance and improvement of vegetation and habitat along waterways as well as building and maintenance of fishways and more than 1000 stormwater treatment systems, including constructed wetlands.

We work together with the state and local governments, non-government organisations and community groups to enhance the environmental, social, cultural and economic value of our waterways and protect them from impacts including climate change and population growth. We also support our partners and individual landowners to deliver works through the provision of incentives and partnerships, support the planning process by offering referral advice for planning permits, and actively enforce compliance measures.

Our engagement with the community has highlighted just how much the people of greater Melbourne value waterways in supporting environmental health and their overall quality of life. This is why our continued efforts to deliver outcomes identified in the Healthy Waterways Strategy are so important.

The *Healthy Waterways Strategy* (HWS) is a shared strategy across Melbourne Water, state and local government, water corporations, Traditional Owners and land management councils, non-government organisations and the community. The strategy provides a shared regional and catchment-specific vision for the health of rivers, estuaries and wetlands in the Port Phillip and Westernport regions and contributes to delivery of the *Port Phillip and Westernport Regional Catchment Strategy* and *Victorian Waterway Management Strategy*.

In 2022-23, Melbourne Water invested $33.6 million to repair and protect our waterways from a variety of threats, including those posed by climate change and population growth. Of this, $6.4 million was spent on improving stormwater quality through renewing and revegetating wetlands (such as Police Road Wetland, Southern Road Wetland, Chirnside Park Wetland and Hallam Valley Wetland), and $27.2 million on improving waterway condition.

Driving evidence-based delivery of the *Healthy Waterways Strategy*

The Region-wide Leadership Group (RLG) has played a vital role in guiding the co-delivery of the HWS during the 2022-23 period. Chaired independently by Cheryl Batagol, the RLG consists of members from various organisations, including the Municipal Association Victoria, Parks Victoria, the Department of Energy, Environment and Climate Action (DEECA), the Environmental Protection Authority (EPA), and Melbourne Water. The group's focus areas encompass natural wetland protection, stormwater management, litter and pollution and the impact of the planning system on waterway health.

To safeguard natural wetlands, a cross-agency working group has been established to identify challenges, explore options, determine preferred solutions and implement agreed-upon actions. The collaborative Waterways Lab process was initiated to address waterway litter, leading to the development of a draft Litter Action Plan outlining coordinated efforts against littering.

The mid-term evaluation of the strategy began this year, with Melbourne Water's Waterways and Wetlands Research program supporting the evaluation. An independent review of research partnerships with the University of Melbourne and RMIT University was also commissioned for optimal value realisation.

Through the dedicated efforts of the RLG and collaboration among partner organisations, the co-delivery and implementation of the strategy have advanced, contributing to ongoing efforts to protect the health of waterways in the region.

Waterways research

This year, we continued to address key research areas, deliver communications activities and work collaboratively to achieve the Healthy Waterways Strategy performance objectives relating to waterways research.

Some notable initiatives included partnering with the University of Melbourne in the Melbourne Waterway Research-Practice Partnership to conduct research into the following:

- prioritisation tools for stream and wetland works
- revegetation program outcomes in a changing climate
- management of deer impacts on vegetation and water quality
- improved methods for monitoring waterway health using aquatic macroinvertebrates
- sediment reduction during urban construction
- performance assessment of stormwater treatment wetlands (in collaboration with RMIT University)
- significance of small headwater streams for downstream water quality and hydrology
- real-time monitoring and control of rainwater tanks
- stormwater wetlands
- urban lakes for multiple benefits.

We also collaborated with RMIT University in the Aquatic Pollution Prevention Partnership to research aquatic pollution management, including:

- identifying cost-effective solutions for industrial catchment pollutants
- managing emerging contaminants
- understanding the ecological impacts of sewage inputs in waterways
- assessing risks of contaminants to environmentally significant sites
- developing improved waterway health assessments
- identifying and tracking progress towards waterway litter management targets.

Work was also undertaken to explore enhanced methods for the propagation and planting of seagrass to restore critical habitats in Westernport.

We also continued collaborative research with Traditional Owners on billabong watering along the lower Birrarung (Yarra) River and establishing knowledge sharing protocols to guide future collaborative research endeavours.

By actively engaging in these research efforts, we strive to enhance our understanding and develop effective strategies to improve waterway health and sustainability.

Compliance and enforcement

To prioritise the management of our waterway health, Melbourne Water has enhanced our compliance and enforcement capacity. In alignment with the state government's commitment to a zero-tolerance approach towards water theft, we have implemented several initiatives to ensure compliance with water diverter obligations. These initiatives include:

- the appointment of two Authorised water officers
- the ability to issue penalty infringement notices for selected diversions offences resulting from the introduction of new regulations (Water (Infringement) Regulations 2020)
- A new partnership with Fines Victoria for the management of issued PINs (fines) which helps with the fine collection, reminder notices and enforcement of the fine if not complied with.

For further details on these actions please refer to Appendix D.

Partnerships along our waterways

This year, Melbourne Water has progressed catchment-scale collaborations to advance priority objectives outlined in the HWS. These partnerships involve various agencies with shared management responsibilities, working together with the community to enhance waterway values.

Lower Werribee Waterway Amenity Plan Collaboration

In the Lower Werribee Waterway Amenity Action Plan collaboration, significant progress has been made during 2022-23. Key actions undertaken include the creation of an interactive online River Guide, and a guidebook titled *'Meet Me by the River'*, which was launched in June 2023. Both aim to attract more visitors. Actions also included the construction of a stepped stone kayak launch, the widening of revegetated areas along the river, planning for interpretive signage, and the delivery of numerous community connection events and cultural assessments with Traditional Owners. These efforts aim to improve the environmental condition, social value, cultural amenity, accessibility and overall enjoyment of the lower Werribee area.

Lower Dandenong Creek Litter Collaboration

The Lower Dandenong Creek Litter Collaboration has conducted a comprehensive analysis of litter generation hotspots, accumulation areas, and litter travel patterns throughout the catchment.

Prioritised interventions have also been identified across infrastructure, maintenance, engagement and education. The draft Action Plan is undergoing endorsement by the partner organisations, and on-ground improvements are already underway, focusing on maintenance and new infrastructure opportunities. These collaborative efforts have enhanced operational relationships, improved maintenance practices, secured external funding for infrastructure improvements, and will ultimately contribute to a more appealing environment and reduced litter impact on waterways and Port Phillip Bay.

Reimagining Your Moonee Ponds Creek

The Reimagining Your Moonee Ponds Creek project is a collaborative effort led by Melbourne Water and the Chain of Ponds Collaboration Group, in partnership with local councils, government agencies and indigenous organisations.
The project aims to transform a 360-metre section of the concrete-lined Moonee Ponds Creek in Strathmore and Oak Park into a more naturalised waterway and community space.

Construction began in January 2023, with the removal of concrete panels. Community involvement in planting 43,000 native trees and shrubs commenced in May 2023. The project involves various components such as replacing concrete walls with rockwork, creating a meandering creek with a more natural appearance, constructing new shared paths and a bridge, and developing a pond and terracing near Oak Park Reserve.

Through these re-naturalisation efforts, the project aims to create a more appealing and interactive creek-side environment where people can connect with nature in a cooler and a more natural setting. The project also seeks to increase biodiversity and provide habitats for native species. Additionally, it aims to activate open spaces, improve active transport connections, and enhance community use and recreational opportunities in the area.

Stony Creek Rehabilitation Plan

The Stony Creek Rehabilitation Plan is a collaborative effort between Melbourne Water, Maribyrnong City Council, the EPA, the local community, and research partners. The plan outlines a series of actions to recover and actively rehabilitate Stony Creek and its surrounds, following the Tottenham factory fire in 2018. Focusing on a 5-kilometre section of the creek from Tottenham to Yarraville, the plan involves the improvement of litter management, water quality and pollution prevention, ensuring the long-term restoration and protection of Stony Creek.

The third annual report card for the plan was launched at a community event on 4 June 2022. Highlights of the report include the identification of litter hotspots along Stony Creek, efforts to understand and manage micro-pollutants and contaminants impacting the waterway through water quality assessments, the establishment of a water quality sensor network to enable prompt response to pollution incidents in industrial areas, and educational initiatives by the EPA to promote better practices among local businesses and prevent illegal waste stockpiling.

Stony Hill Creek

Yarra Riverkeeper Association and Maribyrnong River and Waterways Association

This year, Melbourne Water established new strategic partnerships with the Yarra Riverkeeper Association and the Maribyrnong River and Waterways Association, in addition to an existing partnership with the Werribee River Association.

These strategic partnerships aim to align the work of Melbourne Water with these prominent community-driven waterway associations, focusing on key objectives such as community engagement, revegetation, and stormwater management outlined in the Healthy Waterways Strategy.

These collaborations strengthen the connection between Melbourne Water and engaged community groups, raise the profile of all organisations involved, and build capacity among community members committed to waterway protection.

Improving the health of Birrarung's billabongs

Billabongs are iconic places in the Australian landscape and vital to Birrarung's (Yarra's) floodplain. Changes to river flows mean that billabongs often don't get the water they need to be healthy. Melbourne Water is working with Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation to determine water requirements, deliver water and seek long-term solutions for the billabongs to support cultural, ecological and liveability values.

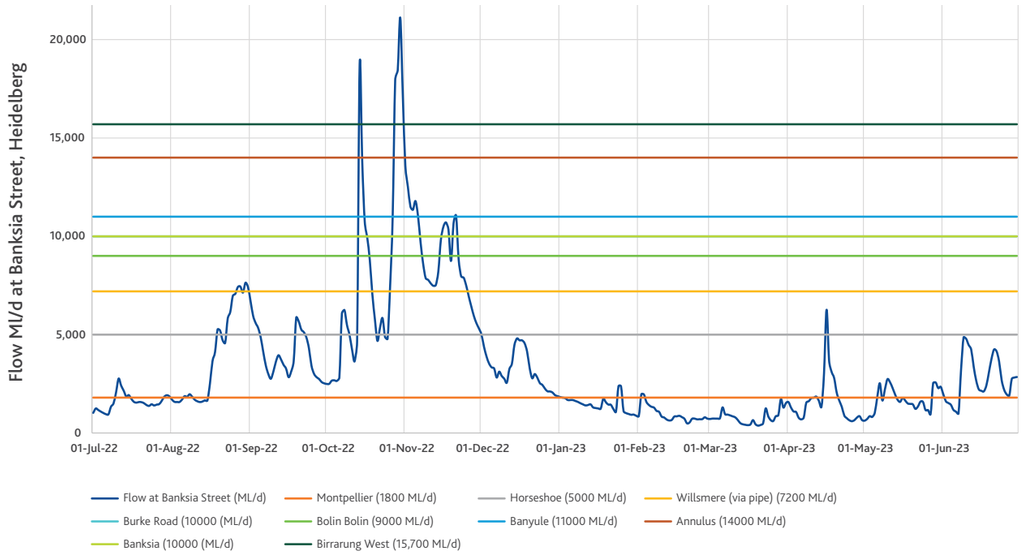
During August 2022, water was delivered to Annulus Billabong, close to Heidelberg, on behalf of the Victorian Environmental Water Holder. This was informed by on Country monitoring of the vegetation response undertaken by the University of Melbourne, Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation Narrap rangers and Melbourne Water.

Benefits to frogs, birds and vegetation were significant with positive outcomes observed and recorded during the watering. This information will inform the long-term watering solution for this site.

During August, the completed re-engagement works at Bolin Bolin billabong meant that the Birrarung flowed into the wetland – a great success for this important location. In October 2022, large flows in the Birrarung resulted in all billabongs becoming engaged and full. For some, this was the first time in over 10 years.

An on Country knowledge day was held with the Narrap Team, Melbourne Water and the University of Melbourne to discuss findings and explore opportunities for Traditional Owner lead research topics. Traditional Owner input resulted in 20 eels from Bolin Bolin billabong being tagged and tracked to help understand their movements and how to support their incredible life cycle.

Figure 8: Lower Yarra (Birrarung) Billabongs inundation 2022



Liveable Communities, Liveable Waterways

Melbourne Water's Liveable Communities, Liveable Waterways incentives program is a key avenue for partnering with our customers and the community to undertake various activities that enhance the health of our waterways and contribute to our vision of enhancing life and liveability.

Throughout the year, 877 organisations and private landholders made successful applications and were awarded $10.2 million in funding for 1032 projects. Our partnerships extended to community members, landowners, councils, public land managers, school and community groups, universities, research institutions and non-profit organisations. These projects focus on improving waterway frontage management by addressing weed control, revegetation, pest animal management, urban and rural stormwater runoff management, and water resource management enhancements.

Additionally, we also helped facilitate collaborative projects between neighbouring landholders to enhance efficiency and local stewardship of waterways on land not directly managed by Melbourne Water.

Yellingbo (Liwik Barring) Landscape Conservation Area partnership

The Liwik Barring Conservation Area encompasses approximately 3000 hectares of riparian public land and large reserves in the Yarra Valley and southern Dandenong Ranges. The conservation area provides improved water quality and habitat for critically endangered species and opens new areas up for recreation.

Melbourne Water works in collaboration with DEECA and Parks Victoria to undertake site assessments and fund agreed works in the area through the Liveable Communities, Liveable Waterways program. This program helps support the implementation of YLCA's 10-year conservation plan for the area and aligns with our Healthy Waterways Strategy.

Throughout the year, there were 19 applications for fencing, weed control and revegetation funded by the program, totalling $193,000.

Burndap Birrarung burndap umarkoo (Yarra Strategic Plan)

Burndap Birrarung burndap umarkoo 2022–2032 (Yarra Strategic Plan) puts the interests of the river and its lands at the heart of future land use planning and decision-making. It sets out a transformative shift for collaborative governance between government agencies and Traditional Owner corporations, ensuring the river and its lands are protected as one living and integrated natural entity.

Melbourne Water was appointed by the Minister for Water as the lead agency for implementation of the plan, which is required under the *Yarra River Protection (Wilip-gin Birrarung murron) Act 2017*. Melbourne Water is also one of fourteen public entities listed in the Act that are responsible for implementing the plan.

As lead agency we facilitate the Yarra Collaboration Committee, coordinate the implementation of the plan, track and measure progress, champion funding submissions, identify opportunities for collaboration, and facilitate improved partnerships with and resourcing of Traditional Owner corporations.

In February 2023, the Birrarung Council[2] annual report was tabled in parliament by the Minister for Water, Harriet Shing. This was an important event as it was the first report on the implementation of Burndap Birrarung burndap umarkoo.

Birrarung Council believe there has been a good start to implementation. Many actions are progressing, Traditional Owners central role is acknowledged, and preparatory work is being done to build collaboration. The Council believes that there is support for Burndap Birrarung burndap umarkoo and that commitment will continue to build.

During the past year, there have been two significant events to raise awareness of the plan and drive commitment for its implementation. The first in October 2022 at Federation Square was attended by 100 leaders from government agencies, Traditional Owners, industry and community groups, all with interest in protecting the river.

An Executive Forum was also held at Birrarung Park, Lower Templestowe on 16 June 2023. This was an opportunity for Melbourne Water's Managing Director to highlight our role as lead agency and partner in delivering Burndap Birrarung burndap umarkoo. This event highlighted the billabong restoration and revegetation works we are leading with our partners at Yarra Flats.

These works showcase the benefit of working together with Traditional Owners, government agencies, local councils, and the community to share knowledge, protect and enhance the Birrarung. Environmental watering of remnant billabongs is providing a more natural water regime, together with vegetation management to improve ecological, cultural and social values, whilst reducing stormwater pollution to the Birrarung and Port Phillip Bay. Plans are in place to replicate this work at other billabongs impacted by urban development.

Native plants sweeten the west

This year, Melbourne Water conducted a sugar trial at Kayes and Imms grassland in Laverton to reduce weed mass and promote native vegetation growth without the use of herbicide. The site is of biological significance with a large amount of remnant grasslands including the critically endangered Pimelea spinescens.

The sugar trial was successful in reducing soil nitrate levels and inhibiting weed growth by feeding soil microorganisms. Multiple plots were tested, with mowed areas showing more promising results, including increased bare ground, decreased weed species, and larger native plant coverage. While the experiment is ongoing, the sugar trial offers a potential alternative to herbicide use for conservation efforts in future.

[2] Birrarung Council is the independent voice of the river, established under the Yarra River Protection (Wilip-gin Birrarung murron) Act 2017. The ten council members appointed by the Minister for Water represent a broad cross section of skills and experience and includes Wurundjeri Woi-wurrung and Bunurong Elders.

DELIVERING VALUED SERVICES | WATERWAY MANAGEMENT

Delivering water for the environment

With wet conditions experienced across most of Melbourne Water's region during 2022-23, many environmental watering actions were met with unregulated flows and reservoir spills in the Yarra, Tarago, Maribyrnong and Werribee systems. The high inflows into reservoirs also meant that there was limited storage space for environmental water and allocation volumes were reduced in the Werribee and Yarra systems as a result. This is the first-time insufficient storage volume has led to a loss of environmental water since the entitlements were created. As conditions returned to normal over summer and autumn environmental water was used to deliver 18 environmental watering actions using 9.7 gigalitres of environmental water as shown in Table 3.

Table 3: Environmental water delivered for 2022-23

River	Volume delivered (ML)	Outcomes
Yarra *(Birrarung)*	7008	The Yarra River (Birrarung) has experienced wet conditions for much of the 2022-23 year resulting in achievement of many environmental watering actions with unregulated catchment inflows. This has included inundation of Yering Backswamp and the lower Yarra Billabongs. One spring high for reach one, one summer/autumn fresh (periodic release or flow of fresh water into a water body) during the summer and autumn seasons for reaches two and five, and one autumn high for reaches two and five have been delivered with water for the environment. The environmental water release for summer/autumn freshes and autumn high flow aimed to improve aquatic habitat and channel form, maintain bank vegetation and provide opportunities for fish movement. Water for the environment was also delivered to Yering Backswamp and Annulus Billabong on the lower Yarra floodplain to improve wetland vegetation and provide habitat for frogs and birds. All the billabongs in the lower Yarra (Birrarung) floodplain were engaged naturally.
Tarago and Bunyip rivers	151	Tarago Reservoir spilled all year (except two days in March 2023). As a result, the Entitlement remained at 3,000 megalitres for most of the year. Spills and unregulated catchment flows have helped to achieve most environmental water demands. One summer/autumn fresh was achieved utilising water for the environment. These releases help to enhance habitats, maintain vegetation communities and facilitate movement and spawning of various fish species including the endangered Australian Grayling.
Werribee *(Wirribi Yaluk)*	2248	Werribee River (Wirribi Yaluk) experienced wet conditions with unregulated catchment flows contributing to the achievement of low flow targets throughout the year. The lower Werribee also benefited from enhanced releases through Southern Rural Water's Bulk Entitlement - 15 megalitres per day from Melton Reservoir (May to Aug 2023) and 10 megalitres per day from Werribee Diversion Weir (January to June 2023). Water for the environment was delivered to Pyrites Creek (Reach 6) two spring/summer freshes and two spring/summer high flow events. These flows maintain channel form, habitat and vegetation, and allow for fish movement between pools. In the lower Werribee River, below Melton Reservoir (reach 8 and 9) and into the estuary, water for the environment was delivered to achieve five summer/autumn freshes, and one winter low flow event. Freshes and high flows improve habitat, maintain vegetation and support fish and frog populations. The winter low flow event was delivered to trigger the downstream migration of Tupong (a native fish species).
Maribyrnong *(Mirrangbamurn)*	321.9	321.9 megalitres of environmental water was secured through temporary trade of unused irrigation allocations. This water purchase was concluded in May 2023. A winter low flow event using water for the environment was actively delivered during June, targeting improved water quality and connectivity between in-stream habitats. Catchment rainfall and unregulated flows helped partially achieve winter/spring high flow and summer/autumn low flow targets. Water purchase timing and operational constraints limiting the maximum release from the reservoir meant full achievement of all targets was not possible, yet enhanced water quality and flow variability was recorded during the winter low flow release.

In 2022-23, as storage operator and delivery partner, Melbourne Water delivered 18,160 megalitres from Thomson Reservoir to the Thomson River as water for the environment. This was achieved in partnership with the West Gippsland Catchment Management Authority and on behalf of the Victorian Environmental Water Holder.

Managing the health of our rivers, creeks, wetlands and estuaries

In 2022-23, we contributed to the health of our waterways through direct maintenance works, capital works and incentive programs, including:

- 1180 sites where active weed control was completed to protect native vegetation and habitat quality for a wide range of native animals
- 521 sites where sections of waterway were replanted with native vegetation to improve streamside vegetation connectivity and habitat for platypus and other significant species
- 41 sites of biodiversity significance along waterways that were protected via active maintenance or capital improvement, including weed and pest animal control, and replanting
- one site where native fish passage was restored by removing in-stream barriers and renewing existing fishways
- one site where habitat for threatened species (southern toadlet) was improved
- over 54 sites where maintenance and monitoring of existing fishways has sustained native fish passage
- four sites where erosion in the bed or banks of waterways was controlled by installing or renewing grade control and bank protection structures
- 407 sites where erosion in the bed of waterways has been controlled by continued maintenance and monitoring of existing grade control structures
- 505 sites where grass cutting, vegetation maintenance and litter removal activities were completed to provide more amenable public open space
- removing over 15,215 cubic metres of silt and 1220 cubic metres of litter and debris from our drainage system, to protect the quality of water in Melbourne's waterways and prevent silt, litter and debris from entering waterways.

Balcombe Estuary

Waterway pollution response and recovery

Melbourne Water has implemented a new training program aimed at enhancing the knowledge and skills of its personnel regarding roles, responsibilities, capabilities, and safety management during pollution response. The training will be rolled out to our service delivery personnel in early 2024.

In addition, several service delivery staff members have undergone training as Level 2 Incident Controllers to improve their effectiveness in this role. In the 2022-23 period, Melbourne Water has collaborated with Fire Rescue Victoria and the EPA to optimise the exchange of pollution reports between agencies and provide clear information on agency roles, responsibilities and capabilities related to pollution response.

Catchment Management

Located on the traditional lands of the Wadawurrung, the Wurundjeri Woi-wurrung and the Bunurong Peoples, the Port Phillip and Westernport region is Victoria's most diverse and complex natural resource management region by virtue of its location, geography, land use and population.

WTP Bus Tour

Covering an area of almost 13,000 square kilometres, the region extends from the You Yangs Ranges and volcanic plains in the west, across the Macedon Ranges and the Kinglake Plateau in the north, through the Yarra Valley to the foothills of the Baw Baw Plateau in the east and south to the Bass Coast. The region also includes the bays of Port Phillip and Westernport, and Victoria's two largest islands, French and Phillip Islands.

Across five distinctly different major catchment systems, the Werribee, Maribyrnong, Yarra, Dandenong and Westernport catchments, the region's land and waterways form a complex network of interconnected and interdependent catchments, rivers, wetlands and estuaries, which flow to Port Phillip Bay and Westernport.

Our approach

As the region's Catchment Management Authority (CMA), Melbourne Water has specific roles, responsibilities, and obligations, enabling us to adopt a more comprehensive and integrated approach to catchment management. Melbourne Water's statutory functions, powers and responsibilities as a catchment management authority are set out in the *Catchment and Land Protection Act 1994*.

This involves considering and contributing to the integrated management of land, water, biodiversity, coasts, and marine environments throughout the region. It also involves extensive collaboration with diverse stakeholders and communities.

Our role provides unique opportunities to expand our planning, collaboration and implementation activities.

For the full Catchment Condition Report, see Appendix F.

Regional catchment strategy

The Minister for Water approved the latest version of the *Port Phillip and Westernport Regional Catchment Strategy* on behalf of the Victorian Government in March 2023. Over 120 organisations were consulted during its development.

Melbourne Water became the custodian of the strategy following the integration of the Port Phillip and Westernport Catchment Management Authority (PPWCMA) in 2022. This refreshed strategy builds upon 25 years of collaboration since its first iteration in 1995, and highlights the interconnectedness of land, water, and biodiversity in the region.

It emphasises the important roles and plans of various stakeholders, including councils, government agencies, Traditional Owners, NGOs, industry bodies, and community organisations, showcasing their contributions to the conservation efforts of the broader region.

Protecting Ramsar wetlands

The long-term vision is for the Ramsar wetlands in the Port Phillip and Westernport region to be healthy and resilient, with their ecological condition at high levels and threats contained at low levels. This vision includes creating diverse, healthy habitats and native animal populations and increasingly healthy populations of threatened species, including birds and mammals.

Western Treatment Plant Ramsar site

This year we delivered a comprehensive program of on-ground works including weed control, pest control and fence maintenance.

We delivered over 3,000 megalitres of environmental water to terrestrial margins and conservation ponds and continued adaptive management of habitat for waterbirds and frogs. We also improved our management of our native grasslands through vegetation mapping and fauna monitoring.

Edithvale—Seaford Ramsar Site

Similar to our Western Treatment Plant works, we completed an additional program of on-ground works including weed control, pest control and phragmites grooming, in line with the Ramsar Management Plan at our Edithvale-Seaford site.

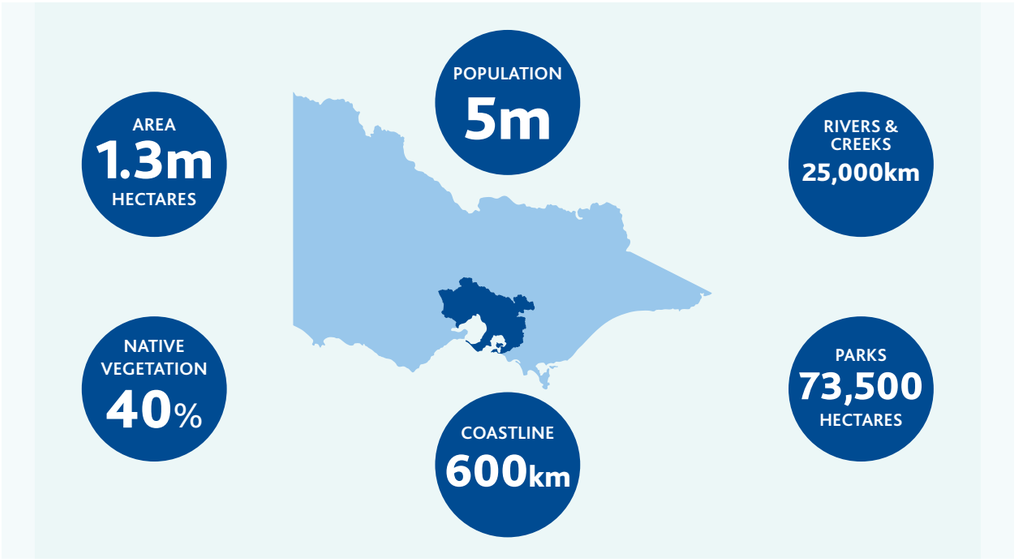
We also undertook a climate change cost-benefit analysis to better understand future management options for the wetlands under a changing climate and worked with Frankston City Council and the Department of Energy, Environment and Climate Action (DEECA) to progress several ecological based projects as part of the department's $5 million Suburban Parks Program at Seaford Wetlands.

Lastly, we continued working with RMIT University to undertake research into sediment and water quality at both Edithvale and Seaford. This research is improving our understanding of the water quality at the wetlands, and the tolerance of macroinvertebrates in the wetlands to pollution and sediment. Recent work has also started to focus on sources of wetland pollution.

Westernport, Port Phillip Bay and Bellarine Peninsula Ramsar sites

This year, investment from both the state and federal governments was prioritised to protect high-value ecological assets across the Port Phillip Bay (western shoreline) Bellarine Peninsula and Westernport Ramsar sites. This investment included:

- delivering over 3800 hectares of pest animal control, helping to reduce the impacts on critical wetland habitat, and reducing the predatory impacts of feral cats and foxes on waterbirds and shorebirds
- removal of over 2,100 hectares of habitat altering woody and non-woody invasive weed species, to support coastal saltmarsh vegetation restoration
- investigation and research into the habitat preferences of the Westernport Australian Fairy Tern colony.
- continuation of the Indigenous Ramsar Ranger partnership with the Bunurong Land Council, a role which works collaboratively with Melbourne Water and our stakeholder network to work on country to support the protection and enhancement of Ramsar sites across the region



Access the detailed Catchment Management Report in Appendix F.

- continued community engagement events aimed at raising awareness of the values and threats to the Port Phillip Bay (western shoreline) and Bellarine Peninsula Ramsar site. Hobsons Bay City Council coordinated successful events, including bike rides and kayak tours, along the coastline between Williamstown and Point Cook, which provides important habitat for waterbirds and shorebirds.

Grow West

Grow West is a long-term, collaborative environmental program working to rejuvenate degraded landscapes in the Upper Werribee Catchment and create vegetation connections between the You Yangs Regional Park, Brisbane Ranges National Park, Werribee Gorge State Park and Lerderderg State Park. Melbourne Water coordinates Grow West on behalf of its partners, which include local government, government agencies and community groups.

This year, Grow West has focused on landholder and community engagement with funding support through the state government's Iconic Urban Waterways fund. The Grow West program has delivered five engagement events, including a platypus habitat education session, an on-property dung beetle discovery workshop and a native tree planting event with grade five students from Bacchus Marsh Primary School.

Planning is also underway for the planting of 20,000 trees in the upper Werribee catchment from July 2023, to celebrate 20 impressive years of Grow West.

Yarra4Life

Established in 2006, Yarra4Life is a multi-agency collaborative program that brings together 14 agencies, non-government organisations and community groups to protect and enhance the unique environmental values of the Yarra Valley.

Melbourne Water is currently the host agency for the program. The Yarra4Life program area takes in roughly 82,000 ha of the Yarra Valley, on the eastern outskirts of Melbourne's fringe. It extends from the foothills of the Yarra Ranges in the north to the Cardinia Reservoir in the south and is flanked by the Dandenong Ranges to the west and Kurth Kiln Regional Park and Bunyip State Park to the east.

This year, Yarra4Life celebrated its 16th birthday with a tree planting day which saw over 3500 trees and shrubs planted at Yarra Valley Water's Upper Yarra Treatment Plant. The new plantings are part of a threatened species habitat masterplan for the site which will develop habitat for the critically endangered Lowland Leadbeater Possum and the Helmeted Honeyeater.

Throughout the year, Yarra4Life also delivered a seven-week sustainable agriculture course with landholders in the Yarra Valley area, a native bee forum and a series of frog census citizen science events to increase community knowledge of the area's natural values.

Protecting threatened wildlife at French Island

The Feral Cat Free French Island project continued its efforts throughout the year to create a wildlife safe haven on French Island, free from introduced predators. A collaboration between the Australian Government, Victorian Government, Zoos Victoria, Parks Victoria and Melbourne Water, the project has seen significant numbers of native wildlife returning to the island, with sightings of Long-Nosed Potoroos in daylight hours and doubling of records of ground nesting birds.

Living Links

Living Links is an urban nature project working to create a web of high quality, interconnected green spaces across Melbourne's south-eastern suburbs. By improving the connections between the many parks, reserves, open spaces, coasts, beaches, pathways, rivers, creeks and wetlands, the project aims to make this area a world-class urban ecosystem.

Throughout 2022-23, Living Links secured over $250,000 in funding to develop a series of Climate Ready Vegetation Research Plots in the Dandenong Creek area. The project is a collaboration between Federation University, Bunurong Land Council Aboriginal Corporation, City of Greater Dandenong and Melbourne Water and will deliver practical evidence on the fitness of different species sourced from different climate areas to survive in the Dandenong area over the long term.

Throughout the year, Living Links supported four different local biodiversity projects led by councils and, in April 2023, the project sponsored the successful Discover Dandenong Creek festival which saw over 500 locals celebrate the wildlife and wonders of this important urban ecosystem.

Deep Creek Biolink

The Deep Creek Biolink project engaged with over 50 landholders over 14 days of site visits in the Deep Creek catchment to identify the environmental values on properties, talk through ways to manage pest plants and animals, and encourage greater stewardship of the area's waterways. The project also funded and coordinated on-ground improvement works for priority properties in the area.

Australian Government Fisheries Habitat Restoration Program

Marine restoration

Shellfish reef habitats are facing significant threats worldwide. Among them, Port Phillip Bay serves as a crucial spawning and recruitment area for numerous fish species. To restore the functionally extinct shellfish reef ecosystems in the eastern part of Port Phillip Bay, Melbourne Water is leading the Port Phillip Bay Community Reef project with funding from the Federal Government. This endeavour involves collaboration with project partner OzFish and recreational fishers to deploy a limestone substrate, followed by recycled shells from oysters, scallops, and mussels discarded by local seafood restaurants on the Mornington Peninsula.

In 2021-22, extensive scientific research, monitoring and ground truthing were conducted to identify suitable sites for restoration. A location was selected approximately 300 metres from shore, at a depth of around eight metres, between Mount Eliza and Mornington.

During 2022-23, a team comprising community representatives, recreational fishers, OzFish, and Melbourne Water representatives, successfully deployed approximately one tonne of recycled shells at the restoration site. This marks the completion of the initial phase, and we aspire to continue this program in an ongoing effort to reinstate shellfish reefs across Port Phillip Bay.

Improving fisheries habitat

Following the integration of the PPWCMA in January 2022, Melbourne Water has been the delivery agency for the Reel Big Fish – Westernport project. Started in 2020, the three-year project aims to improve and increase the extent of suitable habitat for recreational fish species in Westernport while also expanding knowledge and building capacity with the recreational fishing community. Project partners are Bass Coast Landcare Network, OzFish, Parks Victoria, and Mornington Peninsula Shire.

In 2022-23, more than ten-thousand mangrove seedlings were planted at priority sites across Westernport, including Hastings, Queensferry, Tenby Point, and Phillip Island. The project was supported by the Bunurong Land Council, local residents, and the highly passionate recreational fishing community. In addition, over 250 recreational fishers have been engaged in events, workshops, and participated in on-ground restoration works, leading to the creation of two new recreational fishing groups.

By the end of the project, mangrove extent is anticipated to increase by three per cent (50 hecares) as a result of restoration activities.

Landcare support

There are hundreds of community groups in the Port Phillip and Westernport region that are active and influential in the protection and enhancement of natural resources. These include Landcare groups, Friends groups and committees of management.

Melbourne Water has continued the PPWCMA's longstanding strategic support for the Landcare movement in the region, providing Landcare governance, community capacity building and grants provision. This is helping to maintain a strong, active, capable and well-connected Landcare movement, playing a valuable role in natural resource management. In 2022-23, $485,750 was provided for 28 project grants and 71 support grants in the Port Phillip and Westernport region.

Regional Landcare coordination also saw the development of a two-day Landcare Facilitator training event in conjunction with East Gippsland and West Gippsland catchment management authority regions and supported the first 'Caring for Landcarers' statewide Landcare Facilitator Mentoring Program.

Sustainable agriculture and land management

Melbourne Water is committed to supporting sustainable agriculture and undertaking land management through projects funded by the Victorian and Australian governments.

Through our Regional Agriculture Landcare Facilitator, we have engaged with and informed farmers, community groups and agricultural industries about emerging ideas, climate change activities, on-farm innovations and best practices and relevant new government policy to help improve the sustainability, productivity and profitability of agriculture in this region.

The Smart Farming for Westernport project delivered by Westernport Catchment Landcare Network, worked with farmers to increase awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation in the catchment.

The Regional Agriculture Landcare Facilitator and Smart Farming for Westernport projects are supported by Melbourne Water through funding from the Australian Government's National Landcare Program.

Integrated pest management trial

This year Melbourne Water carried out initial monitoring of an integrated pest management approach at a trial site in Bayles, in Melbourne's southeast. This type of approach is widely practised in the horticulture industry but is not commonly used on pastures.

Often, issues like reduced pasture growth and damage are misdiagnosed, leading to the excessive use of insecticides to manage pest pressure. However, a holistic pest management approach can create resilient pastures that are less prone to damage.

Initial monitoring efforts throughout the year have demonstrated the effectiveness of this holistic approach in reducing invertebrate pest pressure. Next year, we will conduct feed tests on pastures with multiple species and continue monitoring pest pressure. Additionally, we will assess the benefits of functional biodiversity in providing habitats for beneficial invertebrates and birds.

DELIVERING VALUED SERVICES | CATCHMENT MANAGEMENT

Summary of trends and key challenges

Theme	Trend 2022-23	Trend Last five years	Condition	Summary
Water (for the environment)	Concerned	Concerned	Poor	Water for the environment is assessed as poor and the trend is of concern. Our reliance on rivers and dams in the Port Phillip and Westernport region to provide most of our water supplies has come at a cost to the environment and to Traditional Owners, and has also affected recreational uses of waterways. Long-term water availability for the environment and river health is declining. Significant additional volumes of environmental water are required to avoid irreversible declines in river health, ensure the survival of native species and the health of water ecosystems (Port Phillip and Westernport RCS, 2023). The Central and Gippsland Regional Sustainable Water Strategy (CGRSWS), released by DEECA in 2022, aims to improve water efficiency and use of manufactured water by returning river water to Traditional Owners and the environment. The targets set in the Healthy Waterways Strategy are supported by the CGRSWS, which aims to return a total of 31.3 GL to rivers across the region by 2032 (CGRWS, 2022).
Water (wetlands extent)	Concerned	Concerned	Poor	Wetland extent is considered poor, and the trend is of concern. Many of the region's wetlands have been modified for urban settlement and agriculture. Similarly, wetlands have been drained and modified to improve access, land availability, flooding control and amenity. Many inner Melbourne and coastal suburbs have been built on 'reclaimed' wetlands, and encroaching urban development continues to pose a threat to ephemeral wetlands (Port Phillip and Westernport RCS, 2023). Melbourne Water continues to amplify efforts to ensure sufficient protections are in place for natural wetlands, including strengthening urban planning and policy processes, and natural wetland information. This year, progress was made in a research collaboration between Melbourne Water, Melbourne University and Deakin Universities to develop wetland habitat suitability models to improve our understanding of how best to support habitat for frogs and wetland birds. Protection of seasonal herbaceous wetlands features as an action in the RCS's Natural Resource Management Strategy Action Plan (in development) and considerable progress has been made to develop a natural wetland protection framework and tool (Healthy Waterways Strategy, 2023).
Water (wetlands vegetation)	Concerned	Concerned	Poor	The condition of wetland vegetation is currently considered poor (low) within the Werribee, Maribyrnong, Yarra and Dandenong catchments. Wetland vegetation is considered moderate within the Westernport catchment. The trend is unknown. Implementing programs to improve wetland buffers, vegetation condition and water regime is predicted to improve the vegetation value scores in the region (Healthy Waterways Strategy, 2023).
Land (soil health)	Neutral	Neutral	Good	The condition of soil health in the region is good and the trend is neutral. The condition and trends of soil health using parameters such as soil acidity (pH), phosphorous and nitrogen levels, soil salinity, soil compaction and microbial health have not been systematically recorded and mapped at landscape level. As a result, the percentage of exposed soil is used as a proxy for broad soil health and vulnerability assessment. Data has been collected and mapped nationally through the Australian National University[3]. The data shows the proportion of exposed soil across the region over the past 20 years has been steady between 10 and 15 per cent. This is relatively low when compared nationally (Port Phillip and Western Port RCS, 2023).

[3] https://www.wenfo.org/aer/

Theme	Trend 2022-23	Trend Last five years	Condition	Summary
Biodiversity (native vegetation)	Concerned	Concerned	Poor	The condition of native vegetation in the region is poor, and the trend is of concern. Before European settlement, approximately 1.28 million hectares was covered by diverse vegetation such as rainforest, woodlands, grasslands, heaths and marshes. Today, due to historical pressures such as land clearing and urban encroachment, an estimated 541,812 hectares of native vegetation remains (around 42 per cent of the region). A number of the ecological vegetation classes have been severely depleted in this region, including Plains Grassland, Plains Grassy Woodland and Box Ironbark Forest (Port Phillip and Westernport RCS, 2023).
Biodiversity (native animals)	Concerned	Concerned	Poor	The condition of native animals is poor, and the trend is of concern. Over the past 200 years, this region was home to an estimated 627 species of native fish, amphibians, reptiles, birds and mammals, and many smaller animal species such as insects. However, the diversity of native animal species has declined due to habitat loss, pest predation and other factors, as indicated by an analysis of animal sighting data[4] that calculated the probability that each species of native fish, amphibians, reptiles, birds and mammals was persisting in the Local Areas of this region at the end of 2016. In addition, a review of Victoria's threatened species list, completed by DEECA in 2021, found that an estimated 159 species of native animals known to occur in this region since 1980 are listed as threatened (Port Phillip and Westernport RCS, 2023). Melbourne Water is renewing its Biodiversity Conservation Action Plan (BCAP) to embed biodiversity conservation. The renewed plan will also expand on prioritising biodiversity assets and values within the National Resource Management Action Plan recently developed for the Federal Government. The BCAP will be important for Melbourne Water to support prudent and efficient investment decisions, enabling investment for the best possible biodiversity outcomes for the Port Phillip and Westernport Region and community.
Community	Unknown	Positive	Good	The community condition is good, and the trend is positive. Communities across the Port Phillip and Westernport region provide an immense pool of knowledge, skills, services and funds that play a vital role in achieving a better environment for the region. At the end of 2020-21, there were 85 Landcare groups, 13 Landcare networks and one council-hosted natural resource management network in the region. Approximately 500 other community environmental groups are active in the region, such as Friends of, Coastcare and Committees of Management, and many part-Landcare networks. These groups significantly benefit local areas and communities and collectively contribute substantially to improving environmental outcomes. In the 2021-22 Victorian Landcare Group Health Survey, 94 groups in the region reported 85,329 volunteer hours, equating to a value of $3.53 million in economic contribution to environmental volunteering (based on a value of $41.72 an hour). The annual group health survey is conducted with the Victorian Landcare Grants to check the attitude of environmental volunteering groups. They describe their condition as trailblazer, rolling along, moving forward, struggling along or just hanging on. Melbourne Water assigns values of 5, 4, 3, 2 and 1 respectively to these descriptions. Despite the disruption during the pandemic, community environmental groups report a positive outlook. The average score in the 2021-22 Landcare Group Health Survey was 3.6 out of 5, which is among the higher average scores over the life of the survey. The 94 surveyed groups reported a membership of 11,830, an average of 126 per group – of these 2004 were new members (Landcare Group Health Survey, 2022).
Marine and coast (coastal vegetation)	Unknown	Unknown	Unknown	The condition of the coastal vegetation has been assessed as unknown, and the trend is unknown. The current environmental condition of the region's coasts is variable. Some areas retain high environmental values, while others have been heavily modified by urban development, coastal settlement and recreational use. In developing the Port Phillip and Western Port RCS, the region's coast has been divided into 11 zones delineated by significant changes in coastal characteristics and/or environmental values and where it is sensible to attach tailored environmental targets. Increased and ongoing vegetation surveys of these zones are required to determine trends and conditions (Port Phillip and Western Port RCS, 2023).
Marine and coast (water quality)	Positive	Positive	Good	Water quality has been assessed as good, and the trend is positive. The Environmental Protection Authority (EPA) has six monitoring locations in Port Phillip Bay. Conditions in Port Phillip Bay have remained relatively consistent since 2002, with overall water quality fluctuating between good to very good. Riverine inputs, particularly nutrients such as nitrogen and phosphorus, highly influence water quality in the northern part of the bay. However, mixing with oceanic waters from Bass Strait and the natural recycling of nutrients in the sediments maintain good water quality. The EPA has two monitoring locations in Western Port. While rainfall can temporarily decrease water quality, conditions in Western Port have generally remained consistent since 2000. The small catchment inflow volumes and mixing with Bass Strait help to maintain good water quality in Western Port (EPA Victoria Annual Report Card, 2022).
Integrated Catchment Management	Positive	Positive	Good	Partnerships has been assessed as good and the trend is neutral. In 2022-23, 22 formal partnerships were established or maintained between organisations and individuals under Melbourne Water CMA initiatives through state and federal government funded programs.

[43] https://www.ppwcma.vic.gov.au/wp-content/uploads/sites/6/2021/06/POP-analysis-for-PPW-region-up-to-2016-Final-report-March-2019.pdf

Maribyrnong River

Delivering for liveability

We are in the decade that matters, when the actions we take now will define our future for generations to come.

At Melbourne Water, we consider that liveability reflects the wellbeing of a community and the many characteristics that make a city a place where people want to live, now and into the future.

Our services, and the partnerships we actively build as part of what we do, are essential in enhancing the liveability of Melbourne and the broader region.

Resilient cities and towns

Melbourne Water has a significant role to play in collaboration with its partners to ensure that greater Melbourne continues to remain resilient and liveable.

Our approach

As a custodian of significant land and water assets, we are uniquely placed to lead in water-oriented design for a water resilient future and transform and reimagine activation of under-utilised sites for multiple community benefits.

However, the combined pressures of ongoing population growth and climate change affect the entire water cycle. These impacts range from an increase in demand for water to generating more stormwater in the urban environment, as well as a reduction in the amount of water captured by our water supply catchments.

To meet these challenges, we need to work together with industry partners to make smart investments and future-focused decisions and identify the solutions that deliver the best long-term value to the community. Melbourne's long-term resilience and water security depends on Integrated Water Management (IWM) practices. IWM is the concept that all parts of the water cycle are connected, from water supply to sewage management, wastewater treatment, flooding and stormwater capture.

By adopting an integrated approach when planning and delivering these services, we can achieve improved value for the community and better outcomes for the environment over the long term. *The Greater Melbourne Urban Water and System Strategy, Melbourne Sewerage Strategy, Flood Management Strategy – Port Phillip and Westernport 2021–2031* and *Healthy Waterways Strategy* each take an integrated approach to considering the water cycle, particularly in how we respond to future growth and climate change.

Sunbury Stormwater Harvesting Scheme

We are working with Greater Western Water and the Sunbury community to plan for future water management in this growing region.

The Sunbury Stormwater Harvesting Scheme is a flagship regional-scale stormwater harvesting scheme. It has scope to prevent 3.8 billion litres of excess stormwater annually entering the local waterways of Emu and Jacksons Creek, helping to maintain their environmental health.

Since 2018, we have been working with the Sunbury community to develop the scheme. The Sunbury region is largely reliant on drinking water supplies from outside the region. With limited harvest from local water catchments, reduced rainfall and a population that is expected to more than double in the next 20 years, innovative solutions are required to limit cost and environmental impacts.

Melbourne Water and Greater Western Water will use the community panel's recommendations and broader community feedback to develop a detailed IWM plan for the region, scheduled for completion in 2024.

Integrated Water Management forums

Melbourne Water has continued to be a key collaborator and partner in the Department of Energy, Environment and Climate Action (DEECA) led IWM forums during 2022-23. Melbourne Water has participated in one forum meeting, 11 working group meetings and six Catchment Scale IWM Plan working group meetings.

Following the endorsement of the five Metropolitan Melbourne Catchment Scale IWM plans that include targets linked to seven strategic outcomes, Melbourne Water and Forum partners have contributed to identifying a suite of key actions that will deliver on each of these strategic outcomes. These actions include structural and non-structural projects such as the Werribee System Reconfiguration and the Upper Merri Creek Sub Catchment plan and form the basis of developing Catchment Scale IWM Action Plans.

Key actions that provide benefit to the community and Traditional Owners, align with funding opportunities, have been identified as regionally significant and meet the agreed strategic outcomes, will be prioritised to ensure that each catchment action plan can be successfully implemented.

All IWM Forum partners will continue to work together to identify on-ground projects and initiatives that will deliver the strategic outcomes at the catchment scale.

Facilitating integrated water management for urban development

Melbourne Water has been instrumental in fostering collaboration among stakeholders to address IWM challenges in new master plans for local areas as well as embedding IWM principles into the planning process.

By actively engaging with the Victorian Planning Authority, retail water companies and local councils, progress has been made, with a great example being the Orana Estate Development in Clyde North.

Working in partnership with Casey City Council and a local developer, the site will include a stormwater harvesting system that will irrigate 17 local open spaces, while enhancing flood protection and catchment management.

Melbourne Water has also been actively involved in several strategic projects that seek to enable delivery of IWM outcomes through the urban planning process. This work included providing input into Greater Western Water's project to document IWM lessons learnt from the Aviators Field Precinct Structure Plan (PSP) experience, which involved developing an IWM plan well in advance of the PSP process, and DEECA's state-wide project to develop an IWM Planning Framework and Guidelines.

Werribee system reconfiguration

The Central and Gippsland Region Sustainable Water Strategy proposes that, by 2023, the Victorian Government will develop a business case to reconfigure the Werribee water supply system to provide more climate-resilient water sources for non-drinking purposes and make better use of all sources of water in the local system.

Melbourne Water is a project partner for the business case development, along with Greater Western Water, Southern Rural Water and DEECA. As the driest catchment in southern Victoria, options to reconfigure the Werribee system will prioritise affordable and cost-effective water supplies for long term availability, healthier waterways by returning more water to the environment, returned river water entitlements for Traditional Owners and greater use of recycled water.

Clearwater

Clearwater, a leading capacity building program, is recognised for its customer-driven approach to equipping the water industry with skills, knowledge, and networks to implement IWM practices. Melbourne Water co-funds Clearwater alongside DEECA.

In the 2022-23 period, Clearwater provided both virtual and face-to-face programs to cater to customer preferences. Additionally, Clearwater conducted customised in-house training events for two local councils and organised a site-based industry permeable pavement tour in collaboration with the City of Yarra.

Notably, Clearwater established a partnership with the Institute of Public Works Engineering Australasia to deliver a new, foundational-level, stormwater training package, fostering collaboration among public sector professionals such as engineers, technical officers, and works supervisors to enhance stormwater outcomes for communities.

In collaboration with DEECA, Clearwater delivered three training sessions to assist IWM professionals to further understand Victoria's stormwater planning requirements outlined in the Victoria Planning Provisions.

Research partnerships

Melbourne Water has made a significant contribution of $150,000 to support Water Sensitive Cities Australia (WSCA) this year, actively advocating for the adoption of water-sensitive practices throughout our industry.

Melbourne Water has also taken a leading role in implementing and advancing research-based tools, guidelines, and case studies developed by WSCA. This included working on the revision and expansion of the Investment Framework for Economics of Water Sensitive Cities value tool and training in Benefit Costs Analysis.

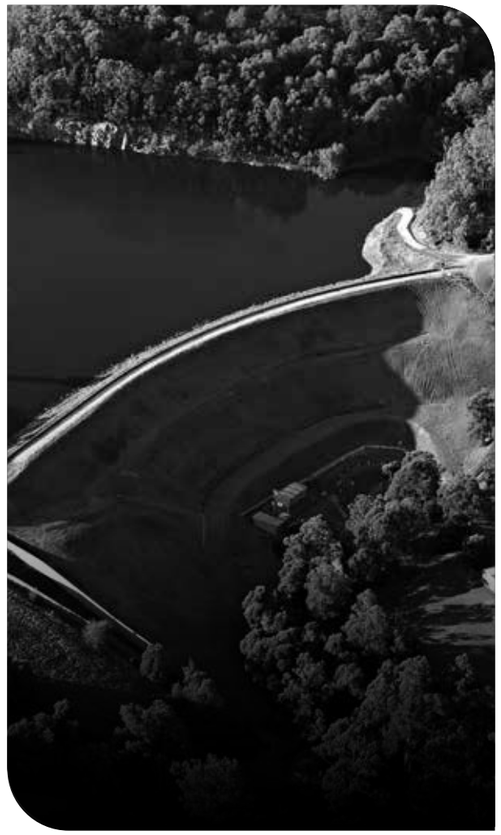
In addition to prioritising benefit valuation, Melbourne Water is actively involved in both national and international initiatives, including the WSCA project on asset lifecycle costs. This project aims to facilitate better comparisons between environmentally friendly 'green' investments and conventional 'grey' investments. Notably, Melbourne Water, along with WSCA and the Water Services Association of Australia, hosted a prestigious delegation from the World Bank in February 2023. The delegation had the opportunity to explore Melbourne Water's Western Treatment Plant through a technical tour and attended a workshop for senior officials focused on water sector policy, strategy, regulation and pricing.

Recognising recreational values

The water supply catchments and reservoirs around greater Melbourne are state significant assets to the Victorian community. In 2018, the Catchment Management Optimisation Program was initiated to inform how Melbourne Water will approach adhering to water quality requirements while also meeting the Victorian Government's expectations to increase access and recreation to some catchments under Water for Victoria.

Melbourne Water has worked with DEECA and other partners to explore opportunities for recreation in water supply catchments, including options for land activation along waterways, pipe tracks and more recently, water storages.

In 2022-23, Melbourne Water timed planned environmental water releases in summer for the Yarra (Birrarung) and Tarago rivers over long weekends to support canoeing, fishing and camping along the waterways.



We also evaluate our options for managing waterways and land with both environmental outcomes and social values in mind. We have implemented several small-scale projects and programs and engaged with our communities to evaluate their perceptions and preferences around recreation in catchment areas.

Tarago Reservoir

In partnership with DEECA, the Victorian Fisheries Authority and Better Boating Victoria, Melbourne Water prepared a prospectus to help promote and secure funding for a new on-water public recreation site at Tarago Reservoir. The prospectus included potential opportunities to enable recreational fishing and non-petrol boating, and support new walking trails and community facilities.

In total, $12.4 million was secured in the May 2023 State Budget for detailed design and delivery works required to implement the first stage.

