Melbourne Water Annual Report

2020/21

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.

Aboriginal Acknowledgement

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 Wurundjeri Woi Wurrung, Bunurong and Wadawurrung, their Elders past, present and future, as Traditional Owners and the custodians of the land and water on which we rely and operate.

We acknowledge and respect the continued cultural, social, economic and spiritual connections of all Aboriginal Victorians. We also acknowledge the broader Aboriginal and Torres Strait Islander community and their connections with lands and waters, and recognise and value their inherent responsibility to care for and protect them for thousands of generations.

Melbourne Water acknowledges Aboriginal Victorians as Traditional Owners and, in the spirit of reconciliation, we remain committed to developing partnerships with Traditional Owners to ensure meaningful, ongoing contributions to the future of land and water management.

About this report

The *Melbourne Water Annual Report 2020-21* describes Melbourne Water activities undertaken between 1 July 2020 and 30 June 2021 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**

Photos in this document were taken prior to the commencement of physical distancing rules in March 2020.

(1) http://www.melbournewater.com.au

Cover photo: Cardinia Reservoir

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The Year in Review

Report from the Chair and Managing Director

The exceptional circumstances of the past year have changed our society in unprecedented ways. In the face of such challenges as the coronavirus (COVID-19) pandemic and significant storm events, our people have risen and excelled, continuing to deliver Melbourne Water's essential services to our customers and the community. While our strategy remains on course, we strive to deliver new value and support the State of Victoria to 'build back better' in a post-COVID-19 society.

Driven by an ambition to be bolder and more innovative in our approach to the way we work, Melbourne Water is incorporating new technologies, behavioural research, expanded digital engagement and sector collaboration to deliver on our vision to enhance life and liveability.

Enhancing life and liveability for greater Melbourne

Visitation to all publicly accessible Melbourne Water spaces tripled, and in some cases quadrupled, during Melbourne's 2020 COVID-19 lockdown, with more people visiting parks and waterways for their physical and mental health than ever before. Community satisfaction with local waterways in 2020 was also the highest ever recorded, confirming their essential contribution to liveability values in Melbourne and their role in shaping a sense of place and space in suburbia.

Through our Pricing Submission engagement, the community told us they wanted increased efforts to promote waterway health. We responded to this need with commitments to protect water quality through increased stormwater capture and investments in vegetation. Planned enhancements to our sewerage service and contributions to the circular economy will further protect bay health with reduced contaminants from wastewater released to the bay, even as Melbourne grows.

We have collaborated with project partners, community representatives and residents to transform creeks and stormwater drains into natural waterways and improve accessibility to our land, thereby enhancing open space across Melbourne. The Waterway Blitz program had a significant impact on improving the health of Melbourne's waterways, while creating more than 100 jobs for people and businesses impacted by COVID-19. Our urban cooling plantings have added thousands of native shrubs, trees and grasses in vegetation, providing shade for regional parks and trails as well as improving habitat, community engagement and appreciation of waterways.

We have invested in the sustainability of Melbourne's critical infrastructure with a total capital expenditure of $627.8 million for the year across all our services.

Collaborating for the future

A significant focus this year has been Melbourne Water's work with partners in the Victorian water sector to set our collective future direction in water security and flood management. The *Central and Gippsland Region Sustainable Water Strategy* and the *Greater Melbourne Urban Water System Strategy* outline significant opportunities for the water sector in our region to advance sustainable water outcomes for future generations. Delivering on the *Central and Gippsland Region Sustainable Water Strategy* over the next 10 years will provide ongoing water security as our climate becomes drier, and improve the environment and health of our rivers and waterways.

The refreshed *Flood Management Strategy for Port Philip and Westernport* underscores the broader benefits that integrated water management can bring to liveability and draws on contributions from 62 organisations, with Melbourne Water leading its development. The strategy confirms the commitment of partners to continue working together, alongside the community, on flood management solutions that manage climate change and achieve multiple benefits.

Delivering value through innovation

Innovation is entrenched in Melbourne Water's culture, and our digital transformation program is helping us find new ways to deliver better value for our customers. Melbourne Water was again named in the top 10 most innovative government, education and not-for-profit firms in the 2020 *Australian Financial Review BOSS* Most Innovative Companies list. In partnership with Deakin University, we designed and built a world-first Confined Space Entry Simulator which enables employees to fully experience the confined space of a sewer from the safety of the office.

Our ambitious program to automate our water transfer network continued this year. As part of this program, we are deploying artificial intelligence across our network for a more reliable system, delivering cost and environmental benefits through reduced pumping costs and chemical usage.

We also advanced our solar energy program, with contracts awarded for solar electricity plants at both our Eastern and Winneke treatment plants. Once commissioned, these solar projects will reduce our greenhouse footprint and energy costs, supporting downward pressure on prices. We are also improving the way we use energy by adopting artificial intelligence technology that maximises the value of variable electricity tariffs. This project is in collaboration with the energy sector and supports a smarter, more efficient energy grid for greater Melbourne.

Customer engagement

Our Next Generation Community Engagement Program (NextGen) ensures our services and the way we deliver them is informed by community input, increasing the value delivered to our customers. NextGen supported engagement in significant projects including development of the 2021 Pricing Submission, Waterways Drainage and Investment Plan and strategies for our water and flooding services. Online participation across our engagement program increased by 72 per cent, reflecting increased community acceptance and uptake of online engagement as a way to provide feedback.

Water literacy campaigns, new digital resources and engagement tools have helped broaden community knowledge of the water cycle and encourage water efficient behaviours. Further campaigns have supported enhanced liveability outcomes for communities, including participation in litter management on waterways and launching Melbourne Water's Path to Net Zero commitment to reducing our greenhouse gas impact.

Investing in our people

Our ambition to be a learning organisation remains one of Melbourne Water's main priorities. As an example, we have partnered with BehaviourWorks Australia on a behavioural research project exploring the societal benefits for new ways of working that embrace flexibility and collaboration, with the vision to prove that flexible and blended work enhances life and liveability for us all.

Our employee engagement score of 77 (out of 100) has highlighted our organisation's resilience and commitment to purpose, underlined by our inclusion in the top 10 of Australia and New Zealand's Best Places to Work on the 2021 AFR BOSS Best Places to Work List.

During COVID-19 restrictions over the past year we supported the wellbeing of our people through a series of virtual mental health sessions with medical experts, and personal home delivery of care packs. Our New Beginnings Forest project in Altona saw a quarter of our employees planting over 10,000 trees and plants, coming together as restrictions eased to celebrate new beginnings, and leaving a legacy of hope and a sustainable environment for the future.

Supporting a sustainable society

Melbourne Water continues to support the United Nations (UN) Global Compact – the world's largest corporate sustainability initiative. As a signatory to the Compact, we continued our commitment to embed the 17 UN Sustainable Development Goals (SDGs) into our operations. In response to community concern about climate change and government policy, our Path to Net Zero program for carbon reduction continues through established practices and planned initiatives.

We are committed to keeping prices low and supporting the Victorian economy

Despite the financial impacts and uncertainties resulting from COVID-19, Melbourne Water has remained a financially strong and viable business, keeping customer bills affordable and delivering strong dividends to the Victorian Government.

In June we finalised our five-year Price Submission to the Essential Services Commission (ESC). As a result of the final ESC decision, water prices will fall, with an average water bill reduction of around $20 in the 2021-22 financial year for a typical residential household.

We take this opportunity to thank our government stakeholders, partners, suppliers and the community for their part in helping us to provide valued services to all Melburnians. We also extend our appreciation to every individual working at Melbourne Water, whose resilience and commitment to making Melbourne a great place to live is the foundation of our success.

In accordance with the *Financial Management Act 1994*, we are pleased to present Melbourne Water's Annual Report for the year ended 30 June 2021.

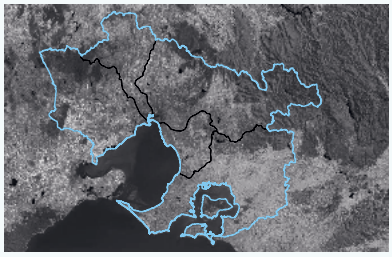
John Thwaites
Chair

27 August 2021

Michael Wandmaker
Managing Director

27 August 2021

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 Melbourne Water

For over 130 years, Melbourne Water has been serving the community by planning and building for our future.

Melbourne Water manages water supply catchments, treats and supplies drinking and recycled water, removes and treats most of Melbourne's sewage, and manages waterways and major drainage systems in the Port Phillip and Westernport regions.

Much of the infrastructure created over that time is still in use today – a testament to the ingenuity and foresight of those who came before us. We are continuing this legacy by building new and resilient infrastructure to meet the challenges of today and the future, while providing valued services for our customers and the community.

Guided by our vision of creating Healthy People, Healthy Places and a Healthy Environment, Melbourne Water's passionate team of experts helps make greater Melbourne a fantastic place to live. We work hard to deliver sustainable public health, financial and environmental solutions such as providing affordable, clean water for homes, gardens and businesses, keeping our city clean and people healthy with effective sewerage services, and creating opportunities for community recreation and enjoyment of the land Melbourne Water owns and waterways we manage.

Melbourne Water does not work alone. We engage and collaborate with a wide range of partners that include Melbourne's retail water companies, councils, developers, contractors, Traditional Owners, the community and government agencies to deliver services our customers value. We build strong relationships with our customers, stakeholders and suppliers in community, government and industry, and care for the health and wellbeing of our people.

With the ever-present challenges of a changing population, urbanisation and an increasingly changing and variable climate, Melbourne Water is also working hard to build a more resilient and water-sensitive city, one with a smart and sustainable water supply.

We are responsible for the management of critical infrastructure and the delivery of essential services that support our customers and communities. We are committed to providing greater Melbourne communities and businesses with the high levels of service they expect from us.

Melbourne Water has a team of diverse and capable people from a broad range of specialised professions. Our people are skilled in delivering on the immediate needs of the community and the long-term requirements of the environment and future generations.

Our focus is not only to deliver exceptional and affordable essential services to the people of greater Melbourne today, but help secure a sustainable and healthy community for the generations to come.

Our Vision and Strategic Direction

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. It 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 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.

Delivering the Victorian Government's plan for water

Water for Victoria is the Victorian Government's statewide water plan. It 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 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 2020-21 to meet the changing needs of the Melbourne region and addresses priorities detailed in *Water for Victoria*.

Our strategic performance

We track our performance through a set of key performance indicators (KPIs) aligned to our strategic direction. The key performance indicators provide us with a framework for setting performance targets in the long term beyond our statutory requirements.

See our statutory Performance Report (pages 136 to 139) for details of our operational performance for 2020-21.

The Sustainable Development Goals

Melbourne Water is a signatory to the United Nations Global Compact, the world's largest sustainability initiative, which includes 17 Sustainable Development Goals (SDGs).

The SDGs provide an additional lens to support our organisational decision making and offer an insight into how to deliver greater sustainability outcomes through our work.

The vital role of water in maintaining environmental sustainability and supporting thriving communities means that Melbourne Water is well positioned to contribute to this global effort. We recognise our ability to contribute to advancing each of the goals, both directly through our own work and indirectly through partnerships with customers, stakeholders and suppliers.

The SDGs provide Melbourne Water, our customers, the community and our key stakeholders with a common framework to work together to deliver ongoing community wellbeing and a sustainable, well-managed environment for future generations.

Our future focus

During 2020-21 our SDG Champions worked together to develop an in-depth understanding of Melbourne Water's current impact on the SDGs. Using the approach recommended by the Global Compact Network Australia, the SDG Champion cohort conducted an assessment of how our operations, supply chain and business model create positive and negative impacts against each SDG.

The SDG Champion cohort also conducted a materiality assessment in late 2020, with findings highlighting those SDGs on which Melbourne Water was able to have the greatest impact. In 2021 Melbourne Water's approach evolved further to determine how consideration for all 17 SDGs can be integrated into all aspects of strategic and business-as-usual decision making. Our goal in pursuing this approach is to embed SDGs as a decision-making lens that will promote their early consideration throughout our whole value chain, thereby allowing the SDGs to drive new thinking about the fundamentals of how Melbourne Water does business.

This Annual Report provides information on how Melbourne Water is contributing across all the SDGs.

Blind Creek

Operating Environment: COVID-19

In early 2020 Melbourne Water acted swiftly to assess the risk of COVID-19 to staff health and safety, customers and the community. Our established Flexible Working policy, and previous investments in online collaboration tools and remote working technologies, enabled our office-based staff to continue to work remotely. Melbourne Water's Safety, Health, Environment and Quality Team played a critical role in coordinating our business-wide response.

Throughout the entirety of the pandemic, Melbourne Water has continued to provide uninterrupted service to our customers and community. As the pandemic evolved, we adapted our operations and emergency management response to ensure we continued to provide our valued services. Segregation arrangements for our field-based staff were put in place, which, along with the wider lockdown rules that Victorians adhered to, limited the risk of transmission to our essential workers. Melbourne Water's research relationships and in-house expertise enabled us to play a critical role in the national COVID-19 wastewater testing project (coordinated by Water Research Australia), which continues to support our understanding of disease prevalence in the community.

Our commitment to our people's wellbeing has never been a higher priority, and we arranged a multitude of mental health, physical health and wellbeing initiatives such as hand-delivered care packages, arranging remote exercise and support through mental health and wellbeing seminars and via our employee assistance program. During this time, we also employed in excess of 100 Victorians who had lost their job as a result of the COVID-19 pandemic, through the Victorian Government's 'Working for Victoria' initiative. This initiative helps lessen the social impact of the pandemic and supports the broader Victorian economy.

Innovations delivered through our community engagement program in digital engagement and education tools were pivotal in supporting our customers, and ensured that complex, multi-stage strategic projects were completed with significant collaboration and engagement, including the 2021 Price Submission (see page 33).

As a learning organisation, we are also taking the opportunity to apply what we have learned about working differently during COVID-19, to reimagine what work could look like beyond the pandemic and successfully embed opportunities for continuous improvement. This involves researching current practices, attitudes and beliefs and systematically testing and measuring potential approaches for our new 'work normal' (see page 50 for more).

	ENHANCING LIFE AND LIVEABILITY			
Our strategic pillars	Healthy People, Healthy Places, Healthy Environment			
	WHAT WE DO:			
	Water	**Sewerage**	**Drainage**	**Waterways**
DELIVERING ON THE SDGs				
Our results	**439 billion** litres delivered **41 billion** litres recycled water delivered	**343 billion** litres of sewage treated **$340 million** commitment for primary treatment expansion at WTP	**23,000** new homes delivered by the development industry supported by Melbourne Water **102** catchments mapped for flood management program	**$8.8 million** in grants funding provided to create great outcomes for waterways across the region **10.25 billion** litres of water released for the environment
Key initiatives and projects	• played a substantial role in development of significant water strategies that will set the direction of our long-term water security for the next 10 years and beyond, with the *Central and Gippsland Region Sustainable Water Strategy* and *Greater Melbourne Urban Water and System Strategy* • finalised construction on the $22 million Holden Reservoir Inlet Pipeline, providing vital and reliable water supplies to Melbourne's growing outer north-west • upgraded Upper Yarra Dam, supporting continued critical supply security for Melbourne's system storage • commenced construction of the Yan Yean Water Treatment Plant upgrade, which will enable water from Yan Yean Reservoir to be supplied on a routine basis, improving the resilience of the water supply system, and enabling greater community recreational use of the site • investigated the economic viability of city-scale alternative water networks, to contribute towards targets for alternative water uptake, and a more liveable and resilient Melbourne • delivered an assessment of the resilience of our water supply system to the potential impacts of future bushfires on water quality, identifying potential investment pathways to ensure resilience is maintained through catastrophic events.	• contributed to the circular economy through re-use of almost 48,000 dry tonnes of biosolids from Western Treatment Plant at 14 farms in Western Victoria. This represents over 90 per cent of the biosolids produced from the plant over the year. • maintained the ability of our sewage transfer system to safely manage the sewage generated by a growing city. This includes detailed design and construction of the Yarra River crossing of the Hobson's Bay sewer, which is a critical element in Melbourne's sewerage network • delivered an internationally significant wastewater treatment innovation at our Western Treatment Plant, which optimises nitrogen removal and renewable energy production onsite, providing cost savings to customers • commitment to expand the primary (or first stage) treatment at the Western Treatment Plant, catering for population growth and increasing treatment resilience • implemented our *Sewerage Strategy*, playing a key industry role in the circular economy of waste management and utilising sewage as a resource.	• refreshed the *Flood Management Strategy* in collaboration with our regional partners to ensure we are delivering outcomes that maximise value to the community • worked with state and local government, to review shared roles and responsibilities for drainage infrastructure and improve system management across the region, including the Melbourne Urban Stormwater Institutional Arrangements • significantly improved the quality and availability of flood information, and doubled the number of catchments flood mapped from 2019-20. Our collaboration with councils and improved data quality and standards have played a key role in driving these results • completed upgrades to essential retarding basins to help reduce flood impacts • facilitated a sense of community and connection through the renewal of the Shakespeare Grove main drain beach outfall in St Kilda • worked closely with the Victorian Planning Authority (VPA), retail water companies and local councils to progress integrated water management (IWM) planning for key development sites across Melbourne, winning the AILA Victoria Award of Excellence in Infrastructure for this program • collaborated with project partners, community representatives and residents to reimagine creeks, improve accessibility to our land and enhance their open space across Melbourne.	• provided over 100 jobs through the State Government's Working for Victoria initiative for important projects across greater Melbourne supporting our waterways and catchment teams and in administration through the Waterway Blitz program • delivered priority watering actions in Yarra, Werribee and Tarago rivers as described in the Victorian Environmental Water Holder's Seasonal Watering Plan, including cultural watering of Annulus billabong • launched the *Healthy Waterways Strategy* Annual Reporting website: healthywaterways.com.au This is a community resource, providing access to contextual information and data • continued the third year of the Litter Action project, which has prevented more than 39,000 pieces of litter from entering waterways and Port Philip Bay • led the way in collaborating with community and agencies on local waterways. The 'Chain of Ponds' Moonee Ponds Creek Collaboration we co-initiated in 2017 was highly commended for Excellence in Strategy and Masterplanning category at the 2021 National Stormwater Awards.

ENHANCING LIFE AND LIVEABILITY

Healthy People, Healthy Places, Healthy Environment

HOW WE WORK:

	Customers and Community	Safe and Inspired People	Continuous Improvement	Business Sustainability
DELIVERING ON THE SDGs				
Our results	**79.9** reputation score remains strong	**3.7** total recordable injury frequency rate (TRIFR) against a target of 2.0 **40%** female gender balance **77%** engagement score	**$6.1 million** invested across 8 research programs, driving innovation	**$3.6 billion** in capital investment provided for in the 2021 Price Submission **44 MWh** additional megawatt generation in renewable energy forecast through new solar program
Key initiatives and projects	• our Next Generation Community Engagement Program (NextGen) was awarded 20202 International Association of Public Participation (IAP2) Australasian Organisation of the Year Award • explored Partnership Agreements with Traditional Owners, enabling self-determined priorities of Traditional Owners which will shape agreements with Melbourne Water • delivered a range of campaigns to support enhanced liveability outcomes for our communities, including increasing water literacy, raising community awareness and participation in litter management on waterways, and launching Melbourne Water's Path to Net Zero commitment • maintained our strong reputation score at 79.9, underpinning strong and trusted relationships with community • improved community understanding and appreciation of sewerage services through enhancement of the virtual tour of the Western Treatment Plant and construction of a new Visitor and Education Centre.	• furthered collaboration and inclusion through leadership development programs such as Unite, our Women's Development Program, which has resulted in 40 per cent of participants being promoted • launch of our new learning organisation framework in May 2021- 280 people in Docklands and over 100 people virtually tuned in to launch events • Melbourne Water's New Beginnings Forest Project. A quarter of our people contributed, and planted over 10,000 trees, coming together as an organisation to celebrate new beginnings following an incredibly challenging year, and leave a legacy of hope for the future • New Ways of Working Behavioural Research Project in partnership with Monash BehaviourWorks, researching the societal benefits for a changed workforce, including liveability and sustainability advancement.	• extended our automation program, including the next phase of the automated operation of our water network. • Melbourne Water named in the top 5 - 2020 Most Innovative Companies List for development of a world first Confined Space Entry simulator in partnership with Deakin University's CADET Virtual Reality Training and Simulation Research Lab. • invested $6.1 million in eight research programs to support our customers and community • applied our Asset Management Framework to our natural waterway assets, drawing on volume of litter, customer satisfaction and complaint data to define service priorities for litter and vegetation management. This was a winner at the Asset Management Council 2021 Excellence Awards for the Asset Management Social and Environmental Award category.	• confirmed construction of solar power plants at Winneke and Eastern Treatment Plants to reduce our net greenhouse gas emissions and reduce energy costs, enhancing affordability for our customers and the community • finalised our Price Submission for the next price period (2021-26) with the Essential Services Commission. Our submission was informed by substantial customer input, and will generate the revenue required to deliver on the services our customers most value • worked with DELWP to support update of *Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria* to include urban and integrated water. These guidelines are now helping to inform long term water strategy • published first Modern Slavery Statement in line with legislation. The statement demonstrates the commitment to address human right issues in our operations and supply chain • continued to implement our *Social and Sustainable Procurement Strategy* and develop meaningful KPIs, including social procurement with our strategic suppliers.

Maroondah Reservoir

Delivering Valued Services

Melbourne Water makes a vital contribution to Melbourne's enviable lifestyle by supplying high-quality drinking water, providing reliable sewerage services, integrating drainage systems, building resilience to flooding, and enhancing 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.


Cardinia 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. With our variable climate we prepare for droughts, floods, bushfires and other events.

Melbourne Water supplies, treats and transfers this drinking water to the city's three metropolitan retail water companies and 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 approximately half of its drinking water from protected, or closed, catchments. These pristine mountain catchments throughout the Yarra Ranges act as a vast natural filter, producing some of the highest quality drinking water in the world. The water harvested from these closed 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 25 per cent of Melbourne's drinking water has come from open catchments, which incorporate mixed land uses like farming 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 closed catchments.

Central and Gippsland Region Sustainable Water Strategy

Sustainable Water Strategies (SWSs) are developed by the Department of Environment, Land, Water and Planning (DELWP) on behalf of the Minister for Water. These strategies set out long-term plans to secure future water resources at the broader regional scale, and are reviewed on a 10-year cycle. To support DELWP to develop the forthcoming *Central and Gippsland Region Sustainable Water Strategy*, Melbourne Water has participated in the Consultative Committee and working groups, and provided strategic feedback on the draft. Our modelling and information supporting the environmental flow assessments for streams in the Port Phillip region contributed to the Long Term Water Resources Assessment, a key input to the sustainable water strategy.

The strategy is a key opportunity to set the direction for the water sector in our region for the next 10 years. We are focused on achieving water security through a portfolio approach, where each water source has a role to play including catchments, desalinated water, stormwater and recycled water.

Planning for a secure water future

Every five years, Melbourne Water is required to produce a *Melbourne Water System Strategy* and the Melbourne retail water corporations are required to produce Urban Water Strategies. Together, these strategies outline how to effectively manage the increasing demand for water and rising sewage volumes in the face of population growth and climate change. By 2022, the greater Melbourne area water corporations (Greater Western Water, Melbourne Water, South East Water and Yarra Valley Water) are due to revise existing strategies and have agreed to produce a joint strategy – the *Greater Melbourne Urban Water and System Strategy* or *Water for Life*.

The strategy will provide a range of actions for the metropolitan water corporations to ensure ongoing water security to Melbourne and surrounding regions. The strategy will also include consideration of a range of possible water supply augmentation options ranging from local-scale stormwater capture and recycling to large-scale options to supply water. The strategy will also consider water conservation and water use efficiency options and will be aligned with the directions within the *Sustainable Water Strategy*.

As water corporations, customers and communities, we have a shared challenge in planning for our water future. By working together we can achieve better outcomes and take a holistic view of industry-wide pressures and opportunities, while remaining responsive to local service region needs. The revision of these key strategies is an opportunity to collectively identify what we need to do to secure our water supplies for the next 50 years, including specific actions for the next five years.

Our commitment to a community led approach recognises the need to place greater emphasis on acknowledging and understanding the cultural, economic and environmental values of water use, including those of Traditional Owners. To achieve this, we are working closely with Traditional Owners and with community to develop the strategy together. A broad customer and community engagement program commenced in March 2021, with public consultation planned for November.

As a water sector we are taking a collaborative and coordinated approach to the development of the *Central and Gippsland Region Sustainable Water Strategy* and *Greater Melbourne Urban Water and System Strategy*.

Water transfer network automation

Our ambitious program to transform our water transfer network continued through automation and data acquisition this year, and we implemented the second phase of the project covering the Tarago – Cardinia water network. Using a software called AAE (Aquadvanced Energy) the program is minimising pumping costs, maximising hydro revenue, decreasing chemical usage by smoothing the flow out of our treatment plants, lowering risk, and improving system reliability and management of outages. When combined, these smaller efficiency gains provide an overall benefit for the cost of transferring water.

The final phase of the project will focus on Silvan – Greenvale network, and will be implemented in mid-2021.

Managing water supply

Melbourne relies on water sourced from rivers and storages in the four major harvesting catchments (Thomson, Upper Yarra, Maroondah and O'Shannassy), and from drinking water sourced from the Victorian Desalination Project. The amount of water in the rivers and storages depends on the rainfall across these catchments from year to year, with our storages typically filling during the winter-spring period before being drawn down during the warmer, drier summer-autumn period.

In July 2020, Melbourne's 10 storages were 63.8 per cent full (1155.8 billion litres). In November 2020 they climbed to 75.5 per cent (1367.5 billion litres). By June 2021 they were at 74.9 per cent (1356.6 billion litres). Storage levels at 30 June 2021 were the highest for this time of year since the start of the Millennium Drought in 1997, and well above the low of 26 per cent (453.2 billion litres) experienced in 2009.

Storages showed a welcome net increase of 11.1 per cent in 2020-21 as a result of both above average rainfall and a desalinated water order of 125 billion litres. However, Melbourne's storages were last above 90 per cent full in 1997, as shown in the Melbourne water storage chart on page 13.