Melbourne Water is committed to providing high-quality drinking water and therefore, all treatment upgrades will be completed before any recreational activities commence.

Revitalising Yan Yean Reservoir

Yan Yean Reservoir Park is a valuable public recreation space and popular location for walking and picnics. As part of Melbourne Water's vision to enhance life and liveability, we are exploring ways Yan Yean Reservoir can offer enhanced recreational and open space opportunities for the community.

Following strong engagement with residents and locals in 2022, Melbourne Water has been engaging with a wider range of community sectors, including multicultural groups, local youths, and people with different abilities to further understand how Yan Yean can provide benefits to everyone in our community.

We have also been discussing future planning for the site with our partners: Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation, Parks Victoria and City of Whittlesea. These discussions are ongoing.

Reimagining Your Creek

Reimagining Your Creek is a collaborative program that revitalises concrete channels into inviting natural spaces for community enjoyment, resulting in enhanced liveability and environmental benefits. This initiative holds particular significance for suburbs where opportunities for exercise, recreation and relaxation in natural or open spaces are limited.

Reimagining Your Creek adopts a co-design approach that actively involves local communities, leveraging their knowledge, suggestions and values to optimise liveability outcomes. These projects are delivered in collaboration with DEECA, ensuring alignment with IWM policies. Additionally, we work in close partnership with Traditional Owners, local government, and communities throughout the design, planning and implementation stages of the projects.

Blind Creek

In January 2023, construction commenced on Blind Creek in Wantirna South. The project will naturalise 1.7 kilometres of underground drain, create three new wetlands, create 6.3 kilometres of new shared pathways for community recreation and access along the creek, provide 677,000 plants for improved biodiversity outcomes and 1700 trees for improved shade and cooling, and develop community infrastructure assets such as viewing platforms, a pedestrian bridge, steppingstone crossings and seating.

Moonee Ponds Creek

Construction has begun on Moonee Ponds Creek to convert a 360-metre section of the concrete-lined channel into a community space that is more natural and enjoyable. This transformation involves the planting of 43,000 native trees and shrubs, the establishment of new shared paths and a bridge, and the creation of a pond and terracing near Oak Park Reserve.

By re-naturalising the area, the creek-side environment will become more attractive, providing an opportunity for people to engage with nature in a cooler and healthier setting. Furthermore, this initiative will contribute to improved water quality and waterway health by regulating water flow, enhancing biodiversity and native species habitat, and activating open spaces while improving connections for active transportation. These efforts aim to enhance community connection and recreation in the area.

Tarralla Creek

Croydon's Tarralla Creek has been successfully transformed as part of the Reimagining Your Creek program. Led by GHD Design and in collaboration with the City of Maroondah as well as local stakeholders and the community, the project won the Infrastructure category at the 2023 Victorian Australian Institute of Landscape Architects Awards.

The project's main focus was to reimagine an underground stormwater system into an ecologically sustainable series of cascades, pools, and riffles, along with incorporating treatment wetlands and sediment basins. This shift in approach went beyond merely managing floods and prioritised community engagement and connection with the natural environment and the area's history.

The transformation of Tarralla Creek has significantly improved water quality, enhanced biodiversity and created a new open space for local residents to enjoy. A 12,500 square metre wetland system has been established along the creek, filtering and cleansing the water. This wetland now thrives with 27,000 aquatic plants, 194 new trees, and over 60,000 terrestrial plants and shrubs, attracting various bird species and providing habitat for other animals.

Customers and community

Our customers and the community are at the centre of everything we do. Our service delivery is enabled by the trusted partnerships we have in place.

Our approach

Our customers and community consist of those who are actively engaged, invested in, contribute to, or are affected by the decisions we make. They reside within the greater Melbourne region and benefit from the safe and affordable delivery of our services.

At Melbourne Water, we prioritise the current and future needs of our customers and community when delivering essential services, ensuring that our strategies, plans, and projects incorporate outcomes that are most valued. We achieve this via a culture of listening and collaboration, where we aim to build stronger relationships with our stakeholders every day.

Guiding our interactions is our *Melbourne Water Customer and Community Strategy*, which serves as a roadmap for effectively managing and responding to customer and community needs. This strategy outlines our plan to continually enhance our practices and ensure that we meet the evolving expectations of our stakeholders.

Customer segments

To assist Melbourne Water to define and understand our customers, we separate our customer base into key segments. These are:

- state government
- local government
- retail water companies
- industry leadership
- direct service customers (including developers)
- suppliers
- engaged community groups
- community.

The Accord

Through collaboration with South East Water, Yarra Valley Water, Greater Western Water, and Barwon Water, Melbourne Water has established 'The Accord,' which sets out a shared vision and agreed-upon principles to guide collective efforts towards cost-effective and equitable outcomes.

The Accord represents a commitment to act in the best interests of the communities we serve. The shared vision encompasses various aspects, including water security, partnership with Traditional Owners, water literacy and efficiency, and addressing the challenges posed by climate change and resilience.

Alignment at the senior leadership levels has facilitated significant progress in system augmentation for future water resilience, and we aim to replicate this success in other key focus areas.

Furthermore, a shared industry position on bulk entitlement reform and bulk tariff reform has been developed, along with improved coordination on Traditional Owner priorities and their effective implementation. Additionally, a joint industry insights program and a new marketing plan have been developed to enhance water literacy campaigns and drive further behavioural change initiatives.

Improving water literacy in our community

Improving community water literacy is a key strategic priority for Melbourne Water, supported by a significant work program reaching across our services and customer delivery. The program focuses on inspiring a greater appreciation of the fact that water is valuable but finite and that we all have a role in caring for it.

This year our Water Literacy Program engaged with over 12,000 people through in person tours and programs to a wide range of audiences including school groups – our next generation of leaders – and Culturally and Linguistically Diverse (CALD) community audiences.

Through our partnerships with Zoos Victoria, we have focused on engaging audiences through place-based, hands-on activities, where we have asked the community to help 'Make Litter Extinct' by participating in our 'Water Bug Lab' at Healesville Sanctuary. This activity is designed to educate community on the impact litter has on our wildlife and the health of our rivers and creeks.

Our corporate partnership with Melbourne Museum has seen us co-create a new augmented reality game called 'FlushBack' which takes users on a journey to educate them on the importance of our sewage system and its role in the water cycle. These types of new digital learning experiences use the power of interactivity and seek to build personal engagement that generates a wider conversation about how we can care for water.

More than 49,000 users engaged with us digitally by subscribing to newsletters, using our innovative website resources and tools such as Drip Trip Game and the Western Treatment Plant (WTP) Virtual Tour. Two new projects commenced; the WTP Digital Education Centre, anchored in the refurbished Cocoroc Hall, and the Digital Learning Gateway.

We engaged with the creative arts industries through partnering with Deakin University and Open House Melbourne to deliver community events at the WTP showcasing the valuable role the plant's sewage system has in Melbourne's water cycle.

Citizen Science

Melbourne Water Frog Census

Melbourne Water Frog Census is a citizen science and engagement program that has worked with the community since 2001 to track the health of Melbourne's Frog populations.

Since 2016 the Frog Census app has been our primary tool for frog data collection. The fully upgraded version of Frog Census app successfully went live on 30 June 2022.

After six years of operation and over 10,000 frog reports, the app required a significant upgrade to retain compatibility with current operating systems and map platforms. A range of content, useability and accessibility updates and new features were also introduced following customer research and an accessibility audit.

Since its upgrade last year, the Frog Census app has been downloaded over 4000 times and there are over 2000 active users with over 700 reports submitted in June alone.

Over the last 12 months, in addition to data collection, the Frog Census Program has run events with a wide range of stakeholders including the general community, environmental groups, local council and state government. Events have included training sessions on how to use the app, citizen science monitoring opportunities and coordinating action for the protection of endangered frog species.

The app provides the opportunity for the community to become a citizen scientist while connecting with their local waterway. Data from the app is in constant use by waterway managers, consultants, and other groups to inform and develop strategies that improve and protect Melbourne's waterways. This includes using Frog Census data to determine the success of environmental water flows into billabongs of the Lower Yarra River or identifying breeding areas for endangered species such as the Southern Toadlet so threats can be mitigated.

Analytics from the Frog Census app show an increase in reports submitted when we run campaigns at key times of the year such as spring and autumn. The increase in the submission of frog calls to the app demonstrates that the broader community is interested in citizen science.

30 years of Waterwatch

This year, Waterwatch, a state-wide community program that started in 1993, celebrated its 30th anniversary. A celebration event was hosted by the North Central Catchment Management Authority in March 2023 to honour the achievements of Waterwatch volunteers across Victoria.

Many groups have been monitoring their local waterways for over 25 years, dedicated to expanding knowledge and improving waterways through citizen science programs, on-ground activities, and knowledge sharing.

Waterwatch volunteers and participants have actively participated in numerous events and activities, including tree planting, educational initiatives, and citizen science programs. Their efforts have contributed valuable scientific data through water quality monitoring, recording frog calls, waterbug monitoring, eDNA collection, and litter audits which support our understanding of species diversity, abundance, responses to environmental changes and habitat restoration impacts.

Western Treatment Plant tours abuzz

This year has brought a renewed sense of excitement and engagement as we witnessed a significant increase in the number of visitors participating in our on-ground tours at the WTP. After successfully adapting to the challenges posed by the pandemic and offering virtual tours to keep the community connected, it is fabulous to witness people returning and re-engaging with us in a face-to-face setting.

The WTP stands as a hidden gem amidst the bustling city of Melbourne. Often regarded as an unlikely treasure, this expansive facility plays a vital role in our mission to protect and enhance the environment. It serves as a wastewater treatment plant, working tirelessly behind the scenes to ensure the safe and efficient management of wastewater for the benefit of the community.

Our online virtual tour during the pandemic period allowed individuals to explore the inner workings of the WTP from the comfort of their homes. It provided a unique opportunity for people to gain insights into the intricate processes involved in treating wastewater, as well as the critical role this plant plays in maintaining the ecological balance of our surroundings.

Now, as restrictions have eased, Melbourne Water is thrilled to welcome visitors back to the WTP for an immersive, face-to-face experience.

Inclusive communications and engagement

At Melbourne Water, we believe that all members of our community should have the right to easily access information and participate in our engagement activities.

This year we have developed the 'Melbourne Water Guide to Inclusive Communications and Engagement'. This guide equips our practitioners with the necessary resources to facilitate activities that encourage participation and is representative of our diverse communities.

By using this guide, our staff will be supported to consistently understand and respect the breadth of diversity within our customers and community, thereby embedding practices that genuinely engage all.

A copy of Melbourne Water's Guide to Inclusive Communications and Engagement can be provided upon request or on Melbourne Water's website[5].

We have also created the Western Treatment Plant Strategic Communications and Engagement Plan to create opportunities to engage with the surrounding community, in particular, the region's vast CALD communities.

This has been demonstrated through actions including commissioning community research, creating a multi-channel launch campaign, which reached a combined 85,000 community members, in person community tours at WTP, community outreach, video series and strengthening our relationship with Wyndham City Council to seek opportunities to collaborate.

More recently we have worked with Wyndham City Council to create a sponsorship opportunity for their citizenship ceremonies. We have a number of inclusions to help us engage further with CALD communities, including the sponsorship of plants that get handed out (10,000 plants handed out to 15,000 residents), a WTP educational video that is played during the ceremony and the WTP virtual tour resources that are shared with attendees after the ceremony.

Our customer performance

Customer satisfaction by service

As a customer-centric organisation, Melbourne Water must continue to evolve in line with shifting customer expectations, internal priorities and a dynamic operating environment. This year, we began our multi-year Customer Reset Program which looks to reshape the way we think, feel and interact with our customers. As part of this work, we have broadened our suite of data points used in our Customer Satisfaction by Service (CSAT) program which now gives our internal teams a more holistic sense of where success is to be celebrated and where we need to improve.

We have also focused our attention on data already collected and available through our internal systems. We have used this information to draw stronger connections between the actions we take at an operational level and the feedback received through our surveys. By analysing and reviewing this data through new, automated dashboards, we now have a real -time view of performance that allows us to stay on-track to achieve our targets.

This work has also allowed us to provide better, more complex reporting to the business that will help us drive visible change for our customers in future.

Lastly, we have also developed a customer experience framework to reinvigorate continuous improvement at Melbourne Water so that we can deliver an improved customer experience. This framework has two elements. The first focuses on short-term tactical initiatives where we can take immediate action on issues occurring. The second focuses on long-term strategic initiatives of how we transform insights into action and has evolved into Customer Improvement Planning by service. Through our program of work, we are providing clear ownership and accountability for delivering actions and linking them to existing improvement activities across our services.

[5] https://www.melbournewater.com.au/about/what-we-do/publications/guide-inclusive-communications-and-engagement

As an example, the drainage customer improvement plan has been developed with seven clear initiatives to drive better customer outcomes.

Customer Service Centre results

This year, our Customer Service Centre achieved the following results in the independent Customer Service Benchmarking Australia call quality and customer experience benchmarking program:

- Melbourne Water was ranked second out of 54 in the utilities sector for call quality and customer experience.
- Melbourne Water was ranked eighth nationally out of 191 participants. This is the first year that Melbourne Water has been in the top 10 of all participants across multiple sectors.
- In addition, and again for the first time, the Melbourne Water Customer Service team received the award for 'Best in Sector' for the utilities industry for the final quarter of 2022-23.

Customer reputation and satisfaction scores

Melbourne Water's reputation score with our customers and the community sat at 69.4 in June 2023, which is a decrease from our performance in the previous year of 75.3 in June 2022. This score is independently determined by RepTrak, a global reputation monitoring agency that has been undertaking this work for Melbourne Water since 2014. The score establishes the levels of trust, esteem, admiration and respect felt by our customers and community. While the score remains strong, it highlights the importance of continually striving to meet the needs of those who interact with us.

What we have learned from our reputation survey is that the flood event of October 2022 did impact our reputation with the community of Melbourne. But, having built up high levels of trust and respect in advance of these events (evidence by a community score reaching 81.1 in June 2022), by June 2023, our score was nearing a return to pre-event levels with the broader community.

Among our customer segments, performance in the past year had been mixed. We are utilising data from our reputation survey with that captured in our CSAT surveys to ensure that there is a clear path to address customer pain points and opportunities to improve the way we deliver our services.

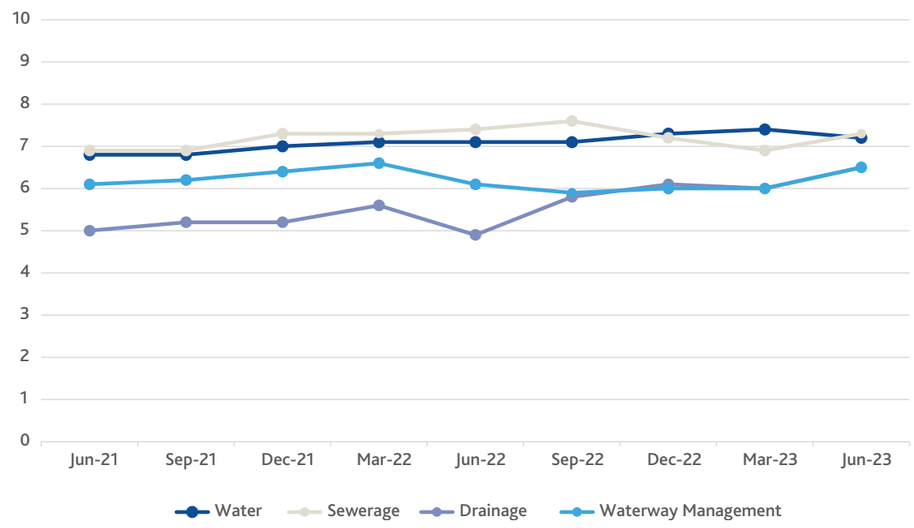
Customer satisfaction scores have improved for three of our four core services in the past 12 months. Our water and sewerage scores remain strong (7.2 and 7.3 out of a possible 10 respectively) with benefits of stronger collaboration between ourselves and retailers being a significant contributor to improvements. To achieve the targets set out by the ESC as part of the 2021 Pricing Determination, we need to continue to build a cohesive working partnership around strategic planning and operational decision making, and ensuring end customers are kept front of mind.

The benchmark for our drainage score (influenced by local government, developer, and direct services customer segments) reflects our role as a regulator. While outcomes are determined by our obligations as the floodplain regulator, we must continue to strive to ensure the key components of customer service are met (such as responsiveness, transparency and ease of doing business). Improvement in the drainage score over the past 12 months comes from a significant focus on the service via actions set out in the Customer Reset and Customer Improvement Planning functions. This has seen a full one-point increase in overall satisfaction from these customers, with the benchmark target well in reach based on current trajectory.

Waterways, while seeing a slight fall in CSAT score (6.1) from the previously reported figure (6.6), did show positive progress in the final two quarters of 2022-23. As the actions from the customer improvement process begin to take hold, we expect to see improvement in the first half of 2023-24.

In line with what we are hearing from our customers, we will continue to focus on customer experience, as well as customer outcomes across all four services we provide.

Customer Satisfaction Score (CSAT) by service



Bringing the outside in

At the heart of our operations are our customers and the community. We prioritise their needs by using effective communication and engagement strategies to plan and provide essential services tailored to their preferences.

Throughout this year, we have made significant progress in advancing and leading the way in engagement practices across various projects and programs. As part of our commitment, we took the opportunity to share our community engagement approach with other water utilities throughout Australia.

In multiple sessions, Melbourne Water engaged with SA Water, SEQwater, Barwon Water, and Unity Water to exchange insights on leading practices, key learnings, potential opportunities, and challenges to avoid when engaging with the community for infrastructure projects. Additionally, we regularly convened with retail water companies in Melbourne through our metro retailers forum, enabling us to exchange experiences and learn from one another.

Throughout the year, we further enhanced our communication and engagement practices by clearly defining our engagement principles, which encompass:

- **Transparency:** We ensure clarity regarding the purpose and scope of community engagement.
- **Timeliness:** We engage early on and maintain ongoing involvement where relevant.
- **Meaningfulness:** Our engagements are genuine, open, and transparent in nature.
- **Consideration:** We acknowledge and address broader community concerns and engage with them in the most suitable manner.
- **Inclusivity:** We strive to be inclusive, act with integrity, and provide a seamless experience.
- **Reflectiveness:** We learn from our experiences and share knowledge to drive continuous improvement.

These engagement principles were employed in a variety of ways when interacting with the community. Our methods ranged from community bulletins, focus groups, door-to-door visits and pop-up events to innovative online approaches such as deliberative panels, co-design initiatives, digital platforms and social media.

Water for Aboriginal cultural, spiritual and economic value

Melbourne Water is committed to a transformational approach in our support of Traditional Owner self-determination and delivering on our commitment to reconciliation.

We will walk Country together and recognise that the Traditional Owners of the region have connections to and hold ancient knowledge of the land and water that are inseparable from their lives. In tending to all the rivers, creeks and surrounding land of our greatest backyard, we work as partners, we listen and we tell the truth with Traditional Owners throughout our region.

Our approach

Melbourne Water's approach to Traditional Owner relationships and engagement aligns with our Customer and Community Strategy but has the fundamental distinction of considering Traditional Owner organisations as sovereign partners in land and water management, not customers or stakeholders to be consulted in relation to these matters.

In 2022-23, we continued to develop as a culturally competent organisation by partnering with Traditional Owners on a range of activities and projects and by implementing our *Innovate III Reconciliation Action Plan* (RAP). During 2023-24, we will seek to progress to a Stretch RAP.

Traditional Owner partnership agreement

Melbourne Water follows Victorian Government policy direction and places a high priority on working with Traditional Owners (particularly those registered with Aboriginal Party status), in recognition of the right people for Country.

This year, we continued our journey with Traditional Owners towards formal partnership agreements, signing agreements with both Gunaikurnai Land and Waters Aboriginal Corporation in July 2022 and Wadawurrung Traditional Owner Aboriginal Corporation in May 2023. These agreements are bespoke to the relationship and are designed to clearly articulate our roles and agreed priority outcomes and activities to enable Traditional Owners to achieve self-determined outcomes.

We are developing strong partnerships also with Wurundjeri Woi Wurrung and Bunurong Land Council Aboriginal Corporation and will progress discussion toward a formal agreement in 2023-24.

Traditional Owner engagement and project delivery

Gunaikurnai Land and Waters Aboriginal Corporation

In December 2022, staff from Melbourne Water and GLaWAC staff and community completed a walk on Country at the Thomson Reservoir to watch the active spillway. This important face-to-face event was part of our shared commitment to our partnership.

Wurundjeri Woi Wurrung

The partnership between Wurundjeri Woi Wurrung and Melbourne Water has resulted in physical work on Country in 2022-23, and, importantly, some significant technical work.

In 2022-23, both a Yan Yean values report and an ethno-historical report for the Werribee River Catchment were documented by the Wurundjeri Woi Wurrung. These are important processes, allowing informed participants in planning and decision making. For the Werribee, this completes a lengthy process to document the social-spatial relations of Woi Wurrung people within this region and the Narrap Ranger perspectives and concludes with a discussion of and suggested responses to key government plans. This report may provide a foundational basis for understanding the historical and contextual presence of Woi Wurrung people in the region and includes further engagement in relation to the Waterways of the West and Narrap Water Program.

The cultural value assessment for Yan Yean Reservoir occurred over 12 weeks in late 2022, including desktop research, field visits and workshops with Wurundjeri Elders, identifying the cultural values of the catchment. The focus was to capture place-based information relating to how Wurundjeri Woi Wurrung people lived within the landscape - tracing Aboriginal history of the area back thousands of years to present day, where the Narrap Rangers continue to carry out caring for Country responsibilities.

Narrap Rangers continue to learn more about wetland systems of the Birrarung during on Country days with Melbourne University. Eels were identified as significant and of interest. Narrap rangers tagged 20 eels at Bolin Bolin resulting in a watering action for eels in a proposal for seasonal watering. Regular meetings now take place to help define monitoring opportunities for Narrap and the environmental water program. This work has supported development of a funded Australian Research Council project for over $400,000 for monitoring and investigation of Birrarung billabongs.

Mark Gardiner, Narrap works coordinator, and Rephael Lankri, Water Unit Manager attended the Symposium on Urbanisation and Stream Ecology as keynote speakers. Mark and Rephael also co-presented on the Lower Yarra Billabongs monitoring project with Joe Greet at the Freshwater Science Conference. They also presented to Melbourne Water staff during NAIDOC Week.

Wadawurrung Traditional Owners Aboriginal Corporation

In May 2023, Melbourne Water and Wadawurrung Traditional Owners Aboriginal Corporation signed their Partnership Agreement called Wunggurwill Ngitj, meaning 'strong together'. Wunggurwill Ngitj was co-designed over six months and sets out the framework under which Melbourne Water and Wadawurrung will work together over five years to support and implement the Paleert Tjaara Dja Wadawurrung Country Plan across the yulluks (waterways), Dja (Country) and skies of Wadawurrung Country. The Agreement is action based and has four themes, covering cultural business, water policy and strategy, Country management, and cultural heritage management.

Wadawurrung have also been involved in waterway management discussions and learnings within the Werribee River landscape during 2023. Involvement in the flow assessment of the upper Werribee has been a valuable learning and improved knowledge of how water assets are managed and manipulated. Further studies have commenced on a cultural value assessment of the lower Werribee River, to be completed in late 2023, allowing Wadawurrung community to provide cultural value information to inform planning and management decision making.

Wadawurrung also completed a cultural burn at the Western Treatment Plant grasslands in May 2023, the first in an ongoing program in collaboration with Country Fire Authority (CFA) and supported by Forest Fire Management Victoria. They used traditional firesticks and achieved a slow, patchy burn that is safer and better for flora and fauna. Wadawurrung elder Aunty Glenda started the lighting of the burn, closely led by Blair and Tammy Gilson and the rest of the Wadawurrung team. The CFA invited a wide range of brigades as an opportunity for them to learn and to gather more support for ecological and Traditional Owner burns.

This is the first of an ongoing program of cultural and ecological burns at WTP and provided an opportunity for each organisation involved to learn and grow together in the spirit of reconciliation.

Bunurong Land Council

Melbourne Water have been supporting the Bunurong Land Council to be more actively involved in waterway management, sea Country management and improving understanding of flows and water requirements.

During 2022, projects were initiated to provide cultural value assessments to waterway managers and strategy authors to allow approved cultural information to be included in planning. The focus of this work was the Werribee River landscape. These projects have provided the Bunurong community with improved resources to respond to requests for cultural information in the Werribee landscape.

During 2022-23, the Bunurong Land Council's Water team were involved in a series of on Country walks. Bununrong Water Officer, Adam Atkinson, met Melbourne Water teams on site at Cardinia, Tarago and Werribee.

Engagement with Bunurong has also taken place around Seasonal Watering Proposal Development. Follow up activity may include an Aboriginal Waterway Assessment for Dandenong Creek.

Melbourne Water works with several research partners to improve scientific knowledge and have supported projects by Deakin University scientists researching seagrass restoration within Bunurong sea Country:

- Two field visits were conducted during 2023 to connect and network and improve understanding of the types of research that Bunurong community may wish to lead or be involved in
- Bunurong staff and rangers conducted a site visit to Westernport near Hastings, following a visit to a mangrove and seagrass nursery at Advance College Native Nursery in Mornington, where Melbourne Water and Deakin University propagation research has been occurring
- A trip to the Marine Discovery Centre in Queenscliff was held for further learning and discussion. This work and relationship will continue throughout 2023 and 2024 with opportunities for Bunurong to further advance seed collection, propagation and field planting with the research team.

Reconciliation Action Plan

Melbourne Water continued to implement our Innovate III RAP during 2022-23 with significant progress toward embedding key pillars of our journey. Through our Reconciliation Working Group we have ensured a focus on respectful relationships, embedding protocols and procedures, ensuring a culturally safe workplace, continuous growth in our cultural learning, supporting self-determination and Traditional Owner aspirations, and opportunities to support Aboriginal business prosperity.

Melbourne Water's Innovate RAP III progress aligns to a Stretch RAP, aims to be consolidated throughout 2023-24 and is on track for completion in March 2024.

National Reconciliation Week 2023

Highlights during National Reconciliation Week 2023 included a community day at Shoreham Foreshore Reserve with Bunurong Land Council, a language session with Wurundjeri Woi Wurrung, raising money and providing donations to community, and meeting an Aboriginal artist in the newly formed designed yarning circle.

Aboriginal employment and retention

Aboriginal employment, wellbeing and retention continue to be a challenge for Melbourne Water. This year, we began embedding our Employment, Wellbeing and Retention plan and have since delivered 36 initiatives and begun 34 additional initiatives as part of the 82 Innovate III RAP deliverables.

Melbourne Water has nine staff identifying as Aboriginal, 0.7 per cent of total staff (at 30 June 2023). Successfully identifying candidates for roles was a learning of 2022-23, with some recruitment success. However, staff retention was challenging with 11 of the 14 staff onboarded leaving by the end of the financial year. Commitment to the actions within the plan will allow achievement of the three per cent Aboriginal employment target by 2027.

Procurement

Our procurement success of 2022-23 shows a continued commitment to create opportunity and innovative ideas and establish suitable systems and records to allow for accurate reporting. In 2022-23, we increased our Aboriginal procurement spend to more than $2.9 million and combined with indirect spend over $9 million. The procurement success of the contract signed with Wurundjeri Woi Wurrung Narrap team has progressed our relationship and created employment for Wurundjeri people to manage Country.

Focus on cultural competency and training

Making Melbourne Water a culturally safe place to work continues to be a focus, supported through annual week-long events of cultural immersion to improve our cultural safety, knowledge and connections – National Reconciliation Week (May), NAIDOC Week (July).

We have continued to embed our three-tiered Cultural Awareness Training plan, including online cultural competency and awareness training for employees, training by third-party providers (not Traditional Owners) and training by Traditional Owners delivered on Country at the Western Treatment Plant and Werribee River You Yangs, Wadawurrung, Wurundjeri Woi Wurrung. Nearly 1000 staff have completed our eLearning module and 200 have completed an immersive experience with Traditional Owners.

Yoorrook Justice Commission

The Yoorrook Justice Commission was established as a Royal Commission to lead the inquiry into the impact of colonisation on First Nations peoples in Victoria and is the first of its kind in Australia. The Commission began in March 2022 and will establish an official public record and shared understanding of the impact of colonisation on First Peoples in Victoria. It will make recommendations for healing and system reform, and practical changes to laws, policy and education. The Commission will also outline matters to be included in future treaties.

After a 12-month extension by the Victorian Government, the Yoorrook Justice Commission will run until June 2025. As Melbourne Water is a state government entity, the Commission may request documents or other evidence on current and past practices and policies.

We have prepared and tested plans and approaches to be an enabler of this truth-telling process and to respond promptly to any requests from the Commission with openness and transparency.

Werribee River, K Road Cliffs

Delivering for environment

Melbourne Water aims to reduce the impact of our operations on the environment and contribute to the environmental sustainability of greater Melbourne.

The Victorian water sector is the single largest contributor to the state government's total carbon emissions. Melbourne Water accounts for over half of the Victorian water sector's emissions. Getting water to homes as well as removing and treating sewage takes a lot of energy. We process more than 90 per cent of Melbourne's sewage. Sewage treatment is energy intensive and releases direct emissions (including methane and nitrous oxide).

The energy and direct emissions associated with sewage transfer and treatment contributes around 85 per cent of Melbourne Water's total Greenhouse Gas Emissions (GHG) emissions.

Our challenge is to reduce our GHG emissions and achieve or exceed our carbon pledge targets. In addition, we are planning for climate change to impact the availability of water supply and the impact on our operations from climate-change impact projections.

Climate change and adaptation

Climate change creates challenges for all of Melbourne Water's services, the natural environment and the liveability of our region.

Melbourne Water is uniquely positioned to help navigate a path that meets our collective water needs, optimises use and reuse of resources, preserves our natural environment, and sustains the liveability of our environment.

The state of Victoria has committed to climate action including through Victoria's Climate Change Strategy, and a suite of adaptation action plans covering the water, built and natural environment systems.

Melbourne Water is supporting the government and our region by working to understand both the physical and transitional risks of climate change and developing options to adapt as the region grows.

Our approach

Our approach to climate governance, climate related indicators and targets, and reporting significant risks and opportunities is informed by the Ministerial directions on climate reporting, and increasingly, the recommendations of the international Task Force on Climate-related Financial Disclosures (TCFD), and the International Sustainability Standards Board (ISSB) guidance on disclosures.

We continue to mature our approach to capturing our progress to date and highlight opportunities to improve disclosures as part of ongoing adaptation dialogue with regional stakeholders.

Climate risk and opportunities are integrated into the overarching strategic goals that help guide planning and investment at Melbourne Water.

The Board approves our strategic goals, oversees corporate risk management systems, and ratifies the service strategies and major investments through which climate risks are identified and managed.

In 2022-23, Board discussions included review and guidance on our Path to Net Zero planning, including ambition, challenges and strategic approach.

The Audit, Risk and Finance Committee of the Board oversees design and implementation of the Risk Management Framework. This includes an annual review of priority risks including overarching climate risks and controls. In 2022-23 this included review of the role of core service strategies as part of our suite of climate risk controls.

The Customer and Service Delivery Committee of the Board reviews and monitors service delivery, strategic projects and investments and compliance with regulations. This includes climate change as an aspect of most strategic investments.

The Executive Leadership Group validates and monitors climate risks and controls included in risk registers and service strategies. This year, this included a workshop discussion of risks and challenges to our strategic goal around decarbonisation, including emission reduction targets and plans.

This year, Melbourne Water also commenced a review of climate governance and disclosure best practice emerging through the TCFD recommendations and draft ISSB climate disclosure standards, noting these are international guides and would likely be tailored for any mandatory application in Australia. We found opportunity to improve formal codification of executive climate risk accountabilities. We are currently developing options to act on these.

Highlighting our commitment to emissions reductions is the inclusion of our total net emissions key performance indicator as part of our Managing Director's performance plan. Our target is to reduce emissions to 480 tonnes of CO2 emissions across the National Greenhouse Emission Reporting Scheme (NGERS) reportable scope 1 and 2 emissions, by 2024-25.

Climate strategy, risks and opportunities

Risks and opportunities are identified and prioritised on an ongoing basis by our regulators (in state policy), through recurring risk assessment processes, and through service strategies.

Understanding and preparing for climate risks is a critical component of Melbourne Water's long term service strategy development. In preparing these strategies, we explore a range of climate scenarios and other influences such as population growth, technology and regulatory changes, to understand at a conceptual level the physical and transition risks that may affect our operations and stakeholders.

We review available research and science and run a number of technical modelling and investigation programs to explore climate impacts on weather, hydrology, and natural and built environments. Potential responses to climate and other changes are developed in consultation and partnership with regional stakeholders. Service strategies are published and shared with all stakeholders, providing a public overview of climate risks, opportunities and adaptation approaches, and timeframes for review and renewal of the strategy.

Adaptation investments can be funded through our 2021 Price Submission, a five-yearly price planning overseen by environmental and economic regulators that set the prices paid for water supply, sewage, and waterways and drainage services. These processes are underpinned by extensive consultation that ensures stakeholder knowledge and community priorities can shape our investments.

Material climate risks

Appendix I provides a summary of the key material risks and opportunities shaping Melbourne Water's strategy development and current investments. It also highlights additional risks that are being explored due to their potential to become significant in the near future.

Appendix I also outlines the technical implementation of climate scenarios and data, which helps us explore possible future impacts in detail.

Applying the Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria

The Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria were finalised in 2020. The guidelines adopt a precautionary approach, requiring us to understand the full range of possible future climate impacts and encouraging the use of the high-emissions global warming scenario to explore risks, as this scenario could produce the biggest decrease or increase in future annual rainfall. These guidelines were also used to conduct future water resource modelling as part of the Greater Melbourne Urban Water and System Strategy development.

By combining high, medium, and low rainfall trends with different demand growth projection scenarios, the guidelines generate various scenarios which we can use to assess potential deficits in the water supply-demand balance in the long term. These scenarios also consider the impacts of climate variability, including droughts and floods. Our modelling results indicate that augmentation of the water supply system will likely be necessary within the next decade, given the range of scenarios explored.

Furthermore, Melbourne Water and other stakeholders use this climate and demand modelling to analyse the financial costs associated with new bulk water supply options. Tools like the bulk water supply cost calculator aid in comparing the long-term costs and benefits of different water sources and policy

options, enabling effective adaptation to climate change and meeting the needs of a growing population while forecasting changing costs.

Applying the Guidelines for the Adaptive Management of Wastewater Systems Under Climate Change in Victoria

In 2022, the Victorian government released guidelines for managing and adapting wastewater systems in response to climate change.

Melbourne Water played a crucial role in developing these guidelines by providing data and sharing knowledge. The guidelines highlight the importance of understanding the complex risks associated with climate change and the need for an adaptive approach in wastewater management.

Melbourne Water has already begun implementing these guidelines by incorporating them into our strategic planning processes for transfer networks and wastewater treatment plants. We are using future climate scenarios and data sets to assess potential risks and opportunities, clarify objectives, and develop appropriate options to meet those objectives.

Climate risk management

Two Board-approved policies help guide climate risk management through all levels of the organisation:

- Melbourne Water's Risk Policy and Risk Appetite set up the structures through which climate risks are captured and included in corporate risk registers and can be reviewed and assessed.
- Our Environmental Sustainability Policy confirms our commitment to assisting the transition to an environmentally sustainable future and preparing for the challenges of climate change, including a focus on intergenerational equity aligned with the UN Global Compact Sustainable Development Goals.

At a strategic level, climate risk is incorporated into our corporate risk register, recognising the complex and comprehensive nature of the adaptation and transition challenges.

It is considered as a component of various service risks, including water security, bushfires, blue-green algae, flooding, as well as customer expectations regarding emissions and environmental management. These risks are currently being managed and may evolve in the future.

Risk assessment and management through service strategies is complemented by internal processes including:

- A regular strategic risk report to Board committees, including climate topics. This captures the state of the risk, any key changes and performance of controls.
- Annual asset system risk and service capability assessments that capture near-term and emerging weather and climate risks and report them to executive leadership and Board committees.
- A periodic operating environment scan process that collates data on global and regional mega-trends and new research and prioritises emerging challenges according to potential to impact operations or goals. Climate change is generally identified as the most urgent and potentially impactful trend in our operating environment.

To view our overarching risk management approach, please see Appendix I.

Metrics and targets

Appendix I includes our current set of key performance indicators, which seek to enhance our ability to withstand extreme weather events, manage climate-related risks, and gain insights into potential changes in our exposure.

DELIVERING FOR ENVIRONMENT | CLIMATE CHANGE AND ADAPTATION

Our Path to Net Zero

Our approach

Melbourne Water is responsible for significant greenhouse gas emissions, primarily through our use of energy and sewage treatment processes. We are progressing our path to net zero by 2029-30 in line with the Victorian Water Corporation's Statement of Obligations (Emission Reduction) and the Victorian Government's long-term target of net zero greenhouse gas (GHG) emissions by 2050.

Under the Victorian Statement of Obligations (Emission Reduction) Melbourne Water must:

1. Reduce our reported scope 1 and 2 emissions (as calculated under the National Greenhouse Emission Reporting Scheme [NGERS] to 204,380 tonnes CO2-e a year by 2024-25 (which represents a 50 per cent reduction of our average annual emissions between 2011 and 2016)
2. Source the equivalent of 100 per cent of our consumed electricity from renewable sources by 2024-25.
3. Reduce our reported scope 1 and scope 2 emissions to net zero by 2029-30.

Our Eastern Treatment Plant (ETP) and Western Treatment Plant (WTP) are also subject to the Federal Safeguard Mechanism. At a high-level, Melbourne Water's Greenhouse Gas Emissions (GHG) emission reduction requirements under the Victorian Statement of Obligations (Emission Reduction) and Federal Safeguard obligations are complementary.

To ensure consistency with the language used in the Statement of Obligations, Melbourne Water currently uses the words 'net zero' rather than 'carbon neutral' to describe our emission reduction program. For transparency it should be noted that offsets will be required to meet our 2024-25 and 2029-30 targets, to allow time to transform our treatment plants to lower emissions alternatives. Supply chain emissions (scope 3) are not currently included in our targets.

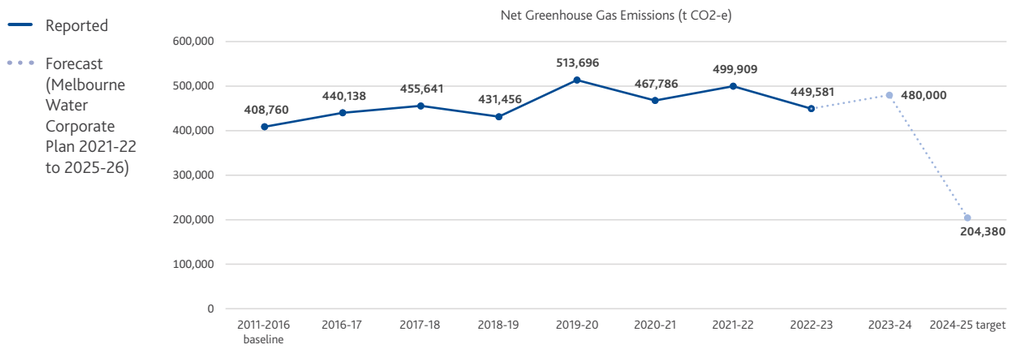
Our emissions

The largest source of emissions within Melbourne Water is associated with sewage treatment and management, producing around 85 per cent of our total emissions. In comparison, the water supply system uses less energy and has lower direct emissions. A breakdown of our greenhouse gas emissions for 2022-23 across our services is provided in Table 5, as calculated using NGERS carbon accounting methodologies.

Melbourne Water's first emission reduction target is a 50 per cent reduction by 2024-25. Figure 9 shows Melbourne Water's current forecast to achieve our carbon pledge. To achieve this and our 2029-30 target of net zero emissions, we are exploring options to reduce scope 1 or 'fugitive' emissions from our operations via alternative sewage treatment processes, increasing the generation and procurement of renewable energy (see Renewable energy, pages 62-63) and carbon offsets (as a transition tool).

There are many factors that must be considered in estimating our future GHG emissions such as climatic conditions, customer water use, rainfall and maintenance activities that affect our operations. The variance of 8.3 per cent of actual against our forecast emissions reflects the significance of the influence of these factors.

Figure 9: Melbourne Water's path to achieving 50 per cent reduction in CO2-e by 2024-25, as required as part of the Statement of Obligations



Note: The sharp reduction in emissions in FY 2024-25, reflects our 100 per cent renewable energy target (netting scope 2 emissions to zero) and some high integrity offsets to meet our 204,380 tonnes CO2-e target. Due to the lead time and cost to directly reduce emissions from sewage treatment, we expect high integrity carbon offsets to play a significant role in meeting this target in the short to medium term transition.

Table 5: 2022-23 greenhouse gas emission performance, by service

Service delivery category	Greenhouse gas emissions (t CO_2-e)				Variance (%)
	2021-22 Total emissions	2022-23 Result			
		Scope 1	Scope 2	Total emissions	
Water treatment and supply	64,779	32	41,812	41,844	
Sewerage treatment and management [1]	453,782	254,814	148,413	403,228	
Transport	1,854	1,774	0	1,774	
Waterways	1,218	1,670	770	2,440	
Other (Offices)	297	0	295	295	
Total Emissions (a) [2]	**521,929**	**258,291**	**191,290**	**449,581**	**-13.9%**
Carbon offsets (self-generated) retired	0	0	0	0	
Carbon offsets (other) retired	22,024	0	0	0	
Total Offsets (b)	**22,024**	**0**	**0**	**0**	
Net Emissions (a – b)	**499,905[3]**	**258,291**	**191,290**	**449,581**	**-10.1%**

[1] Improved effluent processing at WTP
[2] MW is committed to emissions reduction and is currently pursuing a range of emission reduction projects
[3] At time of 2021-22 Annual Report, the numbers reported were the most accurate available and figures were later revised with the most up-to-date data by October 2022 in line with National Greenhouse and Energy Reporting (NGERS) reporting. These numbers represent the most upto-date emission figures for 2021-22.

Improving our understanding of our greenhouse gas emissions

There are range of uncertainties in determining and forecasting GHG emissions, particularly our scope 1 (or direct emissions from sewage treatment). To improve our emissions reporting, provide increased transparency of actual emissions, and identify opportunities for real reductions across our treatment plants, Melbourne Water has developed and continues to pursue a proactive emission measurement program supported by local and international partners.

In the coming years, the outcomes from this program will identify areas where estimated or measured emissions deviate from our reported emissions under NGERS. This is to give a clearer picture of our real impact and to ensure both 'real' and 'reported' emissions are mitigated.

Nitrous oxide emissions

There is a significant industry knowledge gap in understanding nitrous oxide emissions from biological nitrogen removal processes. Hence this is a major focus of our emission measurement program and global collaboration efforts.

In 2022-23, Melbourne Water:

- Was awarded the Victorian AWA R&D Excellence Award for our program of emission measurement - Real Greenhouse Gas Emission Measurement and Reporting for Real Reductions as We Move Toward Net Zero.
- Initiated an industry collaborative research project, supported by an Australian Research Council Linkage Grant and led by the University of Queensland, partnering with utilities across Australia to improve understanding of nitrous oxide emissions and establish a standard approach for measuring and reporting these emissions. Accurate measurement and reporting of nitrous oxide emissions is an essential pre-requisite for any mitigation.
- Continued our work with the University of Queensland to measure and understand chemical reaction pathways associated with nitrous oxide emissions from the WTP's nitrogen reduction treatment process.

Lagoon emissions

Melbourne Water has continued to undertake a long-term research project with the University of Western Australia that will inform our understanding and modelling of GHG emissions from the lagoons at our WTP.

Methane emissions from sludge drying

We have also been working with the University of Melbourne and University of Queensland to quantify and better understand the emissions from our sludge drying pans. These pans are an important part of our sewage treatment process but are currently our single largest source of direct (scope 1) emissions. Transitioning away from sludge drying pans will play an important role in reducing our direct greenhouse gas emissions at our sewage treatment plants.

International partnership to reduce wastewater emissions

In September 2022, Melbourne Water formed an international alliance with Danish water utility Aarhus Vand and UK water leader Severn Trent.

By joining forces, we aspire to co-create innovations and technologies to make wastewater treatment greener. We will begin to establish new international standards for measuring and reporting emissions, with a focus on nitrous oxide emissions, as the industry looks towards a carbon neutral future.

Melbourne Water, Aarhus Vand, and Severn Trent have presented technical papers to an international audience including a joint conference paper, entitled 'Nitrous oxide formation and emission from activated sludge plants in Europe and Australia' as well as a keynote address at the IWA Leading Edge Conference, in South Korea.

Reducing our emissions using carbon offsets

While we develop a robust understanding of direct emissions and methods to reduce them, we expect to use carbon offsets to help meet emission targets.

We are in the process of developing a series of small-scale, pilot carbon forests within our region to build sector capacity and test the value and co-benefits of biodiverse carbon plantings. Three areas have been identified, including a privately owned, community-partnership site identified in collaboration with Yarra Valley Water and Greater Western Water. Cultural heritage and ecological assessments and detailed design are in progress. We aim to commence formal registration of these projects with Commonwealth regulators in 2023 and commence site preparation and planting in 2023 and 2024. Exact timing is subject to availability of resources including native seed supply.

An 'integrity hierarchy' for carbon offset sourcing was approved by Melbourne Water's Board in 2023. This hierarchy is focused on high-integrity, 'removals' based offsets and due-diligence processes, in alignment with principles one and two of the Oxford Principles for Net Zero Aligned Carbon Offsetting.

We are working with VicWater and other Victorian water authorities on developing a collaborative approach to long-term carbon offset sourcing in line with Victoria's policies encouraging local investment and catchment health and in alignment with principle four of the Oxford Principles.

Table 6: Renewable Energy Certificates (REC) Retirement

REC retirement method	RECs retired: 2022-23 (1 REC = 1 MWh renewable electricity)	Commentary
Voluntarily retired by Melbourne Water	0	
GreenPower	0	
Certified carbon neutral electricity purchased	0	
Voluntarily retired on Melbourne Water's behalf	0	
Total voluntarily retired	0	Melbourne Water has no obligations or corporate directives for meeting renewable targets in the 2022-23 financial year.
Mandatorily retired	41,846	Melbourne Water has returned RECs to AGL to meet our Mandatory Lare-scale Renewable Energy Targets obligations.
Total RECs retired	**41,846**	

Table 7: Scope 1 and 2 emissions by greenhouse gas 2022-23

Service delivery category	Scope 1 and 2 emissions by greenhouse gas (in tonnes and converted to tonnes CO2-e)							Commentary
	Carbon Dioxide (CO2)	Methane (CH4)		Nitrous Oxide (N2O)		Other		
	tonnes CO2-e	tonnes	tonnes CO2-e	tonnes	tonnes CO2-e	tonnes	tonnes CO2-e	
Water treatment and supply	41,844	0	0	0	0	0	0	
Sewage collection, treatment, and recycling	157,411	7,406	207,359	145	38,458	0	0	Improved effluent processing WTP.
Transport	1,774	0	0	0	0	0	0	
Waterways	2,440	0	0	0	0	0	0	
Other (e.g. offices, depots etc.)	295	0	0	0	0	0	0	
Total	**203,764**	7,406	207,359	145	38,458	0	0	

Table 8: Scope 3 Emissions 2022-23

Scope 3 emissions source	Scope 3 emissions (t Co2)
Commercial air travel[1]	30.1
Waste disposal[2]	1,286
Total reported scope 3 emissions	**1,316**

[1] 96 return flights

[2] Only corporate/office waste. As per the NGERS "Estimating emissions and energy from solid waste and landfill biogas management guideline".

Energy consumption

Melbourne Water's electricity consumption across our services and other operations in megawatt hours is set out in Table 9. Across all of Melbourne Water operations there was a slight increase in grid electricity consumption.

Increased grid electricity consumption was recorded at the ETP and the WTP coupled with a small reduction in sewerage pumping across the sewage transport network. In 2022-23, there has been a decrease in biogas generation at both treatment plants. In the production and distribution of water the consumption of grid electricity was equal to the previous years consumption.

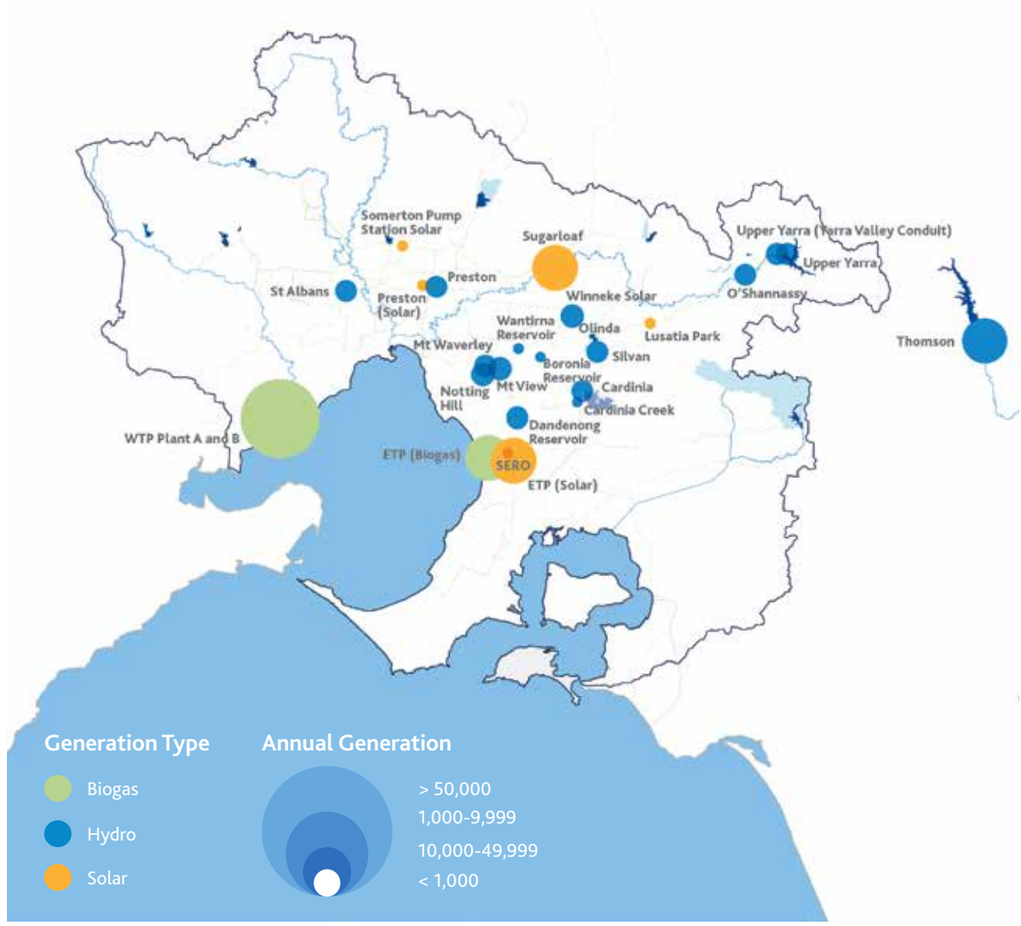
The generation of hydroelectricity across the water network was less than last year. Within the water system, there was a decrease in grid electricity use in water storage reservoirs and an increase in opportunistic pumping from the Yarra River at Yering Gorge. Waterways saw a decrease in drainage pumping which reduced consumption of grid electricity.

Renewable energy certificates

Melbourne Water has a portfolio of onsite energy generation facilities throughout our water system and wastewater treatment plants. This onsite generation reduces our need to use electricity from the grid, which reduces our reportable scope 2 emissions as calculated under NGERS.

At this time, the renewable energy certificates from our onsite energy generation are sold to keep costs to customers down, which reduces the proportion of electricity which can be reported as renewable in Table 11.

Figure 10: Melbourne Water's onsite renewable energy



Going solar

Eastern Treatment Plant

Melbourne Water has completed construction of a new solar farm at the ETP in Bangholme. The solar farm is one of the many ways we are adapting our operations to prepare for a changing climate, reducing our own carbon emissions and generating more renewable energy.

The plant already includes a biogas facility that generates approximately 26 per cent of the electricity required each year to run the plant. The solar farm will produce another 22 per cent, increasing on-site generation to 48 per cent.

Power generation at the solar farm began in mid-2023.

Winneke Water Treatment Plant

In April 2023, Melbourne Water completed construction and commissioning of a new solar farm onsite at the Winneke Water Treatment Plant in Christmas Hills which will further reduce our greenhouse gas emissions as we work towards net zero by 2030.

The 19,000-panel farm will deliver 12,400 megawatt hours per year, which is equivalent to the yearly demand of approximately 1550 households. By producing this energy with a renewable source, 12,000 tonnes of carbon dioxide will be prevented from being released into the atmosphere each year.

The energy produced will be used by the treatment plant and associated pumping stations, with any excess energy fed into the public grid for external use.

Mini-hydro power stations

Melbourne Water is expanding our generation of hydroelectricity through our water transfer system with three new mini-hydro power stations at St Albans, O'Shannassy Reservoir and Upper Yarra Reservoir.