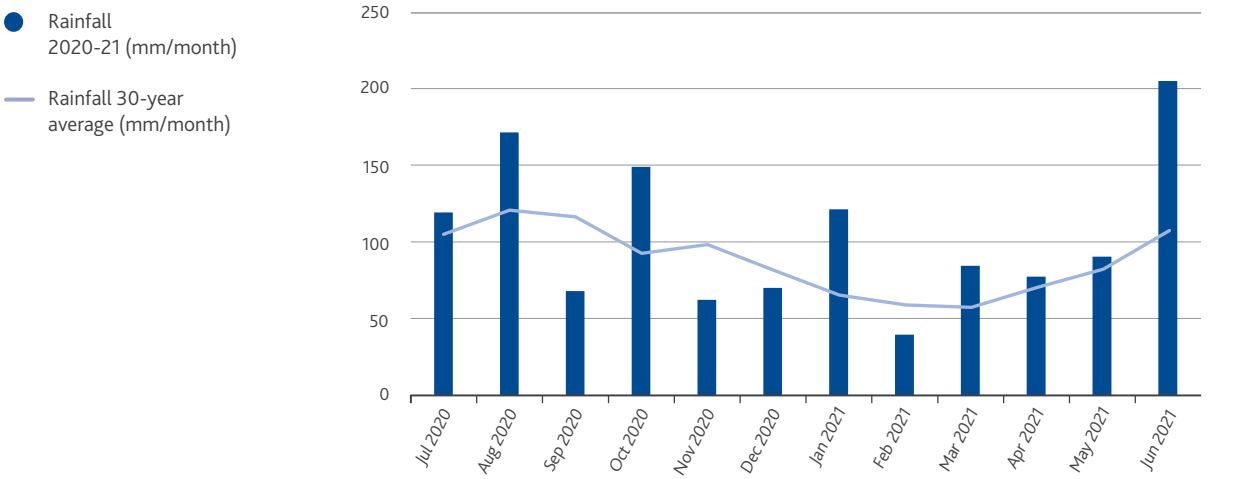
Winter-spring in 2020 saw catchment rainfalls (up 0.1 per cent) and inflows (up 14.8 per cent) above the 30-year average. The monthly average rainfall chart (page 13) shows that monthly rainfall across Melbourne's storage catchments varied from a low of 39 millimetres in February (2021) to a high of 205 millimetres in June (2021). The total rainfall of 1257 millimetres for the 12-month period was 19 per cent above the 30-year average.

The monthly reservoir inflow varied from a low of 14 billion litres in February (2021) to a high of 108 billion litres in June (2021).

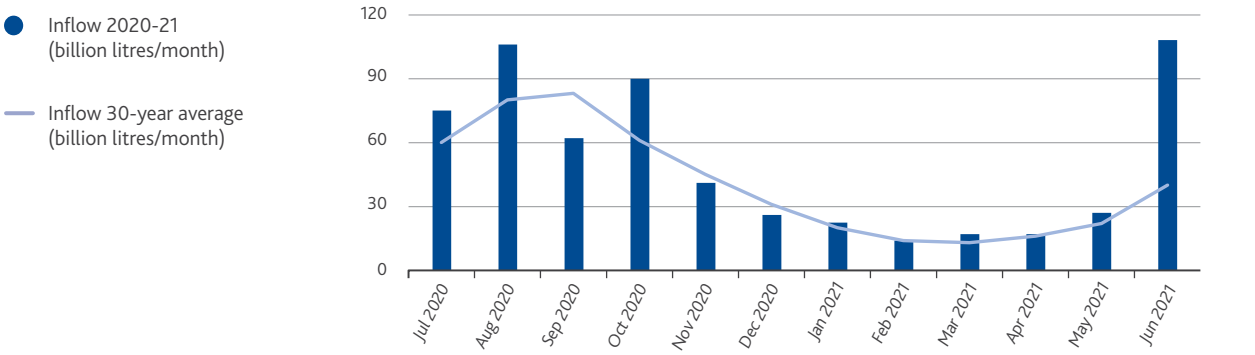
The 2020-21 total inflow to Melbourne's four major harvesting storages (Thomson, Upper Yarra, Maroondah and O'Shannassy) of 604 billion litres was 25 per cent above the 484 billion litres average of the last 30 years. This was 40 per cent above average for the period since 1997, which is a DELWP scenario for future water resources planning to represent recent streamflow conditions.

However, 2020-21 inflows were 2 per cent below the long-term average of 613 billion litres for the pre-Millennium Drought period (1913-14 to 1996-97). As our population increases, we are relying more heavily on desalinated water to meet annual water demands, which means that its effectiveness in future drought recovery is being reduced.

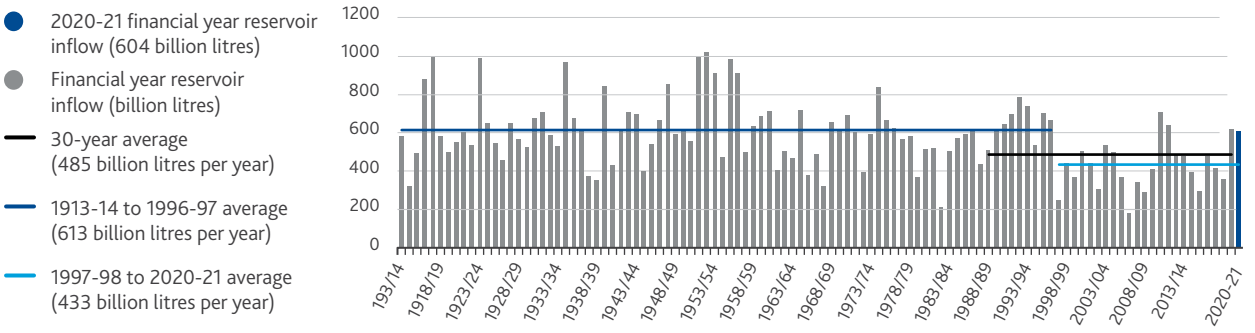
Monthly average rainfall at Melbourne's major harvesting reservoirs



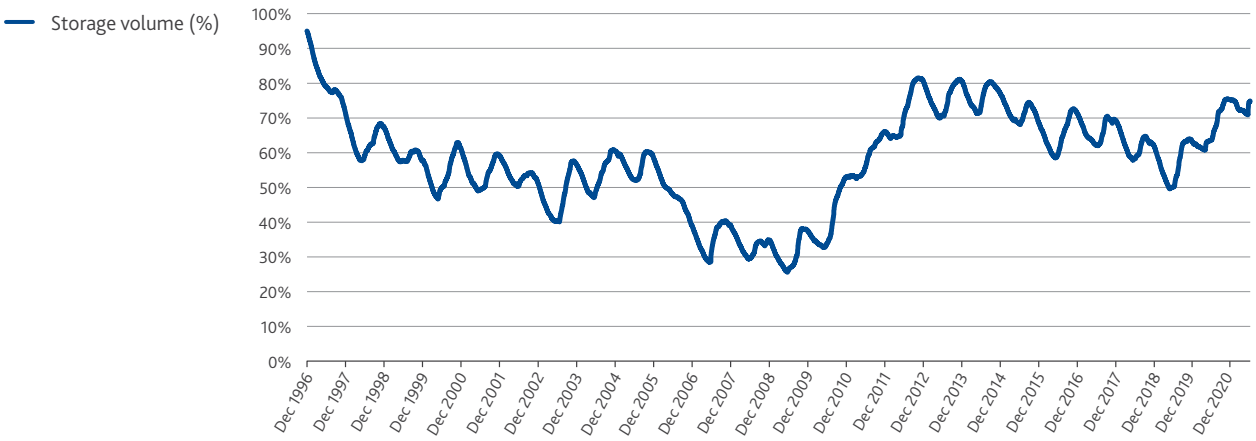
Monthly average inflow at Melbourne's major harvesting reservoirs



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



Melbourne water storage

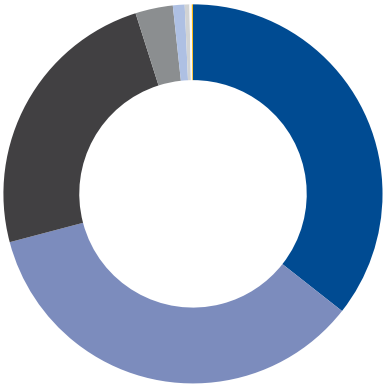


Water from the Victorian Desalination Plant

Melbourne's water system also includes the Victorian Desalination Plant (VDP), which complements our catchments by providing a secure, rainfall independent source of high-quality water. The plant can provide up to 150 billion litres of drinking water each year.

The Victorian Government ordered and received 125 billion litres of drinking water from the VDP for 2020-21. The Minister for Water also announced an order for a further 125 billion litres to be delivered in 2021-22. Operational and planning advice provided by Melbourne Water and Melbourne's retail water companies helped inform this decision. Since 2017, more than 326 billion litres of water has been supplied from the VDP. Without this water, Melbourne's water storages would be around 18 per cent lower than they were on June 30 2020.

2020-21 retail water consumption



- 35.6% Yarra Valley Water 156.4 billion litres
- 35.3% South East Water 154.8 billion litres
- 24.2% City West Water 106.3 billion litres
- 3.2% Western Water 13.9 billion litres
- 1.0% Barwon Water 8.7 billion litres
- 0.4% Gippsland Water 2.0 billion litres
- 0.2% South Gippsland Water 0.7 billion litres
- 0.1% Westernport Water 0.3 billion litres

Supplying our customers

Melbourne Water supplied 439 billion litres of water in 2020-21, which is 2 per cent less than the previous year, to meet customer demand for water.

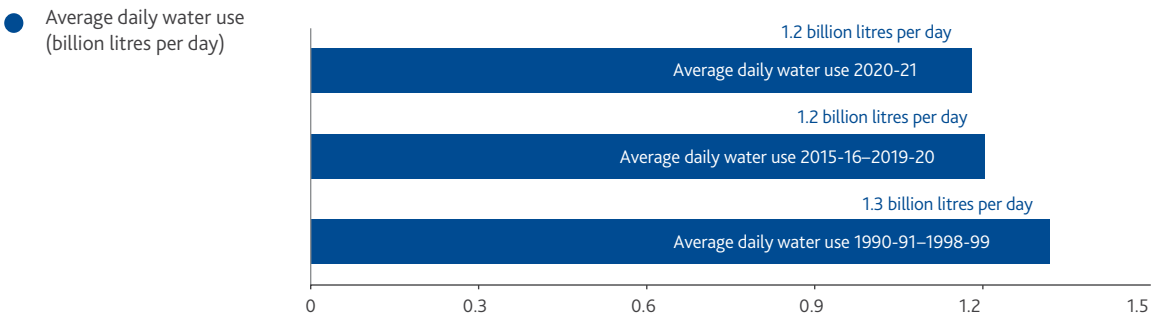
Water consumption

Permanent water saving (use) rules apply across Victoria so we continue to use water wisely. Melbourne's residential water use in 2020-21 was 160 litres per person per day[1] – 5 litres more than the Victorian Government target of 155 litres. This is 6 litres more than last year's consumption, but 1 litre less than the five-year average.

Melburnians averaged 1.2 billion litres of water per day this year – equal to the last five-year average. This is despite ongoing growth in population over the five-year period. While water consumption has been generally increasing over the past nine years, it is 14 per cent lower than in 1997.

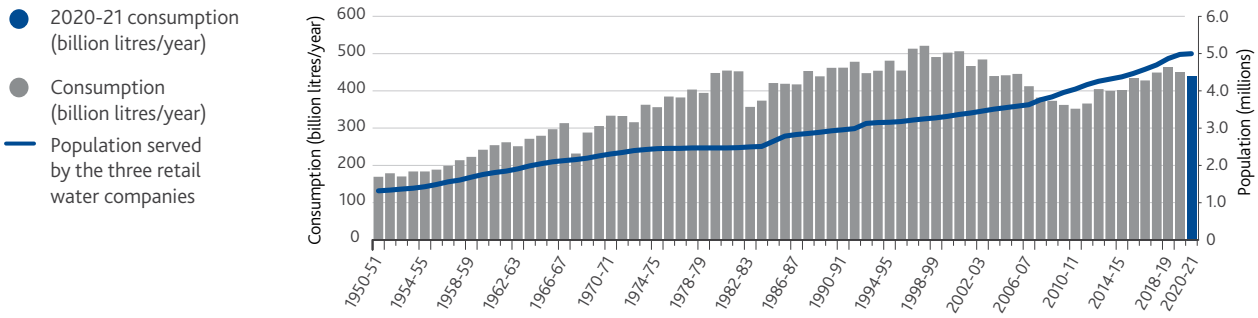
Maroondah Reservoir

Average daily total water use for Melbourne including non-residential



[1] This estimate uses actual water consumption for the first three quarters of 2020-21 and estimated water use for the April-June 2021 period. This approach is necessary due to the quarterly billing cycle for retail water customers, meaning that the actual data is not complete until October. Given the COVID-19 pandemic, there is significant uncertainty in the estimated water use in the April-June period related to changes in behaviour, including work-from-home directives.

Long-term total consumption including non-residential by financial year



Driving water conservation

With Melbourne's population growing and climate change making rainfall less reliable, we all need to do our part to secure Melbourne's water supply now and into the future.

Melbourne Water works closely with Melbourne's retail water companies to promote efficient water use through public education campaigns, including the Target 155 program that encourages each household to limit water consumption to 155 litres per person, per day. Our broad communications focus is on educating the community about all aspects of the water cycle to improve water-saving habits. The key insight shaping this work is that higher water literacy is linked to higher uptake of water-saving behaviours. Water literacy is knowledge about all aspects of the water cycle including rainfall and runoff, rainfall and non-rainfall-based water supplies, stormwater management and sewage management.

Our community awareness programs have contributed to Melburnians using much less water per person than they did 20 years ago, down from 247 litres per person per day in 2000-01 to 160 litres in 2020-21.

Ensuring our water quality

Our *Drinking Water Quality Strategy* guides Melbourne Water's ongoing delivery of safe and secure drinking water.

Bushfires have long been recognised as a key risk for the water supply system in Melbourne. The work guides Melbourne Water to manage plausible catastrophic scenarios in which a bushfire compromises water quality and/or infrastructure in one or more water supply reservoirs, especially given the protected, forested water supply catchments which enable us to supply safe, affordable drinking water to the majority of Melbourne without the need for filtration treatment.
In 2020-21 we delivered an assessment of the resilience of our water supply system to the potential impacts of future bushfires on water quality, identifying potential investment pathways to ensure strategic resilience is maintained over the short, medium and long term.

To achieve the strict drinking water quality targets for public health protection, we treat drinking water at 16 plants across Melbourne's water system, including the Victorian Desalination Plant. During 2020-21, we continued planning and design work for:

- the new Mount Evelyn water treatment plant. This new plant will enable continuity of primary disinfection for water supplied from the Silvan Reservoir during future planned and unplanned outages of the existing disinfection plant
- a new ultraviolet treatment facility at the Winneke water treatment plant, in line with our preventive approach to risk management.

Water quality compliance

As a result of a severe storm on Thursday, 27 August 2020, power outages caused disruption to Melbourne Water's Silvan water treatment plant power supply, causing some un-disinfected water from Silvan Reservoir to enter the water supply system. Boil Water Advisory Notifications were issued by Yarra Valley Water and South East Water for potentially affected suburbs. The Melbourne Water Incident Management Team worked closely with Yarra Valley Water, South East Water, DELWP and the Department of Health on a coordinated response to the incident.

Melbourne Water takes its responsibility for public health extremely seriously, and an extensive post-incident investigation was completed to ensure the root cause was established, all opportunities for improvement were identified and actions undertaken to rectify them. We also contributed to a joint water corporation debriefing process which identified common learnings and a collective industry improvement plan.

There were no further similarly significant incidents within our treatment plants or distribution network with potential public health impacts in 2020-21.

Recycled water

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

We continue to explore new opportunities to increase recycled water use at both the Eastern Treatment Plant and Western Treatment Plant, to provide a sustainable water supply for greater Melbourne.

Recycled water volumes used onsite and supplied to our customers in 2020-21 are shown in Table 1.

Table 1: Recycled water produced for 2020-21

	Volume 2020-21 (ML)
Total sewage treated (not all sewage treated is available for re-use)	**342,913**
Total recycled water supplied	**40,931**
Western Treatment Plant	
Conservation flows used onsite	8252
Non-agricultural use onsite	259
Agricultural use onsite	13,573
Southern Rural Water	
– Werribee Irrigation District	3743
– Werribee Tourist District	46
City West Water	
– Werribee Employment Precinct	148
– MacKillop College	30
– Water tankers/standpipes	0
– West Werribee Dual Supply (non-residential)	0
– West Werribee Dual Supply (residential)	438
Western Treatment Plant total recycled water	**26,489**
Eastern Treatment Plant	
Re-used onsite	8630
Trility – Eastern Irrigation Scheme	4500
Supply to South East Water – South Eastern Outfall	1312
Eastern Treatment Plant total recycled water	**14,442**

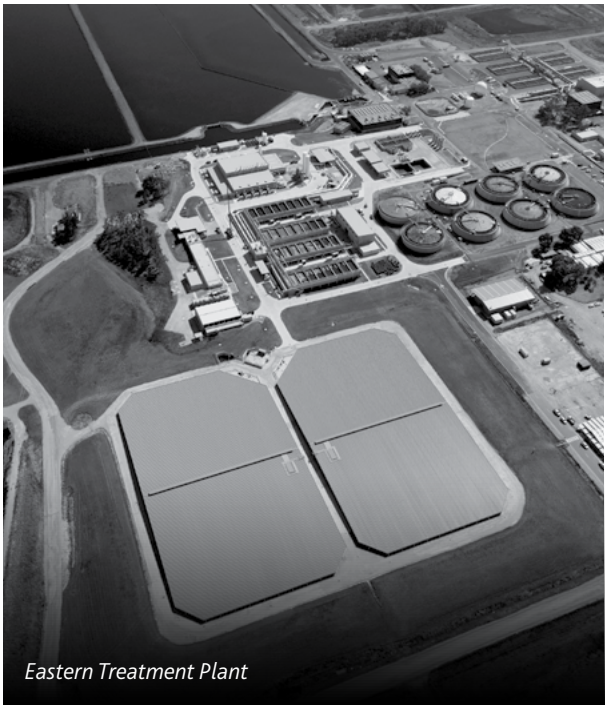
Maintaining our world-class infrastructure

Melbourne Water invested $147.8 million to support Melbourne's critical water infrastructure in 2020-21. About a quarter of this expenditure was on the Upper Yarra Dam Safety Upgrade. Upper Yarra stores water from its own catchment, and also assists the supply of water from the Thomson catchment which controls around 70 per cent of Melbourne's total system storage. These works will install filters and a seepage weir to ensure continued critical supply, in line with world's best practice contemporary standards. We also invested $13.7 million to commence upgrading the Yan Yean treatment plant, which will enable us to bring back water from our northern catchments into the network.

The outer north-west of Melbourne is a growing region, and Melbourne Water has been investing in providing a vital and reliable water supply to this area through a range of projects. In 2020-21 we worked closely with a range of stakeholders – including City West Water, Western Water, VicRoads, Melton City Council, Brimbank City Council and local businesses – to complete construction of the new Holden Reservoir Inlet Pipeline. We also invested $22 million in progressing the installation of a new service reservoir at Bald Hill and a pipeline to connect it to Yan Yean.

Sewerage Management

A reliable sewerage system is vital to the health of Melbourne's people and environment, and Melbourne Water plays a critical role in safely transporting sewage to our treatment plants for processing. Increasingly, we are recovering and re-using more resources like recycled water, biosolids and energy from the sewage treatment process to reduce our impact on the environment.



Eastern Treatment Plant

Our Approach

Melbourne owes much of its liveability to the reliability of its sewerage system. Construction on the network of pipes, pumps and treatment plants commenced in the 1890s and the system has grown and adapted with Melbourne to ensure ongoing protection of public health and wellbeing.

Our system is characterised by two major treatment plants – the Western Treatment Plant (WTP) at Werribee and the Eastern Treatment Plant (ETP) at Bangholme – and the sewerage transfer system, which moves large volumes of sewage across the city via 400 kilometres of sewers and nine sewage pumping stations.

Our long-term investment planning considers the implications of external factors such as a growing population and climate change to ensure that our sewerage system continues to reliably deliver these outcomes.

Along with Melbourne's retail water companies, we work to deliver the *Melbourne Sewerage Strategy*. The strategy takes a long-term view, planning for a population of 10 million people thriving in a water-sensitive city. The *Melbourne Sewerage Strategy* describes a 50-year transformation in our sewerage system from a mostly one-way process that collects, treats and discharges, to a circular process focused on the recovery, re-use and recycling of valuable resources like water, biosolids and energy.

The Melbourne Sewerage Strategy

Implementing this strategy in 2020-21 included completing a 'Case for Change' which focuses on the use of key facts to describe the need for the change set out in the *Melbourne Sewerage Strategy*, and establishes the planning principles we will use to ensure Melbourne's sewerage service continues to protect public health and the environment while becoming an increasingly circular system. Adaptive pathway plans have also progressed, which will ensure our system is prepared for the future while providing the flexibility needed to respond appropriately in our rapidly changing world.

Work on the adaptive pathway plans for the ETP and WTP will continue through 2021-22 and will be completed in close collaboration with Melbourne's retail water companies.

Delivering our service

Operating to high customer and regulatory standards, Melbourne Water treated a total of 343 billion litres of sewage at the ETP and WTP in 2020-21. More than 26 billion litres of recycled water was re-used from the WTP (including conservations flows to the environment), and more than 14 billion litres from the ETP. Further details can be seen in Table 1 on page 16.

As part of the *Port Phillip Bay Environmental Management Plan, (2017-2027,)* the WTP has a three-year rolling average limit of 3100 tonnes per annum of nitrogen that can be discharged to Port Phillip Bay. The limit was set as a precautionary measure to prevent Bay eutrophication, noting there are other factors that affect the likelihood of this occurring other than nitrogen from WTP.

In 2020-21, approximately 3373 tonnes of nitrogen (three-year rolling average) was discharged from WTP as a result of higher than forecast nitrogen loads entering WTP, combined with above average rainfall, which impacts nitrogen removal performance. Planned works are underway to support reducing nitrogen loads discharged from WTP over the next few years, including a $220 million upgrade to the nitrogen removal process. This project is in detailed design and will increase nitrogen removed by the treatment process from 2024.

Improving our understanding of biogas production

Methane-rich biogas is produced from parts of our treatment process. This biogas is used to generate renewable energy onsite, which powers our sewage treatment plants. This year, we have continued to deepen our understanding of biogas production at the covered anaerobic lagoons at the WTP. This will help with optimising production of biogas and potentially improve the service life of lagoon covers and the performance of our treatment process, through research into the factors that contribute to their deterioration.

Melbourne Water is working with the University of Queensland, University of Melbourne and RMIT University to develop evidence-based solids management strategies. For the past three years, a pilot plant with a glass window has been operating, which allows us to see and understand the solids dynamics. We have built a biochemical-hydrodynamic model that replicates the pilot plant and full-scale lagoons. This will allow testing of different scenarios on how best to manage solids and optimise biogas production, reducing waste from our sewerage service and supporting a circular economy.

Delivering an internationally significant wastewater treatment innovation

Nitrogen removal is a vital step in the wastewater treatment process at WTP. It reduces nutrients in the treated water that is discharged to Port Phillip Bay, protecting the environment. Our existing nitrogen removal processes rely on bacteria that use large quantities of oxygen and carbon, and consequently require a lot of energy. A shortcut for the nitrogen removal process is being used in other parts of the world on concentrated sewage, to reduce both the oxygen and carbon requirements for nitrogen removal.

Melbourne Water recently concluded a two-and-a-half-year trial of the shortcut nitrogen removal process at WTP. The plant was able to continuously maintain the right balance of bacteria over the full range of expected conditions – a world-first for continuous robust operation in temperate conditions. The process also achieved a 35-45 per cent improvement in carbon efficiency, which will allow Melbourne Water to optimise nitrogen removal and renewable energy production onsite, providing cost savings to customers. Delivering an international breakthrough aimed at improving effluent quality and energy neutral wastewater treatment, the shortcut nitrogen pilot plant trial was a finalist in the Australian Water Association's Victorian awards.

In 2020-21 the outcomes from the pilot plant were analysed as part of the value engineering assessment for the augmentation of the existing 55E Activated Sludge Plant. The new treatment process was chosen as the preferred option for this significant capital upgrade project, and a full-scale plant is currently planned to be commissioned in late 2024.

Expanding our system to support a growing region

Due to high growth in the west and north of Melbourne, the anaerobic lagoons at WTP are nearing capacity. While research projects underway will assist with optimising performance and the cost of managing the lagoons (see page 18), the system needs to be augmented to manage this population growth.

Planning is underway for the WTP Primary Treatment Capacity Augmentation (PTCA) – a $340 million project to create a new primary treatment process that uses technology similar to ETP. This new asset will reduce the load on the existing anaerobic lagoons, restore them to a sustainable operating condition and build system resilience.

The PTCA is a transformational sewerage treatment project, which reflects an adaptive pathways approach to infrastructure planning, and is scheduled to be commissioned by 2025-26.

Western Treatment Plant

Improving our infrastructure to support Melbourne's growing population

In 2020-21, our sewerage capital program invested $195.7 million to support Melbourne's future health and liveability. A quarter of this expenditure was used to increase the capacity of the sludge drying pans at WTP by around 50 per cent, and by doing so, remove a bottleneck which will allow for the treatment process to run more effectively. We also invested $20.9 million to increase the capacity of the solids treatment process at ETP, $11.1 million to renew the biogas covers on the anaerobic lagoons at WTP, and $9.8 million to renew the ageing Hawthorn Sewer Main.

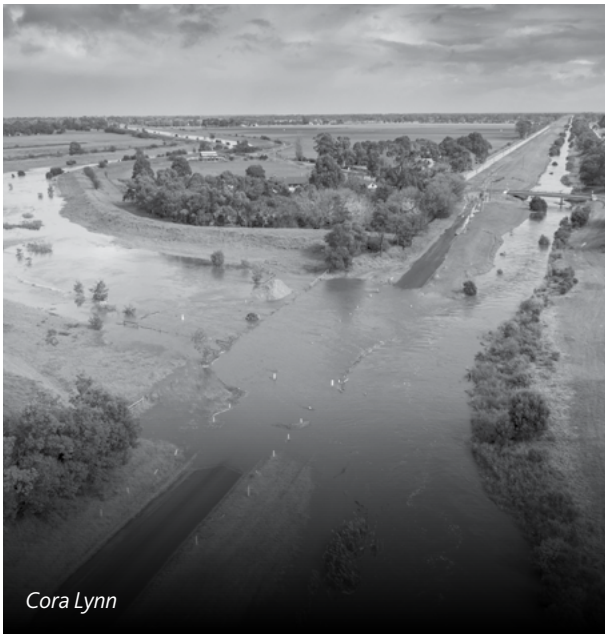
Melbourne Water is responsible for almost 400 kilometres of sewer mains and outfalls. Rehabilitation of our large sewers is difficult due to the lack of redundancy in the network (which requires works to be completed in a live sewer), the depth of the sewers, and the significant urban development that has occurred above and around them.

Over the past five years, Melbourne Water has increased condition monitoring via closed-circuit television (CCTV) to safely and efficiently inspect and formally review two-thirds of our sewerage assets. Between 2002 and 2011, CCTV inspections identified accelerated corrosion in Hobsons Bay Main, which transfers 30 per cent of Melbourne's wastewater flow from the CBD and bayside suburbs to WTP. To rehabilitate the existing sewer main safely and efficiently, the large flows need to be diverted into a new sewer main, which will also provide additional capacity for population growth. The Hobsons Bay Main Yarra River Duplication project is Melbourne Water's biggest sewer renewal project over the next five-year pricing period and is anticipated to cost around $200 million. The project will be awarded in September 2021 with construction to begin in early 2022.

In March 2021, Melbourne Water continued to develop and trial a world-first, self-stabilising robot to further enhance our remote asset monitoring capability for large sewers. The technology overcomes limitations in CCTV and collects a range of data to support better asset maintenance, planning and delivery across Melbourne's sewerage network, contributing to meeting a key outcome of an affordable, reliable sewerage service.

Flood Resilience and Drainage

As the floodplain manager for the Port Phillip and Westernport catchments, Melbourne Water enhances liveability for our communities through flood prevention, and response and recovery initiatives delivered collaboratively with our partners and local communities.


Cora Lynn

Our Approach

Flooding is a natural occurrence in the Port Phillip and Westernport regions. Climate change and urbanisation continue to significantly increase our flood risks and we now have improved information about the impacts on our region.

Melbourne is a diverse and rapidly growing city that requires sustainable integrated water infrastructure to support its people, places and environment both now and in the future. Melbourne Water provides important contributions across the breadth of land development, from broadacre greenfield areas on the city's margins, through to urban renewal and development in established suburbs. We help deliver developments that are flood resilient and provide for stormwater treatment to protect the health of waterways and bays, with water-sensitive urban design principles supporting more resilient and liveable cities and towns.

The 2015 *Flood Management Strategy for Port Phillip and Westernport* sets the direction for flood management in the region.

Flood management strategy

Melbourne Water is leading the refresh of the *Flood Management Strategy for Port Philip and Westernport* in close collaboration with our flood partners to enhance our collective understanding of flood risks and opportunities to address them. The strategy sets out a vision for flood management across Port Phillip and Westernport and a framework to help guide the work of the many organisations responsible for preventing, managing and recovering from flood events. In total, 62 organisations were involved in the development of the strategy. Following public consultation on the draft strategy and action plan, the documents were finalised and will be released to partners and the community in late 2021.

The strategy confirms the commitment of partners to continue to work together and with the community to identify the right mix of flood management solutions for each location. The strategy's key directions place an emphasis on managing climate change, empowering diverse communities, and managing flooding to achieve multiple benefits for water security, liveability and sustainability.

Melbourne Urban Stormwater Institutional Arrangements review

This year Melbourne Water worked with state and local government partners to review the Melbourne Urban Stormwater Institutional Arrangements (MUSIA), and shared

roles and responsibilities for drainage infrastructure, to improve system management across the region. The project's purpose is to review and refine accountability for urban stormwater and flood management assets and services in the Melbourne Water region. Led by DELWP and in partnership with the Municipal Association of Victoria (MAV), Melbourne Water contributed to three options shortlisted for consultation. These will be assessed to compare their relative strengths in relation to set criteria and sensitivity analysis.

Clarifying and formalising roles and responsibilities through the MUSIA review is critical to enabling the efficient and effective delivery of stormwater and flooding infrastructure. Successful arrangements will strengthen relationships between Melbourne Water and councils, empower agencies to manage stormwater in line with their responsibilities, support equitable levels of service for customers, foster integrated water management (IWM), mitigate risks of urban development and climate change, and enable strategic planning. A recommendation is expected in late 2021.

Mapping program to prioritise flood management investment

This year, Melbourne Water has made significant improvements in our catchment mapping program, which has enhanced the quality and availability of flood information. This data is vital to prioritising our investments in flood risk management. Works completed include mapping a total of 102 catchments over the five-year investment plan period, which is significantly above our target of 70 catchments. This result is due to our collaboration with councils, improved data quality and standards.

As part of the current Victorian Government infrastructure program we incorporated the revised 2019 Australian flood mapping guidelines into our Flood Mapping Guidelines and Technical Specifications to ensure all flood modelling work meets the latest standards and protects the community from unacceptable flood effects.

Table 2: Summary of proportion of Melbourne Water drainage assets that have flood maps available (for further detail, see Appendix E)

	Total Length of MW Assets[1] (km)	% Length mapped for design flood magnitudes			
		5yr ARI	10yr ARI	20yr ARI	100yr ARI
Underground drains	1089	29%	27%	53%	53%
Natural waterways	6546	8%	9%	10%	66%
Channels	1971				76%
Total	9606				66%

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

Innovative flood management solutions

Melbourne Water has worked with state and local government to develop integrated and innovative flood and drainage solutions for the Fishermans Bend and Arden-Macaulay urban renewal areas. The strategies include conventional civil infrastructure such as pipes, pumps and levees, together with more advanced and progressive elements such as distributed storages and multi-use flood storage areas. At Fishermans Bend, the distributed storages include rainwater tanks and water sensitive streetscapes. At Arden-Macaulay, flood storage areas will have multiple uses such as public space for active recreation, urban greening, stormwater treatment and passive recreation. The drainage strategy at Arden-Macaulay also integrates with City West Water's proposed stormwater harvesting scheme, which will form part of the newly formed Greater Western Water from July 2021.

As these flood and drainage solutions are further refined with the City of Melbourne, City of Port Phillip and Victorian Government agencies, we will continue to pursue and incorporate multiple benefits such as urban greening, alternative water supplies and creating enjoyable public spaces.

Flood resilient guides for homes

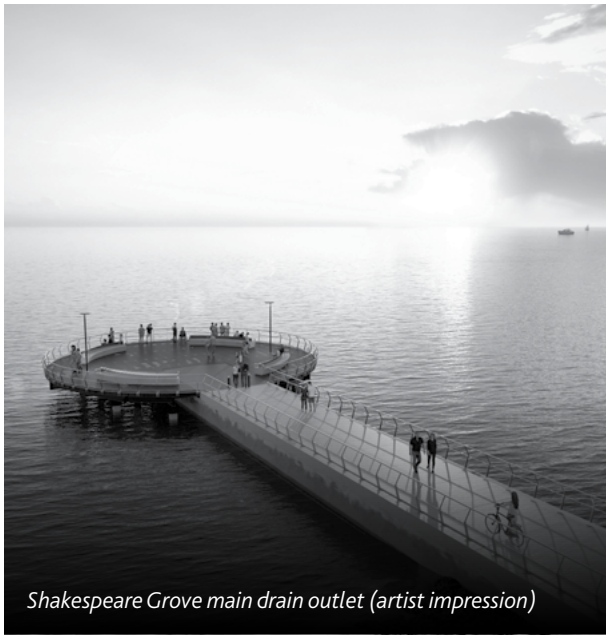
In 2020 Melbourne Water worked closely with the City of Port Phillip and James Davidson Architects to develop a *Flood Resilient Guide to Retrofitting Your Home*. The guide gives residents living in flood-prone areas information to modify their homes to be more flood resilient. A flood resilient home is one that can withstand flood events with minimal impact, allowing residents to recover quickly from flooding. The guide reflects the need for all sectors of the community – from government, the business community and individual households – to work together to make our homes, businesses and infrastructure more resilient to flooding.

The guide was an agreed action from the Elster Creek Collaboration, formed in 2017 to address flood issues, using a catchment-based approach.

Infrastructure investments

During 2020-21, $26.7 million was allocated to renewing and enhancing our drainage and flood protection assets, including $6.4 million (of a total project cost of approximately $15 million) to renew the Shakespeare Grove main drain beach outlet, and $188.6 million to create new drainage and stormwater quality assets (like wetlands) to support the development of new land.

Retarding basins are an important feature of the drainage system, helping to reduce flooding by catching heavy rainfall and holding it in a reserved, low lying area of land. Our five-year program to ensure our retarding basins meet dam safety obligations is nearing completion, and in 2020-21 we progressed works on a number of retarding basins, with three remaining due for completion.



Shakespeare Grove main drain outlet (artist impression)

Fostering community connection: Shakespeare Grove drain renewal

Melbourne Water is replacing the 110-year-old Shakespeare Grove main drain outlet to make it safe for the public and ensure it continues to reduce the risk of flooding to surrounding suburbs for many years to come.

Following extensive community and stakeholder consultation, the spectacular 'Circle of Reflection' viewing platform, suspended above the end of the renewed outlet, emerged as the preferred option. The platform will allow people to access, experience and learn about the marine environment in a novel manner and foster community connection at the iconic St Kilda beach location. Construction commenced in February 2021 and is scheduled for March 2022 completion.

Land development: supporting a resilient and liveable Melbourne

More than 1080 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 2020-21. We provided written development advice to over 2250 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 including those for the cities of Melbourne, Moorabool, Baw Baw, Kingston, Glen Eira and Knox.

Melbourne Water delivers the Development Services Schemes – a future infrastructure delivery mechanism for drainage, flood protection, stormwater quality treatment and waterway management – through precinct structure plans. This service provided water infrastructure planning in Packenham East and upcoming precincts in Beveridge North West, Craigieburn West, Shenstone Park and Pakenham South.

Melbourne Water plays a direct role in building, governing and managing the water infrastructure to allow new housing and jobs, new community facilities and major state rail and road projects to be built. We controlled the development of over 100,000 new homes, community facilities and places of work through the determination of 10,000 applications for statutory planning and statutory building applications, ensuring that all determinations make new places and spaces safe in future flood events.

We supported development capital works, which included 11 flood retarding basins, 11 kilometres of underground pipes to manage drainage and flood flows, 12 kilometres of waterway rejuvenation and 13 new wetlands to provide stormwater treatment and habitats for diverse flora and fauna.

We also provided input for stormwater and drainage planning for major Victorian Government infrastructure projects, including Suburban Rail Loop, Metro Tunnel, Level Crossing Removal Project and Major Road Projects Victoria to ensure asset protection and achievement of mutually beneficial outcomes for the projects and community.

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CATCHMENTS MAPPED FOR **FLOOD MANAGEMENT PROGRAM**

Waterway Management

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


Werribee River

Our Approach

Healthy rivers, estuaries and wetlands play a vital role in many aspects of our daily life. Our community engagement has highlighted how much the people of greater Melbourne value waterways in supporting environmental health and their overall quality of life.

Across our region, Melbourne Water monitors and provides targeted maintenance and improvement works for 25,000 kilometres of rivers and creeks, 33 estuaries and wetlands as well as more than 1000 stormwater treatment systems, including constructed wetlands. We work together with state and local government, non-government organisations and community groups to enhance the environmental, social, cultural and economic value of our waterways and protect them from a variety threats, including climate change and population growth.

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 they are important sites of cultural significance. They support our growth and prosperity by providing drainage and flood mitigation. They also provide economic benefits by supplying water for agriculture, recreational fishing, commercial industries and tourism opportunities.

The *Healthy Waterways Strategy* 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 2020-21 Melbourne Water invested $39.5 million to repair and protect our waterways from a variety of threats, including those posed by climate change and population growth. Of this, $15.9 million was spent on improving stormwater quality through renewing and revegetating wetlands (like Lilydale Lake Wetland, Hallam Valley Wetland and Argus Street Wetland), and $23.6 million on improving waterway condition.

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

This year we launched an annual reporting website for the strategy to support adaptive management and increase transparency on its deliverables and outcomes: www.healthywaterways.com.au. This is a resource for the community and strategy partners, providing access to contextual information and data such as macroinvertebrate trend monitoring and platypus tracking.

The Region Wide Leadership Group (RLG), comprising independent Chair Rob Vertessey and members from Parks Victoria, Port Phillip and Western Port Catchment Management Authority (PPWCMA), EPA, MAV, DELWP and Melbourne Water continues to guide co-delivery of the strategy. The group meets regularly and is working together on targeted areas for improvement, such as protecting natural wetlands and better management of urban stormwater runoff into our waterways.

The impact of COVID-19 unfortunately delayed collaborative catchment forums which review co-designed programs across each of the five major catchments forming the strategy boundary. These are planned to take place in November 2021.

Waterways and Drainage Investment Plan

Melbourne Water finalised the development of the 2021 Waterways and Drainage Investment Plan (WDIP) as part of developing our Price Submission to the Essential Services Commission. Extensive customer and community engagement and a social research program helped identify customer preferences to shape funding prioritisation of the different services delivered under the waterways and drainage charge.

Waterways research

In 2020-21 we continued to address key research areas, deliver communications and engagement activities, and work collaboratively to achieve the *Healthy Waterways Strategy* performance objectives, including:

- working with Traditional Owners on governance and research capacity building activities
- partnering with the University of Melbourne (Melbourne Waterway Research-Practice Partnership) to conduct research that underpins improved management of urban and rural waterways, such as developing tools to prioritise investment in waterway management
- researching aquatic pollution prevention methods with RMIT University (Aquatic Pollution Prevention Partnership)
- trialling environmental DNA methods to monitor frog and bird communities within priority wetlands to track progress against *Healthy Waterways Strategy* targets (with EnviroDNA)
- supporting safer working environments by remotely collecting environmental condition data for waterway assets using satellite imagery, drones and LiDAR (Light Detection and Ranging) – with The University of Melbourne and RMIT University
- undertaking a national research project with the Cooperative Research Centre (CRC) for Water Sensitive Cities to understand the barriers and opportunities for upscaling IWM across Melbourne.

We are also working in collaboration with Monash and Melbourne universities to explore the use of emerging technology, such as low-cost sensors to identify pollution hotspots, and real-time monitoring and control of environmental flow releases in urban streams.

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 don't get the water they need to be healthy. Melbourne Water is engaging with Traditional Owners in a program to determine water requirements, deliver water and seek long-term solutions for the billabongs to support cultural, ecological and liveability values.

During September 2020, water was delivered to Annulus billabong on behalf of the Victorian Environmental Water Holder. As part of the wider Birrarung billabong project, a Melbourne Waterway Research-Practice Partnership project 'Birrarung's billabongs: vegetation responses to environmental watering' has been developed with the University of Melbourne, Melbourne Water and the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation Narrap rangers.

This project includes a monitoring program to refine the recommended water regimes and inform adaptive management. An 'on Country' knowledge day was held with the Narrap team, Parks Victoria, Melbourne Water and the University of Melbourne to share the findings, which included a smoking ceremony and discussions at Bolin Bolin and Annulus billabongs, including about frog habitat and information from the songmeters that the Narrap installed. The information gathered will inform long-term strategies to provide the appropriate watering solution for the billabongs.

Integrated service planning

Melbourne Water adopts an integrated approach to service planning with our local government partners. In 2020-21, we committed dedicated resourcing to support proactive engagement with councils and other key partners to develop action plans to improve alignment on service delivery. This program results in better coordination of on-ground works and operational planning with our partners, strengthened relationships and strategic co-delivery of key aspects of the Healthy Waterways and Flood strategies. The program will continue, with partner engagement on ongoing service delivery and catchment-scale collaborations, to deliver on key strategic priorities.

Port Philip and Westernport Catchment Management Authority integration into Melbourne Water

In February the Victorian Government announced its decision to integrate the Port Philip and Westernport Catchment Management Authority (PPWCMA) into Melbourne Water, commencing at the start of 2022. Detailed planning is now underway to fully align our work and deliver the new obligations. Strong collaborative working arrangements already in place between PPWCMA and Melbourne Water will ensure a smooth transition that preserves the valued relationship built over many years and enhances PPWCMA customer outcomes.

The integration will better position the region to respond to long-term challenges and will provide a sustainable and integrated approach to waterway management for the Port Phillip and Westernport region.

Measuring the value and outcomes for natural waterway assets

This year, Melbourne Water applied our Asset Management Framework in an innovative way to capture the outcome and value gained from investment in maintenance activities that result in improved social amenity for natural assets. Traditionally, it is difficult to apply the asset management framework to natural assets such as waterways because they are organic and dynamic, unlike a built or static asset such as a pit or pipe.

The project collected data in the field – such as the volume of litter, combined with customer satisfaction and complaint data – to inform the management of our assets, and to define the service and technical objectives of litter removal and vegetation management projects.

This innovative program resulted in Melbourne Water and AECOM winning the influential national Asset Management Council 2021 Excellence Awards for the Asset Management Social and Environmental Award category.

Waterway Blitz

Melbourne Water has provided more than 100 jobs to people through the Victorian Government's *Working for Victoria* initiative.

Starting in August 2020, the six-month Waterway Blitz program created jobs for people and businesses impacted by COVID-19, while supporting our essential work caring for the city's waterways and land. Melbourne Water invited the community to submit ideas for the Waterway Blitz target areas, with litter clearing, and removing weeds and revegetation identified as priorities. More than 800 online contributions via Melbourne Water's YourSay website helped shape the program of work.

The impact of the Waterways Blitz was significant, with approximately 640 cubic metres of rubbish collected – equivalent to the volume of 2660 wheelie bins – and 265 kilometres of river banks were weeded and replaced with 20,000 plants for local communities to enjoy.

Liveable Communities, Liveable Waterways

In October 2020 Melbourne Water launched a new incentives program – Liveable Communities, Liveable Waterways – which brings together several successful existing grant programs into a single, more streamlined and flexible program. It enables customers and community to respond to emerging challenges, initiate new partnership opportunities, and opens up funding applications from customers such as universities.

We have received 170 applications with a total of $6.1 million in funding requested over multiple years. We have awarded $5.4 million in funding over multiple years across 159 projects.

Our existing government, school and community group grant recipients are transitioning to Liveable Communities, Liveable Waterways. Private landholder customers will be transferred from the Stream Frontage Management Program and Rural Land Program in late 2021.

Stream Frontage Management Program and Rural Land Programs

A total of 708 private landholder grants were awarded through our Stream Frontage Management and Rural Land Programs in 2020-21. This amounted to over $3.1 million in support for our delivery partners to utilise their skills, expertise and local knowledge to create great outcomes for waterways across the region. In the past year we have supported:

- 646 landholders through cost-sharing project funding to those who manage a waterway frontage on their property. These funds are for weed control, fencing and native vegetation planting programs that increase biodiversity, improve the stability of riverbanks and provide better habitat for a wide range of animals
- 62 rural landholders through sharing costs of work for private landowners to better manage runoff from stormwater and improve water resource management in rural areas. Landholders receive benefits such as improved soil health, access to water and input cost reduction, while waterway health is improved for the broader community. The program also incorporates education, including whole farm planning, soil testing and fertiliser planning, chemical use and other specifically directed educational initiatives. The Rural Land Program also contributes significantly to reducing sediment and nutrients like nitrogen (which can feed algal blooms) from entering Port Phillip Bay and Western Port Bay, helping us meet our commitments to the *Port Phillip Environmental Management Plan* and improving the health of our region's open waters.

Research into climate resilient revegetation

Given Melbourne Water's significant investment in revegetation along our waterways, wetlands and estuaries, it is important that the seed we use to grow plants is suitable for the climate we can expect in the future.

Melbourne Water teamed up with researchers from the University of Melbourne, Deakin University, Greening Australia and Cesar to develop models for our most commonly used revegetation plants to show the impact of future climate scenarios. Glasshouse trials are also being used to study the growth and survival rates for six species of seedlings through to mature plants under simulated future climatic conditions, which will be hotter and drier. The initial species selected for trials include *Acacia implexa* (Lightwood), *Gahnia sieberiana* (Red-fruit Saw-sedge), *Allocasuarina verticillata* (Drooping She-oak), *Bursaria spinosa* (Sweet Bursaria), *Olearia lirata* (Snowy Daisy-bush) and *Eucalyptus camaldulensis* (River Red Gum).

The project outcomes will be used to inform a continued program of work to improve vegetation resilience and ensure our investment in revegetation will be optimised as climatic conditions change.

Delivering environmental water releases

To maintain and enhance waterway values, Melbourne Water works in conjunction with the Victorian Environmental Water Holder (VEWH) to release water that improves seasonal flow within regulated river systems across the Port Phillip and Westernport regions.

These releases, also known as environmental water, help improve the quality of rivers by shifting sediments, maintaining native vegetation and supporting fish migration. Environmental flows also improve the quality of habitat for platypus, macroinvertebrates, fish and frogs.

We engage with a range of organisations when planning the release of environmental flows so they can make the most of them. This includes community groups such as canoeing clubs and river-based businesses like caravan parks. Understanding their preferences means we try to schedule flow releases at times when they deliver the most benefits to recreational users of the rivers. Traditional Owners are consulted during the preparation of the Seasonal Watering Proposal to ensure cultural values are considered as part of the environmental flow release planning. We also advise all stakeholders and the broader public of these flows in advance, so they can take advantage of the higher water levels.

In 2020-21 Melbourne Water released over 10.25 billion litres of water, as shown in Table 3.

Table 3: Environmental water delivered for 2020-21

River	Volume	Outcomes
Yarra	8505 ML	The Yarra River has received naturally good flows this year, with additional flows received as a result of works on the Upper Yarra Reservoir. The autumn high flow used 4141 ML less than estimated due to good rainfall and adaptive management. The environmental water release for autumn fresh and autumn high flow aimed to improve aquatic habitat and channel form, maintain bank vegetation and provide opportunities for fish movement. Environmental water was also released into two billabongs in the Yarra Floodplain – Yering Backswamp and Annulus – to improve wetland vegetation and provide habitat for frogs and birds. Natural inundation occurred to a number of billabongs in the Yarra River catchment due to heavy winter rainfalls in June 2021.
Tarago and Bunyip rivers	1068 ML	Tarago Reservoir spilled on several occasions, with naturally good flows helping to meet compliance. A spring high flow and summer/autumn fresh were achieved with environmental water releases. These releases help to enhance habitats, maintain vegetation communities and facilitate movement and spawning of various fish species including the endangered Australian Grayling.
Werribee	1145 ML	Werribee River experienced reasonably good flows, as flow below the lower diversion weir was increased to 10 ML/d for much of the year from Southern Rural Water's Bulk Entitlement. Water spilled from Pykes Creek and Melton Reservoir, resulting in the cancellation of a planned winter fresh in 2021. Environmental water was delivered to Pykes Creek (reach 6) for low flows, and spring/summer high flows. These flows maintain channel form, habitat and vegetation, and allow for fish movement between pools. In the Lower Werribee, below Melton Reservoir (reach 8 and 9) and into the estuary, flows were enhanced with environmental water releases to provide three summer freshes. Freshes improve habitat, maintain vegetation and support fish and frog populations.
Maribyrnong	0 ML	No releases made due to lack of available water for purchase (no entitlement held).

In 2020-21 Melbourne Water made environmental releases of 19,599 million litres from Thomson Reservoir in cooperation with the West Gippsland Catchment Management Authority and on behalf of the VEWH.

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

In 2020-21, we contributed to the health of our waterways through direct maintenance works, capital works and incentive programs, including:

- 777 sites where active weed control was completed to protect native vegetation and habitat quality for a wide range of native animals
- 132 sites where sections of waterway were replanted with native vegetation to improve streamside vegetation connectivity and habitat for platypus and other significant species
- 34 sites of biodiversity significance along waterways that were protected via active maintenance including weed and pest animal control
- Two sites where native fish passage was restored by removing in-stream barriers and renewing existing fishways
- over 60 sites where maintenance and monitoring of existing fishways has sustained native fish passage
- Three sites where erosion in the bed or banks of waterways was controlled by installing or renewing grade control and bank protection structures
- over 500 sites where erosion in the bed of waterways has been controlled by continued maintenance and monitoring of existing grade control structures
- 542 sites where grass cutting, vegetation maintenance and litter removal activities were completed to provide more amenable public open space
- One site where community access and connection to the Yarra River was improved (Fitzsimmons Lane, Westerfolds Park)
- removing over 49,000 cubic metres of silt and 1695 cubic metres of litter and debris from our drainage system, to protect the quality of water in Melbourne's waterways. This prevents silt, litter and debris from entering waterways, in accordance with our obligations under the *State Environment Protection Policy (Waters)*.

Blind Creek

Werribee River, K Road Cliffs

Delivering for Liveability

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.

We listen to our customers to ensure that the essential services we provide remain affordable and sustainable, and help make our region a better place to live.

We engage with Traditional Owners as sovereign partners in land and water management, working to strengthen relationships and connection to Aboriginal Victorians and Traditional Owner organisations.

Resilient Cities and Towns

Melbourne Water has a significant role to play in ensuring that greater Melbourne remains resilient and liveable. As custodian of significant land and water assets, Melbourne Water is uniquely placed to transform and reimagine activation of under-utilised sites for multiple community benefits. Integrating the way we deliver our services maximises benefits for our customers and the broader community.