St Albans and Upper Yarra Mini-hydros are scheduled for completion by the end of 2023, with O'Shannassy due for completion at the end of 2024. These three additional mini-hydros will be able to collectively produce, on average, 7100 megawatt hours of electricity each year.

Table 9: Total electricity consumption across our services

Service Delivery Category	2021-22 Total electricity consumption (MWh)	2022-23 Total electricity consumption (MWh)	Commentary
Water treatment and supply	67,607	57,178	
Sewerage treatment and management	265,859	287,153	Increased wastewater pumping, treatment and new onsite wastewater treatment plant.
Waterways	863	760	
Other (Offices)	478	443	
Total	**334,807**	**345,534**	

Table 10: Total electricity consumption by source

Electricity source	2021-22 Total electricity consumption (MWh)	2022-23 Total electricity consumption (MWh)	Commentary
Purchased directly through an electricity retailer	231,717	218,254	
Not directly purchased but sources from outside the organisation	0	0	
Corporation-led/self-sourced activities and initiatives	103,090	127,280	
Total (by source)	**334,807**	**345,534**	

Table 11: Total renewable electricity consumption, by type (MWh)

Renewable Electricity Consumption Categories	2021-22 Renewable Electricity Consumption (MWh)	2022-23 Renewable Electricity Consumption (MWh)	2022-23 Renewable Electricity Consumption (% of total consumption)	Commentary
Grid-Sourced	**43,222**	**41,059**	**11.9**	In FY 22-23, Melbourne Water consumed 218,398 MWh electricity from the grid and an additional 127,280 MWh from self-sourced production.
Self-Sourced				
Biogas	18,755	18,755	5.4	A total of 124,915MWh of biogas generation was produced in 2022-23, with 107,658MWh (86.2%) used on site.
Hydroelectric	**0**	0	0	A total of 39,233MWh of hydro-electric power was produced in 2022-23, with a small volume (81.2MWh) used on site.
Solar	**0**	0	0	New solar plants at Somerton Pump Station, Winneke Treatment Plant and the Eastern Treatment Plant produced a total of 16,295MWh in 2022-23, with 15,256MWh (93.6%) used on site.
Wind	**0**	**0**	0	Presently we do not have any wind assets in our portfolio.
Total corporation led/ self-sourced	**18,755**	**18,755**	**5.4**	No RECs were surrendered against self-sourced renewable generation activities in 2022-23 and as such, this volume is not counted against our total renewable generation outcome.
Total renewable electricity consumption	**61,977**	**59,814**	**17.3**	

Table 12: Total Electricity Generation Capacity & Generation Reporting (Renewable)

Renewable Electricity Source	2022-23 Total on-site renewable electricity generation capacity (MW)	2022-23 Total on-site renewable electricity generated (MW)			Commentary
		Renewable (Large-Scale) System		2022-23 Total by Source	
		Consumed on-site	Exported		
Biogas	25	107,658	17,257	124,915	The biogas generation capacity at our Western Treatment Plant was augmented this year with the completion of a 6MW generation plant to support our existing generation assets.
Hydroelectricity	25	81	47,410	47,491	The majority of hydro assets are located at water storages with minimal load and as such, most electricity generated is exported directly to the grid
Solar	24	15,256	1,039	16,295	New solar plants at Somerton Pump Station, Winneke Treatment Plant and the Eastern Treatment Plant.
Wind	0	0	0	0	
Other renewable	0	0	0	0	
Total renewable	**74**	**122,995**	**65,706**	**188,701**	

Table 13: Total Other (Non-Renewable Electricity Generation Capacity & Generation Reporting)

Renewable Electricity Source	2022-23 Total on-site renewable electricity generation capacity (MW)	2022-23 Total on-site renewable electricity generated (MW)			Commentary
		Consumed on-site	Exported	Other	
Natural gas - electricity generation	NA	4,286	0	0	Natural gas combustion for electricity generation to balance biogas supplies.

Natural gas is used as a secondary fuel to optimise use of biogas generation capacity shown in Table 12.

Environmental management obligations

Enhancing biodiversity

Melbourne Water manages significant landholdings that support diverse communities of native plants and animals. We also have a critical role in managing waterways, estuaries and wetlands which are essential to the survival of much of our region's biodiversity.

We develop and implement strategies that protect native biodiversity, in compliance with Victorian and commonwealth biodiversity obligations. These include our *Corporate Biodiversity Conservation Action Plan 2020*; our role as custodian of the *Catchment and Land Protection Act 1994 (CaLP Act)* and *Port Phillip and Westernport Regional Catchment Strategy* (RCS); our *Healthy Waterways Strategy* (HWS) and our Sites of Biodiversity Significance Program. Following the integration of Port Phillip and Westernport Catchment Management Authority into Melbourne Water, Melbourne Water became the host agency for a range of catchment-scale programs – including Grow West, Yarra4Life and Living Links – that contribute to enhancing catchment biodiversity, protecting threatened species and creating biolinks. During 2022-23 we produced our *Port Phillip and Westernport Region National Resource Management Action Plan* (NRM).

Melbourne Water continued as lead agency of the region's Ramsar Protection Program. The program is a long-term, collaborative environmental program working to maintain or improve the ecological values of the Westernport and Port Phillip Bay western shoreline Ramsar wetlands sites. Further details can be found on page 34. In addition, Melbourne Water manages the Two Great Ramsar Wetlands Project at the WTP and Edithvale-Seaford Wetlands Ramsar site, as well as the Westernport Enhancement Project.

Our WTP supports a wide range of biodiversity values, with coastal saltmarsh and temperate grasslands, and some associated threatened species, such as the Orange-bellied Parrot and Spiny Rice-flower. Lagoon-based sewage treatment and dedicated habitat ponds provide critically important habitat for waterfowl, migratory shorebirds and the endangered Growling Grass Frog. To maintain the right hydrological regime essential to support these values, we updated our environmental flow recommendations by drawing on the latest monitoring data.

We also report annually in alignment with the *Environment Protection and Biodiversity Conservation Act 1999* on delivery of environmental flows and monitoring of Growling Grass Frog and Straw-necked Ibis populations as well as many other management actions. To address an observed decline in ibis' numbers, a research project has been initiated with the Arthur Rylah Institute for Environmental Research to track ibis movements in response to watering regimes, which will help improve future site management.

The Ramsar-listed Edithvale—Seaford Wetlands are the largest remaining part of the former Carrum Carrum Swamp and home to many bird species, most significantly the endangered Australasian Bittern. Works in 2021-22 included:

- Progressing the Climate Change Cost Benefit Analysis project to help understand future management options for the wetlands under a changing climate.
- Continuing work with RMIT to undertake research into water and sediment quality at both Edithvale and Seaford wetlands. This research is improving our understanding of the water quality at the wetlands, with a recent focus on sources of pollution.
- Progressing several ecologically based projects as part of the Department of Energy, Environment and Climate Action's (DEECA) $5 million Suburban Parks Program at Seaford wetlands. Stage 1 revegetation within the Seaford wetlands buffer zone has been completed. Ecological Vegetation Classes mapping and revegetation plans for the buffer area are underway, as well as target fauna surveys.
- Finalising a maintenance agreement with Frankston City Council to better align management responsibilities between the authorities at Seaford wetlands (as recommended in the Ramsar Management Plan).

During 2022-23, Melbourne Water continued to implement the Growling Grass Frog Masterplan Program in Melbourne's urban growth areas under an agreement with DEECA. As urban development occurs over the next 30 years, Melbourne Water will construct around 80 Growling Grass Frog habitat wetlands and manage around 2000 hectares of conservation area.

This year, we were appointed manager of the first parcel of Growling Grass Frog conservation area land in Clyde and have commenced habitat management. Over the summer months, we filled the first constructed habitat wetland in Aintree with groundwater to support frog breeding.

Environment Reference Standard

The Environment Reference Standard (ERS) (Waters) assists Melbourne Water with decision making regarding the protection and management of Victorian waterways, bays and coastal waters. The ERS identifies environmental values for waters and provides a way to assess those values. The *Environment Protection Act 2017* came into effect on 1 July 2021, and the State Environment Protection Policy objectives were mostly transitioned to the new Act, subordinate regulations or the Environmental Reference Standard.

We manage our WTP at Werribee and ETP at Bangholme to meet the ERS water quality targets for Port Phillip and Westernport bays.

Melbourne Water is investing in a range of other activities across sewerage, stormwater and waterways programs to protect our waters into the future, including:

- Working with DEECA to deliver the Port Philip Bay Environmental Management Plan, to improve water quality in the bay. The plan aims to foster stewardship of the bay across community, industry and government, improve the bay's environmental health and support thriving marine life and habitats.
- Renewing assets and undertaking preventative maintenance across our 400-kilometre sewerage system to minimise spills, sewer overflows and leakages (see Sewerage Management, page 19).
- Conducting waterways and stormwater research programs, which help to deliver on our Healthy Waterways Strategy targets for water quality (see Waterway Management, page 26).

This year, Melbourne Water made a submission to the draft legislative instrument Obligations for Managers of Land or Infrastructure (OMLI) engagement process. This draft legislative instrument contains obligations to manage urban stormwater, onsite wastewater and salinity and irrigation drainage. The draft OMLI proposes to replace some of the obligations from the State Environment Protection Policy (Waters) that were saved by the Environment Protection Transitional Regulations 2021.

Managing streamflow

Melbourne Water produces streamflow management plans, local management rules and a Drought Response Plan to document the way water is managed to ensure it is shared fairly between diverters and the environment.

Further information about water use by our diverter customers can be found in Appendix D – Private diversion licences.

During 2022-23, Melbourne Water maintained streamflow management plans for seven stream systems in the Yarra catchment. The plans aim to manage the water resources of the catchments, develop sustainable allocations for agriculture and other uses and maintain an environmental water regime to sustain waterway health.

We are also working with Traditional Owners to better engage on roles and opportunities in the Stream Flow Management Plan process, and to build Traditional Owner cultural values into any future amendments to management plans.

Our people

Our organisation is our people. It's the way we work with each other and our customers, the tools we use to support our work and the culture that binds us together. With safety our top priority, Melbourne Water aspires to be a leader in delivering our services. We're developing our people so we are able to respond to today's challenges, while preparing our workforce to be future-ready – bringing agility, creativity and resilience to design solutions in the decade that matters.

Inspired people

At Melbourne Water, our dedicated team of professionals lies at the heart of our capacity to provide vital services to the city of Melbourne.

Our approach

We have an exciting future ahead of us. Population growth and climate change are challenges that require us to think differently and to take new, bold approaches to ways of 'New Normal Ways of Working' program.

That is why this year, we began our journey of building a better Melbourne Water. This program aims to:

- improve our performance as a business
- make this an easier place to work
- set us up to deliver our strategic goals for today, tomorrow and for generations to come.

Our 'Building a Better Melbourne Water Program' seeks to ensure that our people are enabled to deliver our current obligations efficiently and have capacity and capability to respond to new challenges.

Culture and engagement

To support our journey towards building a better Melbourne Water, through co-creation workshops, Board and senior leader consultation and staff forums, we have defined and agreed upon our new Melbourne Water cultural narrative, values and behaviours with the view to launch these to our staff in August 2023 as part of an ongoing cultural campaign that is aligned with our learning agenda.

We have undertaken major groundwork to date, which includes exploring, sense-making, framing and articulating our current and future state. In June 2022, we conducted a cultural diagnostic process to gain valuable insights into our existing organisational culture. This assessment enabled us to pinpoint areas that required attention to align our culture with our new strategic priorities.

Through co-creation workshops, Board and senior leader consultation and staff forums, we have defined and agreed upon our new Melbourne Water cultural narrative, values and behaviours with the view to launch these to our staff in August 2023 as part of an ongoing cultural campaign that is aligned with our learning agenda.

A learning organisation

Our ambition to be a learning organisation remains one of Melbourne Water is committed to becoming a 'learning organisation' to effectively address the challenges and opportunities we face within a rapidly changing environment. To enable this shift, a new framework has been established, which balances a programmatic approach with one that encourages learning in the flow of work.

For our learning agenda to be a key strategic enabler, we have refined our vision for learning, launched a new learning narrative for the business and refreshed our learner pathway, defining a set of core capabilities across the business to help set us up for the 'decade that matters'.

We have introduced key mindsets and habits to support business transformation and have also enhanced our digital learning offering, improving the learner experience to encourage self-directed and mobile-enabled learning. An example of this is partnering with LinkedIn Learning to help our people get answers to their questions on demand, when and where they need them.

Balancing the learning agenda with the capacity of the workforce is crucial for achieving the organisation's goals, and Melbourne Water is ready to evolve its approaches for a more balanced workforce.

Culture and engagement survey

Melbourne Water conducted our employee engagement survey in June 2023, and will move from an annual to a quarterly survey format going forward. This agile approach aims to focus on specific themes each quarter and adapt to changing needs and environmental factors.

The survey reported a strong participation rate of 79 per cent, and an engagement score of 57 per cent, down from previous year's results.

The reduction in Melbourne Water's engagement is primarily attributed to our people's experience with the large scale transformation and restructuring program we embarked on over the financial year and the associated change and transition. Additionally, external macroeconomic factors such as inflationary pressure and challenges related to the cost of living, have further influenced individual responses.

Despite these challenges, 73 per cent of employees take great pride in contributing to Melbourne's quality of life and 68 per cent answered favourably to recommending Melbourne Water as 'a great place to work'.

A strong sense of work-life balance and flexibility at Melbourne Water was also reported with 92 per cent of employees having confidence in achieving business goals regardless of their location, demonstrating the value of trust and enablement around flexible and hybrid working.

In addition, diversity and inclusion initiatives continue to yield positive results, with 86 per cent of respondents favourably acknowledging Melbourne Water's support for a diverse and inclusive workforce. A significant majority of 86 per cent also believe that the organisation does not tolerate harassment and bullying.

Core capability programs

Over the past 12 months, more than 270 team members and leaders from across Melbourne Water have actively engaged in our learning organisation development opportunities. These programs include our Future Focus program, data and analytics boot camps, innovation design jams and pilots of our Customer Focus Capability Program.

Future Focus Program

Melbourne Water's Future Focus Program is dedicated to developing the capabilities required for the future. With over 100 leaders participating in the capability uplift program, we have also established the Future Focus Alumni group to maintain lasting connections among past participants.

In May 2023, we successfully hosted our first Future Focus Alumni event, bringing together approximately 45 individuals who had engaged in the program within the last year. The event served as a platform for reflection on the program's impact on participants' capabilities and mindsets, while also fostering strategic thinking and action to support the achievement of our goals.

Supporting our people leaders

To support our business through transformation, a series of 'Leading Through Change' sessions were delivered for our leadership cohort, with over 190 participants. In addition, Senior Leadership Group team formation sessions were also delivered to help the newly formed leadership team come together as one.

Throughout the year, Melbourne Water has also engaged with other water industry businesses to create a 'Water Industry Learning and Development Network', allowing us to share learning and development insights, expertise and ideas, and address challenges and opportunities.

New ways of working

Melbourne Water developed a New Normal Ways of Working Program to validate the idea that by shifting to hybrid and flexible work as 'the way we work now', there will be benefits at the individual, organisational and societal levels.

With behavioural interventions from the last 18 months delivering high levels of employee trust and engagement, further work is underway to embed new ways of working that accelerate problem solving and foster connection and collaboration in person or hybrid.

In June 2023, the refurbishment of a concept floor and our town hall space were delivered to modernise Melbourne Water's head office and enable a variety of different work tasks and styles, including experimentation and collaboration, with dedicated quiet spaces to complete high-focus work. This concept floor also includes a first-of-its-kind dedicated yarning circle and all gender bathrooms.

Flexible work

In 2021, initial research was conducted in collaboration with Monash BehaviourWorks to examine the attitudes of approximately 60 per cent of Melbourne Water employees towards the challenges and opportunities associated with transitioning from remote to blended work. A second phase of research was carried out in 2022. This phase specifically focused on frontline operational roles, as they were underrepresented in the initial study.

The second phase involved interviews and focus groups with over 30 employees from Waterways and Catchment Operations who held frontline and site-based positions. The objective was to gain insights into the barriers and opportunities for accessing formal flexible work arrangements within these roles. Subsequently, six participants were selected to take part in a pilot trial of a nine-day fortnight schedule.

The research and pilot trial were instrumental in enhancing the understanding of barriers and enablers in relation to flexible work arrangements for frontline and crew-based roles. The valuable insights gained from this initiative will be utilised to shape future interventions aimed at supporting and promoting flexibility for frontline operational roles.

Our commitment to the way we work continues to generate positive momentum, build trust with employees, and position Melbourne Water as a progressive, modern and purposeful organisation.

Diversity and inclusion

Melbourne Water aspires to achieve a truly inclusive workplace culture, characterised by all employees demonstrating respect and value for diversity, including backgrounds, perspectives, skillsets and contributions. We are committed to ensuring that we attract and retain people from diverse backgrounds, and provide opportunities to all Melbourne Water employees, regardless of their individual characteristics.

Through building our inclusive workplace culture, identifying and removing barriers to participation, and providing opportunities to individuals and groups who experience significant barriers to employment, we will grow the diversity of our workforce.

Diversity and inclusion snapshot

- Melbourne Water's representation of women has increased by 6.2 per cent over the previous five years to sit at 41.7 per cent.
- Female representation has increased 0.6 per cent over 2022-23 to 41.7 per cent, up from 41.1 per cent in June 2022.
- Females now represent 46.3 per cent of our Senior Leadership Group roles.
- The current gender pay gap is one per cent.
- The number of our team who identify as Aboriginal and Torres Strait Islander has increased by 0.5 per cent and now sits at 0.9 per cent.

Our workforce in numbers

In 2022-23, Melbourne Water:

- Employed 1204.36 full-time equivalent (FTE) people compared to 1232 FTE in 2021-22.
- Continued to actively support greater diversity in our workforce, with females now comprising 42 per cent of our workforce compared to 41 per cent in 2021-22.
- Has 60 per cent of employees covered by the Enterprise Agreement.
- Filled 43 per cent of our vacant roles via internal candidates, consistent with our focus on career development.

Gender equity

Gender Equality Action Plan

This year, we launched our refreshed Gender Equality Action Plan, focusing on addressing gender inequality and building on the progress made since 2016.

The following highlights and programs included:

- all gender bathrooms
- a campaign promoting respectful behaviour
- LGBTIQ+ inclusion messaging and awareness events
- support of Water Able, the water sector's accessibility network
- further progress on our Accessibility Inclusion Plan actions ahead of designing our new plan for 2023-2026, which supports Melbourne Water's compliance with the *Disability Act 2006*.

Cultural and linguistic diversity

The Pathways Program, in partnership with Jesuit Social Services, aims to increase diversity by providing opportunities for qualified individuals from culturally and linguistically diverse backgrounds to gain Australian work experience.

Employment data

Employee-related statistics are provided as additional information in support of statutory reporting and other obligations. Employees have been correctly classified in workforce data collections and are presented in Table 14.

Table 14: Employee profile data by type for the past two years

		All Employees		Ongoing			Fixed term and casual	
		Number (headcount)	FTE	Full time (headcount)	Part time (headcount)	FTE	Number (headcount)	FTE
June 2023								
Demographic Data	**Gender**							
	Male	744	725.27	639	54	683.85	51	41.42
	Female	532	478.08	323	148	430.90	61	47.18
	Self described	1	1.00	1	0	1.00	0	0.00
	Age							
	Under 25	28	25.91	18	0	18.00	10	7.91
	25-34	252	244.90	205	17	217.60	30	27.30
	35-44	473	439.23	334	109	414.88	30	24.35
	45-54	327	310.46	253	52	293.14	22	17.32
	55-64	166	159.20	134	21	151.04	11	8.16
	Over 65	31	24.65	19	3	21.09	9	3.56
Classification Data	**Classification**							
	Casual	34	14.86				34	14.86
	Enterprise Agreement (EA) Total	**728**	**694.08**	**560**	**110**	**639.53**	**58**	**54.55**
	EA Level 1	12	12.00	2	0	2.00	10	10.00
	EA Level 2	61	59.20	52	5	55.20	4	4.00
	EA Level 3	89	86.59	75	7	79.59	7	7.00
	EA Level 4	50	44.70	37	10	42.10	3	2.60
	EA Level 5	88	84.37	66	14	76.53	8	7.84
	EA Level 6	116	111.14	89	14	99.66	13	11.48
	EA Level 7	303	287.14	231	59	275.51	13	11.63
	EA Senior Officer	9	8.94	8	1	8.94	0	0.00
	Management Contract Total	**515**	**495.42**	**403**	**92**	**476.22**	**20**	**19.20**
	Senior managers	508	488.42	396	92	469.22	20	19.20
	Executives	7	7.00	7	0	7.00	0	0.00
	Total Employees	**1277**	**1204.36**	**963**	**202**	**1115.75**	**112**	**88.61**
June 2022								
Demographic Data	**Gender**							
	Male	725	700.80	624	154	662.48	48	38.32
	Female	506	435.90	313	52	407.19	40	28.71
	Self described	1	1.00	1	0	1.00	0	0.00
	Age							
	Under 25	26	21.54	15	1	15.60	10	5.94
	25-34	259	235.81	223	20	223.14	16	12.67
	35-44	451	411.52	320	105	389.24	26	22.28
	45-54	311	294.44	240	57	283.45	14	10.99
	55-64	156	149.11	120	21	137.75	15	11.36
	Over 65	29	25.28	20	2	21.49	7	3.79
Classification Data	**Classification**							
	Casual	27	10.46					
	Enterprise Agreement (EA) Total	**729**	**681.11**	**568**	**110**	**633.59**	**78**	**57.99**
	EA Level 1	4	3.80	3	0	3.00	2	0.87
	EA Level 2	75	70.40	58	8	62.20	14	9.17
	EA Level 3	78	73.60	75	1	71.60	6	3.54
	EA Level 4	45	38.97	31	11	36.57	4	2.71
	EA Level 5	88	84.47	73	9	78.47	9	8.08
	EA Level 6	141	133.92	109	14	117.00	21	18.06
	EA Level 7	285	263.37	209	64	252.17	20	14.83
	EA Senior Officer	13	12.58	10	3	12.58	2	0.73
	Management Contract Total	**476**	**446.12**	**370**	**96**	**437.08**	**10**	**9.04**
	Senior managers	464	434.12	358	96	425.08	10	9.04
	Executives	12	12.00	12	0	12.00	0	0.00
	Total Employees	**1232**	**1137.69**	**938**	**206**	**1070.67**	**88**	**67.03**

Notes:
- Employees on leave without pay or parental leave without pay excluded, as per FRD 29 guidance
- Employees on secondment included, as per FRD 29 guidance
- Graduates included in workforce data, as per FRD 29 guidance

Local Jobs First

The Local Jobs First Policy issued under the *Local Jobs First Act 2003* supports businesses and workers by ensuring that small and medium enterprises are given full and fair opportunities to compete for large and small government contracts.

The policy brings together the Victorian Industry Participation Policy (VIPP) and Major Project Skills Guarantee (MPSG) policy, which were previously administered separately.

Departments and public sector bodies are required to apply the Local Jobs First Policy in all projects valued at $3 million or more in Metropolitan Melbourne or for state-wide projects, or $1 million or more for projects in regional Victoria.

Projects up to $50 million in value are regarded as Standard Projects and projects valued at or above $50 million are deemed to be Strategic Projects. MPSG applies to all construction projects valued at $20 million or more.

This policy is supported by the Local Jobs First Commissioner.

Projects commenced – Local Jobs First Standard

Melbourne Water commenced three Local Jobs First Standard Projects in metropolitan Melbourne totalling $45,667,265. MPSG did not apply to any of these projects that commenced in 2022-23.

The average of local content commitment is 90 per cent. A total of 75 Annualised Employee Equivalent (AEE) jobs are to be created and 61.3 AEE of existing jobs are to be retained.

Projects completed – Local Jobs First Standard

During 2022-23, Melbourne Water completed two standard projects in metropolitan Melbourne totalling $6,229,036.

The outcomes expected from the implementation of the Local Jobs First policy to these projects where information was provided, were as follows:

- an average of 69 per cent of local content commitment was made
- a total of 7.73 AEE jobs were committed and 16.62 jobs AEE were actually supported.

Projects commenced – Local Jobs First Strategic

During 2022-23, Melbourne Water commenced six strategic projects totalling $1,410,857,547. MPSG applied to four of these projects.

The expected outcomes reported from the implementation of the policy are as follows:

- the average commitment is 95.68 per cent of local content
- a total of 378.92 AEE jobs will be created
- retention of 338.96 AEE jobs
- creation of 57.81 AEE new apprentices, trainees and cadetships
- retention of 12.90 AEE existing apprentices, trainees and cadetships.

Projects completed – Local Jobs First Strategic

During 2022-23, Melbourne Water completed three strategic projects, valued at $53,671,697. The MSPG applied to these three projects.

The outcomes reported from the implementation of the policy where information was provided were as follows:

- an average of 63 per cent of local content outcome was recorded
- a total of 99.72 AEE positions were supported, including the creation of 4.57 new jobs and the retention of 95.15 existing jobs AEE
- a total of 4.07 AEE apprenticeships, traineeships and cadets were also supported.

Safety, health and wellbeing

Keeping our people and the community safe.

Our approach

Keeping people safe is our highest priority, whether they are employees, contractors, delivery partners, volunteers or visitors.

Our diverse operational footprint means that we encounter various process-related safety risks that need to be effectively managed at all times. These include managing hazardous materials, operating an extensive electrical distribution network, and overseeing maintenance and production tasks.

This is distinct from the management of people safety risks that are present when we protect our catchment areas while weeding, slashing, chain sawing and conducting general maintenance of our lands, or the construction activities that occur while delivering some of our major capital projects.

To prioritise our safety efforts effectively, we employ a critical risk methodology. This approach focuses on identifying and mitigating risks that pose the greatest potential harm. By concentrating on these high-risk areas, we ensure that our assurance activities are targeted and aimed at reducing significant risks throughout our operations.

Since 2017, we have been striving towards a generative safety culture. This means that we need to embed safety in everything we do by making it an intrinsic value we hold and share. We go beyond compliance and responding to safety events as we work towards building a culture where safety is a whole-of-life experience, starting in the home and reinforced in the workplace.

Health and safety initiatives

Underpinning our framework are the following dedicated improvement programs and campaigns. These initiatives focus on promoting safe work practices, healthy work environments, and positive outcomes for staff mental health and wellbeing.

Business-wide campaigns

- Our #NotPartoftheJob campaign was designed to raise awareness around occupational violence such as work-related abuse, harassment or assault. A series of training sessions were provided to educate employees about how to manage difficult interactions with the public.
- Our second annual Melbourne Water Step Challenge was conducted to promote physical activity, mental health and social connection among employees. We collectively walked 50 million steps in three weeks and raised $1,250 for Water Aid.
- RUOK? Day was promoted to reduce stigma and promote open, honest conversations about mental health. This year we also encouraged employees to turn inwards and reflect on their own wellbeing using a simple self-check guide.
- The introduction of monthly Spotlight on Safety topics, aligned with Melbourne Water's greatest operational risks to ensure that our staff and contractors have 'safety first' at the forefront of their minds every day.
- UV Safety sessions were presented by the Cancer Council to field crews to reduce skin cancer risks.
- Complimentary flu vaccinations for employees, contractors and their family members were again delivered as part of our annual program.
- Our Employee Assistance Program experienced high usage at 13.6 per cent of staff using the program with 71 per cent of issues raised relating to personal factors.

Spotlight on 'Mind on the Drive' campaign

To raise awareness around workplace fatalities related to vehicle collisions, Melbourne Water launched the 'Mind on the Drive' campaign in May 2023.

National statistics have highlighted that vehicle accidents are the leading cause of workplace fatalities. The geographical nature of Melbourne Water's assets poses additional risks, as driving between sites and navigating isolated and remote catchment areas and water supply reservoirs intensifies the risk profile.

The 'Mind on the Drive' campaign aimed to reduce vehicle-related incidents by addressing the psychological factors that influence driving behaviour. To develop the program, Melbourne Water collaborated with the Monash University Accident Research Centre, who provided valuable insights. The centre's research demonstrated that by influencing thought patterns and behaviours, it is possible to encourage safer driving outcomes.

Mental health and wellbeing framework

Our goal is for Melbourne Water to be a mentally healthy organisation where people are thriving. This year, we continued work on the development of our Mental Health and Wellbeing Framework.

We understand that a mentally healthy workplace sees increased employee engagement, high employee attraction and retention as well as an improved bottom line through reduced turnover and increased productivity.

By working towards implementation of the framework, we will align with the *Occupational Health and Safety Amendment (Psychological Health) Regulations* to be introduced in 2023.

Our performance

Melbourne Water successfully maintained the certification of our Integrated Management System to accredited ISO9001, ISO45001, ISO14001 and ISO22000 standards and achieved improved levels of safety performance.

Our total injury frequency rate reduced from 3.5 (June 2022) to 3.1 (June 2023). While no injury is ever acceptable, the majority of these were linked to minor muscular and skeletal strains and sprains. A further breakdown of our data can be found in our expanded safety results in Figure 11, Table 15 and Table 16.

Figure 11: Total recordable injury frequency

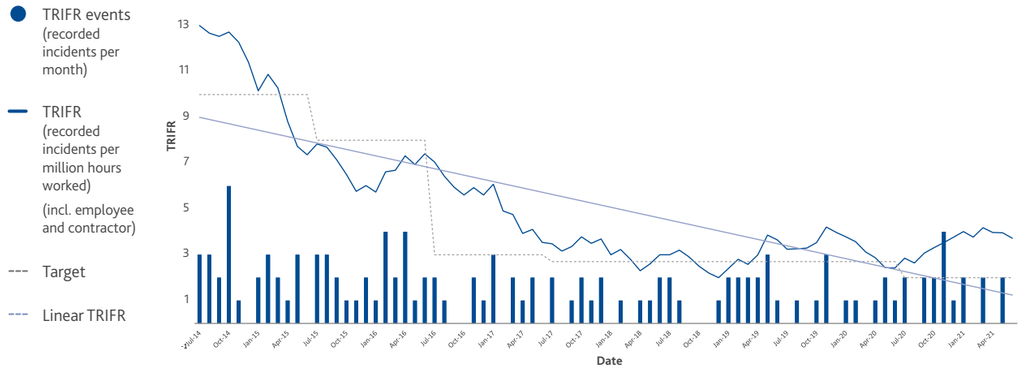


Table 15: Number of reported safety incidents and lost time standard claims per 100 full-time equivalent (FTE) staff

		Hazards		Incidents		Total (hazards + incidents)		Lost time standard claims		
Year	FTE	No.	No./100 FTE	No.	No./100 FTE	No.	No./100 FTE	No.	No./100 FTE	Average cost per claim[1]
2016-17	1002	503	50.20	438	43.70	941	93.90	1	0.10	$65,339
2017-18	1029	546	53.10	303	29.40	763	74.10	3	0.30	$59,736
2018-19	1096	529	48.30	333	30.40	862	78.60	4	0.36	$77,333
2019-20	1132	426	37.60	247	21.80	673	59.40	5	0.44	$79,392
2020-21	1164	395	33.90	322	27.60	717	61.60	7	0.60	$94,746
2021-22	1138	456	40.10	363	31.90	819	72.00	3	0.26	$82,190
2022-23	1204	207	18.10	398	34.80	605	52.84	4	0.30	$118,666

[1]Includes payments to date and estimates of outstanding claim costs advised by WorkCover.

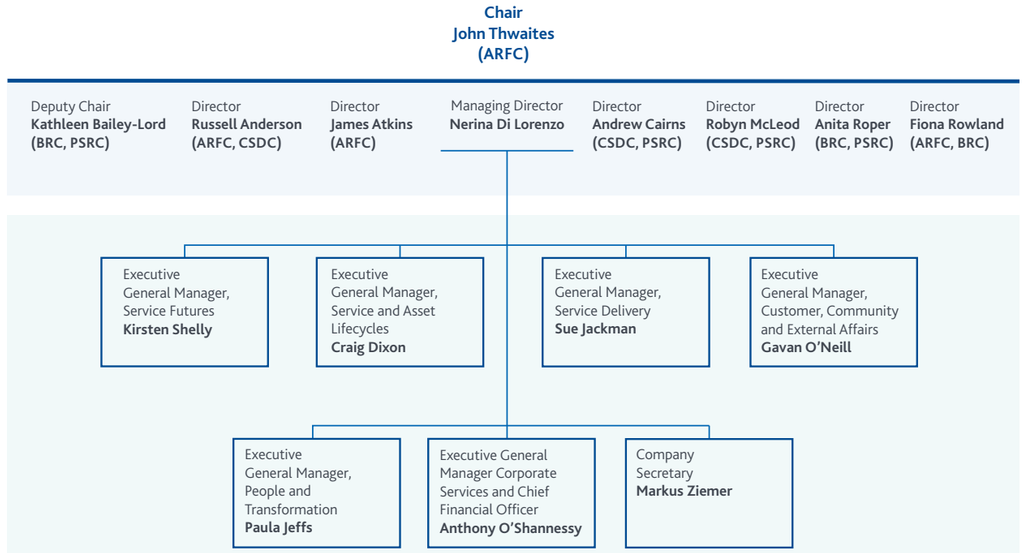
Table 16: Types of injury

Item	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Lost time injury (LTI)	6	3	7	7	7	7	5
Restricted work injury (RWI) / Medical treatment injury (MTI)	6	10	9	4	10	10	8
First Aid	78	74	59	47	72	70	77
Total	**90**	**88**	**75**	**58**	**89**	**87**	**90**

Our business

In the delivery of its services, Melbourne Water places great importance on upholding social responsibility and always ensuring financial accountability.

Organisational structure



Subsequent events:

Fiona Schutt was appointed to the role of Executive General Manager Corporate Services and Chief Financial Officer, commencing on Tuesday July 11, 2023. For further details see Note 7.7 (Subsequent events) to the Financial Report

Legend:

Board Subcommittees

ARFC: Audit, Risk and Finance Committee

BRC: Business Resilience Committee

CSDC: Customer and Service Delivery Committee

PSRC: People, Safety and Remuneration Committee

Corporate governance

Melbourne Water is committed to ensuring that its corporate governance framework, policies and practices are of a high standard. Delivering on this commitment requires Melbourne Water to have a sound understanding of current governance requirements and practices as well as being attuned to emerging governance trends and shifting stakeholder expectations.

Ethics and values

Melbourne Water's directors and employees are committed to operating ethically and in the best interests of customers, the Victorian Government, employees, suppliers and other stakeholders. The organisation has adopted the *Melbourne Water Code of Conduct* [8].

All directors, managers and employees are expected to perform their duties with integrity and honesty. This expectation extends to dealing with our people, customers, suppliers and the community. Melbourne Water employees and managers must comply with the *Melbourne Water Code of Conduct*.

Policies and procedures exist for directors and employees in relation to the identification of actual and potential conflicts of interest. These documents are regularly updated.

The Company Secretary maintains a Register of Directors' Interests and a register of gifts and invitations accepted by directors and employees. As part of maintaining a safe and healthy working environment, the Board has approved behavioural and workplace policies for specific purposes, such as health and safety, and equal opportunity. These policies are widely publicised and made available to our employees.

Powers and accountability

Melbourne Water operates under the *Water Act 1989*.

Melbourne Water has one by-law: Extension By-law No. 1: Water Supply Protection (2018).

The Minister for Water has delegated powers of management under the Act relating to licensed private water diversions from waterways to Melbourne Water, effective as of 1 July 1999. The Act and by-laws are available at the Victorian Legislation website.

The responsible Minister for the period from 1 July 2022 to 30 June 2023 was the Hon Harriet Shing MP, Minister for Water. Melbourne Water works with officers of the Department of Energy, Environment and Climate Action (DEECA) and the Department of Treasury and Finance (DTF). Statutory and other reports are provided, covering Melbourne Water's performance against the objectives and performance indicators stated in the Corporate Plan.

There have been no recorded incidents of non-compliance with laws or regulations in 2022-23 resulting in sanctions or fines.

Primary responsibilities

Melbourne Water's Board has adopted a charter that defines its role and responsibilities within the legislative framework provided by the *Water Act 1989* and other applicable legislation including the *Public Administration Act 2004*. The Board makes plans to achieve specific objectives, including:

- long-term, sustainable outcomes based on a triple bottom line approach
- approval of corporate plans together with key performance indicators linked to objectivesapproval of annual financial statements and monitoring of performance against objectives and risks
- monitoring safety, health and environmental standards and management systems.

The Board has ratified a Corporate Governance Statement. Key features of its activities include the following:

- ensuring the Board meets frequently enough to fulfil its duties and obligations, holding nine Board meetings during 2022-23 and undertaking site visits and strategy workshops with Melbourne Water's Executive Leadership Group. Special Board and committee meetings are convened as required to meet the needs of the business
- a structured induction program for new Board and committee members
- development opportunities for Board members on an ongoing basis
- conflicts of interest are declared, and a director does not participate in decisions where such a conflict exists
- directors have the right to seek independent professional advice, at Melbourne Water's expense, in connection with their duties and responsibilities
- declarations of pecuniary interest by directors are made upon appointment, and thereafter annually, and confirmed at each Board meeting
- there is an annual review of Board performance.

The Board has four committees. These have been comprised of non-executive directors, who meet periodically to focus on: risk, audit, finance and sustainability (four non-executive directors), people, safety and remuneration (four non-executive directors), customer and service delivery (three non-executive directors) and business resilience (three non-executive directors) respectively. The Managing Director and the relevant Executive General Manager attend committee meetings by invitation. The Board approves the charter for each committee.

Audit, Risk and Finance Committee

The role of the Audit, Risk and Finance Committee (ARFC) is to assist the Board of Directors in fulfilling its responsibilities relating to:

- the financial management framework and reporting process
- review and monitoring of the Enterprise Risk Profile, emerging sources of risks and the mitigation measures in place to deal with those risks, including in relation to Information Technology security and climate change
- corporate governance
- audit (internal and external) and assurance
- information technology.

The Audit, Risk and Finance Committee comprised, from the period 1 July 2022 Fiona Rowland (Chair), Russell Anderson, James Atkins and John Thwaites. A report about the activities of the Audit, Risk and Finance Committee in fulfilling its charter is prepared annually.

People, Safety and Remuneration Committee

The role of the People, Safety and Remuneration Committee (PSRC) is to assist the Board of Directors in fulfilling its responsibilities relating to:

- workplace health and safety
- workplace culture
- strategic human resources (including but not limited to diversity and inclusion, change management and employee engagement)
- organisational capability
- remuneration.

For details of directors' and executives' remuneration, refer to the financial statements. The People, Safety and Remuneration Committee comprised from the period 1 July 2022 Anita Roper (Chair), Kathleen Bailey-Lord, Robyn McLeod and Andrew Cairns. A report about the activities of the People, Safety and Remuneration Committee in fulfilling its charter is prepared annually.

Customer and Service Delivery Committee

The role of the Customer and Service Delivery Committee (CSDC) is to assist the Board in fulfilling its business objectives and responsibilities relating to:

- delivery of services and experiences our customers and community value
- affordable asset delivery to enable these services
- protecting the environment and public health.

The Customer and Service Delivery Committee comprised from the period 1 July 2022 Russell Anderson (Chair), Robyn McLeod and Andrew Cairns. A report about the activities of the Customer and Service Delivery Committee in fulfilling its charter is prepared annually.

Business Resilience Committee

The role of the Business Resilience Committee (BRC) is to assist the Board in the oversight of material risks and reputational issues.

The Business Resilience Committee was established on 22 February 2023. The Business Resilience Committee comprised from its establishment in February 2023 Kathleen Bailey-Lord (Chair), Anita Roper (Chair of the People, Safety and Remuneration Committee) and Fiona Rowland (Chair of the Audit, Risk and Finance Committee).

Board of Directors

The Minister for Water, in consultation with the Treasurer, appoints the directors of Melbourne Water for terms of up to four years and the Victorian Government sets their remuneration.

Directors are eligible for reappointment for subsequent terms. In making new appointments to the Board, the Victorian Government ensures the Board has the necessary combination of skills and experience. The Managing Director is appointed by the Board, subject to the approval of the Minister in consultation with the Treasurer, for a term of up to five years.

Typically, annual reviews are conducted on the performance of the Board as a whole and of individual members pursuant to a Statement of Obligations issued by the Minister. The outcomes of these performance reviews are reported to the Treasurer and the Minister. The Board of Directors currently comprises a non-executive chair, seven non-executive directors and the Managing Director.

John Thwaites, Chair

John Thwaites is Chair of Melbourne Water.

Mr Thwaites is a Professorial Fellow at Monash University and Chair of the Monash Sustainable Development Institute and Climateworks Centre. He is the Chair of the McKinnon Institute for Political Leadership.

Mr Thwaites is a Co-Chair of the Leadership Council of the UN Sustainable Development Solutions Network (SDSN) launched by the Secretary General of the United Nations to provide

[8] https://www.melbournewater.com.au/sites/default/files/2017-10/Code-of-Conduct.pdf

expert advice and support on the Sustainable Development Goals. He is also a director of FairTrade ANZ and Honorary Chair of the Biodiversity Council. In 2013, John was named as one of the 100 Global Sustainability Leaders by ABC Carbon Express.

Mr Thwaites was Deputy Premier of Victoria from 1999 until his retirement in 2007. During this period he was Minister for Health, Minister for Planning, Minister for Environment, Minister for Water, Minister for Victorian Communities and Victoria's first Minister for Climate Change. In these portfolios he was responsible for major reforms in social policy, health, environment and water.

Prior to being elected to Parliament, he was a barrister and Mayor of South Melbourne. He has degrees in Law (Honours) and Science from Monash University.

Mr Thwaites was appointed as Chair of Melbourne Water on 1 October 2015.

Nerina Di Lorenzo, Managing Director

Dr Nerina Di Lorenzo is the Managing Director of Melbourne Water Corporation. She leads Melbourne Water's vision of enhancing life and liveability for the greater Melbourne region, encompassing the provision of water supply, sewerage, drainage, waterway health and catchment management services.

Prior to this appointment Dr Di Lorenzo was the Executive General Manager of Service Delivery at Melbourne Water from 2019. Dr Di Lorenzo has over 21 years of experience in senior leadership roles, including as CEO of Merri-bek (Moreland) City Council for five years. She brings a strong focus on delivering strategy and performance improvement focused on customer and stakeholder outcomes, along with extensive experience in Asset Management, Infrastructure Operations, Project Delivery and Business Improvement.

Dr Di Lorenzo commenced her early career in the oil industry as an engineer on the oil rigs in Bass Strait. Dr Di Lorenzo holds a Bachelor of Engineering, a Bachelor of Business and a PhD centering on the topic of organisational change management.

Kathleen Bailey-Lord, Deputy Chair

Kathleen Bailey-Lord is an experienced company director. She has served on boards across listed, private and for-purpose sectors. Her executive career spanned the technology, financial services and professional services. Experienced in digital technology and disruptive change through leading large businesses through complex and transformational change.

Ms Bailey-Lord currently serves as a Non-Executive Director of Alinta Energy, Janison, Datacom, St Vincents Health Australia (SVHA) and Monash College. Previous board roles include Bank of Queensland (BOQ); the Australian Government Solicitor (AGS); Trinity College, University of Melbourne; Chief Executive Women and the Diversity Council of Australia.

Ms Bailey-Lord is a Fellow of the Australian Institute of Company Directors (AICD), a member of the AICD Victorian Council and the AICD Governance of Technology and Innovation Panel. She is a member of Chief Executive Women.

Ms Bailey-Lord was appointed to the Melbourne Water Board on 1 October 2015. She chaired the People, Safety and Remuneration Committee from 2016-2022 and was appointed the Deputy Chair of the Board in 2022.

Ms Bailey-Lord was appointed Chair of the Business Resilience Committee in February 2023.

Russell Anderson, Director

Mr Russell Anderson was appointed as a Director of Western Region Water Corporate from 2007 to 2017 and is a former director of the Loddon Mallee Waste and Resource Recovery Group.

Mr Anderson is currently Strategy, Governance and Risk Advisor at Australian Health Service Alliance Ltd and is also self-employed as a governance consultant. In May 2022 Mr Anderson was appointed a member of the VicWater Board.

Mr Anderson's previous roles include Strategy, Risk and Corporate Governance Manager for Australian Air Express Pty Ltd and Chief Internal Auditor, Air New Zealand Group. Mr Anderson has a Bachelor of Commerce and a Graduate Diploma of Applied Corporate Governance and is a Fellow of the Governance Institute of Australia.

Mr Anderson was appointed to the Melbourne Water Board on 1 October 2017 and was appointed Chair of the Board's Customer and Service Delivery Committee in 2022.

James Atkins, Director

Mr James Atkins FAICD is an experienced business advisor, marketing strategist and company director with over 35 years of experience working at a senior level in the retail, financial services and energy sectors. He is currently the Chair of BIG4 Holiday Parks and a Board member of the Connective Group. James is also director of Vantage Strategy, a consulting firm that provides business advisory services to commercial, government, and not-for-profit organisations.

Mr Atkins was appointed to the Melbourne Water Board on 1 October 2021.

Andrew Cairns, Director

Mr Andrew Cairns has extensive experience in the water industry, having served on the Board of Coliban Water and as Chair of Western Water. His professional career has spanned a number of industries in Australia and internationally, including manufacturing, telecommunications and finance. Andrew is a strong believer in the importance of corporate social responsibility. As CEO of Haven Home Safe, he works collaboratively with government, public and private partners to keep Victorians in safe, secure and affordable homes. Mr Cairns was appointed to the Melbourne Water Board on 1 October 2021.

Robyn McLeod, Director

Ms Robyn McLeod has held the positions of Independent Commissioner for Water Security in South Australia, National Director of Water at KPMG and Executive Director of Major Projects, Water with the Department of Sustainability and Environment, Victoria.

Ms McLeod is currently a Director of Clean Teq Water Limited (CNQ) and in 2022 completed four years as Director of VicWater. Currently Robyn serves on the Board of Austin Health, following her term as a Director of Monash Health.

She was Chief of Staff to the Victorian Energy Resources and Ports Minister and an Advisor to the Victorian Environment and Education Minister. Ms McLeod has previously worked in higher education, industrial relations and secondary teaching.

Robyn is a Fellow of the Australian Institute of Company Directors and has completed the Senior Executive Fellows Program at The Kennedy School of Government, Harvard University. Previous Board positions include as an inaugural Director of The Australian Centre for Social Innovation.

Ms McLeod was appointed to the Melbourne Water Board on 1 October 2015.

Anita Roper, Director

Ms Anita Roper is an experienced senior executive with a diverse background in various management roles across business, government, communities and multilateral agencies in Australia, Canada, the UK and the USA.

Her executive career encompasses both the private and public sectors, and she has held positions including Chief Executive Officer at Sustainability Victoria and Global Director of Sustainability with Alcoa in New York. Throughout her career she has also served as Chair of the Aluminium Stewardship Initiative and Chair of the Stroke Association of Victoria, and has been involved on numerous boards and advisory panels, including Yarra Valley Water.

Ms Roper holds a Graduate qualification from of the Australian Institute of Company Directors and is a Fellow of the Institute of Managers and Leaders ANZ.

Ms Roper was appointed to the Melbourne Water Board on 1 October 2021 and was appointed the Chair of the People, Safety and Remuneration Committee in 2022.

Fiona Rowland, Director

Ms Fiona Rowland, FAICD is an experienced Non-Executive Director, and former CEO, in public, private, government and for purpose sectors with significant experience in leading established and disruptor businesses through transformational and regulatory change.

Ms Rowland has deep experience in the financial services and infrastructure sectors. Prior to her board career, she was a CEO and executive director with 18 years' executive management and CEO experience at the Bennelong Group, National Australia Bank, Australia and New Zealand Banking Group, UBS AG.

Ms Rowland is currently the Non-Executive Chair of Macquarie Investment Services Limited (part of Macquarie Group Ltd ASX: MQG) and Non-Executive Director of Infrastructure Specialist Asset Management Limited (part of the UK Foresight Group Holdings Limited FSG: LSE), where she also Chairs the Audit, Compliance, Risk Management Committee and St Vincent's Institute of Medical Research, where she also Chairs the Investment Committee. Ms Rowland is an Independent Consultant to the UniSuper Audit, Risk and Compliance Committee and an Advisory Board member of Kearney Australia part of the global management consulting group.

Ms Rowland holds a Bachelor of Arts, a Bachelor of Laws (Honours) and is admitted as a legal practitioner in Victoria. She is also a Fellow of the Australian Institute of Company Directors and an alumnus of the Australian Institute of Company Directors Chair Mentors Program. Ms Rowland is a member of Chief Executive Women, an organisation representing prominent and influential women leaders from the corporate, public service, academic and not-for-profit sectors.

Ms Rowland was appointed to the Melbourne Water Board on 1 October 2017 and Chairs the Audit, Risk and Finance Committee (effective 2022).

Risk, emergency and asset management

Risk management is central to ensuring Melbourne Water understands and manages risks and uncertainties to enhance life and liveability.

As a provider of essential services, strict regulatory compliance and strong risk management are critical to what we do. To meet these requirements, we have robust business systems and processes in place to monitor and report on our performance and to alert us early when we are off track. Melbourne Water maintains an Enterprise Risk Management Framework consistent with the International Risk Management Standard (ISO 31000:2018) and the requirements of the Victorian Government's Risk Management Framework.

Melbourne Water's Enterprise Risk Management Framework comprises several key elements which, when combined, create an environment for effectively managing risk and pursuing opportunities. This framework includes:

- an established Risk Management Policy and Risk Appetite Statement
- a robust governance structure with a 'three lines of defence' operating model
- processes that ensure ongoing management of strategic and operational risks
- providing ongoing assurance over our control environment
- a comprehensive compliance program to ensure we continue to meet all our regulatory and legislative obligations
- continued education and development of risk capability across the organisation and maintaining a positive risk culture.

Melbourne Water maintains and tests our Emergency Management Framework, which outlines controls with respect to the preparation for, response to and recovery from internal and external emergencies. The framework aligns to the Australian Inter-service Incident Management System 2017 (AIIMS) and includes contingency, business continuity, emergency response and disaster recovery planning.

Last year, Melbourne Water participated in a range of interagency emergency management exercises aimed at testing and improving the plans and arrangements in place for response to emergency events. These included:

- desktop cyber response exercises to further test and enhance existing response arrangements for cyber intrusions and ransomware attempts
- a number of dam safety emergency plan exercises involving the Department of Energy, Environment and Climate Action (DEECA) and the State Emergency Service, focusing on responses to incidents such as extreme wet weather, flooding and earthquake.

Climate risks have one of the biggest impacts on how we deliver and manage our services. To view our climate related risk management approach, please see Appendix H.

Disclosure of emergency procurement

In 2022-23, Melbourne Water responded to several emergency events across its area of operations including flooding, water supply disruptions and waterway pollution.

Melbourne Water has a specific set of guidelines for enacting procurement outside of approved 'business as usual' arrangements during incidents and emergencies. In certain defined emergency circumstances, Melbourne Water is permitted to forgo routine procurement procedures.

The procurement of materials, equipment and labour can be undertaken outside of existing delegated approval authorities, quotation and sourcing requirements. Melbourne Water is to balance the need to act without delay (for example to save or preserve life or safeguard buildings or repair critical infrastructure) against meeting our overarching agency obligations (act lawfully, reasonably and with integrity).

Despite the events responded to during the year, these emergency procurement guidelines and procedures were not specifically activated for any emergency event. While costs were incurred in responding to and managing these circumstances, all procurement was undertaken in accordance with existing delegations, business as usual procurement procedures and existing contractual arrangements.

In 2022-23, Melbourne Water's total spend on wet weather recovery was $2.63 million from which $2.3 million (88 per cent) was spent with existing vendors (i.e., Field Services Panel) and $327,000 (12 per cent) was spent out of contract.

Melbourne Water did not award any contracts over $100,000 to a single entity as a result of the wet weather event.

Social responsibility

Ethical sourcing and Modern Slavery Statement

Our third Modern Slavery Statement was finalised this year, which describes the risks of modern slavery practices in our operations and supply chains, and the actions we have taken to assess and address these risks. This statement was lodged on the Australian Government Modern Slavery Register, in compliance with the requirements of the *Modern Slavery Act 2018* (Cth). Development of the statement was guided by our commitments to the Victorian *Charter of Human Rights and Responsibilities Act 2006* and the United Nations Sustainable Development Goals (SDGs).

Melbourne Water is proud of the progress it has made to date. While we have not identified any specific instances of modern slavery harm in our operations or supply chain, this year, we have expanded our whistleblowing program to allow Melbourne Water employees and contractors to report on suspected modern slavery instances and we have invested in a digital tool to better track risk of modern slavery in our supply chain. This tool will be implemented in the second half of 2023. Our Board and leaders are committed to addressing the risk of modern slavery occurring within our operations and supply chains and will continue to pursue efforts to promote awareness of our responsibilities through the implementation of policies, processes and training.

Social procurement

Melbourne Water embeds social procurement in our procurement processes in line with the Victorian Government's Social Procurement Framework (SPF).

Our market tenders include weighted criteria which supports delivery of social and sustainable outcomes across priority objectives including opportunities for Victorian Aboriginal people, women's equality and safety, opportunities for disadvantaged Victorians and environmentally sustainable outputs.