Yarra River, Southbank

Our Approach

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, or integrate with, all organisations with an interest in the water cycle and with communities 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). This 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 *Melbourne Water System Strategy*, *Melbourne Sewerage Strategy*, *Flood Management Strategy* 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.

Facilitating Integrated Water Management for urban development

Melbourne Water has worked closely with the Victorian Planning Authority (VPA), retail water companies and local councils to progress IWM planning for key development sites across Melbourne, as well as in regional precincts. Recognising the importance of aligning collaboration and investment in water cycle infrastructure with urban planning and development timelines, Melbourne Water has continued to investigate opportunities for embedding and delivering IWM with a focus on greenfield areas, including the Sunbury growth corridor, Wallan and surrounds, Pakenham East, and Aviators Field precincts.

Greenfield development offers the greatest opportunity for large-scale alternative water interventions to improve water security, including re-using as much wastewater as possible, and protecting the health of Melbourne's waterways. Adoption of IWM in the development of these new areas is essential to achieve the targets set out in Melbourne Water's services strategies.

In addition to demonstrating this commitment through direct investment over the next five years in priority areas including stormwater harvesting, Melbourne Water has continued to influence and support broader strategic changes to policy, planning and regulation that will enable broader IWM across the region.

Integrated Water Management forums

The Victorian Government's water policy, Water for Victoria, commits to putting IWM into practice and ensuring community values and local opportunities are embedded in water planning. Bringing together state and local government agencies and other stakeholders, they support prioritisation for work and investment to collectively protect waterways, reduce demands on the potable network, better manage flooding risks, and create a diverse water portfolio in an uncertain future.

During 2020-21, Melbourne Water participated in 17 DELWP-led IWM forums and working group meetings across the Port Phillip and Westernport regions. The focus this year was on progressing the development of catchment-scale integrated water management (CSIWM) plans for each catchment, including IWM targets for 2030 and 2050. Setting targets aims to increase the adoption of IWM and embed its delivery as 'business as usual' practice.

Investigating city-scale alternative water networks

Melbourne Water is supporting DELWP and other IWM Forum members in a collaborative investigation to assess citywide alternative water networks (ACAWN). The purpose of the project is to investigate the economic viability of city-scale alternative water networks, to contribute towards greater re-use of recycled water and stormwater in our suburbs, aiming to create a more liveable and resilient Melbourne. The project has assessed a range of options for such a network at a conceptual level to help meet future water demands under different climate change and population growth scenarios.

Concepts include using large-scale recycled water and stormwater to supply future non-drinking household water demand to reduce reliance on potable water, increase liveability through irrigated open space for cooling and shading, and supply agricultural demand for more reliable and secure food supply. The project's outcomes will help to inform the work of the IWM Forums and the *Greater Melbourne Urban Water System Strategy*.

Integrated Water Management capacity building and education with Clearwater

Established in 2002, the Clearwater program aims to improve the quality of Victoria's water environments by better managing urban stormwater and ensuring industry makes use of the latest technical and scientific information. Clearwater helps professionals, organisations and the sector take an integrated approach to water management through network building, specialised training workshops, guided technical tours and other knowledge-sharing activities.

Due to COVID-19 restrictions, all Clearwater events in 2020-21 transitioned to online delivery, enabling the program to support a broader geographic audience. Along with our capacity building events program and regional Victorian support through stormwater management training and education videos, Clearwater also partially funded three Water Leadership Program scholarships (one of which is dedicated to emerging Indigenous water leaders). In March 2021, a digital decision-making tool was developed in partnership with DELWP to identify applicable statewide stormwater planning provisions to assist local planning authorities and other stakeholders.

30 HECTARES OF URBAN COOLING: COOLER, GREENER ENVIRONMENTS

Future investment in stormwater catchments

This year Melbourne Water ran a pilot to assist with the prioritisation of future investment opportunities for stormwater catchments. Our Stormwater Investment Prioritisation Tool and Framework is a decision-making support tool that uses spatial data to identify priority catchments for investment, screen potential interventions and evaluate comparative capital works programs.

The study provides insight into how harvested stormwater projects might be rolled out on a broad scale in areas that are currently under development, and supports planning for stormwater interventions that meet the *Healthy Waterway Strategy* performance objectives. Ten investigation areas are being prioritised for further investigation and investment. These are a combination of greenfield locations in residential growth corridors and areas of high environmental value where low rates of development provide the opportunity for Melbourne Water to influence and create desirable environmental outcomes.

Creating cooler, greener environments

As our climate becomes hotter and drier, the need for creative urban cooling strategies becomes essential to offset the urban heat island effect where hard surfaces absorb, store and radiate heat creating hotspots in the urban landscape. Melbourne Water has planted 350 eucalypts and 4000 native shrubs alongside the Edithvale-Seaford Wetland, 170 established river red gums and 12,500 native shrubs at Jacana Wetland, and 250 established trees and 1180 native shrubs at three Maribyrnong River sites, contributing to 30 hectares of urban cooling as part of our Waterways and Drainage Investment Plan target.

We developed an Urban Cooling Data Dashboard to support more strategic, informed decisions about where to prioritise shade and cooling investment on Melbourne Water land and along waterways across greater Melbourne. This enables the identification and prioritisation of locations or projects based on a number of geospatial factors, including the size of the benefitting population surrounding the site, heat vulnerability of the people living nearby, the potential cooling that can be achieved, and the opportunity for co-benefits with other projects or partners.

The dashboard will assist in facilitating partnerships, particularly with local councils interested in using Melbourne Water-owned land to deliver on their urban forest and cooling strategies.

Increasing recreational use of Melbourne's waterways

Melbourne Water is committed to improving accessibility for the public to enjoy and use our waterways across four waterways catchments, as part of the *Healthy Waterways Strategy* and Yarra Strategic Plan. We have partnered with recreational managers across Melbourne to deliver on-water recreation.

In the Yarra River catchment, we partnered with Manningham City Council, Parks Victoria and Paddle Victoria to design and deliver improvements for the Regional Paddle Sports Centre at Westerfolds Park and other locations (for example, Finns Reserve). We have also been collaborating with DELWP, Parks Victoria and Wyndham City Council to design and deliver new safe access structures on the Werribee River.

Using DELWP funding as part of the Boosting Recreation Water Use Initiative, Melbourne Water aims to provide additional on-water recreation facilities at three locations to improve opportunities for the community to enjoy their local waterways. In 2020-21, the work included:

- Moonee Ponds – a new pedestrian and cyclist bridge across Moonee Ponds Creek as well as shared path connections, informal path networks and revegetation and park amenity (seats, signage, etc.)
- Maribyrnong River – a floating pontoon, BBQ facilities and shared pathway network delivered in collaboration with Maribyrnong City Council
- Werribee River – multi-use platform and on-water recreation study to be delivered in collaboration with Parks Victoria and Wyndham City Council.

As we work to enhance recreation value for the community in our waterways, we are also investigating potential recreation opportunities at suitable reservoirs within our water supply network. To support this we have investigated a range of different management regime options at existing reservoir sites where public access is provided. We have also commenced early stakeholder engagement and are preparing to commence broader community consultation in late 2021.

Reimagining Your Creek

Reimagining Your Creek is a multi-partner, multi-site program that transforms heavily engineered concrete channels and pipes into natural places the community can enjoy, with significant improvements in liveability and environmental outcomes. This is especially important in suburbs with limited natural or open space available for exercise, recreation and relaxation. Reimagining Your Creek uses a co-design approach with local communities to ensure we achieve the best liveability outcomes based on local knowledge, suggestions and values.

This year we completed the Blind Creek project, which naturalised 620 metres of underground drain, creating greater community access to a waterway and green open space to improve the liveability and wellbeing outcomes for the local community. The project improved the connection to local schools, recreational parks, sports ovals and the shopping centre by constructing shared pathways and supported Knox's City Council's delivery of a cycling strategy for the local community. The project received the prestigious Australian Institute of Landscape Architects (AILA) Victorian Award of Excellence for Infrastructure.

The Tarralla Creek project is underway and will create a healthy functioning meandering waterway in Croydon that will manage flooding issues and improve biodiversity through habitat creation. The project focuses on bringing water to the surface (daylighting the creek), creating places for the community and wet habitat which will promote local flora and fauna.

Blue-green corridor planning

A blue-green city is an urban area that is designed to successfully incorporate natural systems that provide the ecological and amenity value associated with urban greening, and also provide stormwater management. Melbourne Water is considering how the waterways and service land that we manage could contribute to an interlinking network of parks and park connectors across the region. We have identified areas across the region where enhanced access to green spaces (including waterways) would generate the greatest community health and wellbeing benefits. We are starting to test how this blue-green corridor network of natural escapes, recreation and paths could be implemented through collaborations we both lead and are a part of – including the Chain of Ponds collaboration on the Moonee Ponds Creek.

An additional part of this work this year has included supporting DELWP in its development of the Waterways of the West Action Plan. This program will ensure that Melbourne's western waterways and their parklands are protected in the future so that these community assets continue to be valued and enjoyed for years to come.

Blind Creek

Customers and Community

Melbourne Water provides a range of valued services to customers and the community, who are at the centre of everything we do.


Blind Creek

Our Approach

The essential services Melbourne Water delivers are shaped and influenced by the current and future needs and priorities of our customers and community. We engage with them extensively as our strategies, plans and projects are designed to embed the outcomes that are most valued.

We develop relationships with our customers and partner with them to deliver shared services to our community. Our community represents those that are engaged, invested in, contribute to or are impacted by the decisions we make. Our community resides in the greater Melbourne region and benefits from the services we provide with our customers and partners. Our *Melbourne Water Customer and Community Strategy* guides our approach to customers and the community, and outlines our plan to better manage and respond to their needs.

Customer segments

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

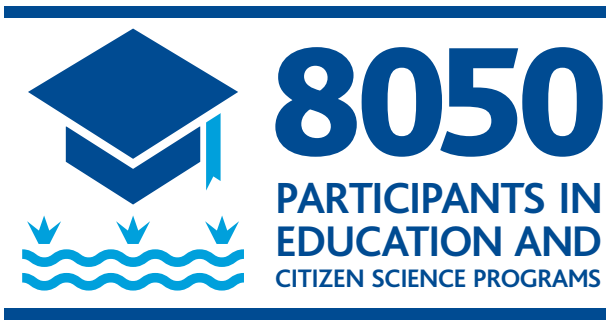
- State Government
- local government
- retail water companies
- industry leadership
- direct service customers (including developers)
- suppliers
- engaged community groups
- community.

Next Generation Engagement Program

Over the past few years we have worked hard to embed our Next Generation Community Engagement model (NextGen) into the culture of the organisation. In 2020 we were proud to be awarded Australasian Organisation of the Year by the International Association of Public Participation (IAP2) in recognition of our leading practice.

Some of the leading innovations recently delivered through the NextGen program include the use of cutting-edge digital engagement and education tools delivered through our YourSay engagement platform. In 2020-21, there was a 72 per cent increase in digital engagement interactions through YourSay as we pivoted to deliver innovative digital engagement to support our customers through a challenging year. Complex, multi-stage engagement programs for major strategic projects were completed, including the 2021 Price Submission and our *Waterways Drainage and Investment Plan*. We also continued community collaboration on Sunbury's *Integrated Water Management Plan*. These projects involved significant customer and community engagement, collaboration and empowerment, including deliberative panels and co-design approaches, as well as a range of online digital forums as part of our COVID-19 arrangements.

In addition, nearly 225 capital infrastructure projects and several hundred local community projects were undertaken (such as tree planting, weed control and grass cutting) to improve our local communities and protect the environment. We engaged the community in a range of ways, from community bulletins, focus groups, doorknocks and pop-up events to innovative and online approaches such as deliberative panels, co-design, digital platforms and social media.



Increasing water literacy

We have evolved our approach to community education about the water cycle in 2020-21 to develop a framework to deliver behaviour change through the uptake of sustainable water saving habits by improving community water literacy and water cycle management understanding. Our research shows that communities with higher water literacy are empowered to participate in the shaping of Melbourne's water future, as well as being more likely to practice water-saving behaviours.

We have signed a new partnership agreement with Zoos Victoria to communicate water literacy concepts to audiences, and have planned increased investment in digital education resources to significantly expand our audience reach, equipping people with the knowledge to contribute to smart water choices.

To embed this delivery in our programs, we have included a KPI in our 2021 Price Submission to increase the proportion of the community with at minimum moderate water literacy to at least 75 per cent.

Reducing litter in our waterways

Ninety-five per cent of litter that ends up in Port Phillip Bay comes from suburban stormwater drains. Melbourne Water works hard to keep our rivers and creeks clean and to bring safe and enjoyable green spaces adjacent to these waterways. We continued the third year of our Litter Action Project supported by funding from DELWP's Port Philip Bay Fund. This program engaged over 1960 people and established 15 Litter Action Groups across Melbourne. It prevented more than 39,000 pieces of litter from entering waterways and Port Philip Bay and implemented 15 initiatives to help prevent litter from entering waterways. Over 7900 volunteer hours were contributed to this project.

We also ran a litter awareness communications campaign to improve community perception of maintenance management of waterways and surrounding open spaces, and motivate waterway users to pick up litter adjacent to waterways to enhance their own – and their community's – enjoyment of these spaces. It provided community with a sense of belonging and shared responsibility, driving empowered action by disposing of litter along waterways when enjoying these spaces.

Improving the service experience of our customers

This year we have developed a strategic relationship management tool which helps create a complete view of our key customers, relationships, interactions and insights. The tool is a key enabler of both the *Customer and Community Strategy* and the *Digital Strategy*. It will drive greater customer focus, responsiveness and exceptional experiences through the digital platform as well as facilitate effective collaboration with customers, stakeholders and the community. A staged rollout began in June 2021 and will continue later into the year.

Digital services and education

Our digital services continued to evolve to deliver an improved channel experience for our customers and the community. In 2020-21 we delivered further innovations and expanded the successful Western Treatment Plant virtual tour by launching the augmented reality WTP Tour App. This new tool takes users right into the WTP for 360-degree views of the site, from the sewage inlet to the substantial lagoons that are used to clean up around half of Melbourne's sewage.

In October we partnered with the Australian Water Association and 16 Victorian water authorities to deliver the National Water Week Online Learning Festival. The Festival offered a whole range of online events over the week from webinars to theatre, storybook readings and activities for the classroom. Together, we had over 4000 participants in events, almost 2000 views of available videos, 36,601 social media views and 5165 webinar participants.

There were 8050 participants in our education and citizen science programs including attending workshops, events and presentations either online or in person. Over 18,000 users engaged with us digitally by subscribing to newsletters, monitoring frogs or using our innovative website resources like Drip Trip and the WTP Virtual Tour.

QR codes enhancing community experiences

The events of 2020 saw universal adoption of QR technology for the first time in our communities. Building on the momentum of QR code check-in to a location during the COVID-19 pandemic, Melbourne Water leveraged our operational QR code check-in to develop an enterprise-wide system. The system allows the business to self-serve QR codes for printed material, site signage and other engagement collateral providing a dynamic and streamlined digital experience for community that is content rich and relevant to their local context.

This work forms a key part of our digital engagement and education program, which aims to drive water literacy outcomes and improved customer and community digital experiences. In the operational parts of business, QR technology is now being used to augment and provide additional contextual information to plant and asset infrastructure.

Customer hardship program

Melbourne Water customers mostly experience hardship in relation to the waterways and drainage charge, which is collected on our behalf from customers by the retail water companies. We also manage hardship for some direct customers relating to river water permits. In December 2020, Melbourne Water actively began engaging with the three metro water retail companies to gain better understanding of their financial vulnerability (hardship) programs and any new support measures developed in response to the pandemic. We are continuing to explore ways to support their hardship programs, and have updated our debt management policies and developed a process to proactively identify financially vulnerable customers.

Our customer performance

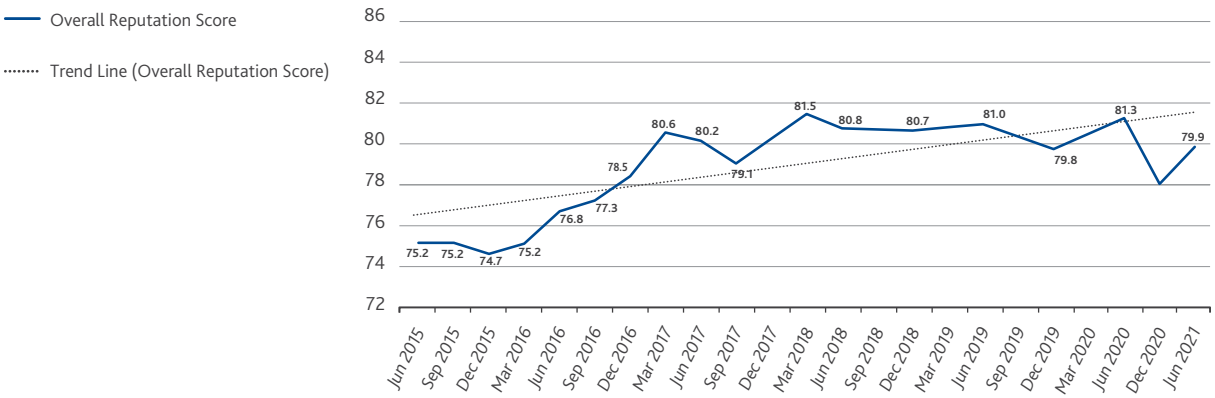
To better understand the needs of our customers, we use a broad and evolving range of tools including targeted research projects, internal data analysis and direct feedback to inform our customer strategies and plans.

Our six-monthly Reputation Study tracks customer and community perceptions of Melbourne Water and includes metrics relating to trust, esteem, admiration and respect. Our overarching Reputation Score remains strong at 79.9 despite a slight dip from 81.8 in June 2020. The decrease was driven by our customers (80.0 compared with 82.4 in June 2020), while our reputation with the wider community of Melburnians continues to go from strength to strength (78.7, up from 76.4 in June 2020).

While our Reputational Score is strong, we are always striving to improve. This year we implemented a Customer Satisfaction by Service (CSAT) framework aligned to core services and customer segment satisfaction levels, launching with a pilot in November 2020 for our water and sewerage services. Results show a high level of satisfaction with our operations, with opportunities existing to further improve our engagement and collaboration with the water retail companies in future planning. The remainder of the CSAT framework will be implemented in 2021-22.

Our Customer Service Centre continued to maintain a very high standard of service assisting customers and the community. In 2020-21, it managed over 38,000 phone calls and received 900 social media enquiries. Our digital customer service program managed a significant 114 per cent increase in engagement, with website use 9 per cent higher, and an audience increase of 18 per cent.

Melbourne Water Reputation Score – Community and Customers



Water for Aboriginal Cultural, Spiritual and Economic Value

Melbourne Water is committed to improving our relationships and outcomes with Traditional Owners in our operating area and the Victorian Aboriginal community more broadly.

Photo taken prior to the commencement of physical distancing rules in March 2020.

Our Approach

Melbourne Water's approach to Traditional Owner partnerships aligns with our *Customer and Community Strategy* direction and principles and has the fundamental distinction that Wurundjeri Woi wurrung, Bunurong, Wadawurrung, Gunaikurnai and Taungurung are sovereign partners in land and water management, not customers or stakeholders to be consulted in relation to these matters.

Traditional Owner partnerships

In 2020-21, we explored formal partnerships enabling self-determined priorities of Traditional Owners which will shape agreements with Melbourne Water. One formal agreement has been drafted with Wadawurrung, based on *Paleert Tjaara Dja let's make Country good together* (Country Plan). We committed to aligning the *Healthy Waterways Strategy* with country plans. We are committed to formalising further partnership agreements with other Traditional Owners and partnering to develop self-determination agreements that align to Melbourne Water priorities.

Cultural Fire

Healthy Country requires Cultural Fire, emphasising the right fire at the right time. It also employs Aboriginal people to practice maintenance of Country, which is an important cultural obligation, while also meeting our obligations for environmental management.

We have developed a Cultural Fire Plan with Traditional Owners with support from the Firesticks Alliance Corporation, which is an adaptation of the *Victorian Traditional Owner Cultural Fire Strategy*. This will deliver cultural burns with Traditional Owners during the next three to five years.

Melbourne Water has completed several walks on Country with Wadawurrung to plan cultural burns at three sites. The plan allows Melbourne Water to satisfy biodiversity requirements including targets within the ecological burn plans at Western Treatment Plant.

Wurundjeri Wiiñ (Fire) has been delivered at two sites this year. A Cultural Fire at Macedon Regional Park has been completed, along with a Wurundjeri burn in Yan Yean at Castle Flat. This is the first time this type of burn has been used in Yan Yean for more than 100 years. The burn was delivered for Melbourne Water by the Wurundjeri Woi-wurrung Narrap Unit (with support from Melbourne Water and CFA crews).

These projects aim to embed Traditional Owner burning techniques into our everyday operations and confirm an ongoing program of cultural burning that is planned and delivered by Traditional Owners in collaboration with Melbourne Water.

Protecting traditional ecological knowledge

Melbourne Water has developed a partnership with Traditional Owners with support from the University of Melbourne to develop protocols for the protection of traditional ecological knowledge (TEK) or culturally specific information as part of research activities. The protocol will be put in place to ensure that Melbourne Water understands how to use, store and share Traditional Owner cultural knowledge in the right way, and is consistent with the commitments outlined in our *Reconciliation Action Plan* (RAP). The protocol also seeks to establish ways for Melbourne Water to share research findings from our Applied Research program with Traditional Owners, as well as facilitating Traditional Owner involvement in collaborative research with Melbourne Water.

Reconciliation Action Plan

To continue developing a culturally competent organisation, we are partnering with Traditional Owners on a range of activities and projects, along with implementing our *Innovate II RAP*. In 2020-21, our delivery has been under three core focus areas: procurement, Aboriginal employment and focus on cultural competency and safety.

1. Procurement

The Aboriginal business sector is growing rapidly, and Melbourne Water's Procurement Team is working with Kinaway (the Victorian Aboriginal Chamber of Commerce) to link members with opportunities across our supply chain.

Our procurement system supports social value weighted criteria through embedded social procurement criteria to better inform buyers with this information. We have also offered to provide mentoring support to Kinaway members and presented at the Indigenous Business Month Kinaway Event in October 2020 on our social procurement in action.

We have created innovative training programs with our suppliers to establish a 100-per-cent-owned Aboriginal construction business, which creates a positive legacy and pipeline of work for young Aboriginals.

Working with Winya, a certified Aboriginal-owned business, our Facilities Team explored options to reupholster, rather than replace, our worn-out chairs. This initiative resulted in a 40 per cent cost reduction on furniture replacement, as well as delivering on our social procurement strategy and RAP commitments.

2. Aboriginal employment

Melbourne Water Waterways and Catchment Operations Group recently awarded a contract to Traditional Owner Organisation, Wurundjeri Woi wurrung Narrap Rangers. The Narrap Rangers Team will deliver minor field services to Melbourne Water at culturally sensitive sites and use traditional work methods.

Melbourne Water aims to build the capacity of Traditional Owners to work in partnership with Melbourne Water and the water sector more broadly. This year, we delivered a number of capacity building projects with Traditional Owners that provide work on Country, while developing waterway management experience.

3. Focus on cultural competency and safety

Making Melbourne Water a culturally safe place to work has driven our program this year, supported through three annual week-long events, of cultural immersion to improve our cultural safety, knowledge and connections – National Reconciliation Week (May), NAIDOC Week (July) and our own Melbourne Water celebratory event Yaluk Biik Baan (August). Widespread use of Aboriginal art in all office locations, using Traditional Owner-endorsed language for rooms and in co-delivered projects, and acknowledging Country in all office foyers and entries are further embedding culturally safe principles.

Melbourne Water's cultural awareness training plan includes a three-tiered approach comprising online learning, training by third-party providers (not Traditional Owners) and by Traditional Owners delivered on Country at WTP and Werribee River You Yangs, Wadawarrung, Wurundjeri Woi worrung. Overall, 161 participants completed cultural awareness training for the year, including 11 as part of on-Country experience.

The COVID-19 restrictions prevented full-scale delivery of on-Country inductions during the year. The induction for the Waterways Blitz team (see page 25) was conducted on Country, led by Wurundjeri Woi worrung.

In 2020-21, work also included the establishment of a Cultural Advisory Group, comprised of Melbourne Water employees committed to advancing reconciliation, and the creation and application of consistent protocols for Acknowledgement and Welcome to Country across Melbourne Water.

As part of NAIDOC week, we held a virtual Yarning Circle with Aunty Janet Turpie-Johnstone and Dr Kerry Arabena, facilitated by community leader Karen Milward. The session was Aborginal-led and designed, and over 100 participants gained further understanding of Aboriginal and Torres Strait Islander culture and steps they can take to create culturally safe environments.

We also ran an event partnership with the Australian Water Association for more than 100 participants from across the water sector with Wurundjeri Elder Uncle Dave Wandin guiding the conversation, while taking participants on a virtual tour of Wandoon Estate (formerly Coranderrk).

Werribee River

Delivering for Environment

As a business we are mindful that our operations consume resources and have the potential to create environmental impacts. We are committed to minimising these impacts to enhance our contribution to the environmental sustainability of greater Melbourne. Our ***Environmental Stewardship Strategy*** sets out how we will achieve this.

Melbourne Water is one of the largest greenhouse gas emitters in Victoria, as we manage wastewater on behalf of most Melburnians. We have an important role in reducing emissions and helping meet Victorian and Australian greenhouse targets.

Climate Change and Adaptation

Our Approach

Melbourne Water's ongoing climate and resilience planning tracks our responses to climate change and is helping to build the knowledge and capability of our people.

This year we have further enhanced our disclosures, in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

Climate risks

Climate change creates challenges for Melbourne Water's services, the natural environment and liveability of our region. The future may bring less rainfall, more drought, rising sea levels, more intense storms and flooding, and more risk of fires. Increasing temperatures and extreme weather are already affecting our services and the way we operate. A transition to a low-carbon economy would create other risks and changes including new standards and regulation, new carbon prices and changing energy markets. Melbourne Water is working to understand and respond to both physical and transition risks of climate change.

Scenario planning

Our service strategies outline potential future climate scenarios informed by the best available climate projections, and modelling and research programs. They assess key risks and propose strategic adaptation responses that draw on community and stakeholder input. Use of climate scenarios is tailored to the unique requirements and best practices applicable to each service and type of risk. Scenario analysis and planning generally includes a Representative Concentration Pathway (RCP) of 8.5 as defined by the Intergovernmental Panel on Climate Change to explore potential 'worst case' future climate impacts, along with other scenarios that may be relevant. A range of other future conditions are considered alongside climate projections to explore topics such as interaction of climate changes and urban growth.

Risk governance and management

Climate risks are governed internally through Melbourne Water's business-wide risk framework, and through ongoing service planning processes. Climate risks, planning and responses are reported to the Board through quarterly risk reports, ongoing operational reporting and periodic detailed discussion of priority risk topics.

We conduct ongoing research and annual environment scanning to ensure we have the best available climate information and identify emerging risks and opportunities. We engage with regulators, research institutions and other government bodies in our region to share climate knowledge and coordinate our efforts.

Climate planning and response

Examples of climate planning and response activities delivered in 2020-21 include:

- working with DELWP to support an update of *Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria* to include urban and integrated water. These guidelines are now helping to inform long-term water strategy and ongoing exploration of stormwater harvesting and other activities that could help boost overall supplies in future
- modelling how much water may be needed by resilient urban forests and public parks to continue providing cool, green spaces for communities as the climate changes. This is part of our work to understand how water demands may change in future, and is helping inform how we plan with others for all future water needs
- a range of emissions reduction research, investment and planning activities, as outlined in Our Path to Net Zero (see page 45).

Table 4: Actions to address climate risk

Water	
Climate risks for water supply include declining rainfall in catchments, rising future demand, and increasing risks to water quality from events such as bushfire and algal blooms. Water supply and demand modelling has identified that new supplies could be needed within the next decade. Opportunities include developing new sources such as stormwater harvesting and making efficient use of the water we have from existing sources. We are currently raising community awareness, maximising the volume of water held in storage for immediate security, and working with government through long-term urban planning and water strategy processes to enable investment in new water sources at the appropriate time.	**KPIs:** Maintaining natural water storages at >40% full Support delivery of 80GL of alternative water by 2065
Sewerage	
Climate risks for sewerage systems include more intense rainfalls leading to more water entering transfer and treatment networks, sea level rise and erosion affecting coastal assets (including the Western Treatment Plant), and rising regulatory requirements and costs for managing greenhouse gas emissions associated with wastewater. Modelling is in progress to better understand priority risks at a number of time-steps out to 2100.	**KPIs:** Reducing reportable greenhouse gas emission to 204,380 tonnes CO2-e by 2025
Flood and Drainage	
Climate risks for flood and drainage services include more intense storms and sea level rise leading to more frequent and costly floods in future. Risks from more intense storms and sea level rise are now being explored and modelled out to 2100. Opportunities include well-designed new urban developments and renovations that make buildings safer, and that reduce runoff by slowing or harvesting stormwater, and building community awareness to enable flood planning and safety. We are currently investing in flood risk modelling, improvements to urban drainage and flood systems, building community awareness, and working with planning authorities to inform design of new urban development.	**KPIs:** Flood information renewed in 25% of rural catchments and 35% of urban catchments subject to flooding from FY22 to FY26 Reduction in flood damages of $155 million achieved over the life of the works for assets created in period from FY22 to FY26
Waterways	
Climate risks for waterways include less water for the environment as overall water availability declines, and increasing heat, fire, sea level rise and flood risks affecting flora, fauna and ecosystems. These threats amplify the damage being done by urban runoff and invasive species. Climate-related impacts are being observed now, and we are conducting modelling and research to better understand impacts over time in complex ecosystems. Opportunities include more stormwater re-use and groundwater infiltration, and seeking more water for the environment as part of long-term resource policy. We are currently monitoring and managing environmental water, working with other government agencies to improve urban stormwater re-use opportunities, and informing long-term state water strategies with information about future environmental requirements.	**KPIs:** Contribute to capturing and re-using 80GL/year of stormwater to protect and/or restore waterways Stormwater harvesting and infiltration capacity will increase by 8GL/y through Melbourne Water programs from FY22 to FY26

Yan Yean Reservoir

Climate and resilience highlights from 2020-21 delivery program by service

	Timeframe	Functional business areas: Source waters and demand	Built assets	Natural environment	People and workplace	Interdependencies	Customer and product delivery
Water							
• Delivered annual 'Water Outlook' and Desalinated Water Order Advice, to support long-term water security for all Victorians.	●	●				●	●
• Developed infrastructure investment programs and operating enhancements to improve water security under dry conditions.	○	●	●			●	●
• Planning for future climate-adaptive additional water sources including recommissioning, optimising long-term desalinated water volumes, harvesting stormwater and more use of reclaimed water.	●	●				●	●
• Improvements to fire-fighting capability and safety in partnership with EMV and DELWP.	●	●	●		●	●	●
• Modelled potential increases to water transfer requirements under heatwave conditions for a range of time horizons, and started developing new methods to understand future climate impacts on water demand and transfer needs.	●		●			●	●
• Modelled potential water demand for urban forests and parks under future climates for inclusion in future water strategies and regional vegetation planning.	◐	●		●		●	●
• Research and modelling to better understand climate risks to catchments, hydrology, water quality and supply, and water supply assets, and help develop options to maintain water security and quality through climate variability and extreme events.	●	●		●	●	●	●
• Engaged with government to support new guidelines for urban water strategies, drought preparedness plans, and water supply adaptation planning that responds to climate change.	●	●				●	●
• Water literacy and education programs in partnership with metropolitan water businesses to build engagement with water resource conservation.	●	●				●	●
Sewerage							
• Updated modelling of transfer network impacts of increasing wastewater and stormwater flows from urban growth and climate change. Improved historical rainfall information, increased temperatures, future rainfall intensity, evaporation and sea level rise included.	○		●	●		●	●
• Supported DELWP's development of a Coastal Hazard Assessment for Port Philip Bay, and scoping future use of information for internal asset planning processes.	○		●	●		●	●
• Renewable energy and emissions reduction programs to support a climate-adapted Victorian economy.	●		●	●		●	●
• Program of research on topics related to water reclamation and re-use.	●	●		●		●	●
Flood and Drainage							
• Mapping potential future climate-related flood risks in priority catchments in partnership with local councils.	●		●			●	●
• Supported councils to consider including climate change flood risks in their local planning scheme.	●		●		●	●	●
• Supported DELWP's development of a Coastal Hazard Assessment for Port Philip Bay, and conducted scoping for future use of information in urban development and coastal advisory processes.	○		●	●		●	●
• Actions to build resilience to climate change impacts included in the draft *Flood Management Strategy Port Phillip and Westernport 2021-31*, and associated action plan.	○		●			●	●
• Updated future flood Annual Average Damages estimates with regard to climate projections.	○		●			●	●
• Provided future coastal inundation information for urban development purposes.	●		●			●	●
Waterways							
• Explored opportunities to retain more water in urban landscapes to reduce stormwater impacts on waterways while supporting greener, cooler neighbourhoods and climate adaptation.	●	●		●		●	●
• Research into climate threats to rivers, wetlands, estuaries and bays, and opportunities to build resilience into our natural and constructed assets. Includes hydrologic and ecological modelling, climate resilient vegetation and soft engineering for coastal protection research.	●			●		●	
• Urban cooling plantings to provide shade for regional parks and trails as well as improving habitat, community engagement and appreciation of waterways.	◐			●		●	●
• Monitored high-value drought refuge sites (key wetlands and waterways) and maintained response plans to enable response if conditions become critical.	●	●		●			

Short term ○ A significant component that has been completed or will be completed within approx. 1 year. May also have ongoing elements eg capital delivery programs associated with a plan.

Medium term ◐ Work will continue over 1 – 5 years

Ongoing ● A long term program

Our Path to Net Zero

Our Approach

Melbourne Water is progressing Our Path to Net Zero in line with the long-term Victorian Government's target of net zero greenhouse gas emissions by 2050. This includes an action for the metropolitan water corporations (including Melbourne Water) to examine accelerated progress to reach net zero emissions by 2030.

Our Path to Net Zero is being progressed in two stages:

1. A reduction to 204,380 tonnes CO2-e by 2025 (which represents a 50 per cent reduction of our average emissions between 2011 and 2016).
2. Examining a path to net zero by 2030.

Measuring greenhouse gas emissions

There are range of uncertainties in determining greenhouse gas emissions. To improve our emissions reporting, and also to identify opportunities for reducing emissions across our treatment plants, we have been performing site-specific assessments of our emissions. In 2020-21 we:

- commenced a research project with the University of Western Australia that will inform our understanding and modelling of greenhouse gas emissions from the lagoons at our Western Treatment Plant (WTP)
- commenced a project partnering with the University of Melbourne to measure greenhouse gas emissions from the solids drying process at the Eastern Treatment Plant (ETP). The findings will be used to improve the accuracy of emissions reporting and support future business cases for emission reduction from this area
- commenced a project partnering with the University of Queensland to measure nitrous oxide (a powerful greenhouse gas) emissions from the WTP's nitrogen reduction treatment process. This work will help identify operational strategies to reduce these emissions.

Our emission reduction performance

Figure 1 shows Melbourne Water's planned path to achieving our carbon pledge. There are significant uncertainties in predicting our future performance, due to factors such as population growth, wastewater treatment plant operation (including maintenance activities), predicted timing of wastewater treatment plant upgrades, climatic conditions, water use per customer and rainfall. With this in mind, we acknowledge that, as well as delivering efficiencies in our sewerage treatment processes and increasing the production of renewable energy, Melbourne Water will be relying on carbon offsets and Renewable Energy Certificates (RECs) to achieve our target. The cost of these was included in the 2021 Price Submission.

A break-down of our greenhouse gas emissions for 2020-21 across our services is provided in Table 5 which shows that the biggest source of emissions within Melbourne Water is associated with sewage treatment and management, producing around 85 per cent of our total emissions, in comparison to the water supply system which uses less energy and has low direct emissions. As mentioned earlier, there are many factors that must be considered in estimating our future greenhouse gas emissions and the variance of 8.3 per cent against our forecast emissions is demonstrative of the significance of the influence of these factors. We are confident that we are still on track to meet our Carbon Pledge through onsite renewable energy generation, procurement of renewable energy and market-based instruments (offsets).

In 2020-21 we progressed our emissions reduction commitments by:

- working with the wider Victorian water sector to develop a framework for future sourcing of carbon offsets. Along with many other Victorian water authorities, Melbourne Water will need to use carbon offsets alongside renewable energy and other investments to reach our emissions targets. The framework will guide carbon offset investments to help meet our carbon pledge with credible and trusted offsets that meet best practice standards and the expectations and preferences of our customers and the community
- progressing planning for a pilot carbon forest in the Port Phillip and Westernport regions in partnership with the Catchment Management Authority, Greater Western Water and Yarra Valley Water, and exploring where we could plant carbon forests on un-vegetated Melbourne Water land
- progressing our transition to a zero emissions vehicle fleet within 10 years. This year we replaced 13 of our vehicles with electric vehicles and added 23 new charging sites across seven of our sites to service our fleet
- a renewable energy program (see Renewable energy, page 44).

Figure 1: Melbourne Water's path to achieving 50% reduction in CO2-e by 2024-2025, as required as part of the Statement of Obligations

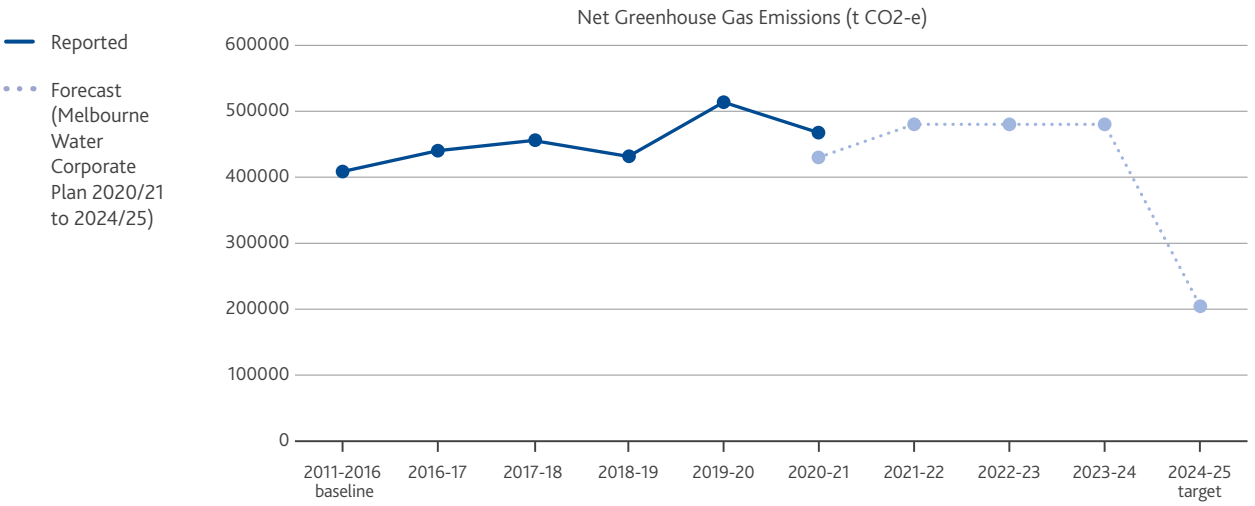


Table 5: 2020-21 greenhouse gas emission performance, by service

Service delivery category	Greenhouse gas emissions (t CO_2-e)				Variance (%)
	20-21 Projected emissions	20-21 Result			
		Scope 1 emissions	Scope 2 emissions	Total emissions[1]	
Water treatment and supply	n/a	279	63,748	64,027	
Sewerage treatment and management	n/a	240,896	154,610	395,507	
Transport	n/a	1904	0	1904	
Waterways	n/a	5707	1257	6965	
Other (e.g. offices, depots, etc.)	n/a		264	264	
Total Emissions (a)	**430,000[2]**	**248,786**	**219,880**	**468,666**	**8.3%[3]**
Carbon offsets (self-generated) retired		0	0	0	
Carbon offsets (other) retired		0	0	0	
Total Offsets (b)		**0**	**0**	**0**	
Net Emissions (a – b)	**430,000[2]**	**248,786**	**219,880**	**468,666**	**8.3%[3]**

[1] Sum of scope 1 and 2 emissions.

[2] From Melbourne Water Corporate Plan 2020-21 to 2024-25.

[3] Melbourne Water is committed to emissions reduction and is currently pursuing a range of emission reduction projects.

Renewable energy

Melbourne Water has an extensive portfolio of onsite renewable energy generation facilities, throughout our water system and wastewater treatment plants.

New solar farms

Along with hydropower and bioelectricity, solar is an exciting opportunity to expand Melbourne Water's portfolio of renewable energy generation. In November 2020 Melbourne Water awarded Beon Energy the construction contract for a new 19 megawatt solar farm at the ETP in Bangholme following a tender application process. An additional 6 megawatt solar farm is planned for Winneke in September 2021. These solar projects will increase our portfolio of renewable energy generation by an expected 44,600 megawatt hours of power per year, lowering our carbon emissions while enhancing affordability for our customers and the community.

Mini-hydro power stations

Melbourne Water currently generates almost 70,000 megawatt hours of power per year via hydroelectric generation – enough to power approximately 14,100 homes. We are preventing over 75,800 tonnes of carbon dioxide emissions, which is equivalent to taking more than 29,200 cars off the road.

We are expanding our generation of hydroelectricity through our water transfer system with the commencement of construction of the St Albans Mini-Hydro. The mini power station will convert energy from the pressure and flow of water going into the reservoir to electricity, which will be fed back into the power grid and used to reduce our operating costs. O'Shannassy and Upper Yarra mini-hydros are progressing with design and are scheduled for construction in 2022. These three additional mini-hydros will collectively produce, on average, 7100 megawatt hours of electricity each year.

Optimising energy management

The rise in home solar generation exported into the electricity network is creating a highly variable energy market, and Melbourne Water is exploring opportunities with our energy retailer to help support better energy grid management across the greater Melbourne electricity network. Using Aquadvanced® Energy (AAE) software currently deployed to optimise our water transfer network, we will be working with our retailer to integrate a variable tariff system. AAE will respond to the variable tariffs and transfer water in the most efficient way, enabling us to deliver our services at lower rates while benefiting the community by not using as much energy in times of peak demand.

Energy consumption

Our electricity consumption across our services and offices and depots in megawatt hours (MWh) is set out in Table 6. We had a 30 per cent reduction in electricity consumption for water which is mainly attributed to electricity usage in 2019-20 being unusually high. The high usage last year was due to additional pumping at Yering Gorge to replenish low Sugarloaf Reservoir levels, which were caused by low river harvest in previous years. In the last year, the majority of our staff have been working from home, which has resulted in around a 40 per cent drop in our office electricity consumption.

Table 6: Total electricity consumption across our services

Service delivery category	19-20 Result (MWh)	20-21 Result (MWh)	Commentary
Water treatment and supply	89,473	65,246	Unusually high consumption in 2019-20 due to extra pumping at Yering Gorge
Sewerage treatment and management	272,793	263,444	
Waterways	1229	1013	
Other (office, workshops, depots etc.)	455	310	Empty office due to COVID-19
Total	**363,950**	**330,014**	

Table 7 shows our renewable electricity consumption. Approximately 33 per cent of our total electricity use can be supplied from our biogas plants; however, only 5.68 per cent can be categorised as renewable energy consumed by Melbourne Water, as we currently sell our Renewable Energy Certificates (RECs) in order to keep prices low for our customers.

Table 7: Total renewable electricity consumption, by type (MWh)

	2019-20	2020-21	2020-21 Renewable energy as % of total consumption	Commentary
Grid-sourced[1]	**48,336**	**42,002**	**12.73%**	In 2020-21, 42,002 MWh is classified as renewable due to mandatory surrender of RECs to meet the Commonwealth Renewable Energy Target
Self-sourced[2]				
Biogas	13,805	18,755	5.68%	In 2020-21, we produced a further 88,984 MWh from our biogas electricity generation facilities but sold the associated RECs, therefore this additional amount is not considered as renewable electricity consumed by Melbourne Water
Hydroelectric	0	0	0%	In 2020-21, we produced 36,782 MWh of hydroelectricity with the majority exported to the grid, which does not contribute to our renewable energy consumption. A small proportion (30 MWh) was used on site but we sold the associated RECs, therefore this cannot be classified as renewable electricity consumed by Melbourne Water
Solar	0	0	0%	Presently we do not have any commissioned solar assets generating electricity
Wind	0	0	0%	Presently we do not have any wind assets in our portfolio
Total self-sourced	**13,805**	**18,755**	**5.68%**	
Total renewable electricity consumption	**62,252**	**60,789**	**18.42%**	

[1] Renewable electricity consumption, based on mandatory surrender of RECs via our retail electricity contract, to comply with the Commonwealth Government's Large-scale Renewable Energy Target (LRET).

[2] Renewable electricity consumption as a result of activities and initiatives led by Melbourne Water.

Melbourne Water Corporate Water Consumption

Melbourne Water's corporate water consumption for 2020-21 was 74.19kL or 0.10kL/FTE/year based on operations at our corporate office at 990 La Trobe Street.

Statutory obligations

Enhancing biodiversity

Melbourne Water manages significant landholdings that support diverse communities of native plants and animals. We develop and implement strategies that protect native biodiversity, in compliance with Victorian and Commonwealth biodiversity obligations and our *Healthy Waterways Strategy*.

As waterways manager and a significant landowner, Melbourne Water has a critical role in managing the waterways, estuaries and wetlands which are essential to the survival of much of our region's biodiversity.

Melbourne Water manages two Ramsar-listed wetlands of international importance, where we invest in biodiversity conservation, and 44 other properties identified as sites of biodiversity significance. The WTP Ramsar-listed site is a major portion of Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site, where we play an important role in managing nutrient and sediment input at the site. We also manage the the Edithvale-Seaford Wetlands Ramsar site.

Our WTP lagoon-based sewage treatment ponds support a wide range of biodiversity values including waterfowl, shorebirds, Growling Grass Frogs and Straw-necked Ibis. To maintain the right hydrological regime essential to support these values, we updated our *Environmental Flow Recommendations* drawing on latest monitoring data. Level loggers in key habitat ponds were installed to assist with achieving the correct conditions for shorebirds and Growling Grass Frogs.

The Ramsar-listed Edithvale-Seaford Wetlands are the largest remaining part of the former Carrum Carrum Swamp and home to many bird species, including the endangered Australasian Bittern. Works in 2020-21 included undertaking a feasibility study into the possible use of recycled water from the ETP to reduce impacts of climate change at Seaford Wetlands. Melbourne Water also engaged RMIT to undertake research into water and sediment quality at both Edithvale and Seaford wetlands. This research is leading us to an improved understanding of the macroinvertebrates living in the sediment and their tolerance to pollution. A number of ecologically based projects are being scoped as part of DELWP's $5 million Suburban Parks Program at Seaford Wetlands, ready to be delivered by June 2022. Projects include replacing old nest boxes, installing live cameras and carrying out plantings to enhance habitat.

In 2019-20, Melbourne Water began implementing the Growling Grass Frog (GGF) Masterplan Program in Melbourne's urban growth areas under an agreement with DELWP. The program meets development approval conditions under Commonwealth environmental legislation. As urban development occurs over the next 30 years, Melbourne Water will construct about 80 GGF habitat wetlands and manage around 2000 hectares of GGF conservation area. This year we identified the detailed watering regimes required to achieve high-quality habitat and obtained salinity modelling that will assist Melbourne Water to maintain suitable conditions over time. At the first constructed GGF wetland, vegetation was established and GGF breeding success was confirmed with the sighting of 15 young in February 2021.

Pollution abatement notices

As the manager of Melbourne's waterways, Melbourne Water is responsible for cleaning up pollution caused by others where the polluter cannot be identified or does not have the capacity to respond. In doing so, we frequently incur significant cost, much of which has not been included in formal Pricing Determinations.

Changes to the *Environment Protection Act 2018* (the Amendment Act) come into effect on 1 July 2021. As part of the transition to new obligations on land managers, Melbourne Water was issued notices by Environment Protection Authority Victoria (EPA) in 2019-20 at WTP and ETP to guide the development of a more comprehensive understanding of actual and potential pathways for pollution of land, groundwater and other receiving environments. These notices relate to polyfluoroalkyl substances concentration, and monitoring contamination in soil, sediment, surface water and groundwater. Melbourne Water is addressing these notices, and they are progressively being revoked, with all expected for completion by late 2021.

In July 2020 EPA issued Melbourne Water with a clean-up directive due to capped historic pollution on Melbourne Water-owned land on Stony Creek. As part of our ongoing responsibilities for responding to capped pollution on our land, we are undertaking biannual monitoring of the capping layer and completing maintenance activities such as weeding and pest control to ensure the integrity of the cap is maintained.

State Environment Protection Policy (Waters of Victoria)

The State Environment Protection Policy (SEPP) (Waters) governs the protection and management of Victorian waterways, bays and coastal waters. It provides environmental quality objectives that reflect the latest scientific understanding and national standards. The *Environment Protection Amendment Act 2018* comes into effect on 1 July 2020, and the SEPP objectives remain a core element of the new framework.

We manage our sewerage treatment plants at Werribee and Bangholme to meet the SEPP water quality targets for Port Phillip and Western Port bays. Details on our performance are noted in Sewerage Management (see page 17).

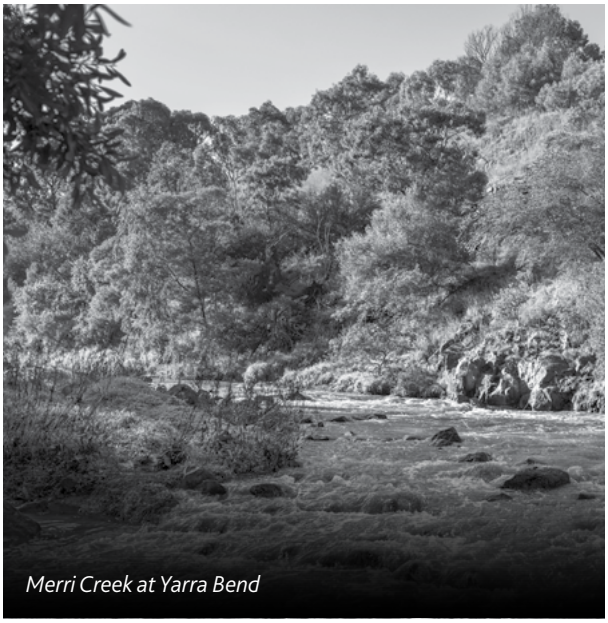
Melbourne Water is investing in a range of other activities across Sewerage, Stormwater and Waterways programs to protect our waters into the future:

- working with DELWP 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 17)
- supporting private landowners to better manage runoff from stormwater and improve water resource management through our Rural Land Program (see page 25)
- conducting waterways and stormwater research programs, which help to deliver on our *Healthy Waterways Strategy* targets for water quality (see Waterway Management, page 23)
- implementing sediment management programs to remove silt, litter and debris from our drainage system and protect waterway quality (see Waterway Management, page 23).

Managing streamflow

Melbourne Water produces streamflow management plans, local management rules and a *Drought Response Plan* to document the ways in which water will be 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 2020-21 Melbourne Water maintained streamflow management plans for seven stream systems in the Yarra catchment. The objectives of the plans are 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. Preparatory work has commenced to repeal the Plenty River Stream Flow Management Plan and replace it with a local management plan, given its low level of diversions and low risk to the environmental water regime. The process, which will include community and licence holder engagement, will also seek to amalgamate several other low risk local management plans in the Lower Yarra Catchment into a single management plan.