The Hobsons Bay Main Upgrade Project is an example of where we have delivered positive social outcomes across different SPF Outcomes. These outcomes include but are not limited to:

- purchasing services from Aboriginal businesses such as labour hire, plant hire, security, and waste.
- providing employment opportunities to diverse cohorts like Victorians with disability or disadvantaged Victorians.
- gender equality outcomes as 50 per cent of the engineering team are female. Female staff are also represented in roles such as site supervisors, laborers, safety advisors, project managers and leaders.

Our 5-West Nutrient Removal project at our Western Treatment Plant has also delivered positive social outcomes such as employment opportunities for Aboriginal people, Victorians with disabilities and disadvantaged Victorians.

Melbourne Water contributes to reconciliation by supporting Traditional Owner businesses. We have continued to support our partnership with Wara Paring through training and the delivery of projects and continue to leverage our Kinaway (Victorian Aboriginal Chamber of Commerce) relationship.

This year, Melbourne Water established a Field Services Panel consisting of 13 suppliers. Among them, two are social benefit suppliers, and the rest have made commitments aligned with our priority social procurement targets.

We have also appointed a local courier who is a certified social enterprise through the Mail and Delivery Services State Purchase Contract.

Field Services Panel refresh

Melbourne Water is delivering increased customer and community value through the implementation of the recently renewed Field Services Panel. The panels consist of qualified and experienced service providers to support the management and maintenance of our assets.

Since October 2022, approximately $23 million has been delivered through minor capital works, preventative and corrective maintenance, and emergency response.

The service providers, in conjunction with our waterway and catchment delivery teams, are committed to sharing learnings and insights to provide our people with safe, diverse and inclusive workplaces. This was recently showcased by Linda Vogt from Marriott's Support Services who chaired our first combined Safety Forum.

Marriott Support Services demonstrate Melbourne Waters commitment to building a fair, inclusive and sustainable Victoria through procurement. As a social enterprise, they have been engaged to deliver vegetation management and services that employ and benefit people from a diverse background of disabilities, supporting independence and connection through meaningful work and skill development over the next three years.

Our procurement initiatives ensure that we consider social, economic and environmental outcomes and leverage our buying power, advice and expertise to ensure all Victorians can participate in the economy.

Table 17: Achievements against defined SPF outcomes

SPF Objective	SPF Outcome	2022-23 Reporting Metrics	2022-23
Opportunities for Victorian Aboriginal people	Employment of Victorian Aboriginal people by suppliers to the Victorian Government	Total number of Victorian Aboriginal people employed by Victorian Government suppliers on Victorian Government contracts	41
	Purchasing from Victorian Aboriginal businesses	Number of Victorian Aboriginal businesses engaged [9]	17
		Total expenditure with Victorian Aboriginal businesses (excl. GST)	$8,513,528
Opportunities for Victorians with disability	Employment of Victorians with disability by suppliers to the Victorian Government	Total number of Victorians with disability employed by Victorian Government suppliers on Victorian Government contracts	2
	Purchasing from Victorian social enterprises and Australian Disability Enterprises	Number of Victorian social enterprises (led by a mission for people with disability) and Australian Disability Enterprises engaged	18
		Total expenditure with Victorian social enterprises (led by a mission for people with disability) and Australian Disability Enterprises (excl. GST)	$4,493,035
Women's equality and safety	Adoption of family violence leave by Victorian Government suppliers	Number of Victorian Government suppliers that have implemented a family violence leave policy	4
		Proportion of Victorian Government suppliers that have implemented a family violence leave policy	0.20%
	Gender equality within Victorian Government suppliers	Number of Victorian Government suppliers that have a gender equality policy	10
		Proportion of Victorian Government suppliers that have a gender equality policy	0.51%
	For all publicly funded construction projects valued at $20 million or more, the Building Equality Policy (BEP) replaces this objective. The defined outcome for the BEP is: improved gender equality within the construction sector.	• Total hours of trade covered labour by women • Percentage of trade covered labour by women • Total hours of non-trade Construction Award covered labour by women • Percentage of non-trade Construction Award covered labour by women • Total hours of management/supervisory and specialist labour by women • Percentage of management/supervisory and specialist labour by women • Total number of apprentice and trainee hours worked by women • Percentage of apprentice and trainee hours worked by women	N/A
Opportunities for disadvantaged Victorians	Job readiness and employment for: • long-term unemployed people; • disengaged youth; • single parents; • migrants, refugees and asylum seekers • workers in transition.	Number of Victorian Government suppliers that employ disadvantaged Victorians on Victorian Government contracts	13
		Total number of disadvantaged Victorians employed by Victorian Government suppliers on Victorian Government contracts	9
		Total number of hours dedicated to supporting disadvantaged Victorians with job readiness opportunities by Victorian Government suppliers on Victorian Government contracts	42,751
		Total number of disadvantaged Victorians who received job readiness opportunities by Victorian Government suppliers on Victorian Government contracts	23
	Purchasing from Victorian social enterprises	Number of Victorian social enterprises (led by a mission for one of the five disadvantaged cohorts) engaged	20
		Total expenditure with Victorian social enterprises (led by a mission for one of the five disadvantaged cohorts; excl. GST)	$2,492,028
Supporting safe and fair workplaces	Purchasing from suppliers that comply with industrial relations laws and promote secure employment	Number of Victorian Government suppliers that attest to compliance with the supplier code of conduct	19
		Proportion of suppliers who attest to comply with the Supplier Code of Conduct	0.96%
Sustainable Victorian social enterprises and Aboriginal business sectors	Purchasing from Victorian social enterprises and Aboriginal businesses	• Number of Victorian social enterprises engaged • Number of Victorian Aboriginal businesses engaged • Total expenditure with Victorian social enterprises (excl. GST) • Total expenditure with Victorian Aboriginal businesses (excl. GST)	Refer to Opportunities for People with Disability, Opportunities for Disadvantaged Victorians and Victorian Aboriginal Businesses above

[9] Note that this outcome features under both Opportunities for Victorian Aboriginal People and Sustainable Victorian Social Enterprises and Aboriginal Business Sectors. Departments and agencies may report this outcome under either objective, as appropriate.

Note that expenditure with Victorian Aboriginal Businesses and expenditure with Victorian Social Enterprises includes indirect spend reported through the Vendor Management Centre or directly to Melbourne Water as in line with contractual arrangements.

OUR BUSINESS | SOCIAL RESPONSIBILITY

Table 17: Achievements against defined SPF outcomes (continued)

SPF Objective	SPF Outcome	2022-23 Reporting Metrics	2022-23
Sustainable Victorian regions	Job readiness and employment for people in regions with entrenched disadvantage	• Number of Victorian Government suppliers that employ people who live in regions experiencing entrenched disadvantage on Victorian Government contracts • Total number of people employed by Victorian Government suppliers working on Victorian Government contracts who live in regions experiencing entrenched disadvantage • Number of hours dedicated to supporting people into work who are experiencing barriers to employment due to living in regions with entrenched disadvantage by Victorian Government suppliers on Victorian Government contracts • Total number of people who received job readiness support by Victorian Government suppliers on Victorian Government contracts who live in regions experiencing entrenched disadvantage	N/A
Environmentally sustainable outputs	Project-specific requirements to use sustainable resources and to manage waste and pollution	Total number of contracts entered into with Victorian Government suppliers that have clauses relating to both sustainable resources and to manage waste and pollution. This may cover items such as: • recycled/reused water as a percentage of total; • percentage or measure of water consumption • percentage of procurement materials sourced from accredited supply chains.	N/A
	Use of recycled content in construction works	Total number of contracts entered into with Victorian Government suppliers that have clauses relating to recycled content in construction works. This may cover items such as: • tonnes of recycled content specified in clauses in contracts or where not specified in tonnes, percentage of recycled content required; • measurement of recycled asphalt products used in asphalt surface • measurement of the repurposing of construction waste.	N/A
Environmentally sustainable business practices	Adoption of sustainable business practices by suppliers to the Victorian Government	Total number of contracts entered into with Victorian Government suppliers that have clauses for environmentally sustainable business practices. This may cover items such as: • percentage of procurement materials to be sourced from sustainable accredited supply chains; • Total number of contracts entered into with Victorian Government suppliers that have clauses for environmentally sustainable business practices. This may cover items such as: • percentage of procurement materials to be sourced from sustainable accredited supply chains; • infrastructure sustainability design ratings (such as 'excellent'); • application and achievement of Green Star Australia ratings; • application and achievement of ISO standards • application and achievement of industry recognised standards.	4
Implementation of the Climate Change Policy Objectives	Project-specific requirements to minimise greenhouse gas emissions	Total number of contracts entered into with Victorian Government suppliers that have a clause for project-specific requirements to minimise greenhouse gas emissions. This may cover items such as: • application and achievement of a specific rating and levels within a nominated industry rating system (for example, the Infrastructure Sustainability Council of Australia [ISCA] and Green Building Council of Australia [GBCA] Frameworks) for design, delivery and operational phases of a project; and • application of an Environmental Management Plan to identify and manage risks to achieving and maintaining required rating levels through the design, delivery and operational phases of a project.	N/A
	Procurement of outputs that are resilient against the impacts of climate change	Total number of contracts entered into with Victorian Government suppliers that have a clause for procurement of outputs that are resilient against the impacts of climate change. This may cover items such as: • application and achievement of national and international standards related to the management of climate change risks • achievement of industry recognised sustainability ratings or certification.	N/A

Financial strength

We remain focused on driving an efficient business that delivers value for money outcomes for our customers and shareholders.

Our financial security objectives are to ensure we:

- continue to deliver our valued services to customers at the lowest possible cost;
- provide a commercial return to our shareholders
- maintain our investment grade credit rating.

Maintaining our financial strength is a key enabler for our strategic business goals that will help us to meet future challenges and deliver on the commitment we made to customers in our 2021 Price Determination to keep bills low. We aim to do this over the short and medium term by:

- having a clear and mature pathway towards financial strength to fund both our ongoing operations and our transformational activities, underpinned by evidence that enables our customers and regulators to understand and support our financial decision making
- having a long-term view of our price path to ensure we are identifying early investment that can deliver long-run benefits
- understanding and responding to post-coronavirus (COVID-19) financial and build back imperatives of the Victorian Government
- developing financial efficiencies across our business (baselined against an improved understanding of productivity) and deliver alternative revenue to enable us to deliver broader outcomes to the community
- playing a role in maturing the market in areas where we have a strong strategic benefit, for example in decarbonisation and resource circularity.

Our financial performance in 2022-23 continues to be robust. We have recorded a positive net profit after tax result of $119.1 million ($130.1 million in 2021-22).

Total revenues for the financial year were $1,919.4 million ($1,935.9 million in 2021-22). Our net revenue for bulk water and sewage treatment is lower than the previous year due to the reduced water order for the Victorian Desalination Plant, partially offset by increased demand and an increase in average charges in line with the price determination. Our revenue from waterways and drainage charges is higher due to the growth in customer numbers and an increase in average charges in line with the price determination that reflects our customers' expectation of healthier waterways. Revenue associated with land development services has increased on the prior year due to continued strong growth in the development sector.

Total expenses (excluding tax) for the financial year were $1,715.8 million ($1,722.1 million in 2021-22). Our operational expenses are lower than the previous year due to the reduced water order for the Victorian Desalination Plant and lower energy expenses through greater use of renewable energy.

Employee benefit expenses have increased slightly in line with average pay increases and full-time equivalent (FTE) movements. We remain focused on delivering financial efficiencies in our expenditure. This will ensure we deliver valued services at the lowest possible cost and a commercial return for our shareholders to support the Victorian state budget outcomes.

During 2022-23, Melbourne Water made cash payments to the Victorian Government of $159.4 million ($199.0 million paid in 2021-22). The reduction from the previous year was due to timing of capital repatriations with nil paid during 2022-23 due to deferral to 2023-24 from the Treasurer of Victoria.

Capital expenditure of $746.0 million ($609.5 million in 2021-22) was incurred during the year, which was required to meet the growth in demand and renew existing infrastructure. The capital expenditure has contributed to an increase in total assets to $17,876.6 million (from $16,829.6 million as at 30 June 2022).

Five-year financial summary

Summary of financial result

Table 18: Summary of financial results

Statement of profit or loss For the year ended 30 June – extract	2023 $M	2022 $M	2021 $M	2020 $M	2019 $M
Total revenue	1,919.4	1,935.9	1,988.7	1,997.6	1,938.8
Operating and other expenses	(695.6)	(718.6)	(672.0)	(636.2)	(595.1)
Depreciation and amortisation expenses	(469.5)	(456.3)	(450.1)	(434.7)	(408.1)
Finance expenses	(550.7)	(547.2)	(573.9)	(601.8)	(618.2)
Net profit from operations before tax	**203.6**	**213.8**	**292.7**	**324.9**	**317.3**
Tax expense	(84.5)	(83.7)	(100.7)	(121.6)	(116.4)
Net profit for the period after tax	**119.1**	**130.1**	**192.0**	**203.3**	**201.0**

Statement of Financial Position as at 30 June – Extract	2023 $M	2022 $M	2021 $M	2020 $M	2019 $M
Current assets	168.5	154.9	145.2	143.6	153.4
Non-current assets	17,708.1	16,674.8	16,184.9	15,246.8	15,125.5
Total assets	**17,876.6**	**16,829.6**	**16,330.1**	**15,390.4**	**15,278.9**
Current liabilities	1,292.3	1,261.8	886.8	1,073.5	1,163.5
Non-current liabilities	8,630.4	8,532.2	8,788.6	8,443.4	8,372.4
Total liabilities	**9,922.7**	**9,794.0**	**9,675.4**	**9,516.9**	**9,535.9**
Net assets/Total equity	**7,953.9**	**7,035.6**	**6,654.7**	**5,873.5**	**5,743.0**

Statement of Cash Flows for the year ended 30 June – Extract	2023 $M	2022 $M	2021 $M	2020 $M	2019 $M
Net cash inflow from operating activities	580.5	545.3	594.9	555.3	534.9
Net cash (outflow) from investing activities	(648.5)	(545.3)	(589.1)	(455.6)	(513.0)
Net cash inflow/(outflow) from financing activities	63.1	2.6	(16.4)	(103.0)	(6.3)

Summary of financial performance

Table 19: Key financial performance indicators

Performance indicators	2023 $M	2022 $M	2021 $M	2020 $M	2019 $M
Cash Interest Cover	**2.3**	2.2	2.2	2.2	2.1
Gearing Ratio	**44.7%**	47.0%	48.1%	50.8%	51.2%
Internal Financing Ratio	**83.5%**	92.8%	87.2%	98.0%	93.4%
Current Ratio	**0.14 times**	0.14 times	0.19 times	0.15 times	0.15 times
Return on Assets	**4.3%**	4.6%	5.5%	6.0%	6.1%
Return on Equity	**1.6%**	1.9%	3.1%	3.5%	3.5%
EBITDA margin	**63.8%**	62.9%	66.2%	68.1%	69.3%

Explanatory notes:

Refer to the Performance Report for definitions of financial performance indicators and reporting of all 2022-23 performance indicators (financial and non financial) against targets with supporting explanations for any significant variations.

Directors' report

Directors

The Directors of Melbourne Water Corporation ('the Corporation') in office during the 2022-23 financial year were:

John Thwaites (Chair)
Nerina Di Lorenzo (Managing Director)
Kathleen Bailey-Lord (Deputy Chair)
Russell Anderson
James Atkins
Andrew Cairns
Robyn McLeod
Anita Roper
Fiona Rowland

Particulars of the directors' qualifications, experience and special responsibilities are set out on pages 78-81 of this report.

Directors' meetings

During the financial period, the Corporation held nine scheduled meetings of directors.

Attendance at meetings of the Board and its committees was as follows:

	Board		Audit, Risk and Finance Committee		People, Safety and Remuneration Committee		Customer and Service Delivery Committee		Business Resilience Committee	
	Attended	Maximum held	Attended	Maximum held	Attended	Maximum held	Attended	Maximum held	Attended	Maximum held
John Thwaites (Chair)	9	9	3	4	Nil^	Nil	Nil^	Nil	Nil^	Nil
Nerina Di Lorenzo (Managing Director)	9	9	4^	4	3^	4	4^	4	6^	7
Kathleen Bailey-Lord (Deputy Chair)	8	9	2^	2	4	4	Nil^	Nil	6	7
Russell Anderson	9	9	4	4	2^	2	4	4	3^	3
James Atkins	8	9	4	4	1^	1	Nil^	Nil	2^	2
Andrew Cairns	9	9	Nil^	Nil	3	4	2	4	2^	2
Robyn McLeod	8	9	2^	2	4	4	4	4	1^	1
Anita Roper	9	9	2^	2	3	4	3^	3	7	7
Fiona Rowland	8	9	4	4	1^	1	1^	1	7	7

^ identifies attendance of non-Committee members

The Managing Director is invited to attend all committee meetings. Although the Managing Director is not a member of these committees, their attendance has been included. Further, where a director has attended a committee meeting of which they are not a member, this attendance has also been included.

In addition to the regular Board and committee meetings, the Corporation held the following special meetings during the year.

	Special Audit, Risk and Finance Committee meetings		Special People, Safety & Remuneration Committee meeting		Special Customer & Service Delivery Committee meeting	
	Attended	Maximum held	Attended	Maximum held	Attended	Maximum held
John Thwaites (Chair)	1	1	Nil^	1	2^	2
Nerina Di Lorenzo (Managing Director)	1^	1	1^	1	2^	2
Kathleen Bailey-Lord (Deputy Chair)	1^	1	1	1	1^	3
Russell Anderson	1	1	Nil^	1	3	3
James Atkins	1	1	Nil^	1	1^	1
Andrew Cairns	1 ^	1	1	1	3	3
Robyn McLeod	Nil	1	1	1	3	3
Anita Roper	1^	1	1	1	2^	2
Fiona Rowland	1	1	1^	1	2^	2

^ identifies attendance of non-Committee members

Director benefits

No director has received, or become entitled to receive, a benefit (other than a benefit included in Notes 7.2 and 7.4 in the Financial Statements) because of a contract that the director, a firm of which the director is a member, or an entity in which the director has a substantial financial interest, has made (during the period ended 30 June 2023 or at any other time) with:

(a.) the Corporation

(b.) an entity that the Corporation controlled, or a body corporate that was related to the Corporation, when the contract was made or when the director received, or became entitled to receive, the benefit.

Directors' and officers' liability insurance

During the financial year, the Corporation paid premiums to insure all directors and officers against certain liabilities. Disclosure of policy terms and the total amount of the premiums paid under this insurance policy is not permitted under the confidentiality provisions of the insurance contract.

Interest in contracts

No contracts involving directors' interests were entered into since the end of the previous financial year or existed at the end of the 2022-23 financial year, other than the transactions detailed in Notes 7.2 and 7.4 to the Financial Statements.

Principal activities

The Corporation is owned by the State of Victoria. The Corporation manages and maintains Melbourne's water supply catchments, removes and treats most of Melbourne's sewage, and manages rivers, creeks and major waterways and drainage systems in the Port Phillip and Westernport regions. The Corporation delivers innovative integrated planning to establish Melbourne as a water sensitive city.

The Corporation also provides wholesale water and sewerage services to Melbourne's three metropolitan retail water companies, Greater Western Water, South East Water and Yarra Valley Water, and water services to Gippsland Water. The Corporation also has the capability to provide water services to other entities including South Gippsland Water, Westernport Water and Barwon Water. The Corporation works with local government, developers and the community to provide waterways and drainage services.

Operating results

The Corporation's profit, after providing for income tax was $119.1 million.

Review of operations

The directors' review of the Corporation's operations during the financial year ended 30 June 2023 is set out in the Report from the Chair and Managing Director on pages 2-3 of this report.

State of affairs

There were no significant changes in the state of affairs of the Corporation during the financial period ended 30 June 2023.

Melbourne Water Financial Management Compliance Attestation

I, John Thwaites, on behalf of the Board, certify that Melbourne Water has no Material Compliance Deficiency with respect to the applicable Standing Directions under the *Financial Management Act 1994* and Instructions.

John Thwaites
Chair

26 August 2023

Financial report

How this report is Structured

Melbourne Water Corporation ('the Corporation') presents its audited general purpose financial statements for the financial year ended 30 June 2023. The following structure provides users with information about the Corporation's stewardship of resources entrusted to it.

Melbourne Water Corporation
Statement by Directors and Chief Financial Officer

We certify the attached financial statements for Melbourne Water Corporation ('the Corporation') have been prepared in accordance with applicable *Financial Reporting Directions* and *Direction* 5.2 of the *Standing Directions* of the Assistant Treasurer, both enforced by the *Financial Management Act 1994*, Australian Accounting Standards and Interpretations and other mandatory professional reporting requirements.

We further state that, in our opinion, the information set out in the Statement of Profit or Loss and Other Comprehensive Income, Statement of Financial Position, Statement of Changes in Equity, Statement of Cash Flows and accompanying notes, presents fairly the financial transactions during the year ended 30 June 2023 and the financial position of the Corporation as at 30 June 2023.

At the time of signing, we are not aware of any circumstance which would render any particulars included in the financial statements to be misleading or inaccurate.

The Financial Statements were authorised for issue by the Directors on 25 August 2023.

On behalf of the Board:

John Thwaites
Chair
25 August 2023

Dr Nerina Di Lorenzo
Managing Director
25 August 2023

Fiona Schutt
Chief Financial Officer
25 August 2023

Statement of Profit or Loss and Other Comprehensive Income

For the year ended 30 June 2023

($ thousands)

	Notes	2023	2022
Revenue			
Revenue from contracts with customers	**2.1**	1,908,460	1,891,265
Other income	**2.2**	10,045	10,941
Net gain on revaluation of non-financial assets	**4.1.2.2**	877	33,743
Total revenue		**1,919,382**	**1,935,949**
Expenses			
Depreciation and amortisation expenses	**4.1.3**	(469,520)	(456,342)
Operational expenses	**3.1**	(265,993)	(319,166)
Employee benefits expenses	**3.2**	(156,057)	(145,936)
Repairs and maintenance expenses	**3.3**	(110,069)	(106,443)
Administrative expenses	**3.4**	(55,581)	(54,572)
Finance expenses	**5.1.1**	(550,706)	(547,178)
Government rates and taxes	**3.5**	(46,577)	(41,310)
Asset transfers to councils	**3.6**	(43,493)	(40,902)
Other expenses	**3.7**	(17,817)	(10,234)
Total expenses		**(1,715,813)**	**(1,722,083)**
Net profit from operations before tax		**203,569**	**213,866**
Tax expense	**3.8.1**	(84,500)	(83,738)
Net profit for the period after tax		**119,069**	**130,128**
Other comprehensive income after tax			
Items that will not be reclassified to profit or loss			
Actuarial gain/(loss) on defined benefit superannuation plan asset[(a)]	**7.1**	1,351	5,602
Net gain on revaluation of non-financial assets[(b)]	**4.1.2.1 & 3.8.1**	692,073	291,808
Decrease in asset revaluation reserve due to disposal of land, buildings and infrastructure[(c)]		(6,558)	(12,030)
Asset revaluation reserve transferred to retained profits on disposal of land, buildings and infrastructure		6,565	12,134
Decrease in retained earnings from integration of Port Philip and Westernport Catchment Management Authority (PPWCMA)[(d)]		-	(2,087)
Net gain in fair value of cash flow hedges		25	-
Other comprehensive income/(loss) for the period after tax		**693,456**	**295,427**
Total comprehensive income for the period after tax		**812,525**	**425,555**

The above Statement of Profit or Loss and Other Comprehensive Income should be read in conjunction with the accompanying notes on pages 101 to 159.

Note:
(a) Pre tax actuarial gain on defined benefit superannuation plan asset $1.9 million (2021-22: gain of $8.0 million)
(b) Pre tax net gain on revaluation of non-financial assets $692.7 million (2021-22: gain of $318.7 million)
(c) Pre tax decrease in asset revaluation reserve due to disposal of land, buildings and infrastructure $6.6 million (2021-22: decrease of $12.1 million)
(d) Pre-tax decrease in retained earnings as a result of accounting and tax adjustments following integration of assets/liabilities from PPWCMA into the Corporation in 2021-22 of $3.1 million.

Statement of Financial Position

As at 30 June 2023

($ thousands)

	Notes	2023	2022
Assets			
Current assets			
Cash and cash equivalents		1,433	6,347
Receivables	**2.3**	126,578	108,497
Other current assets	**3.11**	16,749	18,889
Non-current assets held for sale	**4.3**	23,754	21,139
Total current assets		**168,514**	**154,872**
Non-current assets			
Land, buildings, infrastructure, plant and equipment and service concession arrangements[a]	**4.1**	17,608,356	16,559,527
Intangible assets[a]	**4.2**	39,311	49,087
Right-of-use assets and leases	**4.4**	31,328	38,845
Defined benefit superannuation plan asset	**7.1**	29,107	27,292
Total non-current assets		**17,708,102**	**16,674,751**
Total assets		**17,876,616**	**16,829,623**
Liabilities			
Current liabilities			
Payables	**3.9**	471,819	395,035
Contract liabilities	**3.10**	99,258	106,135
Interest bearing liabilities	**5.1**	639,081	680,160
Other provisions	**3.12**	14,157	9,212
Current tax liability	**3.8.1**	14,413	20,378
Employee benefits provision	**3.2**	53,594	50,831
Total current liabilities		**1,292,322**	**1,261,751**
Non-current liabilities			
Contract liabilities[b]	**3.10**	10,656	9,034
Interest bearing liabilities	**5.1**	7,344,966	7,228,747
Other provisions	**3.12**	332	241
Net deferred tax liabilities	**3.8.2**	1,259,596	1,280,138
Employee benefits provision	**3.2**	14,812	14,082
Total non-current liabilities		**8,630,362**	**8,532,242**
Total liabilities		**9,922,684**	**9,793,993**
Net assets		**7,953,932**	**7,035,630**
Equity			
Contributed equity		586,732	470,592
Reserves		4,537,189	3,851,649
Retained profits		2,830,011	2,713,389
Total equity		**7,953,932**	**7,035,630**

The above Statement of Financial Position should be read in conjunction with the accompanying notes on pages 101 to 159.

Note:
(a)Prior year (2021-22) carrying amounts have been restated to include transfers ($1.8 million) from capital works in progress (Note 4.1.1) for projects that should have been completed in 2021- 22 and transferred to intangible assets (IT).
(2) Prior year (2021-22) payables has been re-classified to contract liabilities for consistency with the current year.

Statement of Changes in Equity

For the year ended 30 June 2023

($ thousands)

	Notes	Contributed equity	Asset revaluation reserve	Other reserves	Retained profits	Total
Balance at 1 July 2022		**470,592**	**3,851,649**	**-**	**2,713,389**	**7,035,630**
Comprehensive income for the period after tax						
Net result for the period after tax		-	-	-	119,069	**119,069**
Other comprehensive income/(loss) for the period after tax		-	685,515	25	7,916	**693,456**
Total comprehensive income for the period after tax		**-**	**685,515**	**25**	**126,985**	**812,525**
Transactions with equity holders						
Dividends paid[a]		-	-	-	(10,363)	**(10,363)**
Capital repatriation paid[b]		-	-	-	-	**-**
Contributed assets[d]		116,140				**116,140**
Total transactions with owners		**116,140**	**-**	**-**	**(10,363)**	**105,777**
Balance at 30 June 2023		**586,732**	**4,537,164**	**25**	**2,830,011**	**7,953,932**
Balance at 1 July 2021		**507,914**	**3,571,871**	**-**	**2,574,912**	**6,654,697**
Comprehensive income for the period after tax						
Net result for the period after tax		-	-	-	130,128	**130,128**
Other comprehensive income for the period after tax		-	279,778	-	15,649	**295,427**
Total comprehensive income for the period after tax		**-**	**279,778**	**-**	**145,777**	**425,555**
Transactions with equity holders						
Dividends paid[a]		-	-	-	(7,300)	**(7,300)**
Capital repatriation paid[b]		(40,410)	-	-	-	**(40,410)**
Integration of PPWCMA[c]	4.5	3,088	-	-	-	**3,088**
Total transactions with owners		(37,322)	-	-	(7,300)	**(44,622)**
Balance at 30 June 2022		**470,592**	**3,851,649**	**-**	**2,713,389**	**7,035,630**

The above Statement of Changes in Equity should be read in conjunction with the accompanying notes on pages 101 to 159.

Note:
(a) During 2022-23 the Corporation paid total dividends of $10.3 million (2021-22 $7.3 million). Dividends are determined by the Treasurer of Victoria after consultation with the Corporation's Board of Directors and the Minister for Water.
(b) On the 29 June 2023, the Treasurer of Victoria has determined a capital repatriation of $40.4 million, payable by the Corporation on 31 July 2023. Under FRD 119 Transfers through contributed capital, para 4.2(d) this transfer is deemed to occur on the effective date, which means it should be recognised on 31 July 2023 when the capital repatriation is due and payable. Therefore no liability has been recognised as at 30 June 2023. The capital repatriation will be recognised in the 2023-24 financial year. The Corporation will fund the capital repatriation through borrowings with TCV, which will occur in July 2023. Refer note 5.1 for other borrowings with TCV. During 2021-22 the Corporation paid total capital repatriations of $40.4 million. Capital repatriations are determined by the Treasurer of Victoria after consultation with the Corporation's Board of Directors and the Minister for Water.
(c) Integration of Port Philip and Westernport Catchment Management Authority (PPWCMA) into the Corporation in 2021-22.
(d) Contributed assets related to assets received in 2022-23 from the Department of Transport and Planning via the Department of Environment, Energy and Climate Action under FRD 119.

Statement of Cash Flows

For the year ended 30 June 2023

	Notes	2023 ($ thousands)	2022 ($ thousands)
Cash flows from operating activities			
Receipts from contracts with customers (inclusive of Goods and Service Tax)		2,008,520	2,023,987
Payments to suppliers and employees (inclusive of Goods and Service Tax)		(784,583)	(836,697)
Income tax paid		(112,189)	(113,086)
Interest received		94	14
Interest and other costs of finance paid		(548,890)	(549,648)
Other receipts		20,151	23,788
Payments for low value, short term and variable lease payments		(2,601)	(3,022)
Net cash inflow from operating activities	**5.2**	**580,502**	**545,336**
Cash flows from investing activities			
Payments for property, plant and equipment and intangibles		(682,782)	(579,687)
Proceeds from sales of property, plant and equipment and intangibles		34,289	34,379
Net cash (outflow) from investing activities		**(648,493)**	**(545,308)**
Cash flows from financing activities			
Proceeds from borrowings [a]		113,600	74,886
Repayments for the Victorian Desalination Plant (VDP) service concession liability		(32,509)	(20,994)
Repayments of lease liabilities		(7,651)	(7,242)
Dividends paid	**7.4**	(10,363)	(7,300)
Capital repatriation paid	**7.4**	-	(40,410)
Proceeds from PPWCMA integration	**4.5**	-	3,676
Net cash inflow / (outflow) from financing activities		**63,077**	**2,616**
Net (decrease)/increase in cash and cash equivalents		(4,914)	2,644
Cash and cash equivalents at the beginning of the financial year		6,347	3,703
Cash and cash equivalents at the end of the financial year		**1,433**	**6,347**

The above Statement of Cash Flows should be read in conjunction with the accompanying notes on pages 101 to 159.

Note:
(a) Proceeds from borrowings exclude debt roll-overs and refinancing of existing debt and are shown on a net basis.

About this report

Basis of preparation

This Annual Financial Report presents the audited general purpose financial statements of Melbourne Water Corporation ('the Corporation' or 'Melbourne Water') for the year ended 30 June 2023. This report informs users about the Corporation's stewardship of the resources entrusted to it.

A description of the nature of the Corporations operations and principle activities is included in the report of operations which does not form part of these financial statements.

The Corporation is classified as a for-profit entity for the purposes of reporting.

Accounting policies selected and applied ensure that the resulting financial information satisfies the concepts of relevance and reliability, thereby ensuring that the substance of the underlying transactions or other events is reported.

The accrual basis of accounting has been applied, where assets, liabilities, equity, income and expenses are recognised in the reporting period to which they relate, regardless of when cash is received or paid.

These financial statements are in Australian dollars, the functional and presentation currency of Melbourne Water, and the historical cost convention is used except for the revaluation of certain classes of infrastructure, property, plant and equipment and financial instruments. Unless otherwise stated, amounts in the report have been rounded to the nearest thousand dollars.

In the determination of whether an asset or liability is current or non-current, consideration has been given to the time when each asset or liability is expected to be realised or paid. The asset or liability has been classified as current if it is expected to be turned over within the next 12 months, being the Corporation's operational cycle.

Judgements and estimates require assumptions to be made about highly uncertain external factors such as discount rates, probability factors, the effects of inflation, changing technology, political and social trends and climate change. There are many uncertainties in the estimation process and assumptions that are valid at the time of estimation but may change significantly when new information becomes available.

Judgements, estimates and assumptions are required to be made about financial information presented. The significant judgements made in the preparation of these financial statements are disclosed in the notes where amounts affected by those judgements are disclosed. The estimates and associated assumptions are based on professional judgements derived from historical experience and various other factors that are believed to be reasonable under the circumstances. Actual results may differ from these estimates. Revisions to accounting estimates are recognised in the period in which the estimate is revised and also in future periods that are affected by the revision. Judgements and assumptions made by management in applying Australian Accounting Standards that have significant effects on the financial statements and estimates relate to:

- the fair value of land, buildings, infrastructure, plant and equipment (refer to 4.1.2)
- the fair value of right of use assets (refer to 4.4)
- defined benefit superannuation asset/liability (refer to 7.1)
- employee benefits expenses and provisions (refer to 3.2 and 3.12)
- useful lives of non current assets (refer to 4.1.3)
- recognition and measurement of Software as a Service (SaaS) arrangements (refer to 4.2)
- recognition of deferred tax balances (refer to 3.8)
- contingent assets and liabilities (refer to 6.3)
- VDP service concession asset and liability and operating commitments (refer to 4.1 and 5.4)
- timing and satisfaction of performance obligations (refer note 2.1)
- determining transaction price and amounts allocated to performance obligations (refer note 2.1)
- for leases, determining whether the arrangement is in substance a short-term arrangement and estimating discount rate when not implicit in the lease (refer to note 4.4)
- going concern (refer below).

About this report (continued)

Financial reporting impacts of climate related matters

In June 2023 the International Sustainability Standards Board (ISSB) (following previous issue as exposure drafts) published two new sustainability disclosure standards. This was in response to the demand for better information about sustainability related matters (including climate). The standards published were:

- International Financial Reporting Standards (IFRS) S1 General Requirements of Sustainability related Financial Information, which sets out the core content for a complete set of sustainability related financial disclosures, thereby establishing a comprehensive baseline of sustainability related financial information; and
- IFRS S2 Climate related Disclosures, which will require the Corporation to provide information that enables the users of its financial statements to understand the Corporation's governance, strategy, risk management, and metrics and targets in relation to climate related risks and opportunities.

The standards are effective internationally from 1 January 2024, with individual jurisdictions to decide whether and when to adopt. The Australian Accounting Standards Board is expected to release Australian adapted versions of these standards for adoption on a similar timeframe. It is not yet clear when they would become mandatory for the Corporation as a public entity.

The Corporation has acknowledged the demand for climate related financial disclosures and has considered the potential financial impacts of climate related matters within the following notes:

- Note 3.1 Operational expenses;
- Note 3.12 Provisions;
- Note 4.1.2 Fair value determination of non-financial physical assets;
- Note 4.1.2.3 Description of significant unobservable inputs to level 3 valuations;
- Note 4.1.3 Depreciation, amortisation and impairment;
- Note 5.1 Financing our operations;
- Note 6.1.5 Climate related risk; and
- Note 6.3 Contingent liabilities.

Broader climate and sustainability reporting considerations have been made within the operating sections of the annual report based on the Task Force on Climate Related Financial Disclosures (TCFD) framework (which underpins the new ISSB standards in development) and other existing mandated legislative reporting obligations.

Going concern

These financial statements have been prepared on a going concern basis and do not include any adjustments to the carrying amounts and classification of assets, liabilities and reported expenses that may otherwise be required if the going concern basis was not appropriate.

Compliance

These general purpose financial statements have been prepared in accordance with the *Financial Management Act 1994* and applicable Australian Accounting Standards (AAS) which include Interpretations, issued by the Australian Accounting Standards Board (AASB). They have also been prepared in compliance with applicable Financial Reporting Directions and Standing Directions issued by the Assistant Treasurer.

Accounting policies

All accounting policies applied are consistent with those of the prior year. There have been no changes to accounting policies for the 2022-23 financial year.

Funding delivery of our services

Introduction

This section provides additional information about how the Corporation is funded and the accounting policies that are relevant for an understanding of the items recognised in the financial statements. The Corporation's vision is to enhance life and liveability within Melbourne and it achieves this through providing water, sewerage services, flood mitigation and environmental protection.

Structure

2.1 Revenue from contracts with customers

($ thousands)

	2023	2022
Bulk water services	906,295	953,074
Bulk sewerage services	447,056	415,213
Waterways and drainage charges	279,657	268,660
Developer contributions	230,003	205,971
Developer contributed assets	10,241	27,879
Net gain on disposal of property, plant, equipment and intangibles	20,042	10,386
Other revenue	15,166	10,082
Total Revenue from contracts with customers	**1,908,460**	**1,891,265**

Revenue is recognised in accordance with *AASB 15 Revenue* from contracts with customers.

The Corporation collects **bulk water and sewerage services** revenue for providing storage operator services and bulk water and sewerage services to retail metropolitan and regional water businesses.

Bulk water and sewerage services revenues consist of a variable metered component (based on volumes of usage) and a fixed fee (for service availability). The usage charge is invoiced weekly with payment required within 7 days. The availability charge is invoiced in advance monthly with payment required within 14 days.

Bulk water and sewerage services revenue is recognised in line with the Corporation meeting its performance obligations over time as the customer simultaneously receives and consumes the services provided. An estimate is made at the end of the accounting period for unbilled revenue (refer to receivables Note 2.3).

The Corporation provides **waterways and drainage** services to residential, non residential, rural and special area customers. The charges are recognised in the year for which the charge is levied and are billed either quarterly or annually in advance and are collected by various retail water businesses on behalf of the Corporation. A lien is held over each property to ensure that any outstanding amounts are recovered upon sale of the property.

Waterways and drainage charges revenue is recognised in line with the Corporation meeting its performance obligations over time as the customer simultaneously receives and consumes the services provided. An estimate is made at the end of the accounting period for unbilled revenue (refer to receivables Note 2.3).

Funding delivery of our services (continued)

Developer contributions are collected from developers in order to fund drainage scheme infrastructure (constructed catchment assets) and stormwater quality treatment works.

The Corporation has a performance obligation in relation to developer contributions, which is to assess whether all the requirements for the issuance of a Statement of Compliance (SOC) have been met by the developer and to provide consent to the local council to issue the SOC if the requirements have been met.

The Corporation recognises developer contribution revenue at a point in time as the performance obligation is satisfied (i.e. upon provision of consent to the local council to issue SOC). The transaction price is the total amount of cash contributions from the developer for the applicable contract, unless the transaction price is adjusted by differences between the assessed fair value of the constructed catchment assets and reimbursements to the developer for construction of those assets (see developer contributed assets policy below).

Developer contributions received in advance of the performance obligation being satisfied are recorded as contract liabilities from contracts with customers (included in Note 3.10) and then recognised as revenue as the performance obligation is satisfied for each contract.

A significant financing component is deemed to exist within a contract when developer contributions revenue is received greater than 12 months before the performance obligation is satisfied. The Corporation assesses the balance of unearned revenue from developer contributions at balance date. If a significant financing component exists then the Corporation adjusts the revenue transaction price (within unearned revenue) and recognises an interest expense (see note 5.1) to reflect the time value of money using prevailing interest rates. When the performance obligation is satisfied the revenue is recognised based on the adjusted transaction price.

Developer contributed assets (DCAs) consist of developer constructed catchment assets transferred to the Corporation to maintain in perpetuity. Under a drainage scheme, developers may be required to undertake capital works in relation to the construction of drainage infrastructure required for their stage of development and other developers in the drainage catchment. This will be included in contracts between the Corporation and the developer as a condition of consent for SOC. Upon completion of the works, these constructed catchment assets become the property of the Corporation. The developer will either be reimbursed by the Corporation for the construction costs at an agreed reimbursable amount (funded through developer contributions for that catchment) or the developer will fully fund the construction costs (in arrangements where there are no developer contributions).

The Corporation has a performance obligation in relation to DCAs, which is to assess whether all the requirements (including construction of catchment assets) for the issuance of a Statement of Compliance (SOC) have been met and to provide consent to the local council to issue the SOC if the requirements have been met.

The transaction price for DCA revenue is determined based on any difference between the assessed fair value of the constructed catchment assets and the reimbursements made to the developer (where reimbursements are applicable depending on the arrangement). The transaction price is uncertain until the date of practical completion of the assets, which usually occurs after the performance obligation is met. Therefore at the time the performance obligation is met any revenue associated with the constructed catchment assets to be received is considered to be variable consideration.

DCA revenue (and associated infrastructure assets) are therefore recognised at the date of practical completion of the works (and their acceptance by the Corporation) when the uncertainty regarding the fair value of the assets is resolved.

Land parcels are also voluntarily transferred from developers to the Corporation (for nil consideration). These transfers relate to land set aside by developers as reserves at the point of subdivision. The transfers are made voluntarily on the basis of the Corporation being the relevant authority to hold and maintain such land for public benefit, rather than being transferred in the context of a contract with a customer. There is no exchange of goods or services from the Corporation to the developers for this land and contracts between the Corporation and the developers do not include these transfers of land. Accordingly, the transfer of land is not considered to form part of the transaction price for revenue recognition. As the transferred land satisfies the definition of property, plant and equipment under AASB 116, the initial measurement and subsequent measurement of such land is within the scope of AASB 116 i.e. the land is recognised initially at cost (being nil) and subsequently revalued in accordance with the land class of assets.

The net gain on disposal of property, plant, equipment and intangibles from sales is recognised as revenue when control over the asset has been transferred to the customer at a point in time. This is the point when the Corporation has performed its performance obligation.

Revenue is measured at the transaction price agreed under the contract. For property sales the consideration is due when it settles. Property sales are recognised in the Statement of Profit or Loss and Other Comprehensive Income on a net basis of sale proceeds less costs.

Other revenue includes fees and charges and other miscellaneous revenue which are all recognised at a point in time when the Corporation meets the required performance obligations under the contract.

2.2 Other income

($ thousands)

	2023	2022
Interest revenue	94	14
Rental income	3,929	3,136
Government grants	6,022	7,791
Total other income	**10,045**	**10,941**

Interest revenue is recognised when earned over time and is accrued in accordance with the terms and conditions of the underlying financial instrument or other contract.

Rental income is recognised when earned over time and accrued in accordance with the terms and conditions implicit in the leasing contract.

Government grants are recognised as operating revenue when the Corporation obtains control of the contribution. Control is obtained when the Corporation receives the grant or contribution and they meet certain other criteria as outlined by *AASB 120 Accounting for Government Grants and Disclosure of Government Assistance* (i.e. when there is a reasonable assurance that the grant will be received and the Corporation will comply with all required conditions).

All conditions attached to Government grants have been satisfied prior to their recognition in the Statement of Profit or Loss and Other Comprehensive Income. Government grants with unfulfilled conditions have been recognised as other unearned revenue (included in Trade and other payables Note 3.9) in the Statement of Financial Position. Any grants relating to assets that meet the conditions attached are recorded against the asset.

Funding delivery of our services (continued)

2.3 Receivables	($ thousands)	
Contractual receivables	**2023**	**2022**
Trade debtors	48,439	46,217
Contract assets	10,764	12,980
Other receivables	50,587	38,267
Less: allowance for expected credit losses	-	-
Total contractual receivables	**109,790**	**97,464**
Statutory receivables		
Net GST receivable from the ATO	16,788	11,033
Total current receivables	**126,578**	**108,497**

Trade debtors, contract assets and **other receivables** are recognised at the amounts receivable less any allowance for expected credit losses. Trade debtors relate to amounts receivable for bulk water services, bulk sewerage services and waterways drainage charges and other charges. Contract assets relate to developer works that have met the requirements for issuing the SOC but no contribution has yet been received. Other receivables relate to land deposits, accrued revenue and accrued GST receivable. Receivables are reviewed on an ongoing basis to identify any receivables which cannot be collected. Debts which cannot be collected are written-off when identified.

The Corporation applies the AASB 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for contractual receivables.

On this basis, an assessment undertaken by management has identified that historical debt write-offs and future expected losses are immaterial. This assessment took into consideration COVID-19 with no expected material impact on the future recoverability of debtors. As such, there is no allowance for expected credit losses as at 30 June 2023 (2021-22: nil).

Net Goods and Services Tax (GST) receivable from the Australian Taxation Office (ATO) is the gross amount of GST recoverable from the taxation authority and is included as part of the receivables balance. AASB Interpretation 1031 provides that revenue, expenses and assets must be recognised, net of the amount of GST, except where GST relating to the expenditure items is not recoverable from the taxation authority, in which case the item is recognised as GST inclusive.

Ageing analysis of contractual receivables

			($ thousands)		
	Current	Past due but not impaired			Total
30 June 2023	**0-30 days**	**31-60 days**	**61-90 days**	**91 days +**	
Receivables					
Trade debtors [a]	27,992	5,076	1,038	14,333	**48,439**
Contract assets	10,764	-	-	-	**10,764**
Other receivables	50,587	-	-	-	**50,587**
Total contractual receivables	**89,343**	**5,076**	**1,038**	**14,333**	**109,790**

	Current	Past due but not impaired[b]			Total
30 June 2022	**0-30 days**	**31-60 days**	**61-90 days**	**91 days +**	
Receivables					
Trade debtors [a]	27,187	5,433	1,209	12,388	**46,217**
Contract assets	12,980	-	-	-	**12,980**
Other receivables	38,267	-	-	-	**38,267**
Total contractual receivables	**78,434**	**5,433**	**1,209**	**12,388**	**97,464**

(a) The majority of the aged receivables relate to waterways and drainage charges guaranteed by a lien on a property to ensure that any outstanding amounts are recovered upon sale of the property. These matters would be subject to the Corporation's hardship provisions.

The cost of delivering our services

Introduction

This section provides additional information about the major components of expenditure incurred by the Corporation in relation to delivering our services during the year, as well as any related obligations outstanding as at 30 June 2023.

Structure

3.1 Operational expenses	($ thousands)	
	2023	**2022**
VDP operating expenses	151,827	208,262
Energy expenses	35,088	41,836
Carbon offsets	783	-
External professional services expenses	36,312	32,701
Research and development expenses	4,997	6,328
Materials and chemicals expenses	12,736	10,248
Grants and contributions expenses	12,134	9,695
Transport expenses	3,904	3,288
Insurance expenses	7,430	6,095
Other Expenses	782	713
Total Operational Expenses	**265,993**	**319,166**

Operational expenses represent the day-to-day running costs incurred in normal operations. Victorian Desalination Project (VDP) operating expenses include the costs of water security, labour, maintenance, chemicals, energy and carbon offsets surrendered to meet the Commonwealth Safeguard mechanism obligations. They are expensed in the period in which they are incurred.

The cost of delivering our services (continued)

3.2 Employee benefits expenses and employee benefits provision

($ thousands)

	2023	2022
Salary and wages expenses	117,523	114,542
Annual, long service and shift leave expenses	15,914	12,454
Defined contribution plans (superannuation accumulation fund) expense	12,565	11,509
Defined benefit superannuation plan expense	115	1,210
Other employee expenses	9,940	6,221
Total employee benefits expenses	**156,057**	**145,936**

Employee benefits expenses include all expenses related to employment including; salary and wages expenses, defined contribution plans, annual, long service and shift leave expenses, defined benefit superannuation plan expense, and other employee expenses (i.e payroll tax, Work Cover (post-1985), workers' compensation (pre-1985), rostered days off, redundancy payments). They are expensed in the period in which they are incurred. Directly attributable costs for bringing an asset to the location and condition necessary for operation, such as costs of employee benefits arising directly from the construction or acquistion of the asset are capitalised via a reduction to the employee benefit expense.

Provision is made for benefits accruing to employees in respect of salaries and wages, annual leave and long service leave (LSL) up to the reporting date and recorded as an expense during the period the services are delivered.

Total employee benefits provision and on-costs at 30 June

($ thousands)

	2023	2022
Current		
Accrued salaries and wages		
Accrued salaries and wages	8,073	6,921
Annual leave		
Unconditional and expected to settle within 12 months	9,035	9,954
LSL		
Unconditional and expected to settle within 12 months	3,540	3,370
Unconditional and expected to settle after 12 months	20,095	19,118
On-costs		
Unconditional and expected to settle within 12 months	1,948	1,995
Unconditional and expected to settle after 12 months	3,187	2,932
Other employee benefits	7,716	6,541
Total current employee benefits and on-costs	**53,594**	**50,831**
Non-current		
LSL	3,922	4,259
On-costs on LSL	622	653
Other employee benefits	10,268	9,170
Total non-current employee benefits and on-costs	**14,812**	**14,082**
Total employee benefits and on-costs	**68,406**	**64,913**

Reconciliation of movement in on-costs provision

($ thousands)

	2023	2022
Opening balance	5,580	5,464
Additional provisions recognised	2,316	2,090
Additions due to LSL transfers	47	41
Reductions arising from payments/other sacrifices of future economic benefits	(2,186)	(2,015)
Closing balance	**5,757**	**5,580**
Current	5,135	4,927
Non-current	622	653

Liabilities for **salaries, wages and annual leave** are all recognised in the provision for employee benefits as 'current liabilities' as per *AASB 119 Employee Benefits*, because the Corporation does not have an unconditional right to defer settlements of these liabilities. Liabilities for salaries, wages and annual leave are measured at:

- undiscounted value, if they will be wholly settled within 12 months; or
- present value, if not expected to be wholly settled within 12 months.

Sick leave payments are made in accordance with relevant awards, determinations and Corporation policy. No provision is made in the Financial Statements for unused sick leave entitlements as these are non-vesting benefits (i.e. can't be transferred or paid out when an employee leaves).

LSL is recognised in the provision for employee benefits. LSL is recognised as a current liability when there is no unconditional right to defer settlement should an employee take LSL they are entitled to within the next 12 months, even when the Corporation does not expect to settle the liability within 12 months. The components of this current LSL liability are measured at:

- undiscounted value, if they expect to be wholly settled within 12 months; or
- present value, if not expected to be wholly settled within 12 months.

LSL is recognised as a non-current liability when there is an unconditional right to defer the settlement of the entitlement until the employee has completed 7 years of service. This non-current LSL liability is measured at present value. Expected future cash payments are discounted using market yields attached to the Reserve Bank of Australia's 10 year rate for semi-annual coupon bonds. Discount rate as at 30 June 2023 was 4.06% (2021-22: 3.69%). Use of this discount rate is mandated by the Department of Treasury and Finance (DTF). The valuation of LSL also incorporates wage inflation, based on DTF budget estimates with the rate at 30 June 2023 of 4.35% (2021-22: 3.85%).

Other employee benefits, current and non-current liabilities include amounts for shift leave, rostered days off, Work Cover, workers' compensation and termination benefits. The Work Cover and workers' compensation provisions are based on independent actuarial assessments. A provision of $14.7 million (2021-22 $12.5 million) has been made for outstanding claims incurred and not settled, and for claims incurred but not reported at 30 June 2023. The value of the bank guarantee to the Victorian Work Cover Authority (as part of the Corporation's Work Cover self insurance commitments) at 30 June 2023 is $13.4 million (2021-22: $10.5 million). The bank guarantee amount is not included in the provision.

Termination benefits include termination of employment payments, such as severance packages. They are payable when employment is terminated before the normal retirement date, or when an employee accepts an offer of benefits in exchange for the termination of employment. Termination benefits are recognised when the Corporation is demonstrably committed to terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal or providing termination benefits as a result of offers made for voluntary redundancy.

The cost of delivering our services (continued)

3.3 Repairs and maintenance expenses

($ thousands)

	2023	2022
Repairs and maintenance	98,670	97,180
Information technology maintenance	11,399	9,263
Total repairs and maintenance expenses	**110,069**	**106,443**

Repairs and maintenance and minor renewal costs are expensed as incurred. Where the repair relates to the replacement of a component of an asset and the cost exceeds the capitalisation threshold of $500, the cost is capitalised and depreciated over the remaining life of the asset.

3.4 Administrative expenses

($ thousands)

	2023	2022
Waterways charges billings and collection	15,247	15,072
Information technology and telecommunication expenses	20,456	23,025
Short term lease expenses	255	252
Low value lease expenses	-	-
Variable lease payment expenses	2,346	2,770
Education and training expenses	2,329	2,086
Legal expenses	4,420	3,080
Other expenses	10,528	8,287
Total administrative expenses	**55,581**	**54,572**

Administrative expenses are the day-to-day costs incurred in administration of the Corporation. They are expensed in the period in which they are incurred.

Expenses relating to short term, low value or variable lease payments are not included in the lease liability and are expensed in the year they are incurred. For further details, refer to note 4.4.

3.5 Government rates and taxes

($ thousands)

	2023	2022
Government rates and taxes	46,577	41,310
Total government rates and taxes	**46,577**	**41,310**

Government rates and taxes are made up of Land Tax, Fringe Benefits Tax, Local Government Rates Equivalent Tax (LGRE) and other minor government charges and fees. They are expensed in the period in which they are incurred.

3.6 Asset transfers to council

($ thousands)

	2023	2022
Asset transfers to council	43,493	40,902
Total asset transfers to council	**43,493**	**40,902**

Asset transfers to council relate to Drainage Developer Scheme works within a catchment size of less than 60 hectares that are transferred to councils for ongoing maintenance (and expensed by the Corporation at book value) upon reaching formal council acceptance to transfer.

3.7 Other expenses

($ thousands)

	2023	2022
Assets written off/written down	1,779	3,946
CSO adjustments for purchased land	13,939	4,527
Allowance for expected credit loss	-	-
Other expenses	2,099	1,761
Total other expenses	**17,817**	**10,234**

Other expenses include all other miscellaneous expenses not included in operational and administrative expenses and are deemed relevant for the understanding of this financial report. They include written down assets and Community Service Obligation (CSO) adjustments for purchased land based on Valuer General Victoria (VGV) valuation. They are expensed in the period in which they are incurred.

3.8 Income and deferred tax

The Corporation is subject to the National Tax Equivalent Regime (NTER), which is administered by the Australian Taxation Office (ATO). The difference between the NTER and the Commonwealth tax legislation is that the tax liability is paid to the Victorian State Government rather than the Commonwealth Government.

The income tax expense for the period is the tax payable on the current period's taxable income based on the national corporate income tax rate of 30%, adjusted for current tax of prior periods and changes in deferred tax assets and liabilities attributable to temporary differences between the tax bases of assets and liabilities and their carrying amounts in the financial statements.

Deferred tax assets and liabilities are recognised as temporary differences at the tax rate expected to apply when the assets are recovered or liabilities settled, based on those tax rates which are enacted or substantially enacted.
The relevant tax rates are applied to the cumulative amounts of deductible and taxable temporary differences when they arise in a transaction that at the time of the transaction did not affect either accounting or taxable profit or loss.
Deferred tax assets are recognised as deductible temporary differences and unused tax losses only if it is probable that future taxable amounts will be available to utilise those temporary differences and losses. Current and deferred tax is recognised in the Statement of Profit or Loss, except to the extent that it relates to items recognised in Other Comprehensive Income or directly in equity. In this case, tax is also recognised in Other Comprehensive Income or directly in equity respectively.

The cost of delivering our services (continued)

3.8.1 Income tax

Components of tax expense

($ thousands)

	2023	2022
Current tax	121,169	119,095
Deferred tax relating to temporary differences	(36,669)	(35,156)
Adjustments for current tax of prior periods	-	(201)
Total tax expense	**84,500**	**83,738**

Reconciliation of income tax to prima facie tax payable

($ thousands)

	2023	2022
Profit before income tax	203,569	213,866
Tax at the Australian tax rate of 30% (2021-22: 30%)	61,071	64,160
Tax effect of amounts which are not deductible/(taxable) in calculating taxable income:		
Adjustment in respect of income tax of previous year	-	(201)
Non assessable and non deductible for income tax purposes	17,827	16,258
Assessable income not booked	5,602	3,521
Income tax as reported in the Statement of Profit or Loss and Other Comprehensive Income	**84,500**	**83,738**

Income tax liability

($ thousands)

	2023	2022
Current tax liability	14,413	20,378
Total income tax liability	**14,413**	**20,378**

Income tax recognised in other comprehensive income

($ thousands)

	2023	2022
Deferred tax arising on items recognised in other comprehensive income		
Increase in deferred tax on land & buildings revalued	599	26,862
Reversal of deferred tax on disposal of land previously revalued	(7)	(104)
Increase in deferred tax on infrastructure assets revalued	-	-
Actuarial gains on the defined benefit plan	579	2,400
Loss on integration of Port Philip and Westernport Catchment Management Authority (PPWCMA)	-	(1,096)
Net gain in fair value of cash flow hedges	11	-
Total income tax recognised in other comprehensive income	**1,182**	**28,062**

3.8.2 Net deferred tax liabilities – non-current

($ thousands)

	2023	2022
Amounts recognised in Profit or Loss		
Property, plant and equipment	136,005	152,226
Employee entitlements	(12,704)	(12,684)
Developer contributions	13	88
Provisions	(5,533)	(3,979)
Revenue in advance	(28,681)	(31,542)
VDP service concession liability	82,122	88,236
Other	(7,671)	(7,070)
Total recognised in Profit or Loss	**163,551**	**185,275**
Amounts recognised in Other Comprehensive Income		
Net gains on revaluation of land and buildings	146,904	146,312
Net gains on revaluation of infrastructure assets	934,758	934,758
Actuarial gain on the defined benefit plan	14,372	13,793
Changes in fair value of cash flow hedges	11	-
Total recognised in Other Comprehensive Income	**1,096,045**	**1,094,863**
Net deferred tax liability	**1,259,596**	**1,280,138**

Movements

($ thousands)

	2023	2022
Opening balance	1,280,138	1,282,332
Credited to Profit or Loss	(36,669)	(35,156)
Debited to Other Comprehensive Income	1,182	28,063
Adjustment in respect of deferred tax of prior period	14,945	4,899
Closing balance	**1,259,596**	**1,280,138**
Net deferred tax liabilities to be recovered after more than 12 months	1,296,971	1,320,370
Net deferred tax liabilities to be recovered within 12 months	(37,375)	(40,232)
Total non-current liabilities – deferred tax liabilities	**1,259,596**	**1,280,138**

The cost of delivering our services (continued)

3.9 Payables

($ thousands)

	2023	2022
Trade creditors	135,475	117,697
Interest payable	32,076	30,261
Accruals	299,709	242,149
Other payables	4,559	4,928
Total payables[a]	**471,819**	**395,035**

(a) The 2021-22 balances for non-current other payables have been re-classifed to non-current contract liabilities for consistency with the current year. Refer to Note 3.10 below.

Trade creditors represent liabilities for goods or services provided to the Corporation prior to the end of the financial year, where invoices have been received and processed but not yet paid. The amounts are unsecured and are usually paid within 30 days of recognition or in accordance with contract terms. Payments for invoices with a contract value of less than $3.0 million are paid within 10 business days in line with the Victorian Government's Fair Payment Policy.

Interest payable is recognised as an expense in the reporting period in which it is payable and accrued in accordance with the terms and conditions of the underlying financial instruments or other contracts.

Accruals represent liabilities for goods or services provided to the Corporation prior to the end of the financial year, where invoices have not yet been received or processed and are not yet paid. The amounts are based on estimates, are unsecured and are usually paid within 30 days of recognition (payments for invoices with a contract value of less than $3.0 million are paid within ten business days in line with the Victorian Government's Fair Payment Policy).

Other payables primarily represent liabilities for miscellaneous security deposits held.

3.10 Contract liabilities

($ thousands)

	2023	2022
Current		
Unearned revenue from contracts with customers	82,150	92,854
Other unearned revenue	17,108	13,281
Total current contract liabilities	**99,258**	**106,135**
Non-Current		
Other unearned revenue	10,656	9,034
Total non-current contract liabilities[a]	**10,656**	**9,034**
Total contract liabilities	**109,914**	**115,169**

(a) The 2021-22 comparative figures have been re-classified from non-current other payables to non-current contract liabilities for consistency with the current year.

Unearned revenue from contracts with customers represents consideration received in advance of the Corporation performing its contract obligations and will be recognised as revenue when the services are performed. This solely comprises developer contributions revenue. Refer to Note 2.1.

Unearned revenue from contracts with customers

($ thousands)

	2023	2022
Unearned revenue at the beginning of the financial year	92,854	72,254
Consideration received in the year before performance obligations are satisfied	219,605	226,571
Performance obligations satisfied during the period and recognised as revenue	(230,309)	(205,971)
Unearned revenue from contracts with customers	**82,150**	**92,854**

Other unearned revenue represents revenue received in advance in relation to other income or assets (i.e. grants) and will be recognised as revenue (or offset against the asset for grants relating to assets) when the services are performed and conditions are met.

3.11 Other current assets

($ thousands)

	2023	2022
Prepayments	**7,573**	**9,682**
Inventories	9,176	9,207
Total other current assets	**16,749**	**18,889**

Prepayments represent payments in advance of receipt of goods or services or that part of expenditure made in one accounting period covering a term extending beyond that period.

Inventories are used in the construction of new works and for the repair and maintenance of existing assets. Inventories are valued at the lower of cost and net realisable value.

3.12 Provisions

($ thousands)

	2023	2022
Current		
Insurance claims	464	184
Other provisions	13,693	9,028
Total current provisions	**14,157**	**9,212**
Non-current		
Insurance claims	332	241
Total provisions – non-current	**332**	**241**
Total provisions	**14,489**	**9,453**

Reconciliation of movement in provisions

($ thousands)

	Insurance claims	Other provisions	Total
Carrying amount at 1 July 2022	425	9,028	9,453
Provisions recognised/(de-recognised)	535	5,015	5,550
Amounts utilised during the year	(164)	(350)	(514)
Carrying amount at 30 June 2023	**796**	**13,693**	**14,489**
Carrying amount at 1 July 2021	1,016	5,056	6,072
Provisions recognised/(de-recognised)	(190)	6,305	6,115
Amounts utilised during the year	(401)	(2,333)	(2,734)
Carrying amount at 30 June 2022	**425**	**9,028**	**9,453**

Provisions are recognised when the Corporation has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation and the amount has been reliably estimated. The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation.

The recognition of provisions requires significant estimates and assumptions such as requirements of the relevant legal and regulatory frameworks, timing, cost estimation, legal disputes and consideration of climate related risks or obligations (i.e. carbon offsets surrender obligation or impacts of acute weather events). These uncertainties may result in future actual expenditure differing from the amounts currently provided. Provisions are periodically reviewed and updated based on the facts and circumstances available at the time.

Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows. When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognised as an asset if it is virtually certain that recovery will be received and the amount of the receivable can be measured reliably.

The insurance claims provision represents the amounts that are likely to be payable under claims but excluding amounts over the relevant insurance policy deductable. Insurance claims are independently assessed by loss adjusters, claims managers and legal practitioners. The insurance claims provision includes claims reported but not yet paid, claims incurred but not yet reported, and the anticipated costs of settling those claims. Due to the inherent uncertainty in the estimate of the outstanding insurance claims, a risk margin is included. The risk margin is set to ensure that the liability estimate will be sufficient to cover outstanding claims. The measurement of the liability for outstanding insurance claims is on the basis of estimated costs of future claims payments. Claims classified as current are expected to be settled within 12 months. The amount classified as non-current is expected to be settled later than 12 months. The provision amounts are based on an independent assessment of claim costs.

Other provisions satisfy the recognition requirements of *AASB 137 Provisions, Contingent Liabilities and Contingent Assets* and include contractual, remediation and other provisions.

Assets available to support output delivery

Introduction

This section outlines those assets that the Corporation controls, reflecting investing activities in the current and prior years. The Corporation controls infrastructure and other assets that are utilised in fulfilling its objectives and conducting its activities. They represent the key resources that have been entrusted to the Corporation to be utilised for delivery of those objectives.

Structure

4.1 Land, buildings, infrastructure, plant and equipment, and service concession arrangements

4.1.1 Reconciliation of movements in carrying values of land, buildings, infrastructure, plant and equipment, and service concession arrangements

($ thousands)

	Total	Crown land	Freehold land	Buildings	Leasehold improvements	Plant and equipment	Fleet vehicles	Infrastructure	VDP service concession asset	Capital works in progress
Year ended 30 June 2022										
Opening balance	16,062,110	167,603	1,945,154	36,742	981	15,961	14,510	9,087,621	4,040,370	753,168
Purchased additions	1,172	-	-	-	-	-	1,172	-	-	-
Developer contributed assets	27,879	-	-	-	-	-	-	27,879	-	-
Disposals and write-offs	(45,405)	(4)	(13,224)	-	-	(17)	(583)	(29,441)	-	(2,136)
Depreciation and amortisation	(424,415)	-	-	(1,419)	(163)	(4,885)	(2,334)	(337,302)	(78,312)	-
Transfers between classes[a]	-	701	(701)	-	-	-	-	-	-	-
Assets classified as held for sale	(1,584)	-	(1,584)	-	-	-	-	-	-	-
Revaluation increments[b]	352,422	25,523	326,899	-	-	-	-	-	-	-
Revaluation decrements[b]	(4,536)	(9)	(4,527)	-	-	-	-	-	-	-
Impairment losses	-	-	-	-	-	-	-	-	-	-
Impairment losses reversed	-	-	-	-	-	-	-	-	-	-
Capital expenditure[c]	587,865	-	-	-	-	-	-	-	-	587,865
Capital contributions	-	-	-	-	-	-	-	-	-	-
Capitalisation of works in progress[d]	4,019	(0)	11,517	26	-	6,614	-	471,455	-	(485,593)
Closing carrying amount	**16,559,527**	**193,814**	**2,263,534**	**35,349**	**818**	**17,673**	**12,765**	**9,220,212**	**3,962,058**	**853,304**
At 30 June 2022										
Gross carrying amount	16,999,936	193,814	2,263,534	36,768	2,437	68,495	23,146	9,518,068	4,040,370	853,304
Accumulated depreciation	(440,409)	-	-	(1,419)	(1,619)	(50,822)	(10,381)	(297,856)	(78,312)	-
Carrying amount	**16,559,527**	**193,814**	**2,263,534**	**35,349**	**818**	**17,673**	**12,765**	**9,220,212**	**3,962,058**	**853,304**
Year ended 30 June 2023										
Opening balance	16,559,527	193,814	2,263,534	35,349	818	17,673	12,765	9,220,212	3,962,058	853,304
Purchased additions	290	-	-	-	-	-	290	-	-	-
Developer contributed assets	10,241	-	-	-	-	-	-	10,241	-	-
Disposals and write-offs	(50,910)	(93)	(9,584)	-	-	(75)	(492)	(39,262)	-	(1,404)
Depreciation and amortisation	(444,379)	-	-	(1,393)	(164)	(5,775)	(1,871)	(356,864)	(78,312)	-
Transfers between classes[a]	(101)	-	-	91	-	(16)	-	(176)	-	-
Assets classified as held for sale	(2,616)	-	(2,616)	-	-	-	-	-	-	-
Revaluation increments[b]	693,547	-	-	3,635	-	-	-	-	689,912	-
Revaluation decrements[b]	(13,939)	-	(13,939)	-	-	-	-	-	-	-
Impairment losses	-	-	-	-	-	-	-	-	-	-
Impairment losses reversed	-	-	-	-	-	-	-	-	-	-
Capital expenditure[c]	740,553	-	-	-	-	-	-	-	-	740,553
Capital contributions	116,140	-	-	-	-	-	-	116,140	-	-
Capitalisation of works in progress[d]	3	-	45,370	24	-	2,738	-	355,234	-	(403,363)
Closing carrying amount	**17,608,356**	**193,721**	**2,282,765**	**37,706**	**654**	**14,545**	**10,692**	**9,305,525**	**4,573,658**	**1,189,090**
At 30 June 2023										
Gross carrying amount	18,329,177	193,721	2,282,765	37,706	2,437	68,628	21,684	9,959,488	4,573,658	1,189,090
Accumulated depreciation	(720,821)	-	-	-	(1,783)	(54,083)	(10,992)	(653,963)	-	-
Carrying amount	**17,608,356**	**193,721**	**2,282,765**	**37,706**	**654**	**14,545**	**10,692**	**9,305,525**	**4,573,658**	**1,189,090**

Note:

(a) Includes transfers to intangible assets, refer to 4.2.

(b) Pre-tax revaluation increments and decrements (net decrement balance of $679.6 million (2021-22: $347.9 million net increment) are recognised in the income statement as revenue via net gain on revaluation of non-financial assets $0.9 million (2021-22:$33.7 million), other expenses $13.9 million (Community Services Obligation discount applied for purchased land based on VGV valuation) (2021-22: $4.5 million) and increase in other comprehensive income $692.7 million (2021-22: $318.7 million). Note: Valuation decrements are expensed in the profit and loss when the reserve balance is exhausted. Valuation increments that result in reversals of previous profit and loss decrements are credited to the profit and loss. The net effect is treated as a net gain or loss on revaluation on non-financial assets.

(c) Represents total capital expenditure, exclusive of intangibles $6.6 million (2021-22 $24.5 million) (refer to 4.2) and fleet vehicles $0.3 million (2021-22 $1.2 million) (refer to purchased additions category).

(d) Prior year (2021-22) carrying amounts have been restated to reclassify ($151.4 million opening carrying value and $211.2 million closing carrying value) from capital works in progress to infrastructure ($145.1 million opening carrying value and $206.6 million closing carrying value), plant and equipment ($0.3 million opening carrying value and $2.8 million closing carrying value) intangible assets ($6.0 million opening carrying value and $1.8 million closing carrying value Note 4.2) for projects that should have been completed (and transferred out of capital works in progress) in 2021-22. These delayed transfers also have associated backlog increased depreciation expenditure recognised in 2022-23 ($12.5 million) that has not been adjusted against the prior year as deemed not material.

Assets available to support output delivery (continued)

If land, buildings, infrastructure and service concession assets were measured at historical cost, the carrying amounts would be as follows:

($ thousands)

	2023	2022
Land	917,650	887,291
Buildings	36,661	36,790
Infrastructure assets – owned	7,087,555	6,859,384
VDP service concession asset	3,839,239	3,916,790
Total	**11,881,105**	**11,700,255**

Initial recognition

All non-financial physical assets (except for service concession assets) are measured and recognised initially at cost. Service concession assets are recognised initially at current replacement cost in accordance with the cost approach to fair value in AASB 13 (Fair Value). Where an asset is acquired for no or nominal cost, the cost is its fair value at the date of acquisition. The cost of constructed non-financial physical assets includes the cost of all materials used in construction and direct labour on the project. The cost of leasehold improvements is capitalised when incurred.

Items with a cost or value in excess of $500 (2021-22: $500) and a useful life of more than 1 year are recognised as assets, with the exception of lifecycle costs (total of all recurring and one-time costs over the full life span of a good, service, structure or system) for the VDP which are expensed. All items with a cost or value less than $500 (2021-22: $500) are expensed.

Subsequent measurement

All non-financial physical assets, with the exception of capital works in progress, are subsequently measured at fair value less accumulated depreciation and impairment. Non-financial physical assets are measured at fair value with regard to the asset's highest and best use after due consideration is made for any legal or physical restrictions imposed on the asset, public announcements or commitments made in relation to the intended use of the asset. Theoretical opportunities that may be available in relation to the asset are not taken into account until it is virtually certain that the restrictions will no longer apply. Therefore, unless otherwise disclosed, the current use of these non-financial physical assets will be their highest and best use.

Revaluation of infrastructure, property, plant and equipment, and VDP service concession asset

Revaluations are conducted either independently every 5 years (as required under FRD 103 Non-Financial Physical Assets) or in the intervening years using management expertise and classified as a managerial revaluation. The Corporation uses land indices (provided by the Valuer General Victoria VGV) to perform managerial valuations on land and buildings. Fair value assessment is performed annually for all other property plant and equipment as a managerial valuation, utilising external experts to conduct the infrastructure and service concession asset valuation annually. Managerial valuation movements are booked if material in accordance with FRD 103. Any accumulated depreciation at the date of revaluation is eliminated against the gross carrying amount of the asset and the net amount is restated to the revalued amount of the asset.

Any revaluation increase is recognised in other comprehensive income, except to the extent that it reverses a revaluation decrease for the same asset (or asset class when specifically related to infrastructure and service concession arrangements) previously recognised in net profit in the Statement of Profit or Loss and Other Comprehensive Income, in which case the increase is credited to profit to the extent of the decrease previously expensed. A decrease in the carrying amount arising on the revaluation is recognised in net profit in the Statement of Profit or Loss and Other Comprehensive Income to the extent that it exceeds the balance, if any, held in the asset revaluation reserve relating to a previous revaluation of that asset, otherwise decreases are recognised in other comprehensive income. The net effect of any revaluation adjustments to Profit and Loss is classified as a net gain or loss on revaluation of non-financial assets.

"Refer to Note 4.1.2 Fair Value Determination for further information on the revaluation methods used for the asset classes and the valuation outcomes for 30 June 2023.

4.1.2 Fair value determination of non-financial physical assets

The fair values of non-financial physical assets are determined (in accordance with the fair value hierarchy) as follows:

- Level 1 – quoted (unadjusted) market prices in active markets for identical assets or liabilities
- Level 2 – valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
- Level 3 – valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

4.1.2.1 Non-financial physical assets

($ thousands)

		Fair value measurements		
	2023	Level 1[(a)]	Level 2[(a)]	Level 3[(a)]
Non-current assets held for sale	23,754	-	23,754	-
Non-specialised land	27,803	-	27,803	-
Specialised land	2,448,683	-	-	2,448,683
Total land	**2,500,240**	**-**	**51,557**	**2,448,683**
Non-current assets held for sale	-	-	-	-
Non-specialised buildings	1,803	-	1,803	-
Specialised buildings	35,903	-	-	35,903
Total buildings	**37,706**	**-**	**1,803**	**35,903**
Leasehold improvements	654	-	-	654
Plant and equipment	14,545	-	-	14,545
Fleet vehicles	10,692	-	-	10,692
Infrastructure assets	9,305,525	-	-	9,305,525
VDP service concession asset	4,573,658	-	-	4,573,658
Total other	**13,905,074**	**-**	**-**	**13,905,074**
Total land, buildings, infrastructure, plant and equipment	**16,443,020**	**-**	**53,360**	**16,389,660**

Note:
(a) Classified in accordance with the fair value determination of non-physical assets

($ thousands)

		Fair value measurements		
	2022	Level 1[(a)]	Level 2[(a)]	Level 3[(a)]
Non-current assets held for sale	21,139	-	21,139	-
Non-specialised land	38,867	-	38,867	-
Specialised land	2,418,481	-	-	2,418,481
Total land	**2,478,487**	**-**	**60,006**	**2,418,481**
Non-current assets held for sale	-	-	-	-
Non-specialised buildings	1,858	-	1,858	-
Specialised buildings	33,491	-	-	33,491
Total buildings	**35,349**	**-**	**1,858**	**33,491**
Leasehold improvements	818	-	-	818
Plant and equipment[(b)]	17,673	-	-	17,673
Fleet vehicles	12,765	-	-	12,765
Infrastructure assets[(b)]	9,220,212	-	-	9,220,212
VDP service concession asset	3,962,058	-	-	3,962,058
Total other	**13,213,526**	**-**	**-**	**13,213,526**
Total land, buildings, infrastructure, plant and equipment	**15,727,362**	**-**	**61,864**	**15,665,498**

Note:
(a) Classified in accordance with the fair value determination of non-financial physical assets.
(b) Prior year (2021-22) carrying amounts have been restated to reclassify ($151.4 million opening carrying value and $211.2 million closing carrying value) from capital works in progress to infrastructure ($145.1 millionm opening carrying value and $206.6 million closing carrying value), plant and equipment ($0.3 million opening carrying value and $2.8 million closing carrying value) intangible assets ($6.0 million opening carrying value and $1.8 million closing carrying value Note 4.2) for projects that should have been completed (and transferred out of capital works in progress) in 2021-22. These delayed transfers also have associated backlog increased depreciation expenditure recognised in 2022-23 ($12.5 million) that has not been adjusted against the prior year as deemed not material.

Assets available to support output delivery (continued)

Non-current assets held for sale
Non-current assets held for sale are treated as current and classified as held for sale if their carrying amount will be recovered through a sale transaction rather than through continuing use.

This condition is regarded as met only when:

- the asset is available for immediate use in the current condition; and
- the sale is highly probable and the asset's sale is expected to be completed within 12 months from the date of classification.

These non-current assets are measured at the lower of carrying amount and fair value less costs to sell, and are not subject to depreciation or amortisation.

Non-specialised land (other than held for sale) and buildings

Non-specialised land (other than held for sale) and buildings are valued using the market/direct comparison approach with key inputs used being sales evidence and unit of value by comparative basis. To the extent that non-specialised land and buildings do not contain significant, unobservable adjustments, the assets are classified as Level 2 under the market approach. Refer to disclosures below under specialised land and buildings for current year valuation results for total land and buildings.

Specialised land

The market approach is used for specialised land adjusted for the Community Service Obligation (CSO) to reflect the specialised nature of the land being valued. A CSO adjustment is a reflection of the valuer's assessment of the impact of restrictions associated with an asset to the extent that it is also equally applicable to market participants. This approach is in light of the highest and best use consideration required for fair value measurement, and takes into account the use of the asset that is physically possible, legally permissible, and financially feasible. As adjustments of CSO are considered as significant unobservable inputs, specialised land is classified as Level 3 assets.

2020-21 was the last formal valuation year under FRD 103. The valuation methodology to assess each property's land fair value in 2020-21 involved an assessment of the unrestricted land value based on the existing or assumed underlying zoning, taking account of the individual property attributes. Then an assessment of the restrictions on the land due to being held by the public sector was made to consider if a CSO was warranted. The level of the CSO will depend on the perceived level of restriction and the risk associated with the removal of the restrictions, if at all possible. The property attributes considered in assessing the unrestricted value include, but are not limited to zoning and overlay(s), underlying zoning, location, land area, access, shape of the site, services available or connected and the highest and best use of the land. 2022-23 was not a formal valuation year under FRD 103 as such an interim managerial valuation was conducted using Valuer-General Victoria (VGV) postcode indices (consistent with 2021-22). The valuation resulted in no material change in value for specialised and non-specialised land (2021-22: net pre-tax increase of $347.9 million accounted for; in revenue via net gain on revaluation of non-financial assets $33.7 million; increase in post-tax other comprehensive income of $291.8 million; and increase in associated deferred tax liability of $26.9 million).

Note: Total net land valuation increments and decrements of $13.9 million (2021-22: $352.4 million) at Note 4.1.1 also include $13.9 million reduction for CSO discounts applied to land purchased during the year based on VGV valuation (2021-22: $4.5 million), which is recorded in other expenses in the Income Statement.

The market that the assets (land and buildings) are valued in is being impacted by the uncertainty that rising interest rates and increased construction costs has caused. The current market environment creates significant valuation uncertainty. The value assessed at the valuation date may therefore change over a relatively short time period.

Specialised buildings

For the majority of the Corporation's specialised buildings, the depreciated replacement cost method is used adjusting for the associated depreciation. As depreciation adjustments are considered as significant, unobservable inputs in nature, specialised buildings are classified as Level 3 fair value measurements.

2020-21 was the last formal valuation year under FRD 103. The valuation methodology in 2020-21 to assess the fair value of buildings was depreciated replacement cost (DRC) for specialised buildings and a market approach for non-specialised buildings. The DRC approach for specialised buildings involved assessing the cost of replacement of the assets to a 'modern equivalent' standard then adjusting for an appropriate depreciation rate, on a useful life basis after making adjustments for condition and general maintenance. The market approach for non-specialised buildings (i.e. some of the residential buildings) was a Market Based Direct Comparison method whereby the subject properties are compared to recent comparable improved sales making adjustment for points of difference to establish the Fair Value.

2022-23 was not a formal valuation year under FRD103 and as such an interim managerial valuation was conducted using Valuer-General Victoria (VGV) indices (consistent with 2021-22). For 2022-23 the managerial valuation resulted in $3.6 million increase in asset values for specialised and non-specialised buildings (2021-22: zero).

Leasehold improvements

For Leasehold improvements, fair value is determined using the depreciated replacement cost method. As depreciation adjustments are considered as significant, unobservable inputs in nature, leasehold improvements are classified as Level 3 fair value measurements.

2020-21 was the last formal valuation year under FRD 103. For leasehold improvements fair value is assessed through a managerial valuation. For 2022-23 the managerial valuation resulted in no material change in asset values for leasehold improvements (2021-22: zero).

Plant and equipment

Plant and equipment is specialised in use, such that it is rarely sold; fair value is determined using the depreciated replacement cost method. As depreciation adjustments are considered as significant, unobservable inputs in nature, plant and equipment are classified as Level 3 fair value measurements.

2020-21 was the last formal valuation year under FRD 103. For plant and equipment fair value is assessed through a managerial valuation. For 2022-23 the managerial valuation resulted in no material change in asset values for plant and equipment (2021-22: zero).

Fleet vehicles

Fleet vehicles are valued using appropriate market or other fair value indicators as determined by management. The Corporation acquires new vehicles and at times disposes of them before the end of their economic life. The process of acquisition, use and disposal in the market is managed by experienced fleet managers who set relevant depreciation rates during use to reflect the utilisation of the vehicles. As depreciation adjustments are considered as significant, unobservable inputs in nature, fleet vehicles are classified as Level 3 fair value measurements.

2020-21 was the last formal valuation year under FRD 103. For fleet vehicles fair value is assessed through a managerial valuation. For 2022-23 the managerial valuation resulted in no material change in asset values for fleet vehicles (2021-22: zero).

Infrastructure

The fair value of Infrastructure was assessed by an independent valuer in 2022-23 (consistent with 2021-22). The income approach was used for the fair value assessment by discounting reliable estimates of the Corporation's future cash flows (projected forecast and terminal value (a)) to their present value and arriving at an enterprise value range. Non-infrastructure assets and liabilities (including Service Concession Asset and Liability) are deducted from the enterprise value range to obtain the residual infrastructure value.

For 2022-23 the independent valuer used the exit RAB multiple as the primary methodology for calculating terminal value (2021-22: exit RAB multiple). This approach aligns with current observed market participant practice. The exit RAB multiple approach calculates terminal value based on forecast Regulated Asset Base (RAB) in the terminal year and an exit RAB multiple. Any tax amortisation benefit (TAB) available to subsequent market participants has been implicitly included through the selection of the terminal value exit multiple. A valuation cross check was performed to calculate the terminal value using the previous Gordon growth methodology, which confirmed that the terminal value is consistent with that calculated under the exit RAB multiple approach (sits within the range of selected terminal enterprise value).

In order to assess reasonableness of the enterprise valuation, cross checks are performed by comparing the earnings before interest, tax and depreciation/amortisation (EBITDA) and regulated asset value multiples implied by the value determined under the income approach against multiples implied by share prices at which comparable organisations are trading and recent transactions in comparable assets which have occurred. Such approaches are often referred to as market approaches or relative value approaches.

Melbourne Water's policy is to use a midpoint valuation in assessing the fair value.

For 2022-23 the valuation resulted in no material change in value (2021-22: nil).

The significant assumptions used in determining fair value under the income approach at 30 June 2023 are summarised below:

- Nominal after tax discount rate in the range of 5.1% to 5.5% (2021-22: 5.0% to 5.4%). The valuation was based on a mid point of 5.3% (2021-22: 5.2%). This represents the rate that market participants would expect to use in determining the fair market value of the Corporation after taking into account the market cost of debt and equity. The market that the assets are valued in is being impacted by the uncertainty that rising interest rates and increased construction costs have caused. The valuer has advised that the current market environment creates significant valuation uncertainty. The value assessed at the valuation date may therefore change over a relatively short time period. This uncertainty has been reflected in the discount rate.
- Operating expenditure and revenue growth applied post initial five year pricing period 3.0% (2021-22: 3.0%)
- Forecast RAB in terminal value year $27,269 million (2021-22: $20,593.0 million)
- Terminal value exit RAB multiple range of 1.05 to 1.15. The valuation was based on a mid point of 1.10 (2021-22: 1.05x to 1.15x and mid point of 1.10x)

Assets available to support output delivery (continued)

- A 10 year explicit cash flow projection period, with cash flows beyond the projection period reflected in the terminal value (2021-22: 10 years)
- Assumptions used for crosschecks:
  - — Long term growth rate of 3.25% (2021-22: 3.25%) - representing inflation and volume growth
  - — A Normalised terminal capex used for steady state $800.0 million (2021-22: $575.0 million).
- The infrastructure valuation considers climate change through forecast cash flows, growth and capital expenditure assumptions. While scenario planning is used to explore and help prepare for a wide range of potential future conditions, there is a risk that the assumptions made may not reflect the actual impact of climate-related emerging risks in the future.
- Impacts from COVID-19 have been incorporated into the cashflow forecasts. The direct impacts are expected to be relatively minor.
- Table 4.1.2.3 highlights sensitivity of the infrastructure fair value measurement to changes in significant unobservable inputs/assumptions noted above.

VDP service concession asset

The VDP service concession asset is valued using the current replacement cost method under AASB 13 (Fair Value), as required by AASB1059 and adjusted for the associated depreciation.

2020-21 was the last formal revaluation year under FRD 103. The approach used by the independent valuer in 2020-21 to derive fair value was the cost approach under AASB 1059. This involved estimating the current cost to purchase or replace the assets (replacement cost or RCN) using a combination of direct and indirect methods with comparison to benchmarking analysis across different Australian desalination plants. The direct method (used for 45 per cent of the assets being the pipeline, building and civil infrastructure and pumps) involved researching the current cost to replace an asset with a new one of equivalent functionality. The indirect method (used for the remaining 55 per cent of the assets) involved applying Australian Bureau of Statistics (ABS) equipment specific inflation factors to historical costs. RCN was then depreciated using engineering lives to account for physical use and deterioration to arrive at a depreciated replacement cost (DRC).

For 2022-23 (and 2021-22) the fair value of the VDP service concession asset was assessed by an independent valuer using the indirect DRC approach as a desktop valuation. This involved using the 2020-21 formal valuation as the base then applying ABS industry specific inflation factors to derive RCN. RCN was then depreciated using engineering lives to derive DRC. The valuation resulted in $689.9 million increase to asset values (2021-22: zero).

The VDP service concession asset is classified as level 3 fair value measurement as it contains significant unobservable inputs and adjustments. Significant assumptions used in determining fair value include; costs per unit, engineering useful lives and industry specific inflation indices. Table 4.1.2.3 highlights sensitivity of fair value measurement to changes in these significant unobservable inputs/assumptions.

The valuation is based on prevailing market, economic and other conditions as at the date of this report. Significant uncertainty continues to exist. To the extent possible these conditions have been reflected in the Valuation. However, any subsequent changes in these conditions on the global economy and financial markets generally, and the Corporation, could impact upon value in the future, either positively or negatively.

Financial reporting impacts of climate related matters (fair value measurement)

Climate change is a risk to the Corporation. Climate change risk includes the physical risk which can cause direct damage to assets or property as a result of rising global temperatures as well as transition risks which arise from the transition to a low-carbon economy (i.e. policy changes, carbon tax, legal and reputational risks and shifts in market and technology).

The Corporations non-current assets are exposed to the risk of damage from extreme weather events such as storms, high winds, floods and drought. Changes in global climate conditions could intensify one or more of these events. In addition, extreme weather events may also increase the cost of operations. The Corporation has extensive processes in place aimed at monitoring and mitigating these risks through proactive management and early detection. The Corporation has incorporated considerations for climate change into its risk management practices, such as the establishment and maintenance of flood management systems and increased monitoring during fire danger periods. Physical risks arising from fires, floods and drought are partially covered through insurance and also the regulatory funding mechanism. However, should the frequency and severity of these events increase as a result of climate change, the cost of such coverage and risk of unfunded costs may increase.

Transition risks could impact the valuation of infrastructure assets where the costs significantly exceed funding through the regulatory pricing mechanism.

Refer to 4.1.2.3 for further details on the sensitivity of climate related physical and transition risks as significant unobservable inputs to the Infrastructure and VDP valuations.

4.1.2.2 Net gain on revaluation of non-financial assets

($ thousands)

	2023	2022
Net gain on revaluation of non-financial assets	877	33,743

Net gain on revaluation of non-financial assets relates to revaluation increments/decrements recognised through profit and loss for land and buildings. Revaluation decrements are initially recognised through profit and loss as expenses to the extent that they exceed the balance, if any, held in the asset revaluation reserve relating to a previous revaluation of that asset. Valuation increments that result in reversals of previous profit and loss decreases are credited to the profit and loss.

4.1.2.3 Description of significant unobservable inputs to Level 3 valuations

Asset category	Valuation technique	Significant unobservable inputs	Range/weighted average		Sensitivity of fair value measurement to changes in significant unobservable inputs
2023 and 2022	2023 and 2022	2023 and 2022	2023	2022	2023 and 2022
Specialised land	Market approach	Community Service Obligation (CSO) adjustment	20-70% (45% weighted average)	20-70% (45% weighted average)	A significant increase or decrease in the CSO adjustment would result in a significantly lower or higher fair value
Specialised buildings	Depreciated replacement cost	Direct cost per square metre	$12-$10,000	$14-$9,000	A significant increase or decrease in direct cost per square metre would result in a significantly higher or lower fair value
		Useful life of specialised buildings"	5-150 years (64 years weighted average)	5-150 years (65 years weighted average)	A significant increase or decrease in estimated useful life of the asset would result in a significantly higher or lower fair value
Leasehold improvements	Depreciated replacement cost	Cost per unit	$500-$0.28M per unit	$500-$0.35M per unit	A significant increase or decrease in cost per unit would result in a significantly higher or lower fair value
		Useful life of plant and equipment	3-15 years (15 years weighted average)	3-15 years (15 years weighted average)	A significant increase or decrease in estimated useful life of the asset would result in a significantly higher or lower fair value
Plant and equipment	Depreciated replacement cost	Cost per unit	$500-$2.0M per unit	$500-$2.5M per unit	A significant increase or decrease in cost per unit would result in a significantly higher or lower fair value
		Useful life of plant and equipment	3-50 years (10 years weighted average)	3-50 years (12 years weighted average)	A significant increase or decrease in estimated useful life of the asset would result in a significantly higher or lower fair value
Fleet vehicles	Depreciated replacement cost	Cost per unit	$5,200-$56,900 per unit	$5,200-$45,200 per unit	A significant increase or decrease in cost per unit would result in a significantly higher or lower fair value
		Useful life of vehicles	1-15 years (7 years weighted average)	1-15 years (6 years weighted average)	A significant increase or decrease in estimated useful life of the asset would result in a significantly higher or lower fair value

4.1.2.3 Description of significant unobservable inputs to Level 3 valuations (continued)

Asset category	Valuation technique	Significant unobservable inputs	Range/weighted average		Sensitivity of fair value measurement to changes in significant unobservable inputs
2023 and 2022	2023 and 2022	2023 and 2022	2023	2022	2023 and 2022
Infrastructure assets	Income approach	Exit RAB multiple	1.05x to 1.15x (1.10x midpoint)	1.05x to 1.15x (1.10x midpoint)	If the exit RAB multiple had changed by +/-0.050x from the year end valuation, the impact to the valuation would have been a decrease of $835.0 million and increase by $835.0 million (2021-22: decrease of $636.0 million and increase by $636.0 million).
		Weighted average cost of capital (WACC)	5.1%-5.5%	5.0%-5.4%	If the WACC had changed by +/-.25% from the year end valuation, the impact to the valuation would have been a decrease of $415.9 million (2021-22: $245.0 million) and increase by $284.7 million (2021-22: $376.0 million)
		Useful life	2-245 years (83 years weighted average)	2-245 years (83 years weighted average)	A significant increase or decrease in estimated useful life of the asset would result in a higher or lower fair value
		Physical risk of unrecoverable financial loss due to one-off climate change adverse weather events (i.e. bushfire, flood, drought etc.)	Costs associated with physical climate risks are uncertain and could vary from estimates included in current financial forecasts included in the valuation. For high level indicative scenario modelling we have considered the example of a pre-tax unrecoverable financial loss (after insurance recovery) of $12.5 million - $25.0 million ($18.8 million mid-point) per one-off climate change event (based on actual average costs of historical bushfire and flood events over an average five year period). We have assumed a possible frequency of one-off climate change events between every 3 to 7 years (5 years mid-point) beyond the terminal year.	Costs associated with physical climate risks are uncertain and could vary from estimates included in current financial forecasts included in the valuation. For high level indicative scenario modelling we have considered the example of a pre-tax unrecoverable financial loss (after insurance recovery) of $12.5 million - $25.0 million ($18.8 million mid-point) per one-off climate change event (based on actual average costs of historical bushfire and flood events over an average five year period). We have assumed a possible frequency of one-off climate change events between every 3 to 7 years (5 years mid-point) beyond the terminal year.	Occurrence of unrecoverable financial loss due to one off climate change events every 5 years (beyond the terminal year) at a cost of $18.8 million per event could reduce the valuation by $71.5 million or 0.5% (2021-22: $18.8 million per event could reduce the valuation by $74.0 million or 0.6%). Note: this is indicative only and limited due to uncertainty with estimation of the financial impact of physical climate risks.
		Transition risks arising from transition to low-carbon economy (i.e. policy changes, carbon tax, legal and reputational risks and shifts in market and technology).	Costs associated with climate change transition risks are uncertain and could vary from estimates included in current financial forecasts included in the valuation. For high level indicative scenario modelling, we have considered the example of price and volume risk associated with purchase and surrender of carbon offsets (associated with meeting our emmissions reduction targets), that could occur within a regulatory cycle and could be partially unfunded. We have considered a range of increase in volume and/or price of 25-50% partially unfunded within each regulatory cycle.	N/A - new for 2023.	An increase in partially unfunded costs associated with fluctuations in carbon price and/or volumes by 25-50% could reduce the valuation by 0.02% ($2.5 million) to 0.9% ($118.2 million).

4.1.2.3 Description of significant unobservable inputs to Level 3 valuations (continued)

Asset category	Valuation technique	Significant unobservable inputs	Range/weighted average		Sensitivity of fair value measurement to changes in significant unobservable inputs
2023 and 2022	2023 and 2022	2023 and 2022	2023	2022	2023 and 2022
VDP service concession asset	Current replacement cost	Cost per unit	Buildings $ per sqm: 11,155 - 17,402 (16,398 weighted average) Pipeline $ per m: 12,532 - 17,545 (14,811 weighted average) Pumps $ per kW: 498 - 1,423 (996 weighted average) Transformers $ per MVA: 56,869 - 121,320 (94,781 weighted average) Pipeline $ per KL: 591 - 1,375 (928 weighted average)	Buildings $ per sqm: 10,291 - 16,053 (15,127 weighted average) Pipeline $ per m: 11,672 - 16,340 (13,794 weighted average) Pumps $ per kW: 364 - 1,039 (727 weighted average) Transformers $ per MVA: 54,770 - 116,842 (91,283 weighted average) Pipeline $ per KL: 527 - 1,226 (828 weighted average)	A significant increase or decrease in unit costs would result in a significantly higher or lower fair value
		Engineering useful life for valuation	9 - 100 years (66 years weighted average)	10 - 100 years (62 years weighted average)	A significant increase or decrease in estimated useful life of the asset would result in a significantly higher or lower fair value
		Industry specific ABS inflation indices	12%-67% (weighted 8.2% change)	0%-71% (8.9% weighted average)	A significant increase or decrease in estimated inflation factors would result in a higher or lower fair value
		Physical risk of reduced asset lives on VDP assets expected to be exposed to physical climate risks (i.e. sea level rise and coastal erosion, changes to seawater composition and extreme weather events) beyond the initial service concession period (as associated maintenance/ repair costs are expected to be funded by the service provider under the existing contractual arrangements to this date).	Costs associated with physical climate risks are uncertain. For high level indicative scenario modelling we have considered the key physical risks and assumed a reduction in the expected remaining useful life of 5%, 10% and 15% (beyond the September 2039 concession period), of the key component assets likely to be exposed to physical risk. These components include; intake and outtake structures, pre-treatment/filtration equipment/reverse osmosis membranes and electrical assets.	N/A - new for 2023	A reduction in expected normal useful live of component assets expected to be exposed to physical risks of 5-15% would reduce the fair value of the VDP assets by less than 1%.

Assets available to support output delivery (continued)

4.1.2.4 Reconciliation of Level 3 fair value

($ thousands)

	Specialised land	Specialised buildings	Leasehold improvements	Plant and equipment	Fleet vehicles	Infrastructure	VDP service concession asset
Opening balance 1 July 2021[a]	2,060,347	34,585	981	15,961	14,510	9,087,621	4,040,370
Purchased additions	-	-	-	-	1,172	-	-
Developer contributed assets	-	-	-	-	-	27,879	-
Disposals and write-offs	(4,755)	-	-	(17)	(583)	(29,441)	-
Depreciation and amortisation	-	(1,120)	(163)	(4,885)	(2,334)	(337,302)	(78,312)
Transfers between classes	-	-	-	-	-	-	-
Transfers in/(out) of Level 3	11,194	-	-	-	-	-	-
Revaluation increments	344,713	-	-	-	-	-	-
Revaluation decrements	(4,536)	-	-	-	-	-	-
Capital contributions	-	-	-	-	-	-	-
Capitalisation of works in progress[a]	11,517	26	-	6,614	-	471,455	-
At 30 June 2022	**2,418,480**	**33,491**	**818**	**17,673**	**12,765**	**9,220,212**	**3,962,058**
Opening balance 1 July 2022	2,418,480	33,491	818	17,673	12,765	9,220,212	3,962,058
Purchased additions	-	-	-	-	290	-	-
Developer contributed assets	-	-	-	-	-	10,241	-
Disposals and write-offs	(1,227)	-	-	(75)	(492)	(39,262)	-
Depreciation and amortisation	-	(1,095)	(164)	(5,775)	(1,871)	(356,864)	(78,312)
Transfers between classes	-	91	-	(16)	-	(176)	-
Transfers in/(out) of Level 3	(1)	-	-	-	-	-	-
Revaluation increments	-	3,392	-	-	-	-	689,912
Revaluation decrements	(13,939)	-	-	-	-	-	-
Capital contributions	-	-	-	-	-	116,140	-
Capitalisation of works in progress	45,368	24	-	2,738	-	355,234	-
At 30 June 2023	**2,448,681**	**35,903**	**654**	**14,545**	**10,692**	**9,305,525**	**4,573,658**

(a) Prior year (2021-22) carrying amounts have been restated to reclassify ($211.2 million total) from capital works in progress to infrastructure ($206.6 million), plant and equipment ($2.8 million) intangible assets ($1.8 million Note 4.2) for projects that should have been completed (and transferred out of capital works in progress) in 2021-22.

4.1.3 Depreciation, amortisation and impairment

($ thousands)

	Notes	2023	2022
Depreciation			
Buildings	**4.1.1**	1,393	1,419
Leasehold improvements	**4.1.1**	164	163
Plant and equipment	**4.1.1**	5,775	4,885
Fleet vehicles	**4.1.1**	1,871	2,334
Infrastructure assets	**4.1.1**	356,864	337,302
VDP service concession asset	**4.1.1**	78,312	78,312
Right of use assets	**4.4**	7,914	8,130
Total depreciation		**452,293**	**432,545**
Amortisation			
Intangible assets	**4.2**	17,227	23,797
Total amortisation		**17,227**	**23,797**
Total depreciation and amortisation		**469,520**	**456,342**

Depreciation and amortisation

Where assets have separate identifiable components that have distinct useful lives and/or residual values, a separate depreciation rate is determined for each component.

Depreciation on other assets is calculated using the straight line method to allocate their cost or revalued amounts, net of their residual values, over their estimated useful lives, commencing from the time the asset is held ready for use. The assets residual values and useful lives are reviewed annually, and adjusted if appropriate, at the end of each reporting period.

Depreciation does not cease when an asset becomes idle or is retired from active use, unless the asset is fully depreciated. However, when an asset is retired permanently, depreciation ceases and the asset is derecognised. The depreciation charge for each period shall be recognised in profit or loss unless it is included in the carrying amount of another asset.

Physical, economic and environmental factors are taken into consideration in assessing the useful lives of the assets, including but not limited to asset condition and obsolescence, technology changes, capital planning and renewals, and climate-related risks.

VDP service concession assets are depreciated based on guaranteed lives per the Project Deed arrangements, which incorporate the impact of the ongoing Project Deed lifecycle cost payments accounted for as expenditure. Guaranteed lives are used because lifecycle costs cover repairs and maintenance and also asset replacements with shorter lives than the Project Deed. Parts of VDP that have a cost that is significant in relation to the total cost of VDP are depreciated separately.

Land is not depreciated. Impacts resulting from changes in depreciation rates have been incorporated in the current year's results and have not been separately disclosed as the overall amount was not material.

Major depreciation and amortisation periods used are listed below:

Buildings	5 to 150 years (2021-22: 5 to 150 years)
Leasehold improvements	3 to 15 years (2021-22: 3 to 15 years)
Plant and equipment	3 to 50 years (2021-22: 3 to 50 years)
Infrastructure assets	2 to 245 years (2021-22: 2 to 245 years)
Fleet vehicles	1 to 15 years (2021-22: 1 to 15 years)
Intangible assets	2 to 25 years (2021-22: 2 to 25 years)
VDP service concession asset	9 to 100 years (2021-22: 9 to 100 years)
Right-of-use assets	3 to 8 years (2021-22: 3 to 8 years)

During the period, there were no material changes made to the useful lives of property, plant and equipment (2021-22: Nil).

Indefinite life assets

Land, which is considered to have an indefinite life, is not depreciated. Depreciation is not recognised in respect of these assets because their service potential has not, in any material sense, been consumed during the reporting period.

Assets available to support output delivery (continued)

Impairment

Intangible assets with indefinite useful lives (and intangible assets not yet available for use) are tested annually for impairment and whenever there is an indication that the asset may be impaired.

All other assets are assessed annually for indications of impairment, except for:

- Inventories (refer to 3.11)
- Non-current assets held for sale (refer to 4.1.2.1 and 4.3)

If there is an indication of impairment, the assets concerned are tested as to whether their carrying value exceeds their recoverable amount. Where an asset's carrying value exceeds its recoverable amount, the difference is written off to the Statement of Profit or Loss and Other Comprehensive Income, except to the extent that the write down can be debited to an asset revaluation reserve amount applicable to that asset.

The recoverable value estimates used in the impairment of assets analysis consider forecast cash flows, growth and terminal capital expenditure assumptions. The recoverable value estimates demonstrate that assets are not impaired. While scenario planning is used to explore and help prepare for a wide range of potential future conditions (including the impacts of climate change and changes in macroeconomic conditions), there is a risk that the assumptions made based on what is currently known may not reflect the actual impact of emerging risks in the future.

It is deemed that, in the event of the loss or destruction of an asset, the future economic benefits arising from the use of the asset will be replaced unless a specific decision to the contrary has been made. The recoverable amounts for most assets are measured at the higher of the present value of future cash flows expected to be obtained from the asset or fair value less costs to sell.

4.2 Intangible assets

($ thousands)

	2023	2022
Intangible assets	187,980	180,571
Less: accumulated amortisation and impairment	(148,669)	(131,484)
Total intangible assets	**39,311**	**49,087**

Reconciliation of movements in intangible assets

($ thousands)

	Total	RECs[b]	IT[c]
Carrying amount at 1 July 2022	49,087	2,932	46,155
Additions	13,390	13,390	-
Disposals	(12,667)	(12,594)	(73)
Amortisation	(17,227)	-	(17,227)
Transfers between classes [a]	101	-	101
Impairment [d]	-	-	-
Capital expenditure	6,627	-	6,627
Carrying amount at 30 June 2023	**39,311**	**3,728**	**35,583**
Carrying amount at 1 July 2021	55,059	3,604	51,455
Additions	9,593	9,593	-
Disposals	(10,270)	(10,265)	(5)
Amortisation	(23,797)	-	(23,797)
Transfers between classes [a]	-	-	-
Impairment[d]	-	-	-
Capital expenditure[e]	18,502	-	18,502
Carrying amount at 30 June 2022	**49,087**	**2,932**	**46,155**

Note:
(a) Includes transfers to physical assets, refer to 4.1.1.
(b) Renewable Energy Certificates (RECs).
(c) Information Technology
(d) There was no impairment recognised this year in the income statement (2021-22: zero)
(e) Prior year (2021-22) carrying amounts have been restated (by $6.0 million opening carrying value and $1.8 million closing carrying value) to include transfers from capital works in progress (Note 4.1.1) for projects that should have been completed in 2021-22 and transferred to intangible assets (IT).

Intangible assets consist primarily of information technology software and RECs. They represent identifiable non-monetary assets without physical substance. Intangible assets are measured at cost less accumulated amortisation (RECs are not amortised) and impairment. Costs incurred subsequent to initial acquisition are capitalised when it is expected that additional future economic benefits will flow to the Corporation.

The Corporation amortises intangible assets with a limited useful life using the straight line method over the estimated useful lives (excluding RECs). Amortisation begins when the asset is available for use, that is, when it is in the location and condition necessary for it to be capable of operating in the manner intended by management. The useful life and amortisation method is reviewed at the end of each annual reporting period. RECs have an indefinite life and are not amortised.

An assessment is made at the end of each reporting period to determine whether there are indicators that the intangible asset concerned is impaired. If so, the assets concerned are tested as to whether their carrying value exceeds their recoverable amount.

Software costs

Costs incurred for the development of software code that enhances or modifies, or creates additional capability to, existing on-premise systems and meets the definition of and recognition criteria for an intangible asset are recognised as intangible software assets.

Software-as-a-Service (SaaS) arrangements are service contracts providing the Corporation with the right to access the cloud provider's application software over the contract period. As such the Corporation does not receive a software intangible asset at the contract commencement date.

The following outlines the accounting treatment of costs incurred in relation to SaaS arrangements:

Recognise as administrative expenses (Note 3.4) over the term of the service contract	• Fee for use of application software • Customisation costs
Recognise as administrative expenses (Note 3.4) as the service is received	• Configuration costs • Data conversion and migration costs • Testing costs • Training costs

The Corporation made the following key judgements that may have the most significant effect on the amounts recognised in the financial statements.