Merri Creek at Yarra Bend

Brooklyn Pumping Station

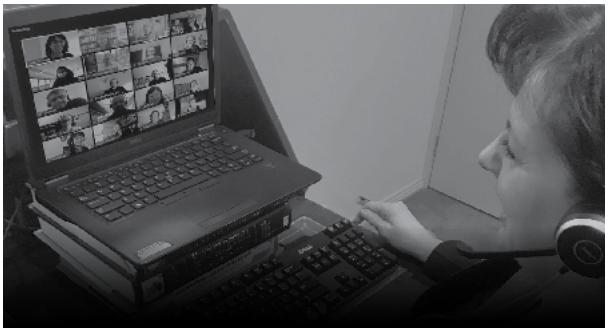
Our People

With safety foremost, Melbourne Water aspires to be a leader in delivering our services. We achieve this through our diverse and capable workforce. Together we have the courage to go above and beyond to deliver service excellence.

Photo taken in May 2019

Inspired People

Melbourne Water's people are central to our ability to deliver essential services to Melbourne.



Our Approach

Attracting and retaining talent, enabling diverse and effective learning experiences, and building employee engagement and satisfaction are critical to our success. Our strong culture and solid foundation of flexible working and commitment to being a learning organisation held us in good stead throughout the COVID-19 pandemic. As we look ahead, we have committed to making flexible working our new normal and will be enabling teams to self-organise around the work to be done. We have embarked on a project to demonstrate the benefits of flexibility to enhance life and liveability for everyone.

Melbourne Water and its employees are committed to growing the diversity of our workforce and fostering an inclusive workplace culture. We recognise that actively creating and supporting diversity and inclusion not only enables us to attract, retain and develop diverse talent, it also contributes to a safer and more engaged workforce, increases our capacity for high performance, and enables us to better understand and respond to the needs of the community we serve.

Culture and engagement

Organisational culture and employee engagement are directly related to performance, productivity, retention, advocacy and wellbeing.

This year, 80 per cent of our staff (1123 people) participated in our employee engagement survey. Overall employee engagement was 77 per cent which, while lower than last year's result of 80, is considered strong and above the Australian benchmark. Local and global industry trends for 2020-21 reflect slight engagement increases in 2020 during the height of the pandemic attributed to a general sense of gratitude for stable employment during a highly uncertain and turbulent time. As things shift to the new normal in 2021, engagement levels are trending to pre-pandemic results. The comparative data has highlighted our organisation's resilience and commitment to purpose despite the ongoing disruptions over the past 12 months.

We were recognised in the top 10 of Australia and New Zealand's Best Places to Work on the 2021 *Australian Financial Review* BOSS Best Places to Work list. Together we have created a business that really cares about people – both within our teams and in the community.

Learning organisation

Our ambition to be a learning organisation remains one of our biggest priorities. Our focus now is to shift the perception of learning as scheduled training to a culture integrated into the flow of our work.

Creating a culture of learning requires a shift in mindsets and behaviours to support our people to be curious to learn, grow and be resilient to change. To support this, we engaged champions throughout the business to identify the habits our organisation needs to embed at scale, to bring a culture of learning to life. Our learning organisation framework was officially launched in May 2021, in front of 280 employees and broadcasting to 100 online attendees.

We refreshed the approach to our learning and development offering, launching a LinkedIn Learning partnership with curated content on building awareness of our core capabilities and mindsets. Available on desktop and mobile, this is helping our people learn on demand and in a self-directed way, as well as getting involved in stretch experiences and development programs which include over 16,000 short videos and 9000 courses from global thought leaders.

New ways of working

The coronavirus pandemic has changed the way we work — both now and into the future. We are in the process of an ambitious program to design the future of work at Melbourne Water that supports our people and our business. We are embracing flexibility and collaboration with the vision to prove that flexible and blended work enhances life and liveability for us all. A number of activities underpin this work, including:

- partnering with Monash BehaviourWorks to develop behavioural trials and interventions that will enable our employees to approach the work they do in a different way. The research will result in two academic papers that contribute to the theory of blended working in a wider workforce
- defining a list of anticipated benefits at individual, organisational and societal levels, that we will track, measure and report against
- reimagining our policies, procedures, systems and processes to empower our people leaders to deliver blended work in a formal and consistent way
- collaborating with industry to explore co-work spaces, projects and thought leadership opportunities together that deliver better outcomes for customers and community
- keeping our people engaged on how new ways of working impacts them through storytelling and a clear roadmap that articulates what changes will be happening across people, process and technology, and when.

Building workforce capability

Building a strong talent pipeline is fundamental to ensuring that Melbourne Water has a workforce that is ready to meet current and future business needs. Our Women's Development Program 'Unite' continued in its third year, resulting in 40 per cent promotion rate for participants. Our operational and strategic leadership certifications programs continued, and more than 12 per cent of our employees now have a Diploma or Graduate Certificate through Melbourne Water.

We delivered new 'Compass' leadership programs for all people leaders across the organisation to upskill in critical people leader skills and delivered a number of high potential programs to our 'next step' leaders at all levels. Our coaching and mentoring programs continued as part of our learning culture habit to seek and embed feedback, supported with a refreshed performance management process to empower our leaders and employees on their career path.

Diversity and inclusion

We finalised our next *Diversity and Inclusion Strategy (2020–2025)* which reflects a maturing approach to diversity and inclusion for Melbourne Water in two ways: it expands our focus areas to include culturally and linguistically diverse and socially disadvantaged communities, and advances us further towards adopting a holistic approach that influences our work both internally and externally, embedding diversity and inclusion in all that we do.

Melbourne Water has had an active *Gender Equity Plan* in place since 2016 which drives our commitment to achieving gender balance and equity both for our workforce and in the provision of services we provide to the community. Female representation of our workforce increased to 40.2 per cent over 2020-21, up from 38.9 per cent in June 2020. Females now represent 50 per cent of our senior leadership team roles, and an external audit of our remuneration over the financial year demonstrated a zero per cent pay gap.

Our effort to address gender balance over the past year has included a strong focus on female representation in male-dominated areas. We delivered several targeted campaigns to increase the representation of women, including a seasonal firefighters recruitment campaign featuring women in firefighting roles. This resulted in increased applications, greater talent diversity and women representing 25 per cent of the firefighters recruited. Within our operations, we have undertaken a number of initiatives to increase diversity and staff retention, including trialling part-time operator arrangements for backfill positions and short-term contracts. Building on our strong foundation of flexible work arrangements, a revised water operations structure is making concrete changes to team configurations, enabling shared shifts and hours across the week.

We are developing a new *Gender Equality Action Plan* and a *Preventing and Responding to Sexual Harassment Plan*, that further builds on our commitment to this agenda and will be in line with guidance and legislative obligations under the new *Victorian Gender Equality Act (2020)*.

Internships were an important feature in this year's diversity and inclusion program and focus on building further the diversity of our talent pipeline. Participants include students and recent graduates with a lived experience of disability, social disadvantage and culturally diverse backgrounds.

Over the last five years, Melbourne Water has increased representation of women (32.8 per cent to 40.2 per cent), Aboriginal and Torres Strait Islander people (0.4 per cent in June 2016 to 1 per cent in June 2021), people with disability (voluntarily self-reporting a type of disability 1.9 per cent to 10.7 per cent), and members of the LGBTIQ+ community (3.2 per cent to 4.2 per cent).

Accessibility Inclusion Plan

The inclusion of people with disability continues to be an important part of our inclusion strategy. Our *Accessibility Inclusion Plan (2018-2021)* is leading our efforts to create a more accessible and inclusive work environment for people with disability, including creating opportunities for participation within the Melbourne Water workforce and removing barriers that prevent people with disability from participating in and accessing Melbourne Water's services. The delivery of this plan also supports Melbourne Water's compliance with the *Disability Act (2006)*. Some of the activities delivered this year include improving digital accessibility, a Carers Week event featuring Jennifer Daddow from Carers Victoria and celebrations for International Day of People with Disability.

Now in its third year, Melbourne Water's Disability Employee Network Kaleidoscope was recognised as an example of a best practice approach to supporting employees with disabilities, through a benchmarking process on the Australian Network on Disability's 2020 Access and Inclusion Index. Melbourne Water scored 65/100 in the Access and Inclusion Index and ranked 8th overall, well above the average 44/100 score for participating organisations. Scoring 65 per cent in the Index as a first-time participant is exceptional and rarely achieved.

In further recognition, Erin Beel (Kaleidoscope chair and Melbourne Water Lead User Experience Designer) was presented with the Individual Change Maker Award by The Victorian Public Sector Enablers Network in 2020 in acknowledgment of her work in digital accessibly, including creating accessible content, design and educating staff on developing for accessibility.

With a continued focus on building an inclusive culture, we experienced an increase in voluntary self-reporting of type of disability from 9.7 per cent in 2019-20 to 10.7 per cent in 2020-21.

Our workforce in numbers

In 2020-21 Melbourne Water:

- employed 1223 people compared to 1198 in 2019-20
- continued to actively support greater diversity in our workforce. Females now comprise 40 per cent of our workforce compared to 39 per cent in 2019-20
- has 62 per cent of employees covered by the Enterprise Agreement
- filled 35 per cent of our vacant roles via internal candidates, consistent with our focus on career development.

Photo taken prior to the commencement of physical distancing rules in March 2020.

Employment Data

The following 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 8.

Table 8: 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 2021							
Demographic Data	**Gender**							
	Male	730	716	632	49	675	49	41
	Female	492	447	302	139	406	51	41
	Self described	1	1	1	0	1		
	Age							
	Under 25	36	32	23	0	23	13	9
	25-34	283	278	237	19	253	27	25
	35-44	444	413	304	105	384	35	29
	45-54	288	277	231	45	267	12	10
	55-64	146	140	119	16	132	11	8
	Over 65	26	24	21	3	23	2	1
Classification Data	**Classification**							
	Casual	21	9				21	9
	Enterprise Agreement (EA) Total	**756**	**724**	**577**	**111**	**661**	**68**	**62**
	EA Level 1	7	7	3	0	3	4	4
	EA Level 2	72	70	61	4	64	7	6
	EA Level 3	86	85	83	0	83	3	2
	EA Level 4	50	45	35	9	41	6	5
	EA Level 5	102	98	77	11	86	14	13
	EA Level 6	139	135	109	14	119	16	16
	EA Level 7	279	263	194	69	248	16	15
	EA Senior Officer	21	20	15	4	18	2	2
	Management Contract Total	**446**	**431**	**358**	**77**	**421**	**11**	**10**
	Senior managers	433	418	345	77	408	11	10
	Executives	13	13	13	0	13	0	0
	Total Employees	**1223**	**1164**	**935**	**188**	**1082**	**100**	**82**
	June 2020							
Demographic Data	**Gender**							
	Male	733	717	620	44	659	69	57
	Female	464	414	277	141	379	46	35
	Self described	1	1				1	1
	Age							
	Under 25	36	31	19		19	17	12
	25-34	280	272	228	16	240	36	33
	35-44	432	400	294	102	370	36	30
	45-54	272	261	213	48	251	11	9
	55-64	151	144	125	16	138	10	7
	Over 65	27	23	18	3	20	6	2
Classification Data	**Classification**							
	Casual	27	11				27	11
	Enterprise Agreement (EA) Total	**749**	**715**	**563**	**108**	**643**	**78**	**72**
	EA Level 1	3	2	0	0	0	3	2
	EA Level 2	70	69	54	3	56	13	13
	EA Level 3	85	84	79		79	6	5
	EA Level 4	58	53	39	9	44	10	9
	EA Level 5	113	109	92	13	102	8	7
	EA Level 6	125	120	93	12	102	20	19
	EA Level 7	268	252	189	65	239	14	13
	EA Senior Officer	27	25	17	6	22	4	4
	Management Contract Total	**422**	**405**	**334**	**77**	**395**	**11**	**10**
	Senior managers	409	392	321	77	382	11	10
	Executives	13	13	13	0	13	0	0
	Total Employees	**1198**	**1132**	**897**	**185**	**1038**	**116**	**94**

Notes:

- Graduates are excluded from workforce data, as per FRD 29C guidance
- Employees on leave without pay or maternity leave without pay are excluded, as per FRD 29C guidance
- Employees on secondment have been included, as per FRD 29C guidance
- One employee was acting in a long-term senior position at the last full pay period in June of 2021.

Local Jobs First

The *Local Jobs First Act 2003* comprises the Victorian Industry Participation Policy (VIPP) and the Major Projects Skills Guarantee (MPSG). All public departments and agencies are required to implement the policy. The Local Jobs First Policy (LJFP) supports Victorian businesses and workers by ensuring that small and medium size enterprises are given a full and fair opportunity to compete for both large and small government contracts, helping to create job opportunities, including for apprentices, trainees and cadets. The annual report on the implementation of LJFP is tabled in Parliament by the Minister for Jobs, Innovation and Trade.

The following projects were commenced or completed during 2020-21 in accordance with the relevant obligations.

Projects Commenced – Local Jobs First Standard

Melbourne Water commenced seven projects in metropolitan Melbourne totalling $80,970,659. MPSG did not apply to these projects.

The outcomes expected from the implementation of the LJFP to these projects where information was provided are as follows:

- the average commitment was 87.57 per cent local content
- a total of 4.24 local jobs to be created
- retention of 47.13 local jobs
- 0.31 new apprenticeships to be created
- creation of 0.31 new trainees.

Projects Completed – VIPP/LJF Standard

Melbourne Water completed two VIPP projects in metropolitan Melbourne totalling $34,382,415.

The outcomes from the implementation of the LJFP to these projects where information was provided, were as follows:

- 96.91 per cent and an average of 93.13 per cent was achieved
- 40 new local jobs were committed and six new positions were created
- 27.77 existing jobs were committed and 24 were retained
- 4.94 existing apprenticeships and trainees were to be retained and 17 apprentices were in fact retained
- three existing apprenticeships, trainees and cadetships were to be created and six were in fact created
- MPSG was applied to one of these projects, which provided 126,712 labour hours to apprentices, trainees and cadets.

Projects Commenced – LJF Strategic

Melbourne Water commenced seven projects in metropolitan Melbourne and regional Victoria totalling $142,963,267.65. The outcomes expected from the implementation of the LJFP to these projects are as follows:

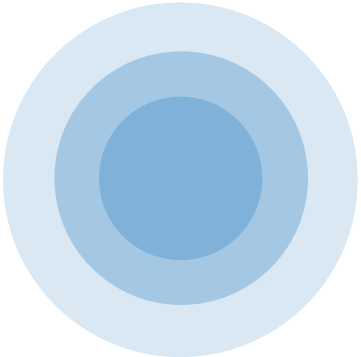
- the average commitment was 92 per cent local content
- a total of 25.75 jobs to be created
- retention of 65.19 jobs
- 3.19 new apprenticeships to be created and 1.27 to be retained
- creation of 3.42 new trainees and retention of 1.42 existing trainees
- creation of 1.07 new cadets and retention of 1.53 existing cadets

The MPSG provided a total of 11,864 labour hours to cadets, trainees and apprentices as at April 2021.

Projects Completed – LJF Strategic

There were three completed strategic projects with the following outcomes:

- the average commitment was 96 per cent and an average of 95 per cent was achieved
- 25 local jobs created
- 62 existing jobs were committed and 58 positions were retained
- four existing apprentices, trainees and cadetships were to be retained and three were in fact retained
- two existing apprenticeships, trainees and cadetships were to be created and four were actually created.



Safety, Health and Wellbeing

Keeping our people and the community safe.

Our Approach

Keeping people safe continues to be our highest priority, whether they are employees, contractors, delivery partners, volunteers or visitors. By living our organisational values of care, courage and integrity, Melbourne Water continues to foster a culture where safety is at the heart of everything we do.

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.

Technology driving innovation

Finding new ways to solve old problems is a key ingredient in our ability to improve the safety of our people and the community. A key focus for our innovation approach has been on improving our training outcomes. Two of our safety programs were recognised in multiple industry awards for their unique approaches to industry issues this year.

Our world-first Confined Space Entry Simulator won the AsiaPacific Spatial Excellence Award for Innovation and Commercialisation and OzWater National Safety Excellence Award. The simulator was built with Deakin University and provides an engaging way to let people understand what a safe confined space entry looks like in an immersive way.

The ECHO tool (Ergonomics for Car, Home and Office) won the Platinum Award in the LearnX Awards for Best E-Learning Design – delivering a simple, highly-interactive tool which guides users to set up their workspaces in an ergonomically friendly way. This has also been shared with the water sector to support industry learning and collaboration.

We have continued our strong relationship with Deakin University's School of Engineering, and have received Federal Government support to co-fund a project that aims to improve the way that electrical safety training is delivered across the country.

Whole of life safety: enhanced wellbeing

In the last 12 months our safety focus was on people's mental health and wellbeing through the COVID-19 pandemic.

A significant program was the New Beginnings Forest, which saw a quarter of our business coming together as an organisation to celebrate new beginnings following an incredibly challenging year. Our people planted 10,000 trees, bushes, grasses and groundcovers at Cherry Lake in Altona, supporting biodiversity at the site and leaving a legacy of hope for the future.

Our wellbeing program supported our people in a range of areas to address mental health and connection during lockdown with:

- personal delivery of almost 1100 care packs to our employees during an allowable window in July. The packs included safety items and provided connection to our people
- virtual wellbeing sessions with medical expert Dr Chris Stevens discussing mental health and strategies to assist during lockdown
- connection-building activities including competitions, lunchtime events and quizzes and online recipe exchanges.

Safer working environments

Melbourne Water aims to create a workplace free from injuries and ill health. Throughout the year we have improved safety within our workplaces by:

- improving controls in relation to Working in Proximity to Water, Remote and Isolated Work, and Lock Out Tag Out (LOTO)
- creating 'Video Procedures' for high-risk tasks, a field-friendly alternative to paper-based safety documentation
- working with the Monash University Accident Research Centre (MUARC) to develop a tailored driver training program to improve driver safety
- completing noise surveys across the business and conducting hearing conservation training for affected people
- employing two field-based safety coaches to assist with injury prevention.

Our performance

Our hazards, near miss events and incidents are notified, investigated and analysed in order to identify facts, draw conclusions and develop corrective actions to prevent reoccurrences. In the previous 12-month period, 18 members of our combined workforce were injured. Although all 18 have been classified as meeting the threshold for total recordable injury frequency rate (TRIFR) inclusion, 14 of these were for injuries where treatment or alternative duties saw the injured person return to normal work in less than a week. The total lost days were 50. For further information and data on our expanded safety results, see Table 9 and Table 10.

Figure 2: Total Recordable Injury Frequency Rate (TRIFR)

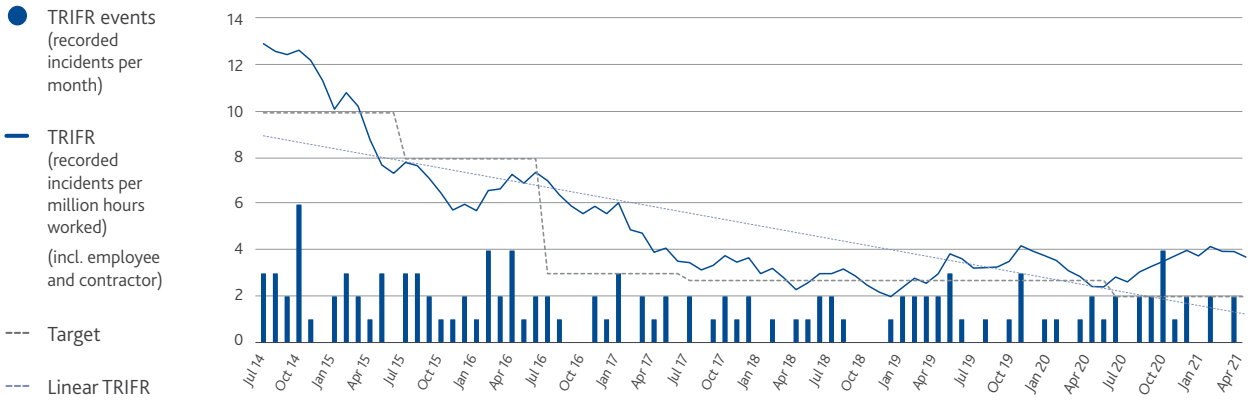


Table 9: Number of reported safety incidents and lost time standard claims per 100 full time equivalent (FTE) staff

		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	50.2	438	43.7	941	93.9	1	0.10	$65,339
2017-18	1029	546	53.1	303	29.4	763	74.1	3	0.30	$59,736
2018-19	1096	529	48.3	333	30.4	862	78.6	4	0.36	$77,333
2019-20	1132	426	37.6	247	21.8	673	59.4	5	0.44	$79,392
2020-21	1164	395	33.9	322	27.6	717	61.6	7	0.60	$94,746

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

Table 10: Types of Injury

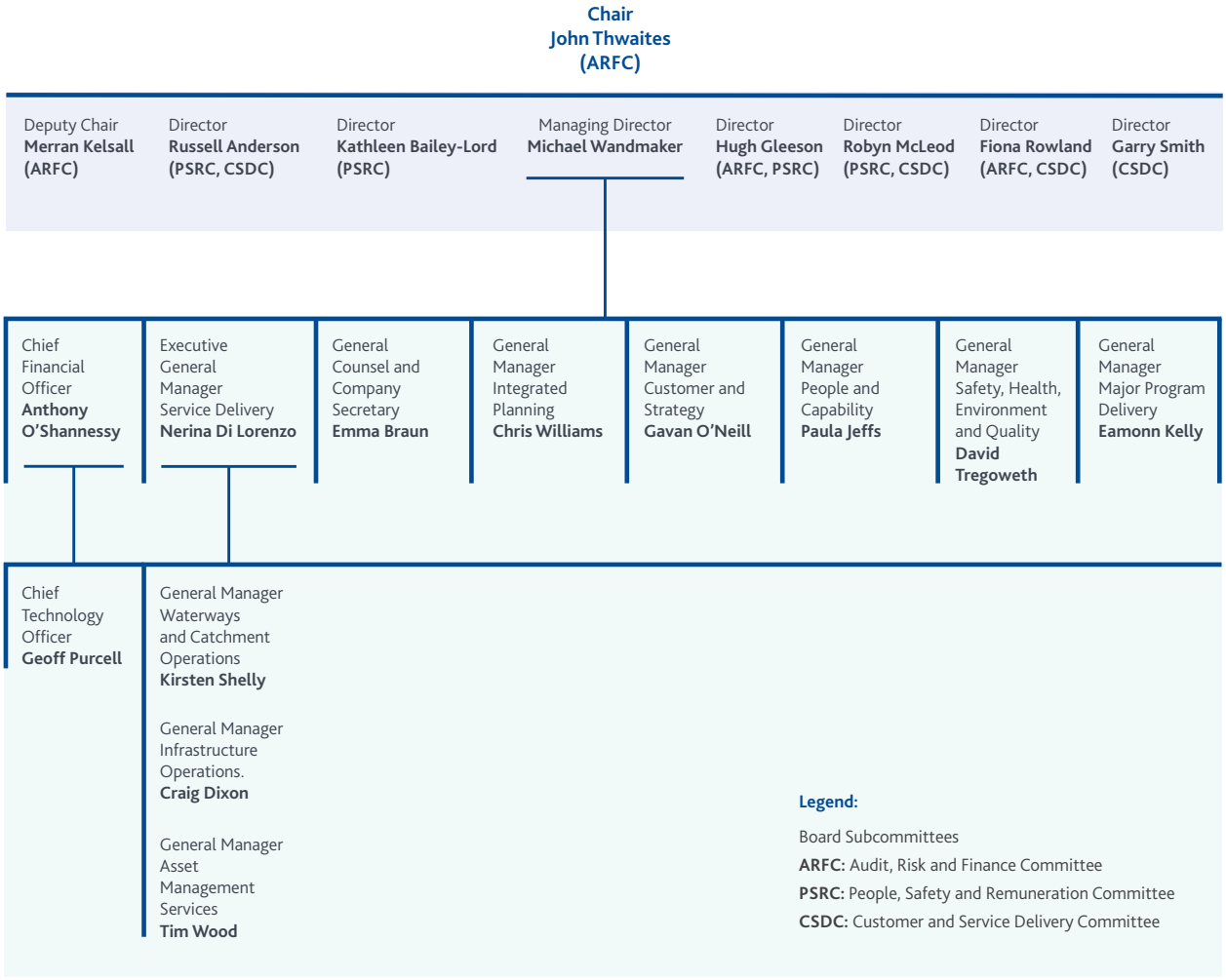
Item	2016-17	2017-18	2018-19	2019-20	2020-21
Lost time injury (LTI)	6	3	7	7	7
Restricted work injury (RWI) / Medical treatment injury (MTI)	6	10	9	4	10
First Aid	78	74	59	47	72
Total	**90**	**88**	**75**	**58**	**89**

Silvan Water Treatment Plant

Our Business

When delivering services Melbourne Water always considers social responsibility and financial accountability.

Organisational Structure



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*.

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 regarding 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* (the Act).

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 www.legislation.vic.gov.au

The Hon Lisa Neville, MP, Minister for Water, was the Minister responsible for Melbourne Water from 1 July 2020 to 30 June 2021. The Hon Richard Wynne acted as the Minister for Water from 15 February 2021 to 30 June 2021. Melbourne Water works with officers of DELWP 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 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 objectives
- approval 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:

- ensuring the Board meets frequently enough to fulfil its duties and obligations, holding 11 Board meetings during 2020-21, and undertaking site visits and strategy workshops with Melbourne Water's Leadership Team. 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 three committees, each comprised of four non-executive directors, who meet periodically to focus on: risk, audit, finance and sustainability; people, safety and remuneration; and customer and service delivery respectively. The Managing Director and the relevant 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:

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

The ARFC comprised Merran Kelsall (Chair), John Thwaites, Fiona Rowland and Hugh Gleeson for the period 1 July 2020 to 30 June 2021. A report about the activities of the ARFC 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, employee engagement)
- organisational capability
- remuneration.

For details of directors' and executives' remuneration, refer to the financial statements.

The PSRC comprised Kathleen Bailey-Lord (Chair), Russell Anderson, Hugh Gleeson and Robyn McLeod for the period 1 July 2020 to 30 June 2021. A report about the activities of the PSRC 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 of Directors 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 CSDC comprised Garry Smith (Chair), Russell Anderson, Fiona Rowland and Robyn McLeod for the period 1 July 2020 to 30 June 2021. A report about the activities of the CSDC in fulfilling its charter is prepared annually.

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 was appointed to the Board on 1 October 2015. He is the Chair of Melbourne Water.

Mr Thwaites is a Professorial Fellow at Monash University, the Chair of ClimateWorks Australia and the Monash Sustainable Development Institute, and a Director of Fairtrade Australia New Zealand.

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 expert advice and support on the Sustainable Development Goals and Chair of the SDSN Association. He was also previously the Chair of the Peter Cullen Water and Environment Trust, the Australian Building Codes Board and the Australian Centre for the Moving Image. In 2013, Mr Thwaites 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, Mr Thwaites was a barrister and Mayor of South Melbourne. He has degrees in Law (Honours) and Science from Monash University.

Michael Wandmaker, Managing Director

Michael Wandmaker is Managing Director of Melbourne Water.

Mr Wandmaker has extensive senior leadership experience across several industries, both in Australia and internationally, and is a Fellow of the Institute of Engineers. He is currently a director of the Committee for Melbourne. Mr Wandmaker was previously President of FT Services, CEO of Silcar Maintenance Services, Vice President at Siemens Canada Ltd, and held various executive positions with Tyco Services and Transfield Holdings Pty Ltd. Prior to becoming Managing Director at Melbourne Water, Mr Wandmaker was Group President and Acting CEO of UGL Limited.

Mr Wandmaker was appointed Managing Director on 22 September 2014.

Merran Kelsall, Director and Deputy Chair

Merran Kelsall was appointed to the Board on 1 October 2015. She is the Chair of the Audit, Risk and Finance Committee.

Ms Kelsall is an experienced independent director who has considerable expertise in finance, audit, risk and compliance. She has served on many boards in the private and public sectors. Her current appointments include Chair and President of CPA Australia Ltd, directorships at Australian Red Cross Lifeblood, CareSuper, Hamilton Art Gallery and the Medical Indemnity Protection Society. She was previously Chair and CEO of Auditing and Assurance Standards Board, a Director of VicSuper and RACV Limited, a Member of International Auditing and Assurance Standards Board and Financial Reporting Council, and a Commissioner at Taxi Services Commission. She was also formerly a partner at BDO Chartered Accountants.

Ms Kelsall is a Professor of Practice at the School of Accounting, UNSW Business School.

Russell Anderson, Director

Russell Anderson was appointed to the Board on 1 October 2017.

Mr Anderson is currently Strategy, Governance and Risk Advisor at Australian Health Service Alliance Ltd and is also self-employed as a governance consultant to the water industry. Mr Anderson's previous roles include as 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.

Kathleen Bailey-Lord, Director

Kathleen Bailey-Lord was appointed to the Board in October 2015. She is the Chair of the People, Safety and Remuneration Committee.

Ms Bailey-Lord is an experienced company board director having served on boards in the public, private and not for profit sectors. She is a Fellow of the Australian Institute of Company Directors (FAICD) and has a particular passion for building healthy workplace cultures that are ready for the digital age. She enjoyed an international senior executive career across diverse industries – technology, financial services, professional services and marketing.

Ms Bailey-Lord currently serves as a non-executive director of Alinta Energy, QBE Insurance (Australia Pacific) where she chairs the People & Remuneration Committee, Bank of Queensland where she is a member of all board committees and Monash College where she chairs the Audit & Risk Committee.

Hugh Gleeson, Director

Hugh Gleeson was appointed to the Board on 1 October 2015.

Mr Gleeson is an experienced company director, a professional engineer, and has more than 30 years' experience in the energy and utilities sector.

Mr Gleeson is currently a director of Energy Queensland, the Ausgrid Partnership, the Collgar Windfarm and GDI-Allgas Energy. He retired as the CEO of electricity and gas distribution businesses, United Energy and Multinet Gas in 2015, following 12 years in that role. He has also served on the boards of Barwon Water, Energy Networks Australia and the Energy Supply Association of Australia.

Robyn McLeod, Director

Robyn McLeod was appointed to the Board on 1 October 2015.

Ms McLeod is also currently a director of Monash Health and VicWater. Previous board positions include as an inaugural director of the Australian Centre for Social Innovation and Chair of this organisation's Audit, Risk and Finance Committee.

Ms 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, and has extensive experience in water governance.

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 the areas of corporate education, industrial relations and secondary teaching. She is a graduate of the Australian Institute of Company Directors, and completed the Senior Executive Fellows Program at The Kennedy School of Government, Harvard University.

Fiona Rowland, Director

Fiona Rowland was appointed to the Board on 1 October 2017.

Ms Rowland is an experienced company board director in the areas of financial services, trusts and asset management with 16 years' executive management and CEO experience at the Bennelong Group, National Australia Bank, Australia and New Zealand Banking Group, UBS AG and UBS Wealth Management. She has been a member of numerous governance, compliance and investment committees in the banking and philanthropic sectors.

Ms Rowland currently serves as a non-executive director of Macquarie Life Limited, Macquarie Investment Services Ltd, Infrastructure Specialist Asset Management Ltd and St Vincent's Institute of Medical Research. She is also a Member of the Independent External Compliance Committee of Franklin Templeton Investments Australia Limited, Independent Consultant to Audit, Risk and Compliance Committee, UniSuper Limited and UniSuper Management Pty Ltd, and serves on the Advisory Group, Kearney Australia.

Ms Rowland holds a Bachelor of Arts, a Bachelor of Law (Honours) and is admitted as a legal practitioner in Victoria. She is also a graduate of the Australian Institute of Company Directors.

Garry Smith, Director

Garry Smith was appointed to the Board in October 2012. He is the Chair of the Customer and Service Delivery Committee.

Mr Smith has extensive experience in the water sector and is a director with DG Consulting (Aus) Pty Ltd, providing advice on water and natural resource management policy and strategy. He has previously held a range of senior management roles in the rural water industry and is currently a member of the Murray Darling Basin Authority's Independent River Operations Review Group, and also their Independent Audit Group for salinity.

His previous roles include Chair of the Greater Shepparton Foundation, membership of the Advisory Board for the National Centre for Groundwater Research and Training, director of the eWater Co-operative Research Centre, member of the Water Accounting Standards Board and director of Scope.

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, Melbourne Water has 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 a number of key elements which, when combined, create an environment for effectively managing risk and pursuing opportunities. This includes:

- an established Risk Management Policy and Risk Appetite Statement
- ongoing management of strategic, operational, financial and compliance risks that may impact on the achievement of our strategic direction, operational objectives and compliance obligations
- embedding physical and transition climate risks in our risk management process. These climate risks are considered by the Board at strategy workshops and regular risk briefings
- ongoing education and development of risk capability across the organisation and maintaining a positive risk culture
- providing ongoing assurance over our control environment through a comprehensive risk-based audit program, based on the three lines of defence
- a comprehensive insurance portfolio.

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

Cyber security

Melbourne Water collaborates extensively with industry and the government sector to stay abreast of emerging risks, incidents and improvement opportunities in cyber security. This year we increased our level of focus and investment in cyber security at an enterprise level which spans our information Technology (IT) and operational technology (OT) environments.

We have refreshed our *Enterprise Security Strategy* to enhance protection of our information assets and underlying systems. Some of the initiatives implemented this year include:

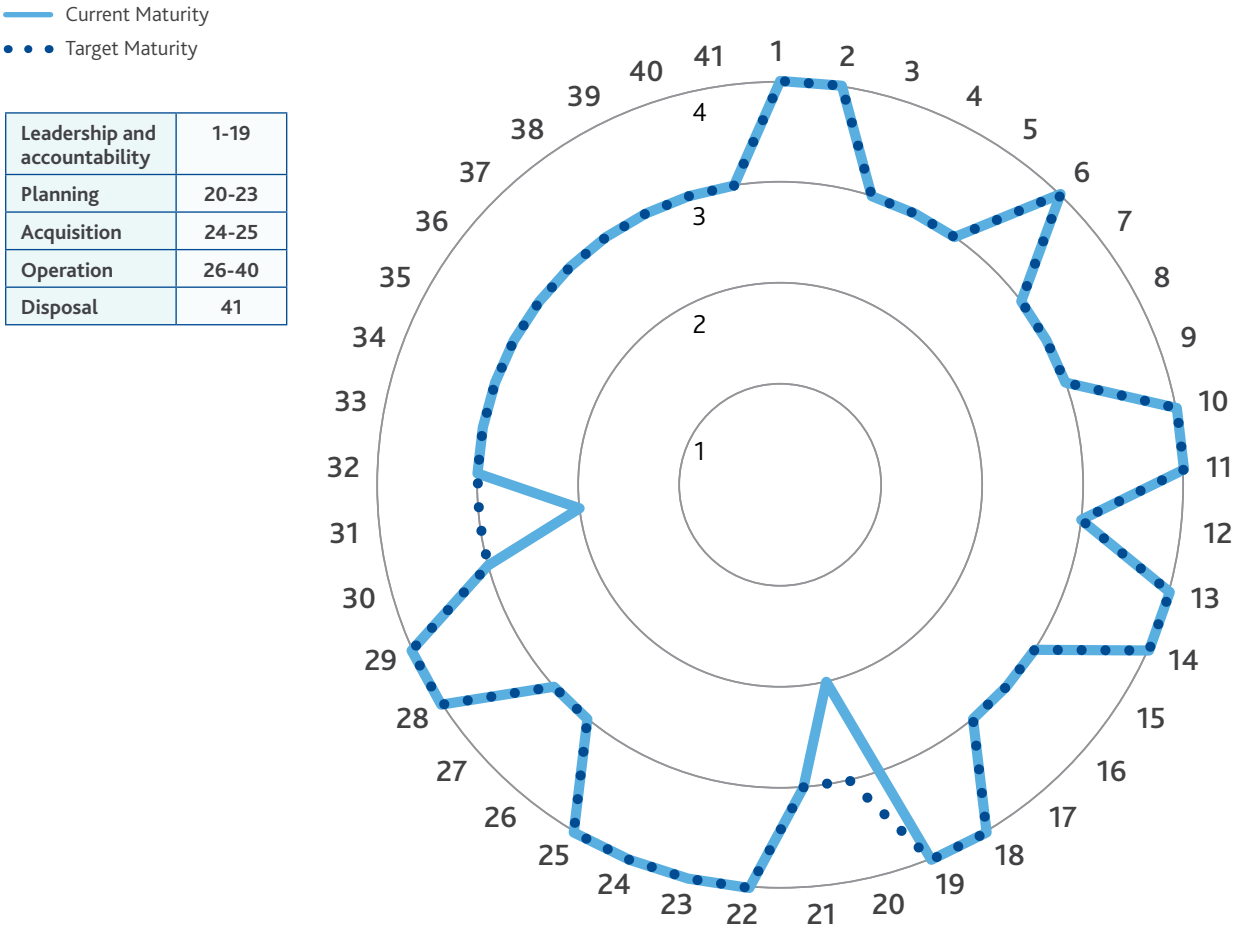
- an Enterprise Security Policy and underlying security standards
- recruiting dedicated cyber security personnel, including an OT security specialist
- quarterly risk reviews as part of our enterprise risk management program
- a cybersecurity eLearning awareness and education module which is compulsory for all employees, contractors and all new starters (induction)
- regular cybersecurity communications via employee communications
- quarterly simulated email phishing attacks with follow-up analysis and advice to employees.

Asset Management Accountability Framework

Melbourne Water's self-assessed maturity for 2020-21 against the Asset Management Accountability Framework (AMAF) requirements identified that Melbourne Water achieved a minimum maturity rating of `competence' (rating 3) across 39 of the 41 aspects of the AMAF. The exceptions being two subjects which had a competency rating of `developing' (rating 2), Subject 21 in the Planning category relating to fully cascading Asset Management Objectives, and subject 31 in the Operation category regarding the review of maintenance effectiveness and adapting its maintenance to current lifecycle stages. Melbourne Water is targeting a minimum maturity rating of 'competence' across all aspects of the AMAF requirements. However, Melbourne Water also aims to continuously improve and optimise its asset management practices in all subjects, wherever those improvements and resulting levels of maturity provide best value to customers, stakeholders and the community.

To support a focus on asset management maturity improvement, Melbourne Water develops an annual Total Asset Management Improvement Plan (TAMIP). The 2021-22 TAMIP includes specific actions and activities designed to address the identified maturity gaps. Implementation of the TAMIP is reported monthly.

AMAF Maturity Assessment



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Social Sustainability

Ethical Sourcing and Modern Slavery Statement

Melbourne Water has led a Victorian Water Industry Social Procurement Working Group (SPWG), with an ongoing program of work since 2016, to identify and address human rights impacts with a focus on labour rights risks and opportunities in the supply chains of Victorian water corporations.

Our first Modern Slavery Statement was published 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. Development of the statement was guided by our commitments to the Victorian Charter of Human Rights and Responsibilities (2006) and the United Nations Sustainable Development Goals (SDGs). While Melbourne Water has not identified any specific instances of modern slavery harm in our supply chain, we recognise that our first Modern Slavery Statement sets the groundwork for our ongoing focus on mitigating modern slavery risk going forward.

Social procurement

Melbourne Water is operationalising its *Social Procurement Strategy* in line with the Victorian Government's Social Procurement Framework. We are building our social procurement capability across the business by focusing on leadership, policy and process, technology and tools, sourcing and contract management, people and culture, performance management, and supplier engagement. We have established minimum requirements across value thresholds that meet expectations of the Victorian Government Social Procurement Framework and best advance Melbourne Water's identified social procurement opportunities.

Melbourne Water's priority Social Procurement Framework objectives are:

- opportunities for Victorian Aboriginal people
- women's equality and safety
- opportunities for disadvantaged Victorians
- environmentally sustainable business practices.

We have included weighted selection criteria for social value in our market tenders which supports delivery of social and sustainable outcomes across priority objectives including opportunities for Victorian Aboriginal and Torres Strait Islander people, women's equality and safety, opportunities for disadvantaged Victorians and environmentally sustainable outputs.

We are contributing to reconciliation by supporting Traditional Owner businesses, delivering cultural awareness training internally, targeting the procurement team. We have been actively engaging with Aboriginal-owned businesses to explore ways of working together by leveraging our Kinaway (Victorian Aboriginal Chamber of Commerce) relationship. We have created innovative training programs with our suppliers to establish a 100-per-cent-Aboriginal-owned construction business, supporting a positive legacy and pipeline of work for young Aboriginal people. For further details, see 'Reconciliation Action Plan', page 37.

Financial Sustainability

> Our financial decisions have business efficiency and a commercial focus at their core to ensure customer affordability.

Financial sustainability is embedded into Melbourne Water's strategic objectives. We define financial sustainability as:

- continuing to deliver our valued services at the lowest cost to customers
- meeting our financial obligations both today and in the future
- providing a return to our shareholders.

In 2020-21 Melbourne Water has again delivered a solid financial performance, achieving a positive net profit after tax result of $192.0 million.

Our net revenue for bulk water is down on the previous year due to lower demand and a reduction in tariffs. Revenue associated with land development services has remained consistent with the prior year and was helped by government stimulus in the development sector during the pandemic. Melbourne Water's continued strong financial performance contributes to our State's success in delivering for our communities.

The COVID-19 pandemic has not resulted in Melbourne Water experiencing material financial shocks during this financial year. Despite restrictions that have resulted in our workforce either having to segregate or work remotely, we have been able to deliver our obligations and another strong financial performance for our shareholders and the community. Possible impacts on both our business and our customers are closely monitored and we remain committed to supporting customers experiencing financial vulnerability. During 2020-21 we undertook early payment of invoices to our suppliers to help support their cashflows and provided rent relief to our lessees in line with government policy.

The finalisation of our 2021 Price Determination has ensured we have sufficient revenues now and in the future to deliver our services and means we will also deliver on our commitment to customers to keep water bills low. To do this, we will continue to seek opportunities to drive efficiencies in all that we do. In particular, we are leveraging our investments in new technologies and systems (including artificial intelligence and robotic process automation) and rapidly building our data analytic capabilities to enable data-driven decision making across the business.

Procurement improvements have been key initiatives in 2020-21 and will continue into the next financial year as will our ongoing commitment to furthering organisational commercial capability. We are steadfast in our objective to deliver excellence in financial management and this includes our debt management practices to minimise financing costs and actively manage financial risks for the business and the State.

Price Submission

Our Price Submission was the result of an extensive 18-month engagement program with the community, government, water retailers, councils, business and industry to develop a Price Submission that balances the ability to provide world-class services with the need to keep bills as low as possible.

The Essential Services Commission (ESC) released its final decision on Melbourne Water's Price Submission, which sought to deliver lower prices and increased levels of service to our customers. The ESC approved a revenue of $7.9 billion over a five-year period. As a result, prices will fall on average by around $20 in the 2021-22 year for a typical residential household. Melbourne Water's Price Submission enables us to deliver on the six outcomes our customers told us they most value:

- access to safe and reliable water and sewerage services
- Melbourne's environment, rivers, creeks and bays are protected and Melbourne Water's greenhouse gas emissions are minimised
- Melbourne remains liveable as it deals with the impacts of climate change and population growth
- Melburnians are empowered to support the design and delivery of service outcomes
- easy, respectful, responsive and transparent customer service
- bills kept as low as possible.

Our Price Submission provides for almost $3.6 billion in capital investment over the next five years to maintain and improve services. This represents the biggest capital works program Melbourne Water has committed to since the Millennium Drought in the 2000s.

Five-Year Financial Summary

Summary of Financial Results

Statement of Profit or Loss For the year ended 30 June – Extract	2021 $M	2020 $M	2019 $M	2018 $M	2017 $M
Total revenue	1,988.7	1,997.6	1,938.8	1,890.4	1,791.4
Operating and other expenses	(672.0)	(636.2)	(595.1)	(525.2)	(512.4)
Depreciation and amortisation expenses	(450.1)	(434.7)	(408.1)	(392.1)	(383.8)
Finance expenses	(573.9)	(601.8)	(618.2)	(645.3)	(657.2)
Net profit from operations before tax	**292.7**	**324.9**	**317.3**	**327.7**	**237.9**
Tax expense	(100.7)	(121.6)	(116.4)	(118.9)	(87.5)
Net profit for the period after tax	**192.0**	**203.3**	**201.0**	**208.8**	**150.4**

Statement of Financial Position as at 30 June – Extract	2021 $M	2020 $M	2019 $M	2018 $M	2017 $M
Current assets	145.2	143.6	153.4	115.7	95.6
Non-current assets	16,184.9	15,246.8	15,125.5	15,212.9	14,786.5
Total assets	**16,330.1**	**15,390.4**	**15,278.9**	**15,328.6**	**14,882.1**
Current liabilities	886.8	1,073.5	1,163.5	1,216.4	1,032.7
Non-current liabilities	8,788.6	8,443.4	8,372.4	8,497.2	8,579.3
Total liabilities	**9,675.4**	**9,516.9**	**9,535.9**	**9,713.6**	**9,612.0**
Net assets/Total equity	**6,654.7**	**5,873.5**	**5,743.0**	**5,615.0**	**5,270.1**

Statement of Cash Flows for the year ended 30 June – Extract	2021 $M	2020 $M	2019 $M	2018 $M	2017 $M
Net cash inflow from operating activities	594.9	555.3	534.9	465.8	439.7
Net cash (outflow) from investing activities	(589.1)	(455.6)	(513.0)	(446.2)	(444.4)
Net cash (outflow)/inflow from financing activities	(16.4)	(103.0)	(6.3)	(21.2)	5.9

Summary of Financial Performance

Key Financial Performance Indicators

Performance Indicators	2021 $M	2020 $M	2019 $M	2018 $M	2017 $M
Cash Interest Cover	**2.2**	2.2	2.1	1.9	2.0
Gearing Ratio	**48.1%**	50.8%	51.2%	52.6%	53.6%
Internal Financing Ratio	**87.2%**	98.0%	93.4%	78.6%	89.0%
Current Ratio	**0.19 times**	0.15 times	0.15 times	0.10 times	0.09 times
Return on Assets	**5.5%**	6.0%	6.1%	6.4%	6.0%
Return on Equity	**3.1%**	3.5%	3.5%	3.8%	2.9%
EBITDA Margin	**66.2%**	68.1%	69.3%	72.2%	71.4%

Explanatory notes:

Refer to the Performance Report for definitions of financial performance indicators and reporting of all 2020-21 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 2020-21 financial year were:

John Thwaites (Chair)
Michael Wandmaker (Managing Director)
Merran Kelsall (Deputy Chair)
Garry Smith
Hugh Gleeson
Kathleen Bailey-Lord
Robyn McLeod
Fiona Rowland
Russell Anderson

Particulars of the directors' qualifications, experience and special responsibilities are set out on pages 60-61 of this report.

Directors' Meetings

During the financial period, the Corporation held 11 scheduled meetings of directors.

Attendance at meetings of the Board and its committees were:

	Board		Audit, Risk and Finance Committee		People, Safety and Remuneration Committee		Customer and Service Delivery Committee	
	Attended	Maximum held	Attended	Maximum held	Attended	Maximum held	Attended	Maximum held
John Thwaites (Chair)	11	11	4	4	-	-	-	-
Michael Wandmaker (Managing Director)[(a)]	11	11	4	4	4	4	4	4
Merran Kelsall (Deputy Chair)	11	11	4	4	-	-	-	-
Garry Smith	11	11	-	-	-	-	4	4
Kathleen Bailey-Lord	11	11	-	-	4	4	-	-
Hugh Gleeson	11	11	4	4	4	4	-	-
Robyn McLeod	11	11	-	-	4	4	4	4
Fiona Rowland	11	11	4	4	-	-	4	4
Russell Anderson	10	11	-	-	4	4	4	4

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

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

	Special Board meetings		Special Audit, Risk and Finance Committee meetings		Special People, Safety and Remuneration Commitee meetings		Special Customer and Service Delivery Committee meetings	
	Attended	Maximum held	Attended	Maximum held	Attended	Maximum held	Attended	Maximum held
John Thwaites (Chair)	1	1	1	1	-	-	-	-
Michael Wandmaker (Managing Director)[(a)]	1	1	1	1	-	-	1	1
Merran Kelsall (Deputy Chair)	1	1	1	1	-	-	-	-
Garry Smith	1	1	-	-	-	-	1	1
Kathleen Bailey-Lord	1	1	-	-	-	-	-	-
Hugh Gleeson	1	1	1	1	-	-	-	-
Robyn McLeod	1	1	-	-	-	-	1	1
Fiona Rowland	1	1	1	1	-	-	1	1
Russell Anderson	1	1	-	-	-	-	1	1

(a) While the Managing Director is not a member of Board committees, he is invited to attend all committee meetings.

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 2021 or at any other time) with:

(a.) the Corporation; or

(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 2020-21 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, City West Water, South East Water and Yarra Valley Water, and water services to Western Water and 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 $192.0 million.

Review of operations

The directors' review of the Corporation's operations during the financial year ended 30 June 2021 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 2021.

Melbourne Water Financial Management Compliance Attestation

I, John Thwaites, on behalf of the Board, certify that Melbourne Water has complied with the applicable Standing Directions made under the *Financial Management Act 1994* and Instructions.

John Thwaites
Chair

27 August 2021

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 2021. The following structure provides users with information about the Corporation's stewardship of resources entrusted to it.

Financial statements

Statement of Profit or Loss and Other Comprehensive Income

Statement of Financial Position

Statement of Changes in Equity

Statement of Cash Flows

Notes to the financial statements

1. About this Report
The basis on which the financial statements have been prepared and compliance with reporting regulations.

2. Funding delivery of our services

Revenue recognised from the provision of water, sewerage services, flood mitigation and environmental protection.

2.1 Revenue from contracts with customers

2.2 Other income

2.3 Receivables

3. The cost of delivering our services

Operating costs of the Corporation.

3.1 Operational expenses

3.2 Employee benefits expenses and employee benefits provision

3.3 Repairs and maintenance expenses

3.4 Administrative expenses

3.5 Government rates and taxes

3.6 Asset transfers to council

3.7 Other expenses

3.8 Income and deferred tax

3.9 Payables

3.10 Contract liabilities

3.11 Other current assets

3.12 Provisions

4. Assets available to support delivery output

Land, buildings, infrastructure, plant and equipment, intangible and held for sale assets.

4.1 Land, buildings, infrastructure, plant and equipment and service concession arrangements

4.2 Intangible assets

4.3 Non-current assets held for sale

4.4 Right of use assets and leases

5. Financing our operations

Borrowings, cash flow information and leases.

5.1 Interest bearing liabilities

5.2 Cash flow information and balances

5.3 Commitments

5.4 Victorian Desalination Plant (VDP) service concession arrangement

Notes to the financial statements (continued)

6. Risk management

Financial risk management, contingent assets and liabilities as well as fair value determination of financial assets and liabilities.

6.1 Financial instruments

6.2 Fair value determination of financial assets and liabilities

6.3 Contingent assets and liabilities

7. Other disclosures

7.1 Superannuation - defined benefit plan

7.2 Responsible persons

7.3 Remuneration of executives

7.4 Related parties

7.5 Remuneration of auditors

7.6 Ex-gratia expenses

7.7 Subsequent events

7.8 Prospective accounting and reporting changes

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 2021 and the financial position of the Corporation as at 30 June 2021.

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 27 August 2021.