Determination whether configuration and customisation services are distinct from the SaaS access

Implementation costs including costs to configure or customise the cloud provider's application software are recognised as operating expenses when the services are received. Where the SaaS arrangement supplier provides both configuration and customisation services, judgement has been applied to determine whether each of these services are distinct or not from the underlying use of the SaaS application software. Distinct configuration and customisation costs are expensed as incurred as the software is configured or customised (i.e. upfront). Non-distinct configuration and customisation costs are expensed over the SaaS contract term (via prepayments).

Non-distinct customisation activities significantly enhance or modify a SaaS cloud-based application. Judgement has been applied in determining whether the degree of customisation and modification of the SaaS cloud-based application is significant or not. During the financial year, the Corporation did not recognise any prepayments in respect of configuration and customisation activities undertaken in implementing SaaS arrangements which are considered not to be distinct from the access to the SaaS application software over the contract term (2021-22: zero).

Capitalisation of configuration and customisation costs in SaaS arrangements

In implementing SaaS arrangements, the Corporation may develop software code that either enhances, modifies or creates additional capability to the existing owned software. This software is used to connect with the SaaS arrangement cloud-based application. Judgement has been applied in determining whether the changes to the owned software meets the definition of and recognition criteria for an intangible asset in accordance with AASB 138 Intangible Assets. During the financial year, the Corporation did not recognise any intangible assets in respect of customisation and configuration costs incurred in implementing SaaS arrangements (2021-22: zero).

Assets available to support output delivery (continued)

4.3 Non-current assets held for sale

($ thousands)

	2023	2022
Land	23,754	21,139
Total non-current assets held for sale	**23,754**	**21,139**

The Corporation currently holds land for sale mainly as part of the Riverwalk Estate (Werribee) development. As at 30 June 2023, the Corporation has a joint arrangement with Development Victoria to actively market Riverwalk Estate lots for private sale.

Riverwalk, located in Werribee, an outer western suburb of Melbourne, is a 197 hectare site and was previously part of the Western Treatment Plant. The Corporation has entered into a Partnering Deed with Development Victoria to develop the land with an estimated 2,260 homes at the completion of the project.

The Corporation has accounted for all assets, liabilities, revenues and expenses relating to its interest in the joint operation in accordance with the *AASB 11 Joint arrangements*.

Refer to 4.1.2 for further details on fair value measurement of non-current assets held for sale.

4.4 Right-of-use assets and leases

This note provides information for leases where the Corporation is a lessee.

(i) Amounts recognised in the Statement of Financial Position

($ thousands)

The Statement of Financial Position shows the following amounts relating to leases:	2023	2022
Right-of-use assets		
Buildings	30,793	38,403
Equipment	146	235
Other	389	207
Total right-of-use assets	**31,328**	**38,845**
Lease liabilities		
Current	8,112	7,624
Non-current	27,981	35,724
Total lease liabilities (included within interest bearing liabilities refer Note 5.1)	**36,093**	**43,348**

During the 2022-23 financial year there were $1.4 million (2021-22: Nil) of additions to the right-of-use assets in relation to a 5 year extension on a building lease ($1.3 million included in buildings) and a land lease ($0.3 million included in other). An equivilent amount of $1.4 million has been included in lease liabilities (2021-22: Nil).

(ii) Amounts recognised in the Statement of Profit or Loss

($ thousands)

The Statement of Profit or Loss shows the following amounts relating to leases:	2023	2022
Depreciation charge of right-of-use assets		
Buildings	7,722	7,930
Equipment	89	120
Other	103	80
Total	**7,914**	**8,130**
Administrative expenses		
Expense relating to short-term leases	255	252
Expense relating to leases of low-value assets that are not short-term leases	-	-
Expense relating to variable lease payments not included in lease liabilities	2,346	2,770
Total	**2,601**	**3,022**
Finance expenses		
Buildings	842	848
Equipment	4	7
Other	14	5
Total	**860**	**860**

The total cash outflow for leases in 2022-23 was $8.4 million (2021-22: $8.1 million).

Assets available to support output delivery (continued)

(iii) The Corporation's leasing activities and how these are accounted for:

The Corporation leases buildings, minor equipment and various network connection assets.

Rental contracts are typically made for fixed periods of 3 to 15 years, but may have extension options as described below.

Contracts may contain both lease and non-lease components. The Corporation allocates the consideration in the contract to the lease and non-lease components based on their relative stand-alone prices.

Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose any covenants.

Leases are recognised as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by Corporation.

Initial recognition

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable
- variable lease payments that are based on an index or a rate
- amounts expected to be payable by the lessee under residual value guarantees
- the exercise price of a purchase option if the lessee is reasonably certain to exercise that option
- payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

Each lease payment is allocated between the liability and finance cost. The finance cost is charged to the profit and loss over the lease period to produce a constant periodic rate of interest on the remaining balance of the liability for each period. Lease payments to be made under reasonably certain extension options are also included in the measurement of the liability.

The lease payments are discounted using the Corporation's incremental borrowing rate. Treasury Corporation of Victoria (TCV)/ Department of Treasury's (DTF) calculator is used to determine the incremental borrowing rate.

Right-of-use assets include the following components:

- the amount of the initial measurement of lease liability
- any lease payments made at or before the commencement date, less any lease incentives received
- any initial direct costs
- restoration costs.

The Corporation is exposed to future cash outflows that are not reflected in the measurement of lease liabilities. This includes:

- variable lease payments
- extension options and termination options
- leases not yet commenced to which the lessee is committed.

4.4 Right-of-use assets and leases (continued)

(iii) The Corporation's leasing activities and how these are accounted for (continued):

Subsequent re-measurements

Right of use assets are subsequently measured at fair value less accumulated depreciation and impairment. Fair value is determined with reference to market rental yields, impairment losses and any re-measurements of the lease liability. A managerial fair value assessment was performed with reference to market rental yields and concluded that no revaluation adjustments were required for 30 June 2023 (2021-22: no revaluation adjustments).

Depreciation

The Corporation depreciates the right-of-use assets on a straight-line basis from the lease commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term.

Variable lease payments

Variable lease payments are recognised as administrative expenses in the profit and loss. Variable lease payments include overhead charges and congestion levies associated with the building and parking leases.

Extension and termination options

Extension and termination options may be included in the leases. These terms are used to maximise operational flexibility in terms of managing contracts. The majority of extension and termination options held are exercisable only by the Corporation and not by the respective lessor.

Residual value guarantees

The Corporation is not exposed to any lease residual value guarantees.

Critical judgements in determining the lease term

In determining the lease term, the Corporation considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. The assessment is reviewed if a significant event or a significant change in circumstances occurs which affects this assessment. During the current financial year and prior year, there were no changes in circumstances to impact the assessment of exercising extension and termination options.

Operating lease receivable

Operating leases receivable primarily relate to land owned by the Corporation. All operating lease contracts contain market review clauses. The lessee does not have an option to purchase the land at the expiry of the lease period.

Commitments for minimum lease receipts in relation to non-cancellable operating leases are as follows:

($ thousands)

	2023	2022
Within 1 year	3,532	2,588
Later than 1 year but not later than 5 years	4,846	5,197
Later than 5 years	1,805	1,370
Total operating lease receivable	**10,183**	**9,155**

Financing our operations

Introduction

The Corporation's operations are financed through a variety of means. Recurrent operations are generally financed from cash flows from operating activities (see Statement of Cash Flows). Asset investment operations are generally financed from a combination of surplus cash flows from operating activities, asset sales and borrowings.

This section provides information on the balances related to the financing of the Corporation's operations, including financial commitments (inclusive of lessor receivables) at year-end.

Structure

5.1 Interest bearing liabilities

($ thousands)

	2023	2022
Current interest bearing liabilities		
VDP service concession liability	48,287	31,205
Lease liabilities	8,112	7,624
Borrowings	582,682	641,331
Total current interest bearing liabilities	**639,081**	**680,160**
Non-current interest bearing liabilities		
VDP service concession liability	3,464,736	3,513,023
Lease liabilities	27,981	35,724
Borrowings	3,852,249	3,680,000
Total non-current interest bearing liabilities	**7,344,966**	**7,228,747**
Total interest bearing liabilities	**7,984,047**	**7,908,907**

Interest bearing liabilities come from borrowings raised through the Treasury Corporation of Victoria (TCV), along with VDP service concession liability and leases. They are classified as financial instruments. All interest bearing liabilities are initially recognised at the fair value of the consideration received less directly attributable transaction costs. Interest bearing liabilities are subsequently measured at amortised cost using the constant interest rate method, with interest expense recognised on an effective yield basis.

Financial liabilities for the VDP service concession liability were initially measured at the fair value of the service concession asset. Any modifications to the debt repayments are considered with reference to the guidance within AASB 9.

Where the Corporation has an unconditional right to defer settlement of the liability for at least 12 months after the balance date, interest bearing liabilities are classified as non-current liabilities. Otherwise interest bearing liabilities are classified as current liabilities.

Financial reporting impacts of climate related matters

Under the Greener Government Buildings Program, the Corporation entered into two Credit Foncier loans with TCV on the 28 September 2022 totalling $78.4M (balance as at 30 June 2023: $70.9M of which $8.7M is current and $62.2M is non-current included within borrowings). The purpose of these loans are to fund the below climate related projects:

- To implement the Eastern Treatment Plant and Winneke Large Scale Solar project to reduce greenhouse gas emissions and operating costs at facilities operated by Corporation; and
- Installation of Mini Hydroelectric Power Stations.

These loans have the financial accommodation levy (FAL) waived, and differ to usual TCV loans in that principal and interest are paid progressively over the loan period.

5.1.1 Breakdown of finance costs

($ thousands)

	2023	2022
Interest expense	118,979	111,677
VDP service concession liability	398,937	401,333
Lease liabilities	755	860
Financial Accommodation Levy	32,035	33,308
Total	**550,706**	**547,178**

Finance costs include interest on short-term and long-term borrowings, finance charges associated with the VDP service concession liability, interest on leases, the Victorian Government's Financial Accommodation Levy. An assessment has been performed and significant financing component on contracts with customers has been determined to be immaterial to recognise (2021-22: Nil).

Finance costs are recognised as expenses in the period in which they are incurred. Finance costs directly attributable to the acquisition, construction or production of these qualifying assets are not required to be capitalised and will continue to be expensed in the period in which they are incurred. All qualifying assets (being assets that necessarily take a substantial period of time to get ready for their intended use or sale) are measured at fair value.

5.2 Cash flow information and balances

Cash and cash equivalents include cash on hand, deposits held at call with financial institutions, other short-term and highly liquid investments with original maturities of 3 months or less, that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value.

Deposits held and advances received are categorised as financial liabilities at amortised cost.

Reconciliation of net profit to net cash flows from operating activities

($ thousands)

	2023	2022
Profit for the period after tax	119,069	130,128
Plus/(less) non cash items:		
Depreciation and amortisation	469,520	456,342
Net gain on revaluation of non-financial assets	(877)	(33,743)
Net gain on sale of non-current assets (including RECs)	(20,042)	(10,386)
Assets written off/written down and asset transfers to Council	45,272	44,848
Developer contributed assets received	(10,241)	(27,879)
Defined benefit superannuation plan expense	115	1,210
RECs received	(13,390)	(9,593)
Changes in operating assets and liabilities (net of investing items):		
(Increase)/Decrease in trade and other receivables and contract assets	(18,081)	(3,837)
(Increase)/Decrease in other assets	325	(9,618)
Increase/(Decrease) in trade and other payables and contract liablities	26,810	34,745
Increase/(Decrease) in other provisions and employee benefits provisions	8,529	3,562
(Decrease)/Increase in current tax liability	(5,965)	909
(Decrease)/Increase in deferred tax liabilities	(20,542)	(31,352)
Net cash provided by operating activities	**580,502**	**545,336**

Financing our operations (continued)

5.3 Commitments

Commitments for future expenditure include capital, operating and financing commitments arising from contracts.

These commitments are not recognised in the financial statements, but are disclosed at their nominal value and inclusive of the GST payable, except for finance lease liabilities which are disclosed at present value.

	($ thousands)	
	2023	**2022**
Capital expenditure commitments		
Total capital expenditure contracted for the construction of water, sewerage and waterways and drainage infrastructure:		
Less than 1 year	591,715	443,247
1 year but less than 5 years	313,495	297,083
5 years or more	471	20
Total capital expenditure commitments	**905,681**	**740,350**

Other operating commitments

Other operating commitments relate to operating contracts including energy, IT, research and development (excluding leases). Refer to Note 5.4 for other operating commitments relating to the VDP service concession arrangement.

Total other operating expenditure contracted for at balance date are as follows:		
Less than 1 year	34,224	37,829
1 year but less than 5 years	70,565	55,422
Later than 5 years	40,154	44,107
Total other operating commitments	**144,943**	**137,358**

5.4 VDP service concession arrangement

Victorian Desalination Plant Arrangement

The State of Victoria entered into a 30-year Public Private Partnership (PPP) arrangement with the AquaSure consortium (AquaSure) on 30 July 2009. The Victorian Desalination Project was initiated to design, build, finance and operate a desalination plant, transfer pipeline and 220 kV underground power cable capable of supplying 150GL of water per annum into the Melbourne network. Construction of the Victorian Desalination Project began in 2009 and the lease term commenced in 2012 upon successful commissioning. AquaSure is required to transfer the project assets to the State at the end of the project term for no additional payment by the State. The desalination plant assets will transfer from the State to the Corporation at the end of the project contract term (presently planned for 2039).

Under the arrangement, the state has an obligation to make Water Security Payments (WSPs) to the consortium provided the plant is maintained to the appropriate standard. The WSPs have two components: capital payments for the project assets and other expenses for operating, maintenance and lifecycle costs. The state will also make Water Usage Payments (WUPs) for any water that is ordered and delivered to the required standard. Water can be ordered annually for flexible amounts from 0GL to 150GL (in set increments). The arrangement also requires a minimum number of Renewable Energy Certificates (RECs) to be purchased to offset the electricity used by the plant. The number of RECs that are consumed will vary based on the volume of water produced by the plant. The number of banked RECs that remain at the end of the supply period are controlled by the State and not recognised by the Corporation.

An arrangement was entered into by the State and the Corporation, where a Statement of Obligations (SoO) was issued to the Corporation under section 4I of the *Water Industry Act 1994* that required the Corporation to pay all monies as required by the State under the project deed with AquaSure. This includes payment of the WSPs and WUP in accordance with the Project Deed. The Corporation makes these payments to DEECA who are managing the contract with AquaSure on behalf of the State.

The Corporation also entered into a Victorian Desalination Project 'Water Interface Agreement' (WIA) and a Supplementary Water Interface Agreement with the State to record the terms of the interface and financial arrangements between the Project and the Corporation.

Service concession assessment and policy

The State (in conjunction with the Corporation) has assessed the agreements between AquaSure, DEECA (on behalf of the State) and the Corporation, and concluded that the agreements are connected and should form one single commercial arrangement. Under the combined arrangement, the Corporation is considered the ultimate grantor under AASB 1059 (Service Concession Arrangements), and AquaSure the private sector operator that provides public services on behalf of the Corporation. Accordingly the Corporation applies AASB 1059 to the VDP arrangement. Service concession assets are recognised under Property plant and equipment in section 4.1 and related liabilities are disclosed under Interest bearing liabilities under section 5.1 respectively.

Changes in arrangement occurring in the current year

As at 30 June 2023 AquaSure had produced 4.1 GL for the 2022-23 supply period (125GL for the 2021-22 supply period). A Change Supply Notice was issued in September 2022 to cancel the 15 GL water ordered due to the water supply system nearing capacity, avoiding spillage and reduce the likelihood of flooding.

On 1 April 2023 the Minister for Water announced the 2023-24 Supply Notice (order) with a Required Annual Water Volume for 0 GL in 2023-24 and non-binding forecasts of 50 GL for 2024-25 and 75 GL for 2025-26 (2022-23 non-binding forecast:125GL for 2023-24 and 2024-25).

Financing our operations (continued)

VDP service concession arrangement liability

As per information provided by DEECA (in accordance with the WIA), the Corporation has recognised the following service concession liability:

($ thousands)

	Minimum future payments (exc GST)		Present value of minimum future payments (exc GST)	
	2023	2022	2023	2022
VDP service concession arrangement liability				
Less than 1 year	442,947	430,141	48,287	31,205
1 year but less than 5 years	1,839,220	1,800,692	332,483	261,839
Later than 5 years	5,541,310	6,022,786	3,132,253	3,251,184
Minimum future liability payments	**7,823,477**	**8,253,619**	**3,513,023**	**3,544,228**
Less: Future finance charges	(4,310,454)	(4,709,391)	-	-
Total liability	**3,513,023**	**3,544,228**	**3,513,023**	**3,544,228**
Representing liability:				
Current (refer to 5.1) [a]			48,287	31,205
Non-current (refer to 5.1) [a]			3,464,736	3,513,023
Total liability			**3,513,023**	**3,544,228**

Note:
(a) The present value of the minimum future payments have been discounted to 30 June of the respective financial years using the weighted average interest rate of 11.28% (2021-22: 11.28%). These payments exclude finance charges.

VDP service concession arrangement – other commitments payable

Under the PPP arrangement that the state entered into with AquaSure, the State is required to make base water security payments, provided the plant is maintained to the appropriate standard. These payments are for costs related to the VDP's operation, maintenance and lifecycle costs. The nominal amounts for the other commitments below represent the charges payable under the agreement at the end of the reporting period for these costs.

The other commitments payable are disclosed based on information provided by DEECA (in accordance with the WIA):

($ thousands)

	2023	2022
Less than 1 year	170,496	173,911
1 year but less than 5 years	712,291	676,234
Later than 5 years	2,760,115	2,898,538
Total other commitments (inclusive of GST) [a]	**3,642,902**	**3,748,683**
Less GST recoverable from the Australian Taxation Office	(331,173)	(340,789)
Total other commitments (exclusive of GST)	**3,311,729**	**3,407,894**
Present value of other commitments [b]	**1,504,041**	**1,482,982**

Note:
(a) The 'Other commitments' are updated to reflect indexation factors, such as Consumer Price Index, Producer Price Index, Chemical Index and Average Weekly Earnings Index. Commitments are updated for the change in actual amounts paid, and forecast percentage increases are based on the original forecasted indices and applied to the adjusted actual payments. This methodology has been applied to reduce volatility in the forecast 'Other commitments'.
(b) The present value of the 'Other commitments' has been discounted to 30 June of the respective financial years. The basis for discounting has been to take each 12 month period of cash flows and discount these cash flows at the end of the period using the annual discount rate. The discount rate used to calculate the present value of the commitment is 9.99% (2021-22: 9.99%) which is the nominal pre-tax discount rate representative of the overall risk of the project at inception.
(c) Net costs associated with the 15 billion litres of water ordered for the 2022-23 financial year have been reflected in commitments for 2021-22. The announcement of the zero water order for 2023-24 is a binding commitment and has been included in 2022-23. The announcement of the 50GL and 75GL water order for 2024-25 and 2025-26 are non-binding commitments and have not been included.

Risk management

Introduction

The Corporation is exposed to financial risks from both its activities and outside factors. In addition, it is often necessary to make judgements and estimates associated with recognition and measurement of items in the financial statements.

This section presents information on financial instruments, contingent assets and liabilities, and fair value determinations regarding the Corporation's financial assets and liabilities.

Structure

6.1 Financial instruments

Financial instruments arise out of contractual agreements that give rise to a financial asset of one entity and a financial liability or equity instrument of another entity. Due to the nature of the Corporation's activities, certain financial assets and financial liabilities arise under statute rather than a contract (for example, taxes). Such assets and liabilities do not meet the definition of financial instruments.

The Corporation's principal financial instruments are contractual in nature and comprise:

- cash and cash equivalents
- trade debtors and other receivables (including cashflow hedge)
- payables (including trade creditors, interest payable, accruals and other payables)
- VDP service concession liability
- lease liabilities
- borrowings (including short term, floating rate notes and fixed interest).

The Corporation's policy on financial instruments is noted below.

Classification and measurement of financial instruments

Receivables and cash are financial instruments with fixed and determinable payments that are not quoted on an active market. Financial assets are initially measured at fair value minus any direct transaction costs. Subsequent to initial measurement, receivables are measured at amortised cost as the objective is to collect the contractual cash flows.

The following assets are held with the objective to collect the contractual cash flows:

- cash and cash equivalents
- trade debtors and other receivables.

Financial liabilities are initially recognised at fair value. These financial instruments are measured at amortised cost with any difference between the initial recognised amount and the redemption value being recognised in the profit and loss, over the period of the interest bearing liability using the effective interest rate method. The Corporation recognises the following liabilities:

- trade creditors, accruals and interest payable
- VDP service concession liability
- lease liabilities
- other payables
- borrowings (including short term, floating rate notes and fixed interest).

Risk management (continued)

Derecognition of financial assets and liabilities

Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Corporation has transferred substantially all the risks and rewards of ownership.

A financial liability is derecognised when the obligation under the liability is discharged, cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the comprehensive operating statement.

Impairment of financial assets

The Corporation applies the AASB 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for contractual receivables. On this basis, an assessment undertaken by management has identified that historical debt write-offs and future expected losses are immaterial. As such, there is no allowance for expected credit losses as at 30 June 2023 (2021-22: nil).

Categories of financial instruments ($ thousands)

	2023	2022
Financial assets at amortised cost		
Cash and cash equivalents	1,433	6,347
Trade debtors	48,439	46,217
Other receivables	50,587	38,267
Total financial assets at amortised cost	**100,459**	**90,831**
Financial liabilities at amortised cost		
Payables[a]	471,819	395,035
VDP service concession liability	3,513,023	3,544,228
Lease liabilities	36,093	43,348
Short-term borrowings	134,000	221,331
Floating rate notes	135,000	135,000
Fixed interest	4,165,931	3,965,000
Total financial liabilities at amortised cost	**8,455,866**	**8,303,942**

a) 2021-22 comparatives have been restated to exclude non-current payables reclassified to contract liabilities for consistency with the current year.

Financial risk management

The objectives of the Corporation's Treasury Management Policy are to:

- Manage the Corporation's cost of borrowings through effective control and management of interest rate risk.
- Manage the Corporation's cost of borrowings in line with the revenue provided in the applicable Pricing Determination to cover the cost of debt.
- Manage working capital requirements by ensuring sufficient cash resources and funds are available to meet daily and long-term liquidity needs within approved parameters, while utilising excess cash to reduce debt balances.
- Ensure that adequate financial accommodation facilities are in place to meet the short and long-term liquidity needs.
- Ensure that all financial and operational risk exposures are identified and managed
- Ensure adequate internal controls, roles and responsibilities.
- Maintain an indicative investment grade corporate credit rating and credit metrics.

These objectives are consistent with the Corporate Risk Management Policy and Framework of the Corporation, the Corporation's Financial Strength Goals, Standing Directions issued by the Assistant Treasurer and the Victorian Public Sector Debt Management Objectives.

The Corporation's Treasury Management Policy manages financial risk by:

- Managing the financial risks arising from the regulatory price determination process, specifically the mismatch between the regulator's revenue allowance for debt costs and actual debt costs throughout the regulatory period.
- Actively managing liquidity and funding risk.

The following are the key measures used to manage financial risk:

Portfolio composition (i.e. fixed and floating) – During the 2022-23 financial year, the Corporation reviewed its Treasury Management Policy and have made no changes from the prior year bands by which it manages its debt portfolio:

Floating interest rate borrowings	0-30%
Fixed interest rate borrowings	70-100%

Physical maturity profile – Debt maturity of fixed and floating rate notes is not to exceed 15% of the total debt portfolio in any financial year.

Interest rate risk profile – Interest Rate Swaps and Forward Rate Agreements are used to mitigate the risk from adverse interest rate increases where the actual interest rates paid to finance debt are at risk of being higher than the debt allowance received in revenue to finance debt. The Corporation's goal is to align the actual interest rate risk profile to the profile used by the Essential Services Commission (ESC) in setting our revenue.

Aligning the interest rate re-pricing profile of the debt portfolio with the annual regulatory weighted average cost of capital (WACC) re-set based on the 10-year trailing average approach used by the ESC to determine revenue aims to reduce the regulatory interest rate mismatch risk. The Corporation also aims to align the modified duration of its debt portfolio in line with the regulatory benchmark portfolio.

Financing arrangements – The capacity to borrow funds and manage the associated risks is subject to the provisions of the *Borrowing and Investment Powers Act 1987*. In accordance with this Act, the Treasurer of Victoria issues an annual approval, permitting new borrowings and the refinancing of all loan maturities for that year and non-maturing loans upon request. All funding is sourced from the Treasury Corporation of Victoria (TCV).

The Corporation's total approved maximum borrowing limit for 2022-23 of $4,827.3 million (2021-22: $4,683.3 million) was not exceeded at any stage throughout the financial year.

Capital management – The Corporation manages its finances in order to maintain a stable and appropriate capital structure given the financial risk profile and the regulated nature of its business. The Corporation's aim is to maintain credit metrics consistent with an investment grade long-term corporate credit rating.

The Corporation has the following externally imposed limits in relation to capital management:

- Financial Accommodation cannot exceed the approval limits set by the Treasurer of Victoria pursuant to the *Borrowing and Investment Powers Act 1987*.
- The Corporation, with the exception of working capital accounts with overdraft facilities, is required to borrow and invest exclusively with TCV.

The Corporation's gearing ratio (Total Debt/Total Assets) at 30 June 2023 was 44.6% (2021-22: 47.0%) and interest cover cash ratio was 2.24 times (2021-22: 2.1 times).

Gearing and Interest Cover ratios are some of a number of benchmarks that are considered by the Board when considering an appropriate capital structure. These ratios are approved via the *Corporate Plan*.

Development Services Schemes (Schemes) Financial Management - the Corporation is responsible for regional drainage, flood plain and waterway management across greater Melbourne under the Water Act 1989 and the Planning and Environment Act 1987. The Corporation prepares schemes to plan the infrastructure required to ensure new urban development meets appropriate standards for flood protection, water quality, waterway health and amenity and to establish the financial contributions that will apply to developers to fund the provision of the required infrastructure. Schemes consist of an infrastructure plan and pricing model for the provision of developer funded drainage works. Schemes operate on a user pays principle where developers pay the full cost of the assets required to meet the designated standards of service. Once constructed, assets servicing catchments over 60 hectares are owned and managed by the Corporation.

The Essential Services Commission (ESC) regulates the principles for calculating developer charges. A key principle is that charges for schemes are based on a discounted cash flow analysis to ensure an economic net present value neutral outcome to the Corporation. Timing differences can arise between capital expenditure and collection of the developer charges for each scheme. These timing differences are funded by the Corporation through operating cash flows and/or borrowings with any surplus or deficit also adjusted/funded through adjustments to the regulatory asset base via the regulatory pricing model set by the ESC in every pricing re-set. Schemes are subject to regular financial and engineering reviews by the Corporation to ensure they remain financially sustainable and the infrastructure meets evolving requirements.

Future capital commitments for schemes are accounted for consistently with other future capital commitments for the Corporation (included in total capital expenditure commitments at Note 5.3 where there is a committed future contract for the works).

Risk management (continued)

6.1.1 Interest rate risk

Interest rate exposure as at 30 June 2023

($ thousands)

	Weighted average	Floating interest	Fixed interest	Non-interest bearing	Total carrying amount
Financial assets					
Cash and cash equivalents	4.25%	1,433	-	-	1,433
Trade debtors	-	-	-	48,439	48,439
Other receivables	-	-	-	50,587	50,587
Total financial assets		**1,433**	**-**	**99,026**	**100,459**
Financial liabilities					
Payables	-	-	-	471,819	471,819
VDP service concession liability [(a)]	11.28%	-	3,513,023	-	3,513,023
Lease liabilities	2.29%		36,093		36,093
Short-term borrowings	4.27%	134,000	-	-	134,000
Floating rate notes	4.20%	135,000	-	-	135,000
Fixed interest	2.75%	-	4,165,931	-	4,165,931
Total financial liabilities		**269,000**	**7,715,047**	**471,819**	**8,455,866**

Interest rate exposure as at 30 June 2022

($ thousands)

	Weighted average	Floating interest	Fixed interest	Non-interest bearing	Total carrying amount
Financial assets					
Cash and cash equivalents	1.00%	6,347	-	-	6,347
Trade debtors	-	-	-	46,217	46,217
Other receivables	-	-	-	38,267	38,267
Total financial assets		**6,347**	**-**	**84,484**	**90,831**
Financial liabilities					
Payables[(b)]	-	-	-	395,035	395,035
VDP service concession liability [(a)]	11.28%	-	3,544,228	-	3,544,228
Lease liabilities	2.29%		43,348		43,348
Short-term borrowings	1.02%	221,331	-	-	221,331
Floating rate notes	1.14%	135,000	-	-	135,000
Fixed interest	2.69%	-	3,965,000	-	3,965,000
Total financial liabilities		**356,331**	**7,552,576**	**395,035**	**8,303,942**

Note:
(a) The weighted average interest rate for the VDP service concession arrangement is the interest rate implicit in the arrangement. AASB 9 requires gains or losses from VDP refinancing activities to be recognised immediately through profit and loss. The gains or losses reflect the difference between the original contractual cash flows and the modified cash flows discounted at the original 'effective interest rate'.
b) 2021-22 comparatives have been restated to exclude non-current payables reclassified to contract liabilities for consistency with the current year.

Interest rate risk sensitivity analysis

($ thousands)

	Profit or Loss		Equity	
2023	**-50 basis points**	**+50 basis points**	**-50 basis points**	**+50 basis points**
Cash and cash equivalents	(14)	14	(14)	14
Interest bearing liabilities	1,345	(1,345)	1,345	(1,345)
Total	**1,331**	**(1,331)**	**1,331**	**(1,331)**

($ thousands)

	Profit or Loss		Equity	
2022	**-50 basis points**	**+50 basis points**	**-50 basis points**	**+50 basis points**
Cash and cash equivalents	(18)	18	(18)	18
Interest bearing liabilities	1,782	(1,782)	1,782	(1,782)
Total	**1,764**	**(1,764)**	**1,764**	**(1,764)**

Exposures arise predominately from liabilities bearing variable interest rates as the Corporation intends to hold fixed rate liabilities to maturity. At 30 June 2022 and 30 June 2023, if interest rates had changed by +/- 50 basis points from the year end rates with all other variables held constant, the net profit before tax and the impact on equity would have changed by the amounts shown above.

6.1.2 Foreign exchange risk

Foreign exchange risk arises when future commercial transactions and recognised assets and liabilities are denominated in a currency that is not the entity's functional currency.

It is the Corporation's policy to hedge the effect of foreign currency exchange rate movements on the fair values of any transactions in excess of AUD $1.0 million. The Corporation's policy requires all hedging to be undertaken through TCV in the form of Forward Foreign Exchange Contracts.

As at 30 June 2023, the Corporation had one Forward Foreign Exchange Contract for net value of $0.1 million (30 June 2022: Nil).

Risk management (continued)

6.1.3 Price risk

Price risk is the risk that the Corporation will suffer financial loss due to adverse movements in the price of commodity inputs and/or outputs related to its business operations.

The Corporation faces a range of risks associated with the procurement, delivery and funding of assets, goods and services. The Corporation continues to experience significant cost increases in many goods and services that are necessary for ongoing operation and delivery of projects consistent with significant market trend.

The Corporation is also exposed to disruptions to supply chains from economic and natural events, however has risk management plans in place to mitigate and minimise these disruptions to business operations where possible. These challenges are ongoing which could impact service delivery and the ability to meet financial performance targets and commitments. The Corporation continually assess exposures to supply chain disruptions and identifies controls and options to reduce any exposures going forward.

Commodity price risk from business operations is quantified and hedged appropriately to minimise risk. Hedging of the risk is mostly performed through supply and service contracts to provide certainty over timing and quantity (i.e. contracts for electricity, chemicals and procurement process to deliver capital works), however increased supplier initiated price escalation has been observed, again consistent with significant market trend.

The Corporation has governance arrangements, processes, procedures and systems in place to prioritise delivery of its capital program and projects. Given current cost escalation pressures, a range of additional actions are underway including reviewing delivery models, value engineering, investment program prioritisation and considering financing options. Long term forecasts are used in planning processes to assess the impact of capital and operating expenditures on our financial health and indicators.

There is also low level price risk associated with Renewable Energy Certificates (RECs) for the potential decline in market value. This risk is managed through sale of RECs to minimise balance held.

6.1.4 Credit risk

Credit risk is the risk of financial loss to the Corporation as a result of a customer or counterparty to a financial instrument failing to meet its contractual obligations in full and on the due date. The Corporation's exposure to credit risk is influenced by the individual characteristics of each customer or counterparty.

All receivables are recognised at the amounts receivable less any expected credit loss. Receivables are reviewed on an ongoing basis to identify amounts which cannot be collected. Debts which cannot be collected are written off. The Corporation applies the AASB 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all receivables. Refer to Note 2.3 (Receivables).

The major exposure to credit risk arises from Trade Debtors and Other Receivables.

Trade Debtors are comprised of:

- Metropolitan retail water businesses with minimal credit risk exposure to the Corporation. These debtors are invoiced in two parts. The first part is a usage charge that is invoiced weekly and paid within 7 days. The second part is an availability charge that is invoiced monthly and paid within 14 days.
- Waterways and Drainage customers. The collection of payments and overdue receivables is managed by the metropolitan retail water businesses as part of billings and collection agreements with the Corporation. In addition any unpaid debt is allocated against the property title and will be extinguished if there is a change in property ownership.

Other receivables primarily consist of accrued revenue in relation to our services.

The Corporation applies the AASB 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for contractual receivables. On this basis, an assessment undertaken by management has identified that historical debt write-offs and future expected losses are immaterial. This assessment took into consideration COVID-19 with no expected material impact on the future recoverability of debtors. As such, there is no allowance for expected credit losses as at 30 June 2023 (2021-22: nil).

All financial risk management instruments are transacted with TCV, whose liabilities are guaranteed by the Victorian Government. The Corporation potentially has a concentration of credit risk with TCV as the central borrowing authority of Victoria. This risk is considered minimal.

6.1.5 Climate-related risk

Climate change is a risk for the Corporation. Climate change risk includes the physical risk which can cause direct impact to natural resources including water supply, or damage to assets or property as a result of rising global temperatures as well as transition risks which arise from the transition to low-carbon economy.

The impacts of climate change create resilience challenges for our services. Understanding and preparing for climate risks is a critical component of the Corporations long term strategy development. At a strategic level, climate risk is incorporated into our corporate risk register, recognising the complex and comprehensive nature of the adaption and transition challenges.

Climate risk and opportunities are also integrated into the overarching strategic goals that guide planning, investment and culture at Melbourne Water. Refer to the operating sections of the annual report for additional climate related risk disclosures.

As at 30 June 2023, the Corporation considered climate related risk in the preparation of the financial statements as summarised at Note 1 (Financial reporting impacts of climate related matters).

6.1.6 Liquidity risk

Liquidity risk is the risk that the Corporation will not be able to meet its short-term financial obligations. The Corporation manages liquidity risk by maintaining and conducting efficient banking practices and account structures, sound cash management practices and regular monitoring of the maturity profile of assets and liabilities, together with anticipated cash flows.

The objective of the Corporation's financial risk management policies is the optimal utilisation of cash with all surplus funds used to repay borrowings.

Undiscounted maturity analysis of financial liabilities ($ thousands)

2023

	Total carrying amount	Total contractual cash flows	1 year or less	1 to 5 years	Over 5 years
Non-interest bearing	471,819	471,819	471,819	-	-
Variable rate	269,000	292,534	145,978	109,559	36,997
Fixed rate	7,715,047	13,339,667	1,049,216	4,096,106	8,194,345
Total	**8,455,866**	**14,104,020**	**1,667,013**	**4,205,665**	**8,231,342**

2022

	Total carrying amount	Total contractual cash flows	1 year or less	1 to 5 years	Over 5 years
Non-interest bearing [a]	395,035	395,035	395,035	-	-
Variable rate	356,331	370,203	226,543	106,984	36,676
Fixed rate	7,552,576	13,496,284	997,316	3,958,604	8,540,364
Total	**8,303,942**	**14,261,523**	**1,618,894**	**4,065,588**	**8,577,040**

a) 2021-22 comparatives have been restated to exclude non-current payables reclassified non-current contract liabilities for consistency with the current year.

Risk management (continued)

6.1.7 Other matters

Net holding gain/(loss) on financial instruments by category ($ thousands)

2023

	Net holding gain	Interest revenue/ (expense)	Total
Financial assets	35	94	129
Financial liabilities at amortised cost	-	(550,706)	(550,706)
Total	**35**	**(550,612)**	**(550,577)**

2022

	Net holding gain	Interest revenue/ (expense)	Total
Financial assets	-	14	14
Financial liabilities at amortised cost	-	(547,178)	(547,178)
Total	**-**	**(547,164)**	**(547,164)**

6.2 Fair value determination of financial assets and liabilities

The fair values and net fair values of financial instrument assets and liabilities are determined as follows:

- Level 1: the fair value of financial instrument with standard terms and conditions and traded in active liquid markets are determined with reference to quoted market prices.
- Level 2: the fair value is determined using inputs other than quoted prices that are observable for the financial asset or liability, either directly or indirectly.
- Level 3: the fair value is determined in accordance with generally accepted pricing models based on discounted cash flow analysis using unobservable market inputs.

The following table shows the carrying amounts and fair values of financial assets and financial liabilities. The fair values are classified as level 2 within the fair value hierarchy with the exception of cash and cash equivalents (classified as level 1).

Carrying amounts, fair values and fair value hierarchy ($ thousands)

	2023		2022	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Cash and cash equivalents	1,433	1,433	6,347	6,347
Trade debtors	48,439	48,439	46,217	46,217
Other receivables	50,587	50,587	38,267	38,267
Total financial assets	**100,459**	**100,459**	**90,831**	**90,831**
Financial liabilities				
Payables[(a)]	471,819	471,819	395,035	395,035
VDP service concession liability	3,513,023	4,435,834	3,544,228	4,509,462
Lease liabilities	36,093	36,093	43,348	43,348
Short-term borrowings	134,000	134,000	221,331	221,331
Floating rate notes	135,000	135,829	135,000	136,679
Fixed interest	4,165,931	3,849,311	3,965,000	3,688,974
Total financial liabilities	**8,455,866**	**9,062,886**	**8,303,942**	**8,994,829**

a) 2021-22 comparatives have been restated to exclude non-current payables reclassified to non-current contract liabilities for consistency with the current year.

6.3 Contingent assets and liabilities

Contingent assets are possible assets that arise from past events, whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity.

Contingent liabilities are:

- Possible obligations that arise from past events, whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity (for example, potential litigation or climate-related risks).
- Present obligations that arise from past events but are not recognised because:
  - it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligations
  - the amount of the obligations cannot be measured with sufficient reliability.

Contingent assets and liabilities are not recognised in the Statement of Financial Position, but if quantifiable are disclosed below.

($ thousands)

	2023	2022
Contingent assets	11,243	12,211
Contingent liabilities [(a)]	61,916	46,280

Note:
(a) Contingent liabilities primarily relate to compulsory land acquisitions where the Corporation will receive an equivalent land asset. Compulsory land acquisitions have not been included as contingent assets. Given the significant estimation uncertainty, compulsory land acquisitions are not treated as provisions. The Corporation only recognises assets and liabilities once the Notice of Acquisition has been issued to the landowner. Total compulsory land acquisitions for 2022-23 are $60.5 million (2021-22: $38.0 million). Contingent liabilities also include possible outflows associated with legal actions both quantifiable and unquantifiable (where there is a possible outflow that can not yet be measured with sufficient reliability). The extreme weather flooding event from October 2022 has been considered as an unquantifiable contingent liability at 30 June 2023. Should future costs arise, the Corporation's liability exposure is expected to be limited to its normal insurance excess.

Other disclosures

Introduction

This section includes those additional disclosures required by Australian Accounting Standards or otherwise, that are material for the understanding of this financial report.

Structure

7.1 Superannuation – defined benefit plan

The Defined benefit plan within Equipsuper (the Plan) provides lump sum benefits based on length of service and final superannuable salary for employees engaged prior to 31 December 1993. Employees contribute at rates between 0% to 7.5% of their superannuable salary. The Corporation contributes to the Plan based on the Corporation's commitments under the Employee Participation Agreement and Contribution Policy with the Trustee of the Plan.

Defined benefit members receive lump sum benefits on retirement, death, disablement and withdrawal. Some defined benefit members are also eligible for pension benefits in some cases. The defined benefit section of the Plan is closed to new members. At each reporting date, a liability or asset in respect of defined benefit superannuation obligations is recognised. This is measured as the difference between the present value of the defined benefit obligations at the reporting date and the net market value of the Plan's assets.

The present value of defined benefit obligations is based upon future payments, which are expected to arise due to membership of the Plan to date, taking into account the taxes payable by the Plan.

Consideration is given to expected future salary levels and employee departures. Expected future payments are discounted to present values using yields from high quality corporate bond rates with 6 years duration (2021-22: high quality corporate bond rates with 8 years duration) reflecting future service as required by AASB119 Employee benefits.

Furthermore, the inflation assumption is based upon the relationship between nominal and index linked bond yields of similar duration. This approach ensures that the inflation assumption reflects market expectations and is compatible with the market-based discount rate that is used to value the outstanding liability.

Furthermore, the inflation assumption is based upon the relationship between nominal and index linked bond yields of similar duration. This approach ensures that the inflation assumption reflects market expectations and is compatible with the market-based discount rate that is used to value the outstanding liability.

Remeasurements of the net defined liability or asset, which comprise actuarial gains and losses, return on the Plan assets (excluding interest) and effect of the asset ceiling (if any, excluding interest), are recognised immediately in Other Comprehensive Income. The Corporation determines the net interest expense on the net defined benefit liability for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the net defined benefit liability or asset taking into account contributions and benefit payments during the period. Net interest expense and other expenses related to defined benefit plans are recognised in the Statement of Profit or Loss and Other Comprehensive Income.

When the benefits of the Plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognised immediately in the Statement of Profit or Loss and Other Comprehensive Income. The Corporation recognises gains and losses on settlement when it occurs.

The Superannuation Industry Supervision (SIS) legislation governs the superannuation industry and provides the framework within which superannuation plans operate. The SIS regulations require an actuarial valuation to be performed for each defined benefit superannuation plan every 3 years, or every year if the plan pays defined benefit pensions.

The Plan's Trustee is responsible for the governance of the Plan. The Trustee has a legal obligation to act solely in the best interests of Plan beneficiaries. The Trustee has the following roles:

- administration of the Plan and payment to the beneficiaries from Plan assets when required in accordance with the Plan rules
- management and investment of the Plan assets
- compliance with superannuation law and other applicable regulations.

The prudential regulator, the Australian Prudential Regulation Authority (APRA), licenses and supervises regulated superannuation plans.

There are a number of risks to which the Plan exposes the Corporation. The more significant risks relating to the defined benefits are:

Investment risk – The risk that investment returns will be lower than assumed and the Corporation will need to increase contributions to offset this shortfall.

Salary growth risk – The risk that wages/salaries (on which future benefit amounts will be based) will rise more rapidly than assumed, increasing defined benefit amounts and thereby requiring additional employer contributions.

Legislative risk – The risk that legislative changes could be made which could increase the cost of providing the defined benefits.

Pension risk – The risk is firstly that pensioner mortality will be lower than expected, resulting in pensions being paid for a longer period. Secondly, the risk that a greater proportion of eligible members will elect to take a pension benefit, which is generally more valuable than the corresponding lump sum benefit.

The Plan assets are invested by the Trustee in a pool of assets with plans providing defined benefits for other employers. The allocation both globally and across sectors is diversified.

Other disclosures (continued)

7.1 Superannuation – defined benefit plan (continued)

Reconciliation of the present value of the defined benefit superannuation obligation

($ thousands)

	2023	2022
Present value of defined benefit obligation at beginning of the year	42,892	55,660
Current service cost	1,139	1,456
Interest cost	1,837	751
Contributions by Plan participants	532	463
Benefits paid	(3,877)	(4,415)
Taxes and premiums paid	(348)	(361)
Actuarial losses/(gains) arising from changes in demographic assumptions	155	-
Actuarial (gains)/losses arising from changes in financial assumptions	(1,786)	(10,819)
Actuarial (gains)/losses arising from liability experience	1,586	157
Contributions to accumulation section [a]	-	-
Contributions to accumulation section in relation to prior year [a]	-	-
Present value of the defined benefit obligation at year end	**42,130**	**42,892**

Reconciliation of the fair value of Plan assets

($ thousands)

	2023	2022
Fair value of Plan assets at beginning of the year	70,184	76,159
Contributions by Plan participants	532	463
Benefits paid	(3,877)	(4,415)
Taxes and premiums paid	(348)	(361)
Interest income	2,861	997
Actual return on Plan assets less interest income	1,885	(2,659)
Contributions to accumulation section [a]	-	-
Fair value of Plan assets at year end [b]	**71,237**	**70,184**

Reconciliation of the assets and liabilities recognised in the Statement of Financial Position

($ thousands)

	2023	2022
Net defined benefit asset/(liability) at start of year	27,292	20,499
Current service cost	(1,139)	(1,456)
Net interest	1,024	246
Actual return on Plan assets less interest income [c]	1,885	(2,659)
Actuarial (losses)/gains arising from changes in demographic assumptions [c]	(155)	-
Actuarial gains/(losses) arising from changes in financial assumptions [c]	1,786	10,819
Actuarial gains/(losses) arising from liability experience [c]	(1,586)	(157)
Net defined benefit asset at year end	**29,107**	**27,292**

Note:
(a) Includes no contributions (2021-22: zero) to accumulation section of the Plan financed from defined benefit assets.
(b) Fair value based on level 2 inputs using observable market data (either directly using prices or indirectly derived from prices).
(c) Net actuarial gain before tax was $1.9 million (2021-22: gain of $8.0 million) and after tax gain of $1.3 million (2021-22: gain of $5.6 million).

The Corporation has recognised an asset in the Statement of Financial Position in respect of its defined benefit superannuation Plan arrangements at 30 June 2023 (2021-22: asset). If the Plan is in surplus, the Corporation may reduce the required contribution rate, depending on the advice of the Plan's actuary. If a deficit exists in the Plan, the Corporation may be required to increase the contribution rate, depending on the advice of the Plan's actuary consistent with the Plan's deed.

During 2022-23, the contributions rate continued to be zero due to sufficient surplus in the Plan (2021-22: zero).

Significant actuarial assumptions at the balance sheet date

	2023	2022
Assumptions to determine defined benefit cost		
Discount rate	4.40%	1.40%
Expected salary increase rate	2.00%	2.00%
Expected pension increase rate	2.50%	2.00%
Assumptions to determine defined benefit obligation		
Discount rate [a]	5.40%	4.40%
Expected salary increase rate [b]	3.00%	2.00%
Expected pension increase rate	2.50%	2.50%
Pension take-up rate	25.0%	25.0%

a) In the current year the Corporation used high quality corporate bond rates with 6 years duration to discount the defined benefit liability (2021-22: high quality corporate bond rates with 8 years duration).
b) 3% per annum (2021-22: 2% per annum for the next four years and 2.5% per annum thereafter)

Other disclosures (continued)

7.2 Responsible persons

The relevant Portfolio Minister and directors of the Corporation are deemed to be the responsible persons by Ministerial Direction pursuant to the provisions of the *Financial Management Act 1994*. In accordance with *FRD 21 (Disclosures of responsible persons and executive officers in the financial report)*, the following disclosures are made regarding responsible persons for the reporting period.

The names of persons who were responsible persons at any time during the financial year were:

Minister for Water	Hon Harriet Shing MP	1 July 2022 to 30 June 2023
Chair	John Thwaites	1 July 2022 to 30 June 2023
Deputy Chair	Kathleen Bailey-Lord	1 July 2022 to 30 June 2023
Director	Robyn McLeod	1 July 2022 to 30 June 2023
Director	Russell Anderson	1 July 2022 to 30 June 2023
Director	Fiona Rowland	1 July 2022 to 30 June 2023
Director	James Atkins	1 July 2022 to 30 June 2023
Director	Andrew Cairns	1 July 2022 to 30 June 2023
Director	Anita Roper	1 July 2022 to 30 June 2023
Managing Director	Dr Nerina Di Lorenzo	1 July 2022 to 30 June 2023

Remuneration

Remuneration received or receivable by the responsible persons (excluding Ministers) in connection with the management of the Corporation during the reporting period is as follows:

	Total remuneration	
	2023	2022
Income Band ($)	Number	Number
10,000 - 19,999	-	3
30,000 - 39,999	-	3
50,000 - 59,999	7	4
90,000 - 99,999	-	1
100,000 - 109,999	1	-
300,000 - 309,999	-	1
570,000 - 579,999	1	-
660,000 - 669,999	-	1
Total numbers [a]	**9**	**13**
Total remuneration ($000) [b]	**1,065**	**1,425**

a) Total number of responsible persons was lower in 2022-23 due to temporary transition of 4 responsible persons roles to 4 new incumbents in 2021-22.
b) Total remuneration for responsible persons was lower in 2022-23 due to higher costs in 2021-22 for termination benefits and other statutory entitlements for the early completion of an executive contract as per the terms of the Public Entity Executive Remuneration Policy for executive contracts.

7.3 Remuneration of executive officers

The number of executive officers, other than responsible persons, and their total remuneration during the reporting period are shown in the table below. Executive officers are defined under *FRD 21 (Disclosures of responsible persons and executive officers in the financial report)* as those employed under an executive contract (excluding the Managing Director and other responsible persons).

Total annualised employee equivalents provides a measure of full time equivalent executive officers over the reporting period. Remuneration comprises employee benefits in all forms of consideration paid, payable or provided by the entity, or on behalf of the entity, in exchange for services rendered, and is disclosed in the following categories.

Short-term employee benefits include amounts such as wages, salaries, annual leave or sick leave that are usually paid or payable on a regular basis, as well as non-monetary benefits such as allowances and free or subsidised goods or services and previously accrued long service leave taken during the period.

Post-employment benefits include pensions and other retirement benefits paid or payable when employment has ceased.

Other long-term benefits include long service leave, other long service benefit or deferred compensation.

Termination benefits include termination of employment payments, such as severance packages.

Remuneration of executive officers	($ thousands)	
	2023	2022
Short-term employment benefits	2,409	3,697
Post-employment benefits	203	277
Other long-term benefits	60	95
Termination benefits	597	109
Total remuneration[a]	**3,269**	**4,178**
Total number of executive officers[a]	**10**	**13**
Total annualised employee equivalent[b]	**7**	**11**

Note:
a) Total remuneration reduced in 2022-23 as a result of a reduction in executives from 11 to 7 due to the restructure in December 2022. The restructure also increased termination benefits paid.
(b) Annualised employee equivalent is based on the time fraction worked over the reporting period.

7.4 Related parties

The Corporation is a wholly owned and controlled entity of the State of Victoria. Related parties of the Corporation include:

- All Key Management Personnel (KMP) and their close family members and personal business interests (i.e. controlled entities, joint ventures and entities they have significant influence over)
- All Cabinet Ministers and their close family members and all departments and public sector entities that are controlled and consolidated into the whole of State consolidated financial statements.

All related party transactions have been entered into on an arms length basis.

AASB 124 Related Parties defines KMPs as those persons who have the authority and responsibility for planning, directing and controlling the activities of the Corporation directly or indirectly, during the financial year. KMPs of the Corporation include the Portfolio Minister and all Directors listed under responsible persons in Note 7.2.

The compensation detailed below excludes the salaries and benefits the Portfolio Minister receives. The Minister's remuneration and allowances is set by the *Parliamentary Salaries and Superannuation Act 1968* and is reported within the State of Victoria's Annual Financial Report.

Other disclosures (continued)

7.4 Related parties (continued)

($ thousands)

Compensation of KMP	2023	2022
Short-term employment benefits	994	990
Post-employment benefits	72	67
Other long-term benefits	25	34
Termination benefits	-	368
Total [a]	**1,091**	**1,459**

Note:
(a) The 2021-22 compensation of KMP comparatives have been amended for consistency with the definition of responsible persons at Note 7.2, to remove any executive officers who are not also Directors.

Transactions with KMPs and other related parties

During the year, related parties of KMPs were awarded contracts on terms and conditions equivalent to those that prevail in arm's length transactions under the Corporation's procurement process. The Corporation has prepared the related party disclosures for the year based on reasonable enquiries made by management in relation to the Portfolio Minister and their close family members and the information available to the organisation.

Significant related party transactions include transactions between the Corporation, a KMP or a KMP-related party and a department or a public body. Transactions have been assessed on an arm's length basis with a materiality threshold set at $0.1 million.

These transactions are as follows:

($ thousands)

Harriet Shing (Minister for Water)	2023	2022
The Honourable Harriet Shing was responsible for the Department of Energy, Environment and Climate Action (DEECA). All dealings with this entity were on normal terms and conditions during the reporting period.		
Total payments made to DEECA were (including VDP payments):	632,665	696,523
Russell Anderson – Director		
Russell Anderson is a Director of the Victorian Water Industry Association. All dealings with this agency were on normal terms and conditions during the reporting period[a]		
Total payments made to the Victorian Water Industry Association were:	132	198
Total payments received from the Victorian Water Industry Association were:	184	100
Kathleen Bailey-Lord – Director		
Kathleen Bailey-Lord is a Director of the Alinta Energy Group. All dealings with this agency were on normal terms and conditions during the reporting period.		
Total payments received from Alinta Energy Group were:	2,115	2,139

All other transactions that have occurred with KMPs and their related parties have been trivial or civil in nature. In this context, transactions are only disclosed when they are considered of interest to users of the financial report in making and evaluating decisions about the allocation of scarce resources and to better understand the effects of related party transactions on the financial statements.

(a) Robyn McLeod was a Director of the Victorian Water Industry Association during 2021-22. Her appointment ceased 21 May 2022. All dealings with this agency were on normal terms and conditions during the reporting period.

Significant transactions with related parties

Entities that have significant influence, the same controlling entity as the Corporation or where a KMP, or their close family member, has significant influence or control over those entities, are considered to be related parties of the Corporation. The following entities are considered to be related parties of the Corporation:

Department of Energy, Environment and Climate Action (DEECA)

DEECA leads and directs the Corporation in the implementation of the framework for achieving the Victorian Government's responsibilities for sustainability of the natural and built environment. DEECA monitors the Corporation's compliance with the *Water Act 1989,* Water Interface Agreement and the Supplementary Agreement to the Water Interface Agreement for the Victorian Desalination Plant. The Corporation makes Victorian Desalination Plant payments directly to DEECA, which is managing the contract with AquaSure on behalf of the State.

Department of Treasury and Finance (DTF)

DTF monitors the Corporation's compliance with the *Financial Management Act 1994*. DTF is responsible for protecting the shareholder's interest in respect of corporate business plans and capital project approvals above $100 million (2021-22: $100 million). DTF also collects income taxes, the Financial Accommodation Levy, Local Government Rates Equivalent and dividend payments from the Corporation.

Greater Western Water, South East Water, Yarra Valley Water and Barwon Water

Greater Western Water, South East Water, Yarra Valley Water and Barwon Water are Government owned water corporations with agreements with the Corporation that include bulk water and sewerage, bulk recycled water supply, billings collections and biosolids storage arrangements. These agreements operated on normal terms and conditions during the reporting period.

Treasury Corporation of Victoria (TCV)

TCV provides financial accommodation (loans to the Corporation), executes financial arrangements (derivatives) and provides/arranges the provision of financial services to the Corporation. Any investments above $2 million are also required to be invested with TCV.

Development Victoria

Development Victoria creates and delivers economic and social value to Victoria. Development Victoria will deliver property and precinct development projects to meet Government's policy objectives and application of its experience and expertise to the delivery of civic projects.

Other related parties

- Environment Protection Agency Victoria
- Level Crossing Removal Authority
- Goulburn Murray Water
- Westernport Region Water Corporation
- South Gippsland Region Water Corporation
- Department of Health and Human Services
- Parks Victoria
- Department of Transport and Planning
- State Revenue Office
- Victorian Fishieries Authority
- Southern Rural Water Corporation
- Victoria State Emergency Service
- Victorian Water Industry Association
- Victorian Workcover Authority
- Department of Jobs, Skills, Industry and Regions
- Monash University
- Holmesglen Institute
- Department of Education and Training
- Victoria Auditor General's Office
- Vicforests

Other related parties with arm's-length transactions greater than $0.1 million have been disclosed above. In the summaries below, all other related parties transactions and payable balances below $0.1 million have also been included.

Other disclosures (continued)

7.4 Related parties (continued)

Material transactions with related parties

($ thousands)

	2023	2022
Receipts from related parties (inclusive of GST)		
DEECA	6,920	15,816
Greater Western Water	414,697	410,325
South East Water	602,174	605,395
Yarra Valley Water	596,282	601,943
Barwon Water	5,589	5,464
Development Victoria	12,164	2,699
Other related parties	5,371	6,924
Receipt of contributed assets		
From the Department of Transport and Planning via DEECA	116,140	-
Receipt of contributed equity		
From the Department of Transport and Planning via DEECA	116,140	-
DEECA	-	3,088

($ thousands)

	2023	2022
Payments to related parties (inclusive of GST)		
DEECA	632,665	696,523
DTF	159,400	151,769
Greater Western Water	5,932	5,637
South East Water	7,480	7,008
Yarra Valley Water	5,482	6,660
TCV	117,100	114,209
Other related parties	38,436	39,709
Dividend paid		
DTF	10,363	7,300
Repayment of equity contributions		
DTF	-	40,410
Transfer of contributed assets		
DEECA	-	-

Outstanding balances arising from sales/purchases of goods and services

($ thousands)

	2023	2022
Receivables		
DEECA	176	196
Greater Western Water	18,157	17,872
South East Water	10,241	11,613
Yarra Valley Water	15,488	13,387
Barwon Water	20	-
Development Victoria	-	-
Other related parties	204	286
Payables		
DEECA	3,513,452	3,544,616
DTF	22,283	29,624
Greater Western Water	15	4
South East Water	-	28
Yarra Valley Water	942	22
TCV	4,467,007	4,351,592
Other related parties	449	1,373

Transactions relating to dividends are subject to final determination by the Treasurer after consultation with the Corporation's Board of Directors and the Minister for Water. Transactions relating to equity contributions are determined by the Minister for Water in consultation with the Corporation. Transactions relating to trading activities of the Corporation including sale of bulk water, sale of sewerage services and collection of drainage rates are based on normal commercial terms and conditions.

Outstanding balances are unsecured and are receivable/payable in cash under normal trading terms. There are no guarantees given or received for the current and non-current payables, current receivables and borrowings.

Other Disclosures (continued)

7.5 Remuneration of auditors

($ thousands)

	2023	2022
Audit of financial report by the Victorian Auditor-General's Office	260	242
Total amount paid/payable	**260**	**242**

7.6 Ex-gratia expenses

In accordance with FRD 11 Disclosure of Ex-Gratia Expenses the Corporation must disclose in aggregate the total amount of material (greater than $5000) expenses.

For 2022-23, the Corporation had zero ex-gratia expenses (2021-22:$68,167 due to rental waivers provided to approved applicants as part of the Victorian Government's COVID-19 hardship program).

7.7 Subsequent events

On Monday 11 July 2023, the Managing Director appointed Fiona Schutt as the new Executive General Manager - Corporate Services, which includes the role of Chief Financial Officer (CFO). As a result of the appointment, Fiona Schutt will be the CFO for the Corporation from 11 July 2023.

No other matter or circumstance has arisen since 30 June 2023 which has significantly affected, or may significantly affect:

- the Corporation's operations;
- the results of those operations; and/or
- the Corporation's state of affairs in the financial year subsequent to 30 June 2023.

7.8 Australian Accounting Standards issued that are not yet effective

Certain new amendments to accounting standards that are deemed relevant to the Corporation have been published, but are not mandatory for the 30 June 2023 reporting period. The Corporation has not adopted these amendments early in accordance with DTF guidance.

The Corporation's assessment of the impact of these amendments is set out below:

AASB 2022-6 Non-current Liabilities with Covenants

Requires a liability be classified as a non-current liability if at the end of the reporting period the entity has a right to defer settlement of the liability for at least twelve months after the reporting period. Effective date 1 January 2024.

The Corporation expects that a reclassification from current to non-current borrowings will be required upon adoption of this amendment for any borrowings where there is a right to defer settlement.

Several other amending standards and AASB interpretations have been issued that apply to future reporting periods but are considered to have limited impact on the Corporation's reporting.

- ***AASB 17 Insurance Contracts***
- ***AASB 2014-10 Amendments to Australian Accounting Standards –*** Sale or Contribution of Assets between an Investor and its Associate or Joint Venture
- ***AASB 2021-2 Amendments to Australian Accounting Standards –*** *Disclosure of Accounting Policies and Definitions of Accounting Estimates*
- ***AASB 2021-5 Amendments to Australian Accounting Standards –*** *Deferred Tax related to Assets and Liabilities arising from a Single Transaction*
- ***AASB 2021-6 Amendments to Australian Accounting Standards –*** *Disclosure of Accounting Policies: Tier 2 and Other Australian Accounting Standards*
- ***AASB 2022-1: Amendments to Australian Accounting Standards –*** *Initial Application of AASB 17 and AASB 9 Comparative Information.*

7.9 Changes in accounting policy

There have been no changes in accounting policy during the 2022-23 financial year.

Independent Auditor's Report

Victorian Auditor-General's Office

To the Board of the Melbourne Water Corporation

Opinion

I have audited the financial report of the Melbourne Water Corporation (the corporation) which comprises the:

- statement of financial position as at 30 June 2023
- statement of profit or loss and other comprehensive income for the year then ended
- statement of changes in equity for the year then ended
- statement of cash flows for the year then ended
- notes to the financial statements, including significant accounting policies
- statement by Directors and Chief Financial Officer.

In my opinion, the financial report presents fairly, in all material respects, the financial position of the corporation as at 30 June 2023 and its financial performance and cash flows for the year then ended in accordance with the financial reporting requirements of Part 7 of the *Financial Management Act 1994* and applicable Australian Accounting Standards.

Basis for Opinion

I have conducted my audit in accordance with the *Audit Act 1994* which incorporates the Australian Auditing Standards. I further describe my responsibilities under that Act and those standards in the Auditor's Responsibilities for the Audit of the Financial Report section of my report.

My independence is established by the *Constitution Act 1975*. My staff and I are independent of the corporation in accordance with the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 Code of Ethics for Professional Accountants (the Code) that are relevant to my audit of the financial report in Victoria. My staff and I have also fulfilled our other ethical responsibilities in accordance with the Code.

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

Key audit matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the financial report of the current period. These matters were addressed in the context of my audit of the financial report as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

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Key audit matter	How I addressed the matter
Recognition and Measurement of Service Concession Arrangement asset and liability - the Victorian Desalination Plant (the VDP) *Note 5.4 – VDP Service Concession Arrangement*	

VDP Service Concession Asset: **$4.574 billion**
VDP Service Concession liability: **$3.513 billion**
VDP commitment disclosures:
• Minimum future payments: $7.823 billion (nominal)
• Other expense commitment: $3.643 billion (nominal)
I considered the service concession arrangement (SCA) for the VDP's asset, liability and commitment to be a key audit matter because:
• they are financially significant
• the contractual rights and obligations are complex and small changes, including refinancing adjustments, can significantly affect the SCA liability and commitments
• the SCA liability and commitments model is complex
• a significant degree of management judgement and assumptions are required to measure the liability, commitments and the fair value of the VDP asset
• the requirements of AASB 1059 *Service Concession Arrangements: Grantors* (AASB 1059) are complex, and involve significant management judgement
• the corporation places significant reliance on the Department of Energy, Environment and Climate Action (DEECA) for information to account for and disclose the arrangement
• the required disclosures for service concession arrangements are extensive.
	My key procedures included:
	• gaining an understanding of the key contractual changes from the prior year
	• engaging a subject matter expert to assist in obtaining sufficient appropriate audit evidence for the SCA liability and commitment disclosures, including the:
	  ○ identification of any model and/or assumption changes
	  ○ reasonableness and consistency of the liability model assumptions
	  ○ reasonableness of model inputs, with specific reference to underlying data and supporting documentation
	  ○ model's computational accuracy
	  ○ appropriateness of any re-financing adjustments
	• evaluating our subject matter expert's workings and concluding the work was adequate for the purposes of our audit
	• evaluating management's assessment of the fair value of the VDP asset
	• obtaining representations provided by DEECA relating to the underlying audited data used in the DCF model and for disclosures
	• assessing the adequacy of financial report disclosures against the requirements of applicable Australian Accounting Standards.

Key audit matter	How I addressed the matter
Fair Value of Infrastructure Assets *Note 4.1.3 – Fair value determination of non-financial physical assets*	

Fair value of Infrastructure assets: **$9.305 billion**
 	
I considered this to be a key audit matter because:
• infrastructure assets are financially significant
• the fair value estimate is derived from an income-based valuation approach that uses a discounted cashflow (DCF) model
• management engage an external valuation expert to prepare the fair value estimate
• the DCF model is highly complex and involves significant judgements and assumptions
• small changes in key assumptions used in the DCF model can materially affect the fair value
• the DCF model's forecast period is long, and includes a terminal value, which increases the difficulty in accurately estimating the fair value
• accounting standard AASB 13 *Fair Value Measurement* (AASB 13) requires extensive financial report disclosures.
	My key procedures included:
	• obtaining an understanding of the approach to estimating the fair value of infrastructure
	• assessing the competence, objectivity and capability of management's expert engaged to assist with the valuation process
	• engaging a subject matter expert to assist us in obtaining sufficient appropriate audit evidence, including:
	  ○ the appropriateness of using an income-based valuation approach
	  ○ the identification and assessment of the reasonableness of any changes to the DCF model and/or assumptions,
	  ○ the reasonableness and consistency of all the assumptions used in the DCF model
	  ○ the reasonableness of all inputs used in the DCF model, with specific reference to underlying data and supporting documentation
	  ○ the DCF model's computational accuracy
	• evaluating our subject matter expert's work and concluding the work was adequate for the purposes of our audit
	• assessing the completeness and adequacy of the financial report disclosures against the requirements of AASB 13, including the significant observable and unobservable inputs utilised in the model and the sensitivity analysis.

Board's responsibilities for the financial report	The Board of the corporation is responsible for the preparation and fair presentation of the financial report in accordance with Australian Accounting Standards and the *Financial Management Act 1994*, and for such internal control as the Board determines is necessary to enable the preparation and fair presentation of a financial report that is free from material misstatement, whether due to fraud or error. In preparing the financial report, the Board is responsible for assessing the corporation'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 it is inappropriate to do so.

Auditor's responsibilities for the audit of the financial report	As required by the *Audit Act 1994*, my responsibility is to express an opinion on the financial report based on the audit. My objectives for the audit 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 the 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 the 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 our 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 corporation's internal control • evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board • conclude on the appropriateness of the Board'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 corporation'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 my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the corporation 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. I communicate with the Board regarding, 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 my audit. From the matters communicated with the Board, I determine those matters that were of most significance in the audit of the financial report of the current period and are therefore key audit matters. I describe these matters in the auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in the auditor's report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

MELBOURNE
1 September 2023

Paul Martin
as delegate for the Auditor-General of Victoria

Sugarloaf Reservoir

Performance reporting

Contents

Performance report

Financial performance indicators

Key performance indicator	2021-22 Result	2022-23 Result	2022-23 Target	Variance to prior year	Notes	Variance to target	Notes
Cash interest cover Net operating cash flows before net interest and tax/net interest payments	2.2	2.3	2.1	4.5%		9.5%	
Gearing ratio Total debt (including service concession liabilities and leases)/total assets * 100	47.0%	44.7%	50.0%	4.9%		10.6%	[2]
Internal financing ratio Net operating cash flow less dividends/ net capital expenditure * 100	92.8%	83.5%	55.3%	-10.0%	[3]	51.0%	[3]
Current ratio Current assets/current liabilities (excluding long-term employee provisions and revenue in advance)	0.14 times	0.14 times	0.14 times	0.0%		0.0%	
Return on assets Earnings before net interest and tax/ average assets * 100	4.6%	4.3%	4.3%	-6.5%		0.0%	
Return on equity Net profit after tax/average total equity * 100	1.9%	1.6%	1.3%	-15.8%	[4]	23.1%	[4]
EBITDA margin Earnings before interest, Tax, Depreciation and Amortisation/total revenue * 100	62.9%	63.8%	66.4%	1.4%		-3.9%	

Notes – to Performance Report:

[1] Performance indicators as mandated in Ministerial Reporting Direction 07 - Performance and Financial Sustainability (previously called MRD 01 Performance Reporting in 2021-22). As required by MRD 07 any variances to target or last year of more than 10% for financial performance indicators and 5% for non-financial performance indicators have been further explained within these notes.

[2] The 2022-23 result for the Gearing Ratio is favourable to target due to lower than target debt balance ($334.7 million -mainly due to lower payments for capital expenditure, higher operating cash inflows and lower capital repatriation payment) and higher than target total assets ($963.0 million - mainly due to the revaluation of assets).

[3] The 2022-23 result for the Internal Financing Ratio is unfavourable to the prior year due to higher payments for capital expenditure of ($103.1 million) partially offset by higher net operating cash inflows ($35.2 million – mainly due to lower payments to suppliers and higher receipts from customers). The 2022-23 result for the Internal Financing Ratio is favourable to target due to higher than target operating cash inflows ($93.7 million –mainly due to lower payments to suppliers and higher receipts from customers) and lower than target payments for capital expenditure ($197.5 million – mainly due to timing of project delivery).

[4] The 2022-23 result for Return on Equity is unfavourable to the prior year due to lower net profit after tax ($11.1 million) and an increase in total equity of ($918.3 million -mainly due to the reserves increase for the revaluation of assets). The 2022-23 result for Return on Equity is favourable to target due to higher net profit after tax ($30.3 million) and higher total equity ($1,220.5 million – mainly due to asset revaluations).

Performance report (continued)

Water, sewerage and other service performance indicators

Key performance indicator	2021-22 Result	2022-23 Result	2022-23 Target	Variance to prior year	Notes	Variance to target	Notes
Water quality Compliance with Bulk Water Service Agreement (BWSA): Microbiological Standards — *E. coli*	100.0%	100.0%	100.0%	0.0%		0.0%	
Water Quality Compliance with BWSA: Aesthetics — Turbidity	100.0%	100.0%	91.5%	0.0%		9.3%	[5]
Customer Responsiveness Complaints referred to Energy and Water Ombudsman Victoria (EWOV) responded to within EWOV established time	100.0%	100.0%	100.0%	0.0%		0.0%	
Non-compliance with other Environment Protection Authority Victoria (EPA Victoria) Licence and SEPP parameters – Sewerage system failure Zero spills due to sewerage system failure	0.0	0.0	0.0	0.0%		0.0%	
Compliance with EPA Victoria discharge licence requirements							
Western Treatment Plant (WTP)	100.0%	97.0%	100.0%	-3.0%		-3.0%	
Eastern Treatment Plant (ETP)	100.0%	96.6%	100.0%	-3.4%		-3.4%	
Waterways — Drainage and Flood Protection Reduction in flood damages over the lifetime of works	$23.0M	$125.0M	$42.0M	NA	[6]	197.6%	[7]
Waterways Condition Maintain river health (% of 10 target sites at high-value rating)	100.0%	100.0%	100.0%	0.0%		0.0%	
Recycled water WTP recycled water schemes fully compliant with regulatory obligations and their contractual requirements, as outlined in the relevant Recycled Water Supply Agreement							
Volume demands	100.0%	100.0%	100.0%	0.0%		0.0%	
Quality	100.0%	100.0%	100.0%	0.0%		0.0%	
Recycled water ETP recycled water schemes fully compliant with regulatory obligations and their contractual requirements, as outlined in the relevant Recycled Water Supply Agreement							
Volume demands	100.0%	91.7%	100.0%	-8.3%	[8]	-8.3%	[8]
Quality	100.0%	100.0%	100.0%	0.0%		0.0%	

Notes – to Performance Report:

[1] Performance indicators as mandated in Ministerial Reporting Direction 07 - Performance and Financial Sustainability (previously called MRD 01 Performance Reporting in 2021-22). As required by the new MRD 07 any variances to target or last year of more than 10% for financial performance indicators and 5% for non financial performance indicators have been further explained within these notes.

The net C02 emmisions and the WTP recycled water reliability perfomance indicators are no longer required to be reported in the MRD 07 Perfomance and financial sustainability report and have been removed.

[5] The favourable variance compared to target and prior year for water quality (turbidity) was due to optimised harvest from the catchment to ensure good water quality is selected and supplied to the Silvan system resulting in no exceedances

[6] Waterways - Drainage and Flood protection indicator result is not comparable to the prior year as it is a cumulative result.

[7] Waterways – This indicator is based on the calculated impact of the Corporation's flood mitigation program which has been shown to yield this measured outcome. Drainage and Flood protection indicator is favourable to target due to the flood effects reduction program having a higher impact than originally planned. The program includes building and planning permits, flood mitigation works and community education. In 2022-23 there have been 841 building and planning permit for development cases responded to during the period with floor level advice provided, exceeding the target of 150. There has also been 6,703 engagements in the education component, exceeding the target of 4,500. The major flood event which occurred in 2022 had a significant impact on the community and is under review.

[8] ETP was not able to provide Class A recycled water throughout November 2022 as a result of the severe weather event in October 2022. Demand for recycled water was expected to be significantly lower than normal during this wet period. Supply of class A recycled water resumed on 8 December 2022.

Certification of Performance Report for 2022-23

We certify that the accompanying Performance Report of Melbourne Water Corporation in respect of the 2022-23 financial year is presented fairly in accordance with the *Financial Management Act 1994*.

The Performance Report outlines the relevant performance indicators for the financial year as determined by the Minister for Water and as set out in the *2022-23 Corporate Plan*, the actual and comparative results achieved for the financial year against predetermined performance targets and these indicators, and an explanation of any significant variance between the actual results and performance targets and/or between the actual results in the current year and the previous year.

As at the date of signing, we are not aware of any circumstances which would render any particulars in the Performance Report to be misleading or inaccurate.

John Thwaites
Chair
25 August 2023

Dr Nerina Di Lorenzo
Managing Director
25 August 2023

Fiona Schutt
Chief Financial Officer
25 August 2023

VAGO
Victorian Auditor-General's Office

Independent Auditor's Report

To the Board of the Melbourne Water Corporation

Opinion

I have audited the accompanying performance report of the Melbourne Water Corporation (the corporation) for the year ended 30 June 2023, which comprises the:

- financial performance indicators
- water and sewerage service performance indicators
- other service performance indicators
- certification of performance report.

In my opinion, the performance report of the Melbourne Water Corporation for the year ended 30 June 2023 presents fairly, in all material respects, in accordance with the performance reporting requirements of Part 7 of the *Financial Management Act 1994*.

Basis for Opinion

I have conducted my audit in accordance with the *Audit Act 1994* which incorporates the Australian Standards on Assurance Engagements. I further describe my responsibilities under that Act and those standards in the *Auditor's Responsibilities for the Audit of the performance report* section of my report.

My independence is established by the *Constitution Act 1975*. My staff and I are independent of the corporation in accordance with the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants* (the Code) that are relevant to my audit of the performance report in Victoria and have also fulfilled our other ethical responsibilities in accordance with the Code.

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

Board's responsibilities for the performance report

The Board is responsible for the preparation and fair presentation of the performance report in accordance with the performance reporting requirements of the *Financial Management Act 1994*, and for such internal control as the Board determines is necessary to enable the preparation and fair presentation of the performance report that is free from material misstatement, whether due to fraud or error.

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Auditor's responsibilities for the audit of the performance report

As required by the *Audit Act 1994*, my responsibility is to express an opinion on the performance report based on the audit. My objectives for the audit are to obtain reasonable assurance about whether the performance 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 the Australian Standards on Assurance Engagements 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 decisions of users taken on the basis of this performance report.

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

- identify and assess the risks of material misstatement of the performance 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 corporation's internal control
- evaluate the overall presentation, structure and content of the performance report, including the disclosures, and whether the performance report represents the underlying events and results in a manner that achieves fair presentation.

I communicate with the Board regarding, 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 my audit.

MELBOURNE
1 September 2023

Paul Martin
as delegate for the Auditor-General of Victoria

Albert Park

Appendices

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Appendix B – Corporate information

Consultancy expenditure

The following is a summary of consultancy expenditure by Melbourne Water over the 2022-23 financial year. Details of individual consultancies are outlined on Melbourne Water's website.

Consultancies valued at $10,000 or greater

In 2022-23, there were 16 consultancies engaged during the year where the total fees payable to the consultants were $10,000 or greater. The total expenditure incurred during 2022-23 in relation to these consultancies was $ $2,227,182 (2021-22: $764,920) (excl. GST). Details of individual consultancies are outlined on Melbourne Water's website at www.melbournewater.com.au

Consultancies valued at less than $10,000

In 2022-23, there were three consultancies engaged during the year where the total fees payable to the consultants were less than $10,000 (2021-22: 6). The total expenditure incurred during 2022-23 in relation to these consultancies was $17,675 (2021-22: $24,350) (excl. GST).

Disclosure of emergency procurement

In 2022-23, Melbourne Water responded to several emergency events across its area of operations, including flooding, water supply disruptions and waterway pollution events.

Melbourne Water has a specific set of guidelines for enacting procurement outside of approved 'business as usual' arrangements during incidents and emergencies. In certain defined emergency circumstances, Melbourne Water is permitted to forgo routine procurement procedures. The procurement of materials, equipment and labour can be undertaken outside of existing delegated approval authorities, quotation and sourcing requirements. Melbourne Water is to balance the need to act without delay (for example, to save or preserve life, or safeguard buildings or repair critical infrastructure) against meeting our overarching agency obligations (act lawfully, reasonably and with integrity).

Despite the events responded to during the year, these emergency procurement guidelines and procedures were not specifically activated for any emergency event. While costs were incurred in responding to and managing these circumstances, all procurement was undertaken in accordance with existing delegations, business as usual procurement procedures and/or existing contractual arrangements.

Advertising campaigns

Melbourne Water has no advertising campaigns with a value greater than $100,000.

Information and Communication Technology (ICT) expenditure

For the 2022-23 reporting period, Melbourne Water had a total ICT expenditure of $62,109,989 (2021-22 $64,918,403) with the details shown below.

	($ 000)		
Business as usual (BAU) ICT expenditure (Total)	Non-business as usual (non-BAU) ICT expenditure (Total = Operational and Capital expenditure)	Non-BAU ICT expenditure Operational expenditure (OPEX)	Non-BAU ICT expenditure Capital expenditure (CAPEX)
54,822	7,288	-	7,288

Definitions
Non Business As Usual (Non BAU): non BAU ICT expenditure is a subset of ICT expenditure that relates to extending or enhancing current ICT capabilities and are usually run as projects.
Business As Usual (BAU): all remaining ICT expenditure is considered BAU ICT expenditure and typically relates to ongoing activities to operate and maintain the current ICT capability.

[3] http://www.melbournewater.com.au

Disclosure of major contracts

Melbourne Water has disclosed, in accordance with Ministerial Directions and Instructions for Public Construction Procurement and the Victorian Government Purchasing Board (VGPB) policies, all contracts greater than $10 million in value entered into during the year ended 30 June 2023. Details of contracts can be viewed on Buying for Victoria website.

Competitive neutrality policy

Melbourne Water is corporatised, with an independent Board, and independent, objective performance monitoring.
The Corporation faces the same tax treatment, borrowing requirements and regulations as a private business. As outlined above, Melbourne Water also operates in an environment where the Essential Services Commission (ESC) determines cost-based pricing. In this regard, our processes are consistent with the requirements of the Victorian Competitive Neutrality Policy.

Melbourne Water has not had any pending or completed legal action during the reporting period, in relation to anti-competitive behaviour.

Pricing

Melbourne Water's wholesale water and sewerage prices decreased by approximately 0.76 per cent plus inflation in 2022-23, reflecting the ESC's 2021 Price Determination with updates to cost of debt and desalination plant costs. The annual residential waterways and drainage charge decreased by 1.21 per cent plus inflation in 2022-23 to $109.68.

Freedom of Information

Melbourne Water is subject to the *Freedom of Information Act 1982 (FOI Act)* and is committed to releasing documents in its possession unless such documentation is exempt from release in accordance with the FOI Act. We welcome enquiries about the broad range of documents we also provide outside the FOI Act.

The designated persons for the purpose of the FOI Act are:

Principal Officer	Authorised Officer
Mr J Thwaites	Ms K Croker
Chair, Melbourne Water Board	Corporate Paralegal, Freedom of Information Officer and Privacy Officer

Requests

We received 30 Freedom of Information requests, including one transferred from another agency. We finalised seven requests. Of those remaining requests made this year, five did not proceed, five were withdrawn and five were managed outside the FOI Act, including three from the previous year. Fourteen requests are still in progress.

Eight requests were made by members of the public, 11 came from law firms, seven requests were made by media outlets, two from a Member of Parliament and two requests came from an interest group, while two requests were for personal information.

We released 198 documents, 93 of them were released in full. Exemptions applied included in relation to; disclosure of information obtained in confidence; personal affairs information; and commercial in confidence information.

Finalised requests 7	Other requests 26
Access outcomes:	**Outcomes:**
• Access in full: 1	• Withdrawn: 1
• Access in part: 4	• Did not proceed: 5
• No documents: 1	• Provided outside the FOI Act: 5
• Access denied: 1 (decision includes documents released in part)	• Not yet finalised: 15
	• Transferred to another agency: 1
Related to:	**Related to:**
• Environment and planning: 3	• Asset management: 4
• Personal: 1	• Environment and planning: 7
• Works: 2	• Waterways: 3
• Asset Management: 1	• Personal: 2
	• Works: 4
	• Miscellaneous: 6

Reviews and complaints

One review is ongoing, and no complaints were received from the Information Commissioner. No Victorian Civil and Administrative Tribunal (VCAT) applications in relation to reviews of decisions or complaints were received.

Appendix B – Corporate information (continued)

Access to documents

People wanting access to Melbourne Water documents under the FOI Act may use the online Freedom of Information application on our website.

We also accept applications made in writing to:

Freedom of Information Officer
Melbourne Water
PO Box 4342
Melbourne VIC 3001

Each application must clearly identify the documents sought and must be accompanied by the required application fee of $30.80.

General enquiries about Freedom of Information can be made by contacting the Freedom of Information Officer on (03) 9679 7050 between 9am and 5pm Monday to Friday or via email to foi@melbournewater.com.au

Information required under Part 2 of the FOI Act is available on our website.

The statement includes information about Melbourne Water's functions, decision making, consultation arrangements and publications. It also outlines how to make a Freedom of Information request and how to request information outside of the scope of the FOI Act.

Categories of documents

Melbourne Water uses a computerised records management system to manage its correspondence and documentation. We use online computer systems to manage our financial, human resource and other operational activities and plans relating to water supply, waterways, drainage and sewerage responsibilities. Historical archives of our activities are available through the Public Records Office Victoria. More information is in the Part 2 Information Statement on our website.

Building compliance

Melbourne Water continues to work towards compliance with the *Building Act 1993* across our substantial property and building portfolio. We require that appropriately qualified consultants and contractors are engaged for all proposed works on land controlled by Melbourne Water and that their work and services comply with current building standards. All such consultants and contractors are expected to have appropriate mechanisms in place to ensure compliance with the building and maintenance provisions of the *Building Act 1993*, Building Regulations 2018 and the National Construction Code.

As part of our ongoing compliance program we continue to obtain relevant statutory building documentation and update our Asset Management System to ensure mandatory testing and inspection is conducted to the relevant standards. These inspections inform the works program which is delivered annually through existing contracts.

In 2022-23:

The number of major works projects undertaken (greater than $50,000):	1
The number of building permits, occupancy permits or certificate of final inspection issued in relation to buildings owned by the entity:	1 building permits 0 occupancy permit 1 certificates of final inspection
The number of emergency orders and building orders issued in relation to buildings:	0 emergency orders 0 building orders
The number of buildings that have been brought into conformity with building standards during the reporting period:	0 buildings brought into conformity

Privacy legislation

Melbourne Water is subject to the *Privacy and Data Protection Act 2014 (Vic), the Health Records Act 2001 (Vic)* and, in relation to federal government identifiers such as Tax File Numbers, *the Privacy Act 1988 (Cth)*. Melbourne Water is committed to protecting the privacy of personal and health information it collects and handles. Melbourne Water collects and handles personal and health information only to carry out its functions and activities.

Melbourne Water received no privacy complaints or notifications of complaints received by the Victorian Information Commissioner, the Health Complaints Commissioner or the Australian Information Commissioner.

Melbourne Water is committed to openness and transparency and welcomes queries and suggestions about its approach to privacy. We endeavour to resolve any privacy complaints quickly and effectively.

People may access their personal and health information held by Melbourne Water. People who wish to access their information, seek a copy of our Privacy Policy or make a privacy complaint should call 131 722 (within Victoria) or 9679 7100 (within the rest of Australia) or write to:

Privacy Officer
Melbourne Water

PO Box 4342
Melbourne VIC 3001

Or

Attention Privacy Officer at enquiry@melbournewater.com.au

Financial management

Other information, as required under the *Financial Management Act 1994*, but not specifically referred to, has been retained by the Accountable Officer and is available to the Minister, Members of Parliament and the public, upon request.

Other information available on request

In compliance with the requirements of the Standing Directions of the Assistant Treasurer, details in respect of the items listed below have been retained by Melbourne Water and are available on request, subject to the provisions of the *Freedom of Information Act 1982*.

Further information is available on request about:

- pecuniary interests of relevant officers
- details of shares held by a senior officer as nominee or held beneficially in a statutory authority or subsidiary
- details of changes in prices, fees, charges, rates and levies charged if relevant
- details of Melbourne Water publications
- committees chaired by Melbourne Water
- major external reviews carried out on Melbourne Water
- research and development activities
- overseas visits
- major promotional, public relationship and marketing activities
- Melbourne Water's Code of Conduct
- assessments and measures to improve the occupational health and safety of employees
- statement of industrial relations
- details of time lost through industrial accidents and disputes
- major sponsorships.

Phone 131 7822 or (03) 9679 7100 (within the rest of Australia) or visit the website[6].

[6] http://www.melbournewater.com.au

Appendix B – Corporate information (continued)

Public interest disclosure

The *Public Interest Disclosures Act 2012* (Vic) (PID Act) assists people to expose wrongdoing in public life and protects them from any reprisals. The PID Act applies to Melbourne Water and members of our community must have confidence that Melbourne Water and its people are conducting themselves properly.

Melbourne Water does not tolerate improper conduct by employees nor reprisals against those who come forward to disclose such conduct. Melbourne Water is committed to ensuring transparency and accountability in its administrative and management practices and supports the making of disclosures that reveal corrupt conduct, conduct involving a substantial mismanagement of public resources, conduct involving a substantial risk to public health and safety or the environment, or other improper conduct. Our commitment is reflected in our Code of Conduct and our Public Interest Disclosure Procedures.

Where a disclosure is brought to Melbourne Water's attention by an investigative body, we will take all reasonable steps to protect people who make such disclosures from any detrimental action in reprisal for making the disclosure. We will also afford natural justice to the person who is the subject of the disclosure to the extent it is legally possible.

How do I make a 'public interest disclosure'?

You can make a public interest disclosure about Melbourne Water or its Board members, officers or employees by contacting the Independent Broad-based Anti-corruption Commission (IBAC) Victoria, using the contact details provided below. Please note, Melbourne Water is not able to receive public interest disclosures, directly. Melbourne Water has had no incidents of corruption in this regard in 2022-23.

How can I access Melbourne Water's procedures for the protection of persons from detrimental action?

Melbourne Water has procedures in place for the protection of persons from detrimental action for making a public interest disclosure about Melbourne Water or its employees. You can access our procedures at the Melbourne Water website[7].

Contacts

Jay Dimitri
General Counsel and Company Secretary
Melbourne Water
PO Box 4342
Melbourne VIC 3001
Phone (03) 9473 5564

Independent Broad-based Anti-corruption Commission Victoria

Level 1, North Tower, 459 Collins Street
Melbourne VIC 3000

GPO Box 24234
Melbourne VIC 3000
Phone: 1300 735 135

See the IBAC website[8] for the secure email disclosure process which also provides for anonymous disclosures.

[7] http://www.melbournewater.com.au
[8] https://www.ibac.vic.gov.au

Appendix C – Bulk Entitlements

The Victorian Government introduced bulk water reforms on 1 July 2014. These reforms introduced a 'source' and 'delivery' bulk entitlements model for Melbourne with a seasonal determination process and rights to carry over unused water allocations from year to year. The four systems currently supplying Melbourne (Thomson River, Yarra River, Silver and Wallaby creeks and Tarago and Bunyip rivers) are collectively known as the Greater Yarra System – Thomson River Pool.

Melbourne Water is assigned the source bulk entitlements to the Greater Yarra System – Thomson River Pool. The delivery bulk entitlements to the Greater Yarra System – Thomson River Pool are assigned to Barwon Water, Greater Western Water (formerly City West Water and Western Water), South East Water, South Gippsland Water, Westernport Water and Yarra Valley Water (the 'primary entitlement holders' – PEHs).

As the storage manager for the Melbourne headworks system, Melbourne Water allocates water to the primary entitlement holders by making seasonal determinations to them. Melbourne Water also has the storage manager functions specified in section 122ZL of the *Water Act 1989* and the obligations specified in bulk entitlements for the Melbourne headworks system, water from the Victorian Desalination Project and those held by the Melbourne Retailers in the Goulburn headwork system. The following table fulfils the reporting requirements in Melbourne Water's bulk entitlements.

Melbourne Water reporting obligation	Combined Yarra River, Silver and Wallaby creeks, Thomson River	Yarra River[2] (WSE000185)	Silver and Wallaby creeks[5] (WSE000018)	Thomson River[7] (WSE000168)	Tarago and Bunyip rivers[9] (WSE000041)
The amount of water taken by PEHs in 2022-23 (i). Total inflows[(a)]; (ii). Total storage volumes[(b)]; and (iii). Total outflows[(c)]	N/A	Clause 15.1 (a) (i). 492,815ML (ii). 578,707 ML (iii). 474,741ML	Clause 14.1 (a) (i). 1,142 ML (ii). No storage is available in Silver and Wallaby (iii). 1,142 ML	Clause 15.1 (a) (i). 302,844 ML (ii). 989,559 ML (iii). 117,093 ML	Clause 15.1 (a) (i). 34,637 ML (Tarago) 2,190 ML (Bunyip) (ii). 34,580 ML (Tarago) No storage is available in Bunyip (iii). 11,226 ML (Tarago) 2,190 ML (Bunyip)
Compliance with the diversion limit	441,804 ML[1]	Clause 15.1 (b) 323,469 ML[3]	Clause 14.1 (b) 7,208 ML[6]	Clause 15.1 (b) 117,093 ML[8]	Clause 15.1 (b) 12,718 ML (Tarago)[10] 2,191 ML (Bunyip)[11]
Any temporary/permanent transfer of this bulk entitlement	N/A	Clause 15.1 (c) Nil	Clause 14.1 (c) Nil	Clause 15.1 (c) Nil	Clause 15.1 (c) Nil
Any temporary/permanent transfer of a bulk entitlement which may alter the flow in the waterway	N/A	Clause 15.1 (d) Nil	Clause 14.1 (d) Nil	Clause 15.1 (d) Nil	Clause 15.1 (d) Nil
Any amendment to this bulk entitlement	N/A	Clause 15.1 (e) As per Bulk Entitlement (Melbourne Water Storage Manager Changes) Minor Amendment Notice 2022 published in Government Gazette G37 15 September 2022	Clause 14.1 (e) As per Bulk Entitlement (Melbourne Water Storage Manager Changes) Minor Amendment Notice 2022 published in Government Gazette G37 15 September 2022	Clause 15.1 (e) As per Bulk Entitlement (Melbourne Water Storage Manager Changes) Minor Amendment Notice 2022 published in Government Gazette G37 15 September 2022	Clause 15.1 (e) As per Bulk Entitlement (Melbourne Water Storage Manager Changes) Minor Amendment Notice 2022 published in Government Gazette G37 15 September 2022

Appendix C – Bulk Entitlements (continued)

Melbourne Water reporting obligation	Combined Yarra River, Silver and Wallaby creeks, Thomson River	Yarra River[2] (WSE000185)	Silver and Wallaby creeks[5] (WSE000018)	Thomson River[7] (WSE000168)	Tarago and Bunyip rivers[9] (WSE000041)
Volume of water made available to PEHs from seasonal determinations (on 1 June 2022)	N/A	Clause 15.1 (f) Greater Yarra System – Thomson River Pool[4] 237,012 ML (Greater Western Water) 285,834 ML (South East Water) 304,534 ML (Yarra Valley Water) 22,170 ML (Barwon Water) 1,386 ML (South Gippsland Water) 1,386 ML (Westernport Water)	Clause 14.1 (f) N/A	Clause 15.1 (f) N/A	Clause 15.1 (f) N/A
Any new bulk entitlement of water granted	N/A	Clause 15.1 (g) Nil	Clause 14.1 (g) Nil	Clause 15.1 (g) Nil	Clause 15.1 (g) Nil
Any failures to comply with this bulk entitlement and any remedial action	N/A	Clause 15.1 (h) Nil	Clause 14.1 (h) Nil	Clause 15.1 (h) Nil	Clause 15.1 (h) Nil
Any difficulties experienced in complying with this bulk entitlement and any remedial action	N/A	Clause 15.1 (i) Nil	Clause 14.1 (i) Nil	Clause 15.1 (i) Nil	Clause 15.1 (i) Nil
Any other matters as required by the Minister	N/A	Clause 15.1 (j) Nil	Clause 13.1 (j) Nil	Clause 15.1 (j) Nil	Clause 15.1 (j) Nil

(a) Total inflows for each of Melbourne Water's bulk entitlements include inflows to reservoir(s) and diversions from weirs available to Melbourne Water under its bulk entitlements.

(b) Total storage volumes are as at 30 June 2023 for all reservoirs defined in each of Melbourne Water's bulk entitlements.

(c) Total outflows are the volume of water diverted or released under each of Melbourne Water's bulk entitlements for consumptive and operational purposes. It excludes spills from reservoirs.

Notes for compliance with Bulk Entitlements

Combined Yarra River, Silver and Wallaby creeks, Thomson River

1. This is the volume diverted in 2022-23.

Yarra River

2. Melbourne Water holds the Bulk Entitlement (Yarra River – Melbourne Water) Order 2014 – WSE000185.
3. This is the volume diverted in 2022-23.

Notes for compliance with Bulk Entitlements (continued)

Greater Yarra System – Thomson River Pool

4. The Greater Yarra System – Thomson River Pool includes the following Bulk Entitlements held by Melbourne Water:
   a. Bulk Entitlement (Yarra River – Melbourne Water) Order 2014 – WSE000185
   b. Bulk Entitlement (Silver and Wallaby creeks – Melbourne Water) Order 2014 – WSE000018
   c. Bulk Entitlement (Tarago and Bunyip rivers – Melbourne Water) Order 2014 – WSE000041
   d. Bulk Entitlement (Thomson River – Melbourne Water) Order 2014 – WSE000168

Silver and Wallaby creeks (Goulburn Basin)

5. Melbourne Water holds the Bulk Entitlement (Silver and Wallaby creeks – Melbourne Water) Order 2014 – WSE000018.
6. Compliance with the three-year total diversion limit of 66,000 ML was assessed and confirmed using a three-year rolling total diversion.

Thomson River

7. Melbourne Water holds the Bulk Entitlement (Thomson River – Melbourne Water) Order 2014 – WSE000168.
8. This is the volume diverted in 2022-23.

Tarago and Bunyip rivers

9. Melbourne Water holds the Bulk Entitlement (Tarago and Bunyip rivers – Melbourne Water) Order 2014 – WSE000041.
10. Compliance with the Tarago River long-term average diversion limit of 24,950 ML was assessed and confirmed using a five-year rolling average annual diversion.
11. Compliance with the Bunyip River long-term average diversion limit of 5,560 ML was assessed and confirmed using a five-year rolling average annual diversion.

Melbourne Water's Maribyrnong Bulk Entitlement

Melbourne Water holds a Bulk Entitlement (WSE000117) to the water resources of the Maribyrnong Basin to supply irrigators diverting water from Jacksons Creek, downstream of Rosslynne Reservoir, and the Maribyrnong River between its confluence with Jacksons Creek and Shepherd Bridge.

Compliance with the Maribyrnong River Bulk Entitlement held by Melbourne Water	
The volume of water taken by Melbourne Water to supply licence holders in 2022-23	Clause 19.1 (b), 92 ML
Compliance with the five-year rolling average annual bulk entitlement diversion limit of 1,096 ML	193 ML
Melbourne Water's share of flow into Rosslynne Reservoir in 2022-23	Clause 19.1 (a.iii), 1,591 ML
Melbourne Water's share of storage volume in Rosslynne Reservoir at 30 June 2023	Clause 19.1 (a,ii), 1,995 ML
Transfer and operating losses within the system	Clause 19.1 (a,iv), 0 ML
Releases made from Rosslynne Reservoir to supply licence holders in 2022-23	Clause 19.1 (a,i), 301 ML
Releases from Melbourne Water's share of flow to meet minimum flows	Clause 19.1 (a,v), 73 ML
Any temporary or permanent transfers of the bulk entitlement	Clause 19.1 (c), nil
Any temporary or permanent transfer of the bulk entitlement which may alter the flow in the waterway	Clause 19.1 (d), nil
Alteration to volume of water under licences issued by Melbourne Water	Clause 19.1 (e), nil
Alteration to security of supply of entitlements under licences	Clause 19.1 (e), nil
Transfer of licences (number, amount and places)	Clause 19.1 (f), Yes (In total 23 licences were transferred to VEWH)
Any amendment to the bulk entitlement	Clause 19.1 (g), As per Bulk Entitlement (Maribyrnong -Melbourne Water) Minor Amendment Notice 2022 published in Government Gazette G36 8 September 2022
Any new bulk entitlement granted to Melbourne Water	Clause 19.1 (h), nil
Implementation of metering program	Clause 19.1 (i), Yes
Any failures to comply with any provision of the bulk entitlement	Clause 19.1 (j), nil
Any difficulty experienced in complying with the bulk entitlement and if so, any remedial action taken or proposed	Clause 19.1 (k), nil

Appendix D – Private diversion licences

Melbourne Water manages 1,810 licences to use water from farm dams and waterways in the Yarra River, Maribyrnong River, Stony Creek, Kororoit Creek, Laverton Creek and Skeleton Creek catchments. Water is mainly used for agricultural, industrial, commercial, domestic and stock purposes. The total number of 'take and use' licences (that is, licences for uses such as irrigation) is 1188 with a combined volume of 34,936 ML.

Melbourne Water applies permanent management trigger and restriction conditions enacted under the *Diversions Drought Response Plan* (A Water Sharing Plan for all Licenced Water Users) and licence conditions. Melbourne Water has not invoked any additional drought response measures outside of the plan during 2022-23. The table below details the licence type, number, volume and volume used for 2022/23.

Licence Totals	No. Licences	Volume (ML)	Metered Usage (ML)
Farm Dam Registrations	524	6,775.5	0
Farm Dam Licences	42	972.5	101.94
Take and Use Licences Yarra	1141	34,149.03	8,106.76
Take and Use Licences Maribyrnong	47	787.10	148.9
Stormwater Licences	56	3,681.6	763.41
Environmental Water Licence	8	1,995.87	0

Compliance Management

Melbourne Water has delegated power and functions to undertake compliance and enforcement activities under the *Water Act 1989*. Following an independent compliance and enforcement review undertaken in 2020, Melbourne Water has been working with DEECA to review and update compliance and enforcement strategies to ensure a coordinated, risk-based and consistent State-wide approach to compliance and enforcement activities.

Our *Healthy Waterways Strategy* and *Stream Flow Management Plans* provide guidance on our compliance and enforcement priorities which is further supported by our Compliance and Enforcement Statement. The Statement is available on our website and outlines our approach to compliance and enforcement and was developed in line with DEECA's Non-Urban Compliance and Enforcement Guidelines for Water Corporations 2019. This document can be assessed on the website[9].

Melbourne Water are committed to continuous improvement following the completion of recommendations arising from the 2020 Independent Review into Compliance and Enforcement. During 2022-23 period Melbourne Water continued to operationalise our Compliance and Enforcement Statement by undertaking the following priorities:

- Implementing system improvements to assist with our compliance and enforcement reporting capability and increasing automation of reporting.
- Upgrading meters to AS4747 meters as per our Meter Action Plan.
- Continuing the rollout of automated meter reading technology to provide near-time access to water extraction data.
- Continuing our communications campaign to build customer understanding of the zero-tolerance approach to improving compliance.
- Building the capability of our staff to deliver a zero tolerance approach through additional training to relevant staff including completing CERT IV Government Investigations and Penalty Infringement Notice Training.
- Finalising our ability to issue fines under Water (Infringements) Regulations 2020 (PINs) from 1st July 2023.
- Appointed two Authorised Water Officers.
- Actively participated in the DEECA lead Compliance Community of Practice, Water Compliance Communications Working Group, Authorised Officer Network, and Non-urban Metering Working Group.

[9] https://www.melbournewater.com.au/water-data-and-education/waterway-diversions/water-use-compliance

Compliance and enforcement actions

A summary of the investigations into non-compliances and their resolutions over the past three years is provided in Table 11.

Table 11: Compliance actions undertaken in the past three years

Item	2019-20	2020-21	2021-22	2022-23
Potential breaches detected	51	53	49	42
Under investigation at the time of reporting	18	9	13	14
Dismissed (insufficient evidence)	1	5	0	0
No further action required	21	27	22	28
Verbal warning	N/A	7	2	0
Advisory letter	3	0	3	0
Formal warning or interview	8	5	9	0
Penalty Infringement Notice	N/A	0	0	0
s.151 Notice of Contravention	N/A	0	0	0
s.133 Notice of Entry	N/A	0	0	0
s.141 Lockdown	N/A	0	0	0
Prosecutions commenced	N/A	0	0	0
Prosecutions finalised	N/A	0	0	0

Metering Activities

Melbourne Water has a zero-tolerance approach to unauthorised water take and a risk-based approach to licence management. To support this, we have developed and are delivering our *Metering Action Plan*, focused on continuing to improve the meter fleet with highly reliable Australian Standard AS4747 compliant meters and telemetry to provide real-time water usage data to Melbourne Water and our customers. This real-time data helps Melbourne Water with enforcement actions and strengthens our zero-tolerance approach. Rollout of our plan is progressing ahead of schedule, and we anticipate we will be fully compliant to the implementation program of the Victorian Metering Policy with the upgrade of the remaining 24 contemporary meters and the installation of 200 data loggers by 2025. Our *Non-Urban Metering Action Plan* plus summary can be found on the website[10].

Table 12: Summary of licensed metered sites as of July 2021.

Category	2022-23
1. AS4747 Compliant Meters	478
2. Existing Contemporary Meters[11]	24
3. Exempt Meters	308
Total	**810**

The 810 Melbourne Water meters range in diameters from 25 to 450 mm in size with the vast majority of the meters being in the 50 to 150 mm range. As of June 2023, we have 95 per cent of total required meter fleet compliant with AS4747 meters with the remaining 24 meters scheduled to be upgraded to AS4747 by 2025.

Melbourne Water also undertakes meter validations as per AS4747. This is done on each waterway every three years by a Certified Meter Validator. During 2022-2023, there were approximately 173 meters validated onsite. In addition, Melbourne Water undertakes a program of regular maintenance of meters including regular inspections.

[10] https://www.melbournewater.com.au/water-data-and-education/waterway-diversions/metering-pump-and-offtake-guidelines
[11] To be upgraded to AS4747 compliant meters as per our capital program by 2025

Appendix D – Private diversion licences (continued)

Public information and education campaigns

To inform customers and promote our approach to zero tolerance on water theft, Melbourne Water has undertaken a number of initiatives including developing a compliance and enforcement web page, adding zero tolerance to water theft banners on invoices, having a compliance focus for the annual StreamNews newsletter, conversations with customers by our officers in the field and creating four fact sheets. These documents can be assessed on the website[12].

Melbourne Water's compliance and enforcement is a risk-based strategy to ensure that resources are used efficiently, focusing more on areas where there are the greatest compliance risks. Our approach to compliance and enforcement is risk-based and responsive, so our actions reflect the seriousness of the offence. We are committed to:

- An emphasis on education, community engagement, technology and monitoring programs, to encourage and assist with compliance.
- A clear and logical escalation pathway in response to detected breaches.
- Working in good faith with all parties and using our enforcement powers only when needed.

Melbourne Water has undertaken several activities in support of its *Compliance Communications Strategy* including the following:

- Participated in the state-wide Water Compliance Communications Working Group supporting implementation of the state-wide water compliance communications plan and collaboration with other rural water corporations.
- Participated in Australasian Environmental Law Enforcement and Regulators (AELERT compliance Community of Practise – an Australia wide working group.
- Updated our communications plan regarding compliance and enforcement key messaging.
- Continued to update compliance information on our website.
- Continued our interaction with licence holders in relation to their obligations and importance of maintaining a high level of compliance.
- Collaborated with DEECA to refine and expand ZERO Tolerance key messaging and taglines for Zero Tolerance for Water Theft banner, which have been used on water bills, factsheets and newsletters.
- Building up working relationships with other Statutory Authorities who have a compliance role within our operational area.

Bans and restrictions

Melbourne Water will be transparent about our water use compliance strategies, protocols, and compliance and enforcement activities.

Also, during drought or low flow conditions, licenced diverters' access to water may be restricted or banned to protect the environment. Our *Drought Response Plan* is active at all times, and specifies how water is shared when there is not enough to meet all users' needs. It states river flow levels which trigger restrictions or bans, and how these are applied to different licence types. These trigger points have been developed together with stream flow management plans or local management rules/plans.

The status of restrictions and bans for individual catchments is posted daily on Melbourne Water's website[13] and is available by calling Melbourne Water on 131 722 during business hours or via an automated SMS services to subscribed customers.

During 2022-23 we sent over 1100 text messages to 283 subscribed customers advising them on waterway pumping restrictions and/or bans.

[12] https://www.melbournewater.com.au/water-data-and-education/waterway-diversions/water-use-compliance
[13] https://www.melbournewater.com.au/water-data-and-education/waterway-diversions/restriction-and-ban-status

Table 13: Summary of bans and restrictions in 2022-23

Catchment	Restriction days	Ban days	Licence ban days	Days available
Arundel Creek	0	0	0	366
Cockatoo Shepherds Creek (SFMP)	0	0	0	366
Darebin Creek	0	35	0	331
Diamond Creek	0	103	0	263
Dixons Creek (SFMP)	0	15	212	139
Don River (SFMP)	0	0	0	366
Gardiners Creek	0	1	0	365
Hoddles Creek (SFMP)	0	30	0	336
Kororoit Creek	0	0	0	366
Little Yarra River (SFMP)	0	0	0	366
Maribyrnong River (All Year)	0	0	0	366
Maribyrnong River (Winterfill)	0	4	242	120
McCrae Creek (SFMP)	0	0	0	366
Merri Creek	0	0	0	366
Moonee Ponds Creek	0	0	0	366
Mullum Mullum Creek	0	4	0	362
Olinda Creek (Lower) – SFMP	0	0	0	366
Olinda Creek (Upper) – SFMP	0	46	0	320
Pauls Creek (SFMP)	0	56	212	98
Plenty River	0	0	0	366
Steels Creek (SFMP)	0	67	212	87
Stringybark Creek (Lower) – SFMP	0	26	0	340
Stringybark Creek (Upper) – SFMP	0	15	0	351
Wandin Yallock Creek (SFMP)	0	0	0	366
Watsons Creek	0	0	0	366
Watts River	0	0	0	366
Woori Yallock Creek (SFMP)	0	0	0	366
Yarra River (Lower)	21	0	0	345
Yarra River (Upper)	5	0	0	361

Statewide key performance indicators

Unauthorised take performance is reported against statewide key performance indicators (KPIs) being:

- no more than 1 per cent of volume of total water take is taken without authorisation at any time
- no more than 3 per cent of accounts are to be in negative at any time.

Table 14 summarises performance against the Minister for Water's state-wide performance targets, these KPIs show that we have met both of them in 2022-23.

Table 14: Unauthorised take key performance indicators

	ABAs [or licences]			Volume			
Year	Number of negative ABAs	ABAs%	ABAs % (excluding <1ML)	Volume (ML) of water taken under corporation issued licences[14]	Volume (ML) of unauthorised Take	Volume %	Volume % (excluding previous FY)
2019-20	17	0.9%	NA	6507.7	-110.3	1.7%	1.7%
2020-21	6	0.3%	NA	9939.1	-140.2	1.4%	1.4%
2021-22	17	0.9%	0.6%	9920.9	-55.1	0.5%	0.5%
2022-23	7	0.54%	0.47%	9121.01	-85.90	0.94%	0.94%

[14] Melbourne Water read meters at the end of licence seasons, licensed take information is not captured quarterly.

Appendix E – Flooding and drainage

Item	2022 - 23	
	km	%
Underground drains		
Total length of Melbourne Water assets	1,768	
Total length of Melbourne Water assets excluding drainage scheme areas	1,100	
Mapped 100yr ARI	605	55%
Mapped 20yr ARI	460	42%
Mapped 10yr ARI	313	29%
Mapped 5yr ARI	310	28%
Natural waterways		
Total length of Melbourne Water assets	8,700	
Total length of Melbourne Water assets excluding drainage scheme areas, forested areas and French Islands	6,517	
Mapped 100yr ARI	4,645	71%
Mapped 20yr ARI	845	13%
Mapped 10yr ARI	677	10%
Mapped 5yr ARI	566	9%
Channels		
Total length of Melbourne Water channels	2,032	
Mapped 100yr ARI (underground drains)	114	
Mapped 100yr ARI (waterways)	1,581	
Mapped 100yr ARI (total)	1,695	83%
Total		
Total length of Melbourne Water assets	12,500	
Total length of Melbourne Water assets excluding drainage scheme areas, forested areas and French Island	9,649	
Mapped 100yr ARI	6,945	73%
Method: Select the assets while excluding (DSCM or DSCM/French Island/forestered areas) using an erase tool. Select the waterways that intersect with 100yr ARI flood map. Calculate the percentage of flood polygons from the 20yr ARI, 10yr ARI and 5yr ARI, using an intersect query with the 100yr ARI selected for interesction with assets. Derive the length of assets that have been flood mapped for each ARI interval using the percentage and the length calculated from the 100yr ARI query (see example below)		
Intersect of 20yr ARI polygons with 100yr ARI polygons = 0.76 (76%)		
Mulitply 100yr ARI with percentage intersect | 605 * 0.76 = 460		

Appendix F – Port Phillip and Westernport Catchment Condition Report 2022-23

This assessment is based on a set of state-wide indicators and data sets outlined in the *Regional Catchment Strategy* (RCS) outcomes framework. It is not a definitive assessment but an assessment at a point in time based on the best available evidence.

Water

Indicator - extent of protected or improved riparian land

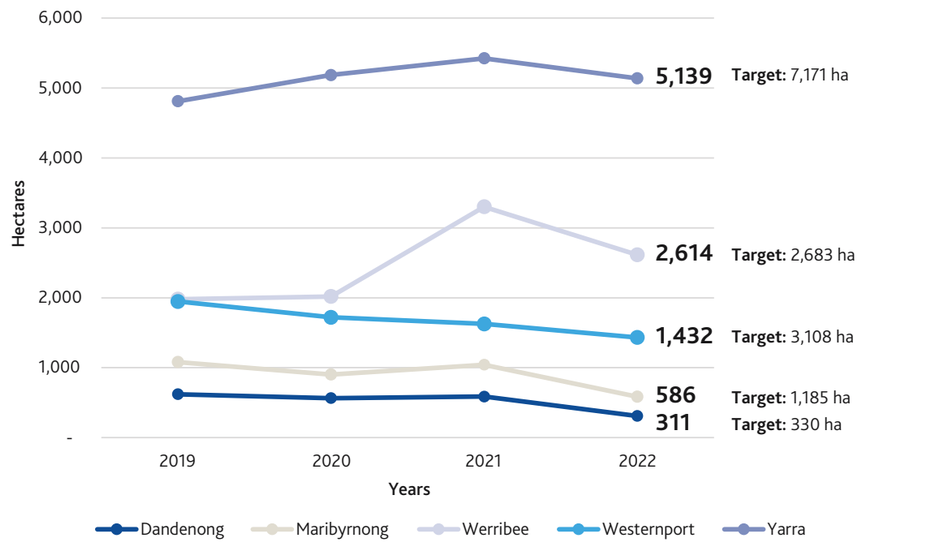
The indicator reflects efforts to protect or improve the condition of riparian lands, including fencing, weed control, revegetation, and pest control (e.g., rabbits)

Trend assessment: 2022-23: Unknown
Rolling five years: Positive

Within the Port Phillip and Westernport region, all catchments are on track to meet the *Healthy Waterways Strategy* (HWS) 10-year catchment target maintaining and protecting existing vegetation along priority reaches, therefore the rolling 5-year trend is positive.

At the time of writing this report, data for 2022-23 was not available so the trend assessment for this year is unknown.

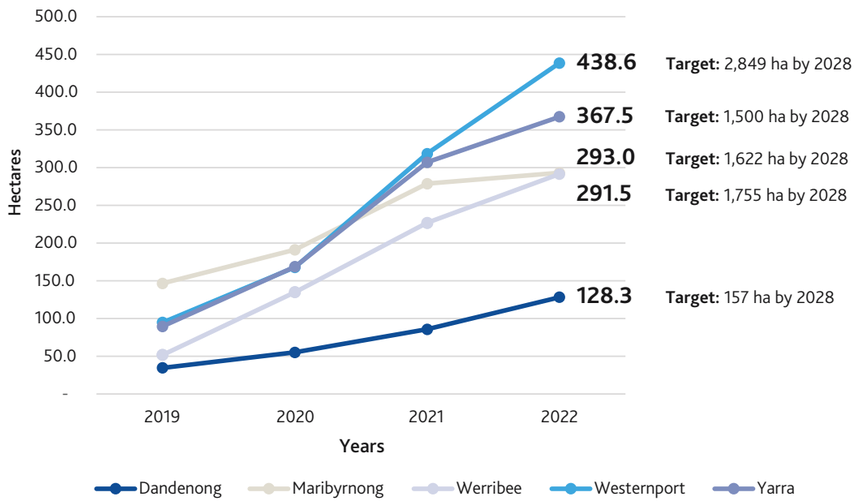
Riparian (ha) established by catchment



Appendix F – Catchment Condition Report (continued)

In terms of establishing new vegetation, the Dandenong catchment is the only catchment still on track to meet the 10-year targets in the *Healthy Waterways Strategy*. The 300 hectares of riparian vegetation that was established across the region (through planting efforts in 20-21) was less than half what was needed to keep us on track to meet the 10-year targets set in the strategy. We are now significantly off-track in the Werribee, Maribyrnong and Westernport catchments and slightly off-track in the Yarra catchment.

Riparian (ha) established by catchment



Source: Healthy Waterways Strategy website, 2022

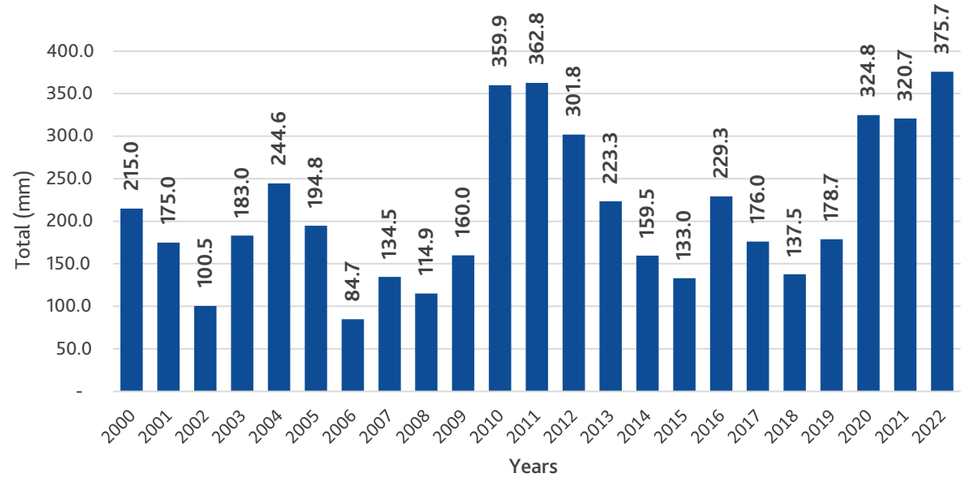
Indicator - River inflows

This indicator provides estimates of river inflows in the Port Phillip and Westernport region.

Trend assessment: 2022-23: Positive
Rolling five years: Positive

Since 2000, annual river inflows in the Port Phillip and Westernport Region have been variable. River inflows have generally increased over the last 5 years ranging from 137.5 millimetres in 2018 to 375.7 millimetres in 2022, therefore the rolling five year trend is positive. In 2022, the region experienced above average rainfall and was the wettest year since 2011, therefore the 2022-23 trend is positive. Above average rainfall is due to weather patterns combining causing extensive rain across the east of Australia.

Annual river Inflows for the Port Phillip and Westerport Region



Appendix F – Catchment Condition Report (continued)

Indicator - extent of wetlands

This indicator provides an estimate of the overall rate of change in the extent and spatial distribution of wetlands and associated vegetation on public and private land in the Port Phillip and Westernport region.

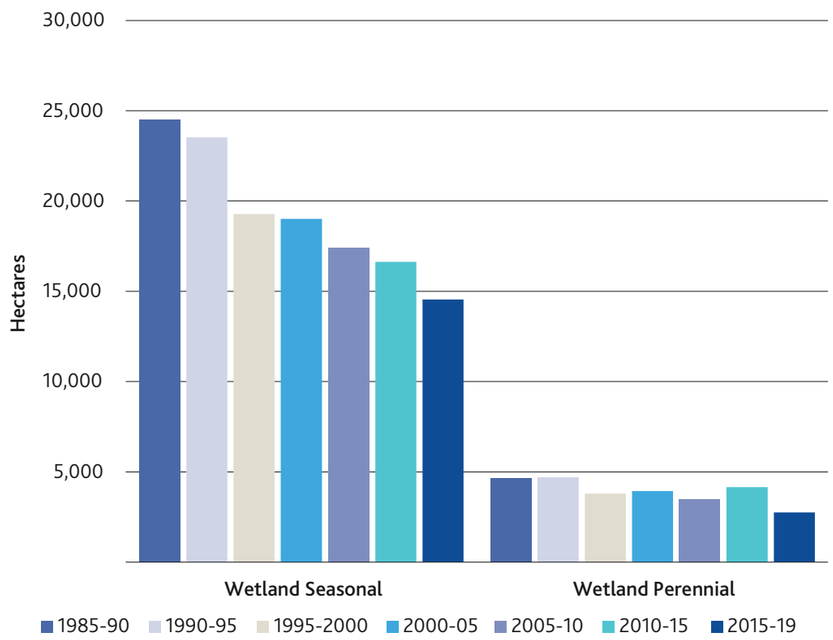
Trend assessment: 2022-23: Unknown
Rolling five years: Positive

Perennial wetlands and seasonal wetlands in the Port Phillip and Westernport region decreased by approximately 41 per cent from the 1985-90 baseline to 2015-19. No data is available since 2019 so the five year rolling trend and 2022-23 trend assessment is unknown.

The Port Phillip and Westernport region hosts significant areas of wetland habitats including three wetland complexes which are listed under the Ramsar Convention on Wetlands of International Importance (Westernport, Edithvale-Seaford Wetlands and Port Phillip (Western Shoreline) and Bellarine Peninsula). In the Port Phillip and Westernport region, natural wetlands in urban growth areas are particularly at risk.

In the past, priority wetlands identified in the *Healthy Waterways Strategy* have been lost to urban development and many today remain at risk from urban development and multiple large infrastructure projects.

Extend of wetlands in the Port Phillip and Westernport region



Indicator - groundwater resources

This indicator provides information on groundwater resources in the Port Phillip and Westernport region.

Trend assessment: 2022-23: Unknown
Rolling five years: Concerned

The following table summarises the general trends in groundwater levels in the Port Phillip and Westernport region, based on analysis of the State Observation Bore Network for the Victorian Water Accounts annual reports. The dominant trend over the past five years is declining.

Data is not available for 2022-23 so the trend assessment for this year is unknown. The stability or decline of groundwater systems depends on the amount of water recharging the system and on how much water is being used.

Period	Deutgam	Lancefield	Merrimu	Frankston	Moorabbin	Nepean	Wandin Yallock	Koo Wee Rup	Corinella
June - 17	Declining	Stable	Declining	Stable	Declining	Stable	Declining	Stable	Stable
June - 18	Declining	Stable	Stable	Declining	stable	Stable	Stable	Declining	Declining
June - 19	Declining	Rising	Declining	Declining	Declining	Stable	Declining	Declining	Declining
June - 20	Declining	Rising	Declining	Declining	Rising	Stable	Declining	Stable	Stable
June - 21	Stable	Rising	Rising	Stable	Rising	Stable	Stable	Declining	Rising

Source: State Observation Bore Network (SOBN), Victorian Water Accounts

Appendix F – Catchment Condition Report (continued)

Land

Indicator - percentage of exposed soils

This indicator provides an estimate of the overall rate of change in the extent and spatial distribution of wetlands and associated vegetation on public and private land in the Port Phillip and Westernport region.

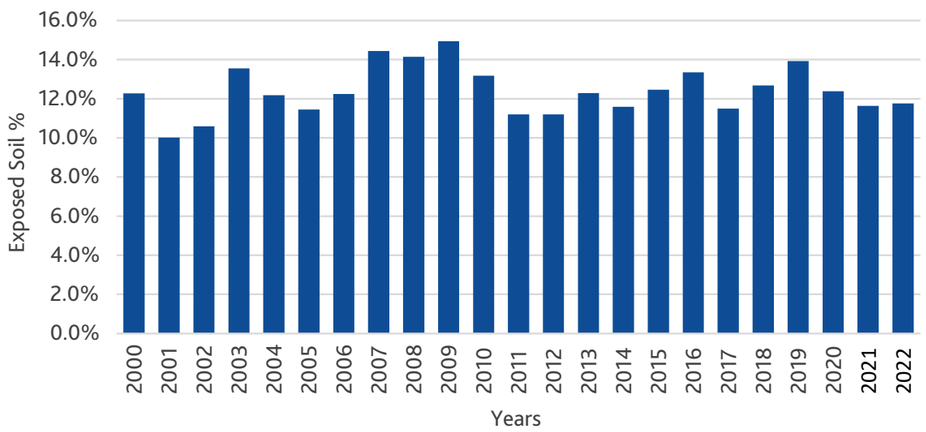
Trend assessment 2022-23: Neutral
Rolling five years: Neutral

The graph below shows that, across the region over the past 20 years, the proportion of exposed soil has been steady at between 10 per cent to 15 per cent (this is a relatively low level), therefore the rolling five year trend and 2022-23 trend has been assessed as neutral.

Factors that should be considered in assessing soil health include soil acidity (pH), phosphorous and nitrogen levels, soil salinity, soil compaction and microbial health. Soil carbon is also important due to the importance of sequestering and retaining carbon to help address climate change.

The health of soil, as measured by these parameters, is highly variable at local level due to the particular local conditions and the management history of the site. The condition and trends of soil health using these parameters have not been systematically recorded and mapped at landscape level. Instead, a proxy for broad soil health and vulnerability assessment, for which data has been collected and mapped for some decades nationally through the Australian National University[15], is the per centage of exposed soil.

Percentage of exposed soils in Port Phillip and Westernport region



Source: Australian National University, Tern Ecosystem Research Infrastructure, 2022

[15] https://www.wenfo.org/aer/

Indicator - agricultural commodities

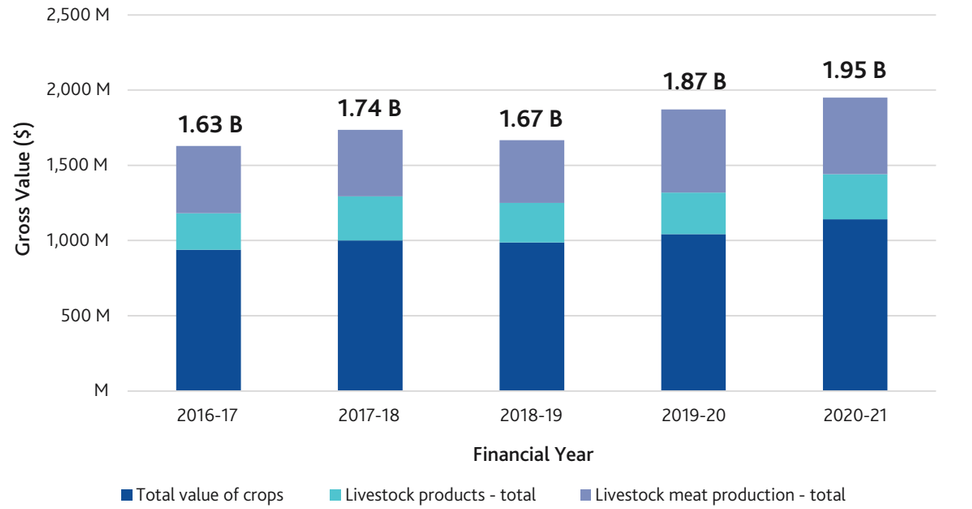
This indicator aims to provide estimates of the type and gross value of agriculture in the Port Phillip and Westernport region.

Trend assessment: 2022-23: Unknown
Rolling five years: Positive

The contribution of agriculture to the regional economy has been strong and has increased over the past five years, therefore the rolling five year trend has been assessed as positive. In 2020-21 total gross value of agricultural commodities in the Port Phillip and Westernport region was more than $1,950 million. Total gross value of crops was more than $1,141 million. Total gross value of livestock products was more than $298 million and total gross value of livestock meat production was more than $509 million.

Data is not available for 2022-23 so the trend assessment for this year is unknown.

Total Gross Value of Agricultural Commodities



Source: ABS (2021). Agricultural gross value of production by NRM (CMA) region for Victoria. 2018-19.

Appendix F – Catchment Condition Report (continued)

Indicator - amount and change over time of land use

This indicator provides estimates of the current and overall rate of change in the extent and spatial distribution of land use classes on public and private land in the Port Phillip and Westernport region.

Trend assessment: 2022-23: Unknown
Rolling five years: Unknown

Agriculture and native vegetation in the Port Phillip and Westernport region has decreased slightly from the 1985-90 baseline to 2015-19 and urban land has increased. No data is available since 2019 so the five year rolling trend and 2022-23 trend assessment is unknown.

Around 44 per cent of the region is currently used for agriculture and green wedges (non-urban areas that lie outside the urban growth boundary) and around 42 per cent is covered in native vegetation, including the large parks and water supply catchments. Much of the region's natural resource production comes from the rural and vegetated areas, which provide habitat for native species, recreation, protected natural areas and scenic landscapes.

Urban land use currently covers 14 per cent of the region and houses the majority of the region's five million residents. By 2051, the population is expected to have grown to eight million, which will see a conversion of some of the rural land to urban use in the next 30 years.

Land use	1985-1990	2015-2019
Agriculture	~ 590,677 ha (46%)	~ 564,134 ha (44%)
Native vegetation	~ 565,745 ha (44%)w	~ 541,812 ha (42%)
Urban	~ 121,923 ha (10%)	~ 172,399 ha (14%)

Source: DELWP, Victorian Land Cover Time Series Data 1985 - 2019

Biodiversity

Indicator - extent of native vegetation (ha)

This indicator aims to provide estimates of the current and previous extent and spatial distribution of native vegetation on public and private land in the Port Phillip and Westernport region.

Trend assessment: 2022-23: unknown
Rolling five years: unknown

Native vegetation in the Port Phillip and Westernport region has decreased from the 1985-90 baseline to 2015-19. No data is available since 2019 so the five year rolling trend and 2022-23 trend assessment is unknown.

An estimated 541,812 hectares (42 per cent) of native vegetation exists in the region today. A number of Ecological Vegetation Classes have been severely depleted including Plains Grassland, Plains Grassy Woodland and Box Ironbark Forest.

Over the past 30 years, the extent of native vegetation has reduced by an estimated 23,933 hectares (an average of 800 hectares per year). The amount of loss has varied depending on vegetation types and the suitability of land for agriculture and urban development. The reduction has been particularly felt by native grasslands (west of the region), scattered trees and waterways/wetlands.

Vegetation class	Estimated extent at 1985-90 (ha)	Estimated extent at 2015-19 (ha)	Change (ha)	Change %
Treed native vegetation	405,448	404,322	- 1,126	0%
Scattered native trees	13,805	8,372	- 5,433	-39%
Native scrubland	7,321	7,458	137	2%
Native pasture/grassland	99,827	91,780	- 8,047	-8%
Natural low cover	3,207	4,095	888	28%
Saltmarsh and mangrove	2,098	2,190	92	4%
Water and wetlands	34,040	23,595	- 10,445	-31%
Total	565,746	541,812	- 23,934	-4%

Source: DELWP, Victorian Land Cover Time Series Data 1985 – 1990 to 2015-2019

Indicator - area (ha) of pest herbivore and predator control

This indicator provides information on the area treated for pest control, including herbivore and predator control, under CMA initiatives.

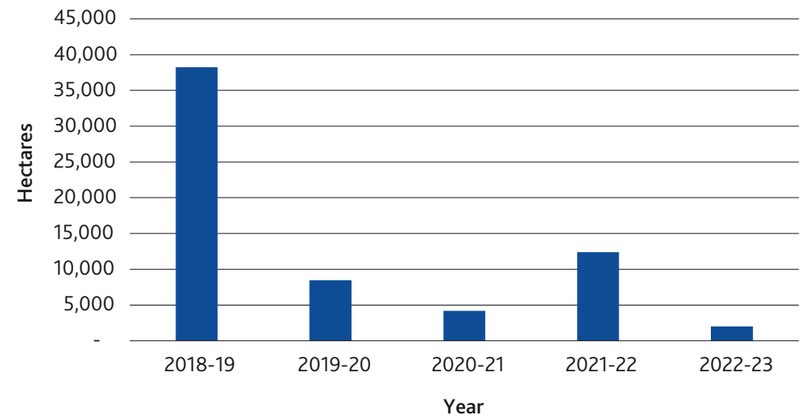
Trend assessment: 2022-23: Neutral
Rolling five years: Neutral

Area of pest herbivore and predator control has varied since 2018, therefore the rolling five year trend has been assessed as neutral. Reasons for the variation include the availability/ introduction of new tools and techniques for pest predator control on French Island and greater investment in the early stages of projects (2018-19). The trend for 2022-23 has been assessed a neutral.

Area of pest herbivore control

This data summarizes the pest herbivore control outputs (hectares), delivered by PPWCMA, now Melbourne Water, through Victorian and Australian government funded programs. This data represents the gross area of which pest herbivores (rabbits, feral pigs, feral goats, deer) were controlled to improve native vegetation condition. In 2022-23, Melbourne Water collaborated with Parks Victoria to control feral goats on French Island.

Area (ha) of pest herbivore control



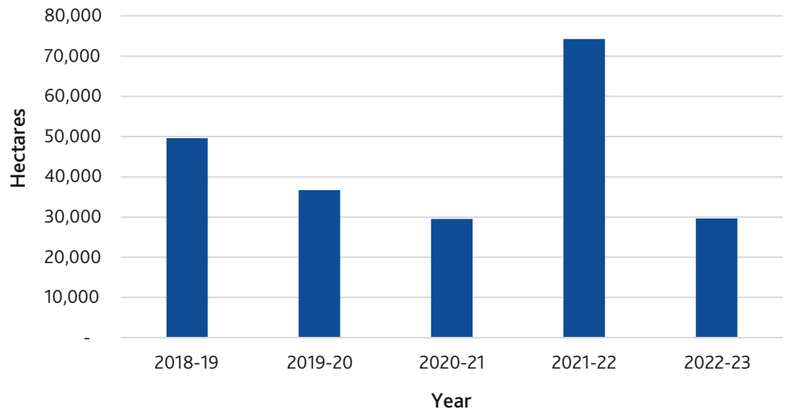
Source: Melbourne Water, 2023

Appendix F – Catchment Condition Report (continued)

Area of pest predator control

This data summarises the pest predator control outputs (hectares), delivered by Port Phillip and Westernport Catchment Management Authority (PPWCMA), now Melbourne Water, through Victorian and Australian government funded programs. This data represents the gross area of which pest predators (feral cats, foxes) were controlled to reduce predation on native fauna. In 2022-23, Melbourne Water continued to lead efforts to eradicate feral cats from French Island through collaborative partnerships with Parks Victoria and French Island Landcare.

Area (ha) of predator control



Source: Melbourne Water, 2023

Indicator - area (ha) of weed control

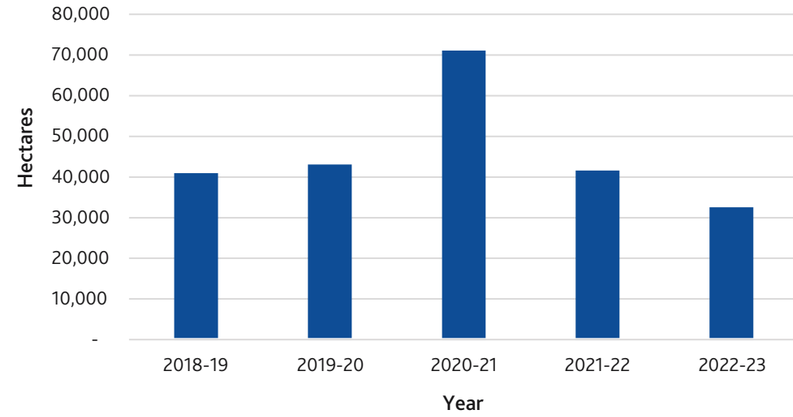
This indicator provides information on the area treated for pest control, including herbivore and predator control, under CMA initiatives.

Trend assessment: 2022-23: Neutral
Rolling five years: Neutral

Area of weed control has varied since 2018, therefore the rolling five year trend has been assessed as neutral. Reasons for the variation include additional works crews in 2020-21 through the Working4Victoria program; which was funded out of the coronavirus (COVID-19) employment schemes. The trend for 2022-23 has been assessed as neutral.

This data summarises the weed control outputs (hectares), delivered by PPWCMA, now Melbourne Water, through state and federal government funded programs. The data represents the gross area over which weeds (woody and non-woody) were controlled to improve native vegetation condition, remove harbor for pest animals, and complement revegetation activities. In 2022-23, Melbourne Water supported community groups, and land managers to reduce the impacts of environmental weeds across the region. These initiatives resulted in a total of 3,218 hectares being treated.

Area (ha) of weed control



Source: Melbourne Water, 2023

Appendix F – Catchment Condition Report (continued)

Coasts and marine

Indicator - extent of coastal vegetation (mangrove and saltmarsh)

This indicator provides estimates of the overall rate of change in the extent and spatial distribution of coastal vegetation on public and private land in the Port Phillip and Westernport region.

Trend assessment: 2022-23: Unknown
Rolling five years: Unknown

The table below shows area, width and length of native vegetation along coastal zones. No data is available since 2019 so the five year rolling trend and 2022-23 trend assessment is unknown.

The current environmental condition of the region's coasts is variable. Some areas retain high environmental values while many others have been heavily modified by urban development, coastal settlement and recreational use. In developing the PPWRCS, the region's coast has been divided into zones which are delineated by significant changes in coastal characteristics and/or environmental values and where it is sensible to attach tailored environmental targets. These zones are outlined in the table below.

Coastal zone	Approx length	Approx average width	Approx area	Area of native vegetation	Proportion of zone with native vegetation
Philip Island Ocean	42	260	1087	1009	93%
Philip Island Bay	37	120	414	367	89%
French Island South	24	340	810	788	97%
French Island North	40	350	1354	1327	98%
Western Port East	55	140	757	622	82%
Western Port North	40	450	1557	1427	92%
Hastings	23	460	842	734	87%
Sandy Points to Flinders	33	440	1310	1165	89%
Flinders to Point Nepean	46	450	2073	1901	92%
Port Philip Bay Eastern Beaches	116	80	959	770	80%
Port Philip Bay North Western Shoreline	60	450	1707	1515	89%
Total	516	3540	12870	11625	90%

Source: DELWP, Victorian Land Cover Time Series Data 2015- 2019

Indicator – water quality (Port Phillip and Westernport Bay)

This indicator provides information on the area treated for pest control, including herbivore and predator control, under Catchment Management Authority initiatives.

Trend assessment: 2022-23: Unknown
Rolling five years: Positive

The rolling five year trend for Port Phillip and Westernport Bay has been assessed as positive due to consistent ratings of good since 2018 within the EPA Victoria Annual Report Card. There is no data for 2022-23 therefore the rating for this year is unknown.

EPA has six monitoring locations in Port Phillip Bay. Conditions in Port Phillip Bay have remained relatively consistent since 2002, with overall water quality fluctuating between Good to Very Good. Riverine inputs, particularly nutrients such as nitrogen and phosphorus, highly influences water quality in the northern part of the bay. However, mixing with oceanic waters from Bass Strait and the natural recycling of nutrients in the sediments maintain good water quality.

EPA has two monitoring locations in Westernport. While rainfall can temporarily decrease water quality, conditions in Westernport have generally remained consistent since 2000. The small catchment inflow volumes and mixing with Bass Strait helps to maintain good water quality in Westernport.

Year	Port Phillip Bay WQI	Western Port Bay WQI
2018-19	Good	Good
2019-20	Good	Good
2020-21	Good	Good
2021-22	Good	Good

Source: EPA Victoria Annual Report Card

Water quality index (WQI) scoring categories

8-10	Very good	High quality waterways generally unimpacted by pollution
6-8	Good	Meets Victorian water quality objectives
4-6	Fair	Some evidence of stress
2-4	Poor	Under considerable stress
0-2	Very Poor	Under severe stress

Appendix F – Catchment Condition Report (continued)

Communities

Indicator - community volunteering (Landcare / community NRM rgoups – group health score)

This indicator provides estimates of Landcare contributions and volunteering commitment to environmental conservation and sustainable development in Victoria.

Trend assessment: 2022-23: Unknown
Rolling five years: Neutral

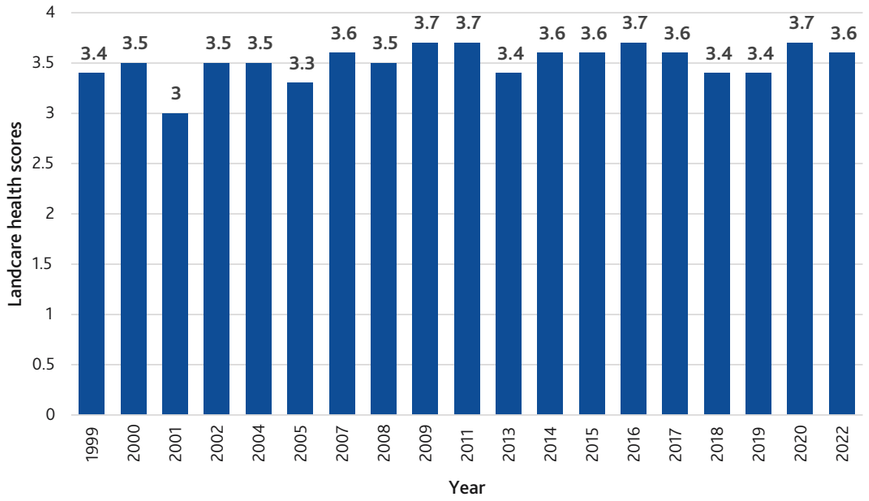
Since 1999 the Landcare group health score has fluctuated from 3-3.6 out of 5, therefore the rolling five year trend has been assessed as neutral. There is no data for the 2022-23 financial year therefore the trend for this year is unknown.

Communities across the Port Phillip and Westernport region provide an immense pool of knowledge, skills, services and funds that play a vital role in the successful achievement of a better environment for the region. At the end of 2020-21, there were 85 Landcare groups, 13 Landcare networks and one council-hosted natural resource management network in the region. There were also approximately 500 other community environmental groups active in the region, such as Friends groups, Coastcare and committees of management, many of whom were part-Landcare networks.

While bringing significant benefits to local areas and communities, collectively these groups also make substantial contributions to improving environmental outcomes. In the 2021-22 Victorian Landcare Group Health Survey, 94 groups in the region reported 85,329 volunteer hours, equating to a value of $3.525 million in economic contribution to environmental volunteering (based on a value of $41.72 an hour). The group health survey is conducted in conjunction with the Victorian Landcare Grants annually as an annual check in on the attitude of environmental volunteering groups who describe their condition as trailblazer, rolling along, moving forward, struggling along and just hanging on.

Melbourne Water assigns values of 5,4,3,2 and 1 respectively to these descriptions. Despite the disruption to environmental volunteering and on ground activities during the coronavirus (COVID-19), community environmental groups are reporting a largely positive outlook. The average score in the 2021-22 Landcare Group Health Survey was 3.6 out of 5 (3 = "moving forward", 4 = "rolling along"), which is among the higher average scores over the life of the survey. The 94 surveyed groups consisting of Landcare groups and networks, Friends groups and Committees of Management reported a membership of 11,830, an average of 126 per group – of these 2,004 were new members.

Landcare health score 1999-2022



Source: Source: DELWP, Victorian Land Cover Time Series Data 2015- 2019

Indicator - Partnerships between NRM agencies and Traditional Owners

This indicator provides the number of formal partnerships for planning and management between Melbourne Water and Traditional Owners in the Port Phillip and Westernport region.

Trend assessment: 2022-23: Positive
Rolling five years: Neutral

In July 2022 Gunaikurnai Land and Waters Aboriginal Corporation and Melbourne Water signed the first of the co-developed Partnership Agreements and in May 2023 Melbourne Water and Wadawurrung signed the second agreement. The rolling 5-year trend has been assessed as neutral and the 2022-23 trend has been assessed as positive.

Partnership Agreements with Bunurong Land Council Aboriginal Corporation, Taungurung Clans Aboriginal Corporation and Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation are also being developed.

Integrated Catchment Management (ICM)

Indicator - number of partnerships

This indicator provides information on the number of formal partnerships established, modified, or maintained between organisations and individuals, under CMA initiatives.

Trend assessment: 2022-23: Neutral
Rolling five years: Neutral

In 2022-23, 22 formal partnerships were established or maintained between organisations and individuals under Melbourne Water CMA initiatives through Victorian and Australian government funded programs. The rolling five year trend has been assessed as neutral and the 2022-23 trend has been assessed as neutral.

Appendix G – Reporting of environmental data by government entities

Stationary fuel use

Sources of emissions from stationery fuel include natural gas used in some building's heating systems, diesel back-up generators at critical facilities and fuel-powered portable equipment. Melbourne Water collected data primarily through our fuel cards transaction history.

As this is the first year Melbourne Water is reporting on stationary fuel use, commentary on changes against prior year will commence from next year's Annual Report.

The fuel consumed from these activities are reported as scope 1 emissions, with the respective volume of reportable emissions to be reduced using carbon offset units in line with our obligations of achieving zero reportable emissions by FY 2029-30.

Indicator	2022-23
Total Fuels used in buildings and machinery (MJ)	4,003,601
Buildings[1]	
Natural gas	900,042[3]
Machinery[2]	
Petrol	437,116[4]
Diesel	2,666,454[5]
Greenhouse gas emissions from stationery fuel consumption (tonnes CO2-e)	261

[1] Buildings – fuel used in heating, cooling, cooking, and the provision of other building services.
[2] Machinery – any item of plant or equipment that uses fuel for a defined process that is not already counted in buildings or vehicles (see Indicator T1, for vehicle fuel use).
[3] Estimated using corporate head office gas usage (14,686 m3), used conversion factor 38.61 MJ/cubic metre, scaled upwards to the entire company using FTE (63% at office)
[4] Conversion Rate Used 1 Litre petrol = 34.2 M
[5] Conversion Rate Used 1 Litre diesel = 38.6 MJ

Transportation

Melbourne Water's fleet comprises of 419 vehicles essential to the provision of water, sewerage, waterways, drainage and catchment management services. Of these, 67 per cent are light commercial vehicles used for operational purposes and 27 per cent are passenger vehicles for transporting staff to the wide variety of sites that Melbourne Water operate. Out of the passenger vehicles, 30 per cent are battery electric vehicles as we continue our journey to a low carbon emission fleet.

In February 2023, Melbourne Water trialled the first fully electric utility vehicle to arrive in Australia - the 4x2 LDV eT60. This vehicle was trialled at the Eastern Treatment Plant, the Western Treatment Plant and Winneke Treatment Plant to understand its suitability in the field.

This is the first year Melbourne Water is reporting on transportation fuel use. Commentary on changes against prior year will commence from next year's Annual Report.

Melbourne Water is currently upgrading onsite electric vehicle charging capacity to enable an increase in the number of battery electric vehicles and reduce greenhouse gas emissions from transportation on our journey to net zero.

Indicator	2022-23	%
Number and proportion of vehicles	419	100
Road vehicles	419	100
Passenger vehicles	81	27
Internal combustion engine	361	19
Petrol	79	19
Diesel	2	0
Electric propulsion	34	8
Battery electric	34	8
Goods vehicle	304	73
Internal combustion engine	304	73
Diesel	304	73

Indicator	2022-23
Total energy used in transportation (MJ)	29,286,812
Road vehicles	29,286,812
Passenger vehicles	3,758,948
Internal combustion engine	3,748,107
Petrol	3,586,952
Diesel	161,155
Electric propulsion	10,841
Battery electric	10,841
Goods vehicle	25,527,864
Internal combustion engine	25,527,864
Diesel	25,527,864
Total distance travelled by commercial air travel (passenger km)[1]	187,125

[1] **Source:** Corporate Travel Management - Climate Friendly Carbon Emission Report

Appendix G – Reporting of environmental data by government entities (continued)

Total energy use

Melbourne Water continued to increase our production of onsite renewable energy in 2022-23. A major milestone was the commencement of 19,000-panel Winneke Solar Farm on 10 March 2023, which will produce 12,400 MWh of electricity per year. Energy will be used by Winneke Water Treatment Plant and surrounding transfer stations, with any excess fed into the grid.

This is the first year Melbourne Water is reporting on total energy use. Commentary on changes against prior year will commence from next year's Annual Report.

Indicator	2022-23
Total energy used in fuels (stationery & transportation) (MJ)	33,290,412
Total energy used from electricity (MJ)	1,554,328,800
Total energy used segmented into renewable and non-renewable sources	1,587,619,213
Renewable	768,906,041
Non-renewable	818,713,172
Unit of energy used normalised by FTE[1]	1,318,620

[1] FTE = 1204

Sustainable buildings & infrastructure

On December 2022, Melbourne Water received a 5.5-star NABERS Energy rating for its corporate office building at 990 La Trobe St. Further ratings for water and waste can be found in the table below.

Name of Building	Building Type	Rating Scheme	Rating	Certificate Expiry
990 La Trobe St Head Office	General Office Building	NABERS - Energy	5.5	Dec 2023
990 La Trobe St Head Office	General Office Building	NABERS – Water	6.0	Dec 2023
990 La Trobe St Head Office	General Office Building	NABERS – Waste	2.5	Oct 2023

Water consumption

This is the first year Melbourne Water is reporting on water consumption. Commentary on changes against prior year will commence from next year's Annual Report.

Indicator	2022-23
Total water consumption by Melbourne Water (kilolitres)[1]	519.5
Potable water consumption	519.5
Units of metered water consumed normalised by FTE[2]	0.683

[1] Based on operations at our corporate office at 990 LaTrobe Street.
[2] 63% of total FTE approximated to be based in corporate office.

Waste and recycling

This is the first year Melbourne Water is reporting on waste and recycling. Commentary on changes against prior year will commence from next year's Annual Report.

Indicator	2022-23	%
Total units of waste disposed (kg and %) 1	39,148	100
Landfill (disposal)	24,272	62
Recycling / recovery (disposal)	14,876	38
Food and garden organics	3,687	
Cardboard	4,280	
Paper	3,409	
Other mixed recyclables	981	
Percentage of office sites which are covered by dedicated collection services for		
Printer cartridges		6
Batteries		
E-Waste		6
Soft plastics		6
Total units of waste disposed of normalised by FTE (kg/FTE) 2	32.5	
Recycling rate	38%	
Greenhouse gas emissions associated with waste disposal (Tonnes CO2-e)	1,286	
Landfill	1,286	
Contamination of standard bin contents (%)		7.4

[1] Based on our operations at corporate office at 990 LaTrobe Street, scaled up to represent whole of Melbourne Water based on 63% FTE based in 990 LaTrobe St.
[2] FTE = 1204

Appendix H – Material climate risks

Water Supply	
Climate risks and opportunities	**Climate risks:** • decline in rainfall • increased variability • longer, more severe droughts • more severe storms • increased water demand • population growth • storage options no longer viable • impacts to water quality • stress on existing water treatment and transfer assets • potential increased energy consumption from new water sources • potential increase in cost to customer **Climate opportunities:** • Ensuring that new water sources we develop to service growth are less reliant on rainfall, and less exposed to climate hazards. • Imbed IWM practices as we upgrade ageing infrastructure
Climate scenarios, time horizons and assumptions	We use Victorian guidelines to understand the impact of climate change on long term water supplies. Our water resource modelling explores the high, medium and low rainfall outcomes that are possible for our region under a Representative Concentration Pathway 8.5 (RCP8.5) emissions scenario. This is compared to potential RCP 4.5 rainfall trajectories to ensure a robust understanding. Three future demand trajectories including population growth and potential climate impacts are also applied to understand water availability. We focus on five-, ten- and fifty-year time horizons for short-, medium- and long-term planning. Baselines for modelling include both the full historical rainfall record and a 'step change' of lower annual average rainfall observed since 1997. We explore the water demand and transfer requirements that may arise under future heatwaves. Changes in peak demand are estimated based on historical peaks and forecast changes in population and dwelling density at 10, 30 and 50-year time-steps available from Victoria in Future, including some assumptions about behaviour change (demand) linked to hotter weather. As there is no established method to link climate scenarios such as RCPs with demand, we continue to review and refine our approach to understanding this factor. An analysis of potential impacts of bushfire on water quality was undertaken over 2021 and 2022, drawing on historical fire data and synthesising climate impact projections and modelling conducted by the Bureau of Meteorology, CSIRO and others. This analysis estimated that climate change could triple the number of extreme and catastrophic bushfire days by 2050 and found that a fire severe enough to push water quality below regulator and customer expectations should be treated as almost certain in the next 30 years.
Climate strategy and responses	• Ongoing delivery of the *Water for Life - Greater Melbourne Urban Water System Strategy*. • Planning for new water supply sources that are climate independent while managing any greenhouse impacts. • Supporting government and councils to explore both state-wide and local adaptations such as increased water transfer between Victoria's supply regions, and more rainwater tanks and water sensitive urban design. • Exploring investment options to help address bushfire and water quality risks. • Ongoing review and improvement of catchment fire management and response operations in partnership with DEECA. • Adaptive approach to development and delivery to respond to our environment. • Desktop evaluation of potential climate hazards that may affect the Victorian Desalination Plant, and financial consequences to Melbourne Water. • Delivery of public awareness programs promoting water saving and efficiency. • Making the most of desalinated water, regularly topping up our reservoirs to build a buffer in our storages. • Ongoing research programs looking at potential change in catchment forest cover and species under hotter, drier conditions, as well as the impacts of more severe rainfalls and rapid inflows to structural security of large dams.
Related KPIs	• Maintain natural water storages at least >40 per cent full. • Support delivery of 80 billion litres of alternative water by 2065. • Stormwater harvesting and infiltration capacity will increase by 8 billion litres per year through Melbourne Water programs from 2022-26.

Sewage and wastewater treatment	
Climate risks and opportunities	**Climate risks:** • more extreme peaks in wastewater flows • more frequent spills • supply interruptions to recycled water • impact to annual sludge drying processes • impacts to nitrogen removal processes • increased odour and asset corrosion rates • increase risk of algal blooms • erosion at the western treatment plant foreshore • sea level rise and risk of inundation and damage to lagoons • increased greenhouse gas emissions **Climate opportunities:** • As growth and ageing assets drive expansion and renewal of sewage systems, we have opportunities to design changes that implement adaptations and produce less emissions. • Wastewater management could be transitioned from the current disposal approach to a circular resource recovery model providing resources that help the region respond to climate change, including recycled water and renewable energy.

Appendix H – Material climate risks (continued)

Climate scenarios, time horizons and assumptions	We use a range of best-practice guidelines and bespoke scenario approaches to explore climate impacts to sewage treatment systems. Future climate scenarios are used in conjunction with urban development, and regulatory change scenarios. To understand future flows and spill risks for sewer transfer networks and treatment plants, we have modelled potential change in severe rainfall events, reduction in annual rainfalls and increase in evaporation. We used RCP 8.5 and RCP 6.0 at four time-steps, 2030, 2040, 2050 and 2070, alongside Victoria in Future population scenarios. This selection of scenarios and rainfall factors was informed by Australian Rainfall and Runoff, and the Bureau of Meteorology. Baseline rainfall is drawn from GeoScience Australia. We have assessed the impact of sea level rise of up to .27 metres by 2050 on coastal emergency release points. Indicative costs of compliance with current and potential future expectations to reduce and avoid emissions are regularly estimated as part of emission reduction planning. We use high, medium and low potential Australian Carbon Credit Unit (ACCU) prices, to understand potential costs under various policy settings and market conditions that could occur. Potential future prices are provided by an independent market expert.
Climate Strategy and responses	• Delivery of the Melbourne Sewage Strategy • Exploring how to make long term planning more flexible and collaborative. • Ongoing sharing of sewer network modelling with ArcGIS Dashboards. • New strategic plans are being developed for the Eastern and Western treatment plants to manage risks and provide new services to the region as it grows.
Related KPIs	• Reduce reportable greenhouse gas emission to 204,380 tonnes CO2-e by 2024-25, and net zero by 2030. • Source 100 per cent of electricity from renewable sources by 2024-25. • As far as practicable, design and upgrade sewers to contain 18.1 per cent AEP flows.

Waterways and catchments

Climate risks and opportunities	**Climate risks:** • less water for the environment • more frequent droughts • changed catchment, wetland and waterway wetting and drying cycles • higher water temperatures that affect habitat, algal blooms and chemistry in waterways and wetlands • more severe rainstorms • faster flows • erosion • sea level rise • movement of salt water in estuaries affecting biogeochemistry, vegetation and water quality • fire risk and heat affecting flora, fauna and ecosystems • ocean acidification affecting flora, fauna and ecosystems **Climate opportunities:** • There are opportunities to reduce the impact of climate change while also reducing the impacts of urbanisation through IWM and water sensitive urban design • IWM may enable greater capture and re-use of rainwater, and more retention in soils and vegetation leading to greener, cooler city.

Climate scenarios, time horizons and assumptions	We use good practice guidelines and bespoke scientific research to explore climate scenarios for waterways and catchments. Water supply modelling outlined above is also used to assess potential decline in stream-flows and potential environmental water requirements, including high, medium and low rainfall futures under RCP 8.5. To understand potential impacts of climate change on the quantity and quality of runoff and instream habitats, we apply climate projections to the hydrological and habitat suitability models that help inform long term strategy and investments. Over the 2021-22 period we have tested several sources of Victorian downscaled climate projections to determine how to apply them to waterway models. All are based on IPCC global climate models. We tested RCP 4.5 and RCP 8.5 projections at six time-steps out to 2090. To understand the potential impact of climate on the distribution of native plants, we are modelling the potential change in habitat suitability for a suite of species we use in revegetation, under an RCP 8.5 scenario to 2090.
Climate Strategy and responses	• Delivering on outcomes in the Port Phillip and Westernport *Healthy Waterways Strategy 2018-28*. • Delivering on commitments outlined in the Port Phillip and Westernport Regional Catchment Strategy (PPWRCS). • Waterways investment programs that support climate resilience and are guided by the *Healthy Waterways Strategy*. • Participation in catchment and urban planning processes to promote stormwater re-use management, re-use groundwater infiltration. • Contributing to the DEECA IWM forums that identify and prioritise collaborative water opportunities, and the Yering Gorge to Yarra Junction Integrated Catchment Management Project, which is examining how to build resilience into a landscape through collaborative approaches with landowners. • Investing in research and tools to support adaptive decision making through partnerships with Melbourne, Deakin and Federation Universities, Councils, Traditional Owners and others. • Creating new species distribution models for macroinvertebrates (water bugs) to help model the potential impacts of climate changes and other threats. • Mapping changing distribution of coastal vegetation (mangroves, saltmarsh) in Westernport, and predicting likely impacts of sea level rise and opportunities for protection and enhancement. • Developing new maps and environmental predictors for natural wetlands and their catchments. • Identifying how our long-term water quality monitoring network and historical data set can be used to better understand climate impacts. • Communicating the findings of research programs and interim evaluations of strategy progress and research programs. • Creating 'climate future plots' that will test the climate resilience of commonly used revegetation species.
Related KPIs	Stormwater harvesting and infiltration capacity will increase by 8 billion litres per year through Melbourne Water programs from 2022-23.

Appendix H – Material climate risks (continued)

Flood and drainage	
Climate risks and opportunities	**Climate risks:** • increased flooding • system over capacity • ocean inundation in some estuary areas • coastal erosion. **Climate opportunities:** • Opportunities to design new suburbs and the renovation of existing buildings in a way that increases resilience and safety for future flood risks. • In new and redevelopment areas, urban planning is one of the most cost effective and efficient ways to reduce the risk and impacts of floods for communities.
Climate scenarios, time horizons and assumptions	We include climate scenarios in new flood modelling and are progressively updating existing flood models to include climate information. We are guided by the best-practice approaches set out in Australian Rainfall and Runoff 2019, using RCP8.5 on a precautionary basis. Data on potential local changes to rainfall to 2100 are obtained from the Bureau of Meteorology. State planning policy sets a sea level rise planning benchmark of 0.8 m rise by 2100. We used this benchmark to develop preliminary inundation models for the Port Phillip and Westernport coast.
Climate strategy and responses	• Ongoing delivery of the Flood Management Strategy - Port Philip and Westernport 2021. • Maintaining flood models for over 400 sub-catchments across the region. We are progressively updating these to include the latest available climate information. • Using future climate flood risk information to design new flood management work. • Flood maps and information shared with all relevant government stakeholders to inform their decisions and are used by Melbourne Water in our role as a referral authority for land use and development. • Preparation of a new Strategic Urban Planning Climate Risk Assessment Framework to help us assess climate (flood) risk as part of land use and infrastructure decision making, using both existing and updated flood information. • Updating our regional Sea Level Rise Guidelines, which are incorporated into the Planning Scheme and support land use and development decisions as part of our referral role. • Supporting the Melbourne Urban Stormwater Institutional Arrangement project, alongside Councils, the Municipal Association of Victoria, and DEECA.
Related KPIs	This KPI is in the process of being updated to reflect a new commitment to expedite production of climate-related flood information. For more information, see page 23.

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