On behalf of the Board:

John Thwaites
Chair

27 August 2021

Michael Wandmaker
Managing Director

27 August 2021

Anthony O'Shannessy
Chief Financial Officer

27 August 2021

Statement of Profit or Loss and Other Comprehensive Income

For the year ended 30 June 2021

($ thousands)

	Notes	2021	2020
Revenue			
Revenue from contracts with customers	**2.1**	1,939,504	1,954,962
Other income	**2.2**	10,021	4,516
Net gain on revaluation of non-financial assets	**4.1.2.2**	39,219	-
Refinancing gain on financial instruments	**5.1.2**	-	38,142
Total revenue		**1,988,744**	**1,997,620**
Expenses			
Depreciation and amortisation expenses	**4.1.3**	(450,146)	(434,687)
Operational expenses	**3.1**	(304,859)	(291,465)
Employee benefits expenses	**3.2**	(146,119)	(140,409)
Repairs and maintenance expenses	**3.3**	(95,412)	(83,200)
Administrative expenses	**3.4**	(42,773)	(43,294)
Finance expenses	**5.1.1**	(573,914)	(601,800)
Government rates and taxes	**3.5**	(29,814)	(33,772)
Asset transfers to council	**3.6**	(40,553)	(35,814)
Other expenses	**3.7**	(12,477)	(8,270)
Total expenses		**(1,696,067)**	**(1,672,711)**
Net profit from operations before tax		**292,677**	**324,909**
Tax expense	**3.8.1**	(100,671)	(121,596)
Net profit for the period after tax		**192,006**	**203,313**
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**	7,195	(781)
Net gain on revaluation of non-financial assets[(b)]	**3.8.1 & 4.1.2.1**	644,732	-
Decrease in asset revaluation reserve due to disposal of land, buildings and infrastructure[(c)]		(4,461)	(12,244)
Asset revaluation reserve transferred to retained profits on disposal of land, buildings and infrastructure		4,500	13,218
Other comprehensive income/(loss) for the period after tax		**651,966**	**193**
Total comprehensive income for the period after tax		**843,972**	**203,506**

The above Statement of Profit or Loss and Other Comprehensive Income should be read in conjunction with the accompanying notes on pages 77 through to 131.

Note:
(a) Pre-tax actuarial gain on defined benefit superannuation plan asset $10.3 million (2019-20: loss of $1.1 million).
(b) Pre-tax net gain on revaluation of non-financial assets $734.8 million (2019-20: zero).
(c) Pre-tax decrease in asset revaluation reserve due to disposal of land, buildings and infrastructure $4.5 million (2019-20: decrease of $13.2 million).

Statement of Financial Position

As at 30 June 2021

($ thousands)

	Notes	2021	2020
Assets			
Current assets			
Cash and cash equivalents		3,703	14,324
Receivables	2.3	104,659	101,749
Other current assets	3.11	17,274	18,462
Non-current assets held for sale	4.3	19,555	9,086
Total current assets		**145,191**	**143,621**
Non-current assets			
Land, buildings, infrastructure, plant and equipment and service concession arrangements	4.1	16,068,099	15,127,888
Intangible assets	4.2	49,069	51,406
Right of use assets and leases	4.4	47,277	55,558
Defined benefit superannuation plan asset	7.1	20,499	11,907
Total non-current assets		**16,184,944**	**15,246,759**
Total assets		**16,330,135**	**15,390,380**
Liabilities			
Current liabilities			
Payables	3.9	358,336	321,668
Contract liabilities	3.10	79,225	73,620
Interest bearing liabilities	5.1	374,568	613,915
Provisions	3.12	5,477	4,183
Current tax liability	3.8.1	19,469	12,824
Employee benefits provision	3.2	49,775	47,262
Total current liabilities		**886,850**	**1,073,472**
Non-current liabilities			
Payables	3.9	3,014	467
Interest bearing liabilities	5.1	7,487,690	7,200,813
Provisions	3.12	595	1,223
Net deferred tax liabilities – non-current	3.8.2	1,282,332	1,225,818
Employee benefits provision	3.2	14,957	15,062
Total non-current liabilities		**8,788,588**	**8,443,383**
Total liabilities		**9,675,438**	**9,516,855**
Net assets		**6,654,697**	**5,873,525**
Equity			
Contributed equity		507,914	507,914
Reserves		3,571,871	2,931,600
Retained profits		2,574,912	2,434,011
Total equity		**6,654,697**	**5,873,525**

The above Statement of Financial Position should be read in conjunction with the accompanying notes on pages 77 through to 131.

Statement of Changes in Equity

For the year ended 30 June 2021

	($ thousands)			
	Contributed equity	Asset revaluation reserve	Retained profits	Total
Balance at 1 July 2020	**507,914**	**2,931,600**	**2,434,011**	**5,873,525**
Comprehensive income for the period after tax				
Net result for the period after tax	-	-	192,006	**192,006**
Other comprehensive income/(loss) for the period after tax	-	640,271	11,695	**651,966**
Total comprehensive income for the period after tax	-	**640,271**	**203,701**	**843,972**
Transactions with equity holders				
Dividends paid [(a)]	-	-	(62,800)	**(62,800)**
Total transactions with owners	**-**	**-**	**(62,800)**	**(62,800)**
Balance at 30 June 2021	**507,914**	**3,571,871**	**2,574,912**	**6,654,697**
Balance at 1 July 2019	**507,914**	**2,943,844**	**2,291,261**	**5,743,019**
Comprehensive income for the period after tax				
Net result for the period after tax	-	-	203,313	**203,313**
Other comprehensive income/(loss) for the period after tax	-	(12,244)	12,437	**193**
Total comprehensive income for the period after tax	**-**	**(12,244)**	**215,750**	**203,506**
Transactions with equity holders				
Dividends paid[(a)]	-	-	(73,000)	**(73,000)**
Total transactions with owners	-	-	(73,000)	**(73,000)**
Balance at 30 June 2020	**507,914**	**2,931,600**	**2,434,011**	**5,873,525**

The above Statement of Changes in Equity should be read in conjunction with the accompanying notes on pages 77 through to 131.

Note:
(a) During 2020-21 the Corporation paid total dividends of $62.8 million (2019-20 $73.0 million). Dividends are determined by the Treasurer of Victoria after consultation with the Corporation's Board of Directors and the Minister for Water.

Statement of Cash Flows

For the year ended 30 June 2021

($ thousands)

	Notes	2021	2020
Cash flows from operating activities			
Receipts from contracts with customers (inclusive of Goods and Service Tax)		2,048,095	2,055,021
Payments to suppliers and employees (inclusive of Goods and Service Tax)		(755,324)	(736,379)
Income tax paid		(130,613)	(152,964)
Interest received		110	79
Interest and other costs of finance paid		(579,960)	(610,471)
Other receipts		15,121	2,652
Payments for low value, short-term and variable lease payments		(2,565)	(2,625)
Net cash inflow from operating activities	**5.2**	**594,864**	**555,313**
Cash flows from investing activities			
Payments for property, plant and equipment, and intangibles		(605,952)	(492,274)
Proceeds from sales of property, plant and equipment, and intangibles		16,820	36,698
Net cash (outflow) from investing activities		**(589,132)**	**(455,576)**
Cash flows from financing activities			
Proceeds from borrowings[(a)]		92,145	53,200
Repayments for the Victorian Desalination Plant (VDP) service concession liability		(39,146)	(77,070)
Repayments of lease liabilities		(6,552)	(6,146)
Dividends paid	**7.4**	(62,800)	(73,000)
Net cash (outflow) from financing activities		**(16,353)**	**(103,016)**
Net (decrease)/increase in cash and cash equivalents		(10,621)	(3,279)
Cash and cash equivalents at the beginning of the financial year		14,324	17,603
Cash and cash equivalents at the end of the financial year		**3,703**	**14,324**

The above Statement of Cash Flows should be read in conjunction with the accompanying notes on pages 77 through to 131.

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 2021. This report informs users about the Corporation's stewardship of the resources entrusted to it.

A description of the nature of the Corporation's operations and principal activities is included in the report of operations (pages 4 to 68) 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, estimates and assumptions are required to be made about carrying values of assets and liabilities that are not readily apparent from other sources. 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 to acquire 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 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 of satisfaction of performance obligations (refer to 2.1)
- determining transaction price and amounts allocated to performance obligations (refer to 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 4.4)
- the impacts of COVID-19 on the financial report and going concern (refer below).

COVID-19 and going concern

The Novel Coronavirus (COVID-19) outbreak first reported in late 2019 is currently having an unprecedented health and economic impact both internationally and domestically. To reduce the spread of the virus, a series of public health measures were imposed across the world and in Australia, including travel restrictions, a nationwide call to work from home and significantly reduced levels of activity in both the economy and community. In response to the global health pandemic, the Federal and State governments have been providing a number of economic stimulus packages and policies in support of Victorian families and businesses.

The Corporation adopted the Victorian State Government Direction in March 2020 to make our payments to suppliers earlier (note 3.9) and to provide rent relief (note 7.6). In cooperation with the Victorian State Government's Working for Victoria the Corporation has also created in excess of 100 new jobs (commencing in 2020-21) for those in the community impacted by COVID-19.

The Corporation has transitioned the workforce to a blended working arrangement from home and office. We have also implemented COVIDSafe Principles designed to keep our employees and business safe.

Other account balances affected by COVID-19 due to management's judgements and assumptions about the future and estimation uncertainty include: recoverability of receivables (note 2.3); asset valuations (note 4.1.2.1); impairment (note 4.1.3); and defined benefit plan actuarial valuation (note 7.1).

About this Report (continued)

COVID-19 and going concern (continued)

The Corporation has reviewed the 2021-22 forecasts to reflect expectations about the future. The Corporation does not anticipate any significant impact in our current or future operations or financial position as a result of COVID-19. Therefore it remains appropriate to prepare these financial statements on a going concern basis. The financial statements 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.

Further COVID-19 related disclosures have been added to the financial statements to reflect management's judgements and assessments. These can be found in the notes referenced above.

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.

In particular, they are presented consistent with the requirements of *AASB 101 Presentation of Financial Statements*. As defined in AASB 101 and explained further in the joint Australian Accounting Standards Board and Australian Auditing and Assurance Standards Board guidance bulletin *Climate-related and other emerging risks disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2*, information is material if omitting it or misstating it could influence decisions that users make on the basis of financial information about the Corporation. Climate-related risk is a risk for the Corporation. The impacts of climate change create resilience challenges for our services. Extreme weather events, rising sea levels, reduced rainfall and increasing temperatures are already affecting our infrastructure, natural environment and water supplies. We expect these changes to continue, and therefore we are taking action now to ensure we are prepared for the future.

We have considered the impact of climate-related risks and determined there is no material financial impact to the 2020-21 financial statements (consistent with our conclusion for 2019-20) other than through uncertainty to significant future forecasting assumptions determining infrastructure asset fair value (note 4.1.2.1) and asset impairment (note 4.1.3). Climate change is also a consideration in determining asset useful life assumptions (note 4.1.3), provisions (note 3.12) and contingent liabilities (note 6.3).

Accounting policies

All accounting policies applied are consistent with those of the prior year. There have been no changes to accounting policies for the 2020-21 financial year.

Significant event

Port Phillip and Westernport Catchment Management Authority (PPWCMA) integration

On 8 February 2021, the Victorian Government announced the decision to integrate the functions of the PPWCMA into Melbourne Water (the Corporation), commencing from 1 January 2022. This will mean that, for the Port Phillip and Westernport (PPW) region, catchment management and waterway management functions will be brought together under one entity, the Corporation.

PPWCMA, the Corporation and DELWP are working together during 2021 to prepare for the integration. The integration will involve transferring PPWCMA's functions, powers, duties, assets, liabilities and staff to the Corporation. This includes legislative reform being coordinated by DELWP. Until the integration takes effect, the performance of the PPWCMA will continue to be led by the PPWCMA Board.

It is expected that PPWCMA will officially wind up on 31 December 2021 and all PPWCMA functions, powers, duties, assets, liabilities and existing employees will transfer to the Corporation from 1 January 2022. It is expected that the integration will be accounted for as a transfer of contributed equity as per FRD 119A. The financial impacts of the integration will be disclosed in the 2021-22 financial statements for the Corporation and are not expected to be material.

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)

	2021	2020
Bulk water services	964,351	996,467
Bulk sewerage services	455,874	452,045
Waterways and drainage charges	263,930	250,896
Developer contributions	186,723	192,232
Developer contributed assets	38,484	38,512
Net gain on disposal of property, plant, equipment and intangibles	16,554	15,207
Other revenue	13,588	9,603
Total revenue from contracts with customers	**1,939,504**	**1,954,962**

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.

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.

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 issue 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 (that is, upon provision of consent to the local council to issue the 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 (DCA) 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 an 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 issue of an 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 Property, Plant and Equipment*, the initial measurement and subsequent measurement of such land is within the scope of AASB 116, that is, 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)

	2021	2020
Interest revenue	110	79
Rental income	2,920	3,012
Government grants	6,991	1,425
Total other income	**10,021**	**4,516**

Interest revenue is recognised when earned and is accrued in accordance with the terms and conditions of the underlying financial instrument or other contract.

Rental income is recognised when earned 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* (that is, 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	2021	2020
Trade debtors	43,707	40,983
Other receivables (including contract assets)	42,673	47,397
Less: allowance for expected credit losses	-	-
Total contractual receivables	**86,380**	**88,380**
Statutory receivables		
Net GST receivable from the ATO	18,279	13,369
Total current receivables	**104,659**	**101,749**

Trade debtors and **other receivables** (including contract assets) are recognised at the amounts receivable less any allowance for expected credit losses. 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 Financial Instruments* 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 2021 (2019-20: 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 2021	0-30 days	31-60 days	61-90 days	91 days+	
Receivables					
Trade debtors[a]	25,500	6,436	1,394	10,377	**43,707**
Other receivables	42,673	-	-	-	**42,673**
Total contractual receivables	**68,173**	**6,436**	**1,394**	**10,377**	**86,380**

	Current	Past due but not impaired[b]			Total
30 June 2020	0-30 days	31-60 days	61-90 days	91 days +	
Receivables					
Trade debtors[a]	24,017	7,023	1,475	8,468	**40,983**
Other receivables	47,397	-	-	-	**47,397**
Total contractual receivables	**71,414**	**7,023**	**1,475**	**8,468**	**88,380**

(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.

(b) Ageing profile for 2019-20 trade debtors has been re-classified for comparative purposes, with no impact on total trade debtors.

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 2021.

Structure

3.1 Operational expenses

($ thousands)

	2021	2020
VDP operating expenses	203,641	186,045
Energy expenses	42,411	47,282
External professional services expenses	23,850	22,511
Research and development expenses	6,958	8,051
Materials and chemicals expenses	11,157	10,896
Grants and contributions expenses	9,044	8,038
Transport expenses	3,391	3,492
Insurance expenses	3,749	4,787
Other expenses	658	363
Total operational expenses	**304,859**	**291,465**

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 and energy. 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)

	2021	2020
Salary and wages expenses	113,081	107,312
Annual, long service and shift leave expenses	13,768	14,765
Defined contribution plans (superannuation accumulation fund) expense	10,795	9,879
Defined benefit superannuation plan expense	1,687	1,565
Other employee expenses	6,788	6,888
Total employee benefits expenses	**146,119**	**140,409**

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 (that is, 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)

	2021	2020
Current		
Accrued salaries and wages		
Accrued salaries and wages	6,397	5,247
Annual leave		
Unconditional and expected to settle within 12 months	10,830	9,155
LSL		
Unconditional and expected to settle within 12 months	3,079	2,864
Unconditional and expected to settle after 12 months	18,652	18,634
On-costs		
Unconditional and expected to settle within 12 months	2,010	1,681
Unconditional and expected to settle after 12 months	2,763	2,760
Other employee benefits	6,044	6,921
Total current employee benefits and on-costs	**49,775**	**47,262**
Non-current		
LSL	4,662	4,754
On-costs on LSL	691	704
Other employee benefits	9,604	9,604
Total non-current employee benefits and on-costs	**14,957**	**15,062**
Total employee benefits and on-costs	**64,732**	**62,324**

Reconciliation of movement in on-cost provision ($ thousands)

	2021	2020
Opening balance	5,145	4,716
Additional provisions recognised	1,979	2,025
Additions due to LSL transfers	3	27
Reductions arising from payments/other sacrifices of future economic benefits	(1,663)	(1,623)
Closing balance	**5,464**	**5,145**
Current	4,773	4,441
Non-current	691	704

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 (that is, they cannot 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 seven 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 2021 was 1.491 per cent (2019-20: 0.872 per cent). 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 2021 of 2.95 per cent (2019-20: 4.25 per cent).

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 $12.7 million (2019-20 $12.7 million) has been made for outstanding claims incurred and not settled, and for claims incurred but not reported at 30 June 2021. 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 2021 is $10.0 million (2019-20: $8.8 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)

	2021	2020
Repairs and maintenance	86,008	75,463
Information technology maintenance	9,404	7,737
Total repairs and maintenance expenses	**95,412**	**83,200**

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)

	2021	2020
Waterways charges billings and collection	14,484	14,122
Information technology and telecommunication expenses	16,350	17,358
Short-term lease expenses	252	252
Low-value lease expenses	2	13
Variable lease payment expenses	2,311	2,360
Education and training expenses	2,417	2,514
Legal expenses	1,003	1,056
Other expenses	5,954	5,619
Total administrative expenses	**42,773**	**43,294**

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)

	2021	2020
Government rates and taxes	29,814	33,772
Total government rates and taxes	**29,814**	**33,772**

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)

	2021	2020
Asset transfers to council	40,553	35,814
Total asset transfers to council	**40,553**	**35,814**

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)

	2021	2020
Assets written off/written down	4,172	2,916
CSO adjustments for purchased land	5,905	3,157
Other expenses	2,400	2,197
Total other expenses	**12,477**	**8,270**

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 per cent, 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 liability

Components of tax expense	($ thousands)	
	2021	2020
Current tax liability	137,786	141,004
Deferred tax relating to temporary differences	(36,511)	(19,114)
Adjustments for current tax of prior periods	(604)	(294)
Total tax expense	**100,671**	**121,596**

Reconciliation of income tax to prima facie tax payable	($ thousands)	
	2021	2020
Profit before income tax	292,677	324,910
Tax at the Australian tax rate of 30% (2019-20: 30%)	87,803	97,473
Tax effect of amounts which are not deductible/(taxable) in calculating taxable income:		
Adjustment in respect of income tax of previous year	(604)	(294)
Non assessable and non deductible for income tax purposes	8,882	20,774
Assessable income not booked	4,590	3,643
Income tax as reported in the Statement of Profit or Loss and Other Comprehensive Income	**100,671**	**121,596**

Income tax liability	($ thousands)	
	2021	2020
Current tax liability	19,469	12,824
Total income tax liability	**19,469**	**12,824**

Income tax recognised in other comprehensive income	($ thousands)	
	2021	2020
Deferred tax arising on items recognised in other comprehensive income		
Increase in deferred tax on land & buildings revalued	62,884	-
Reversal of deferred tax on disposal of land previously revalued	(39)	(974)
Increase in deferred tax on infrastructure assets revalued	27,173	-
Actuarial gains (losses) on the defined benefit plan	3,084	(334)
Total income tax recognised in other comprehensive income	**93,102**	**(1,308)**

3.8.2 Net deferred tax liabilities – non-current

($ thousands)

	2021	2020
Amounts recognised in Profit or Loss		
Property, plant and equipment	167,485	196,680
Employee entitlements	(12,805)	(12,165)
Developer contributions	277	619
Provisions	(2,861)	(2,220)
Revenue in advance	(22,545)	(20,086)
VDP service concession liability	93,490	95,919
Other	(6,414)	(5,532)
Total recognised in Profit or Loss	**216,627**	**253,215**
Amounts recognised in Other Comprehensive Income		
Net gains on revaluation of land and buildings	119,554	56,709
Net gains on revaluation of infrastructure assets	934,758	907,585
Actuarial gain on the defined benefit plan	11,393	8,309
Total recognised in Other Comprehensive Income	**1,065,705**	**972,603**
Net deferred tax liability	**1,282,332**	**1,225,818**

Movements

($ thousands)

	2021	2020
Opening balance	1,225,818	1,246,337
Credited to Profit or Loss	(36,511)	(19,114)
Debited to Other Comprehensive Income	93,102	(1,308)
Adjustment in respect of deferred tax of prior period	(77)	(97)
Closing balance	**1,282,332**	**1,225,818**
Net deferred tax liabilities to be recovered after more than 12 months	1,314,932	1,255,946
Net deferred tax liabilities to be recovered within 12 months	(32,600)	(30,128)
Total non-current liabilities – deferred tax liabilities	**1,282,332**	**1,225,818**

The Cost of Delivering Our Services (continued)

3.9 Payables

($ thousands)

	2021	2020
Current		
Trade creditors	129,080	84,981
Interest payable	32,732	37,479
Accruals	190,326	194,382
Other payables	6,198	4,826
Total current payables	**358,336**	**321,668**
Non-current		
Other payables	3,014	467
Total non-current payables	**3,014**	**467**
Total payables	**361,350**	**322,135**

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 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 million are paid within 10 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)

	2021	2020
Current		
Unearned revenue from contracts with customers	72,254	66,523
Other unearned revenue	6,971	7,097
Total current contract liabilities	**79,225**	**73,620**

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)

	2021	2020
Unearned revenue at the beginning of the financial year	66,523	71,036
Consideration received in the year before performance obligations are satisfied	192,452	183,043
Performance obligations satisfied during the period and recognised as revenue (net of interest)	(186,721)	(187,556)
Unearned revenue from contracts with customers	**72,254**	**66,523**

Other unearned revenue represents revenue received in advance in relation to other income (that is, grants) and will be recognised as revenue when the services are performed.

3.11 Other current assets

($ thousands)

	2021	2020
Prepayments	**7,845**	**8,507**
Inventories	9,429	9,955
Total other current assets	**17,274**	**18,462**

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)

	2021	2020
Current		
Insurance claims	421	842
Other provisions	5,056	3,341
Total provisions – current	**5,477**	**4,183**
Non-current		
Insurance claims	595	1,223
Total provisions – non-current	**595**	**1,223**
Total provisions	**6,072**	**5,406**

Reconciliation of movement in provisions

($ thousands)

	Insurance claims	Other provisions	Total
Carrying amount at 1 July 2020	2,065	3,341	5,406
Provisions recognised/(derecognised)	(679)	6,105	5,426
Amounts utilised during the year	(370)	(4,390)	(4,760)
Carrying amount at 30 June 2021	**1,016**	**5,056**	**6,072**
Carrying amount at 1 July 2019	1,889	7,148	9,037
Provisions recognised/(derecognised)	1,210	-	1,210
Amounts utilised during the year	(1,034)	(3,807)	(4,841)
Carrying amount at 30 June 2020	**2,065**	**3,341**	**5,406**

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 climate-related risks. 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 primarily contractual 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 2020										
Opening balance	15,053,474	111,540	1,374,358	22,065	8,330	14,981	12,436	8,801,118	4,149,448	559,198
Purchased additions	3,743	-	-	-	-	-	3,743	-	-	-
Developer contributed assets	38,512	-	-	-	-	-	-	38,512	-	-
Disposals and write-offs	(51,841)	(33)	(16,752)	(5,132)	-	(6)	(513)	(28,816)	-	(589)
Depreciation and amortisation	(405,314)	-	-	(1,011)	(416)	(6,423)	(2,001)	(317,910)	(77,553)	-
Transfers between classes [a]	-	(87)	1,940	-	(6,769)	6,888	-	(1,972)	-	-
Assets classified as held for sale	12,533	-	7,440	5,093	-	-	-	-	-	-
Revaluation increments	-	-	-	-	-	-	-	-	-	-
Revaluation decrements [b]	(3,157)	-	(3,157)	-	-	-	-	-	-	-
Impairment losses	-	-	-	-	-	-	-	-	-	-
Impairment losses reversed	-	-	-	-	-	-	-	-	-	-
Capital expenditure [c]	479,903	-	-	-	-	-	-	-	-	479,903
Capital contributions	-	-	-	-	-	-	-	-	-	-
Capitalisation of works in progress	35	-	4,243	6,727	-	2,348	-	382,207	-	(395,490)
Closing carrying amount	**15,127,888**	**111,420**	**1,368,072**	**27,742**	**1,145**	**17,788**	**13,665**	**8,873,139**	**4,071,895**	**643,022**
At 30 June 2020										
Gross carrying amount	16,846,390	111,420	1,368,072	30,968	2,441	98,264	21,643	9,907,767	4,662,793	643,022
Accumulated depreciation	(1,718,502)	-	-	(3,226)	(1,296)	(80,476)	(7,978)	(1,034,628)	(590,898)	-
Carrying amount	**15,127,888**	**111,420**	**1,368,072**	**27,742**	**1,145**	**17,788**	**13,665**	**8,873,139**	**4,071,895**	**643,022**
Year ended 30 June 2021										
Opening balance	15,127,888	111,420	1,368,072	27,742	1,145	17,788	13,665	8,873,139	4,071,895	643,022
Purchased additions	3,952	-	-	-	-	-	3,952	-	-	-
Developer contributed assets	38,484	-	-	-	-	-	-	38,484	-	-
Disposals and write-offs	(49,171)	(11)	(4,758)	-	-	(13)	(723)	(40,951)	-	(2,715)
Depreciation and amortisation	(417,544)	-	-	(1,086)	(164)	(5,035)	(2,346)	(331,359)	(77,554)	-
Transfers between classes [a]	8	3	(3)	3,598	-	50	(38)	(3,602)	-	-
Assets classified as held for sale	(10,469)	-	(10,469)	-	-	-	-	-	-	-
Revaluation increments [b]	826,361	57,751	626,219	5,785	-	-	-	90,577	46,029	-
Revaluation decrements [b]	(58,264)	(1,560)	(55,492)	(1,212)	-	-	-	-	-	-
Impairment losses	-	-	-	-	-	-	-	-	-	-
Impairment losses reversed	-	-	-	-	-	-	-	-	-	-
Capital expenditure [c]	606,361	-	-	-	-	-	-	-	-	606,361
Capital contributions	-	-	-	-	-	-	-	-	-	-
Capitalisation of works in progress	493	-	21,585	1,915	-	2,878	-	316,201	-	(342,086)
Closing carrying amount	**16,068,099**	**167,603**	**1,945,154**	**36,742**	**981**	**15,668**	**14,510**	**8,942,489**	**4,040,370**	**904,582**
At 30 June 2021										
Gross carrying amount	16,147,443	167,603	1,945,154	36,742	2,437	83,988	24,078	8,942,489	4,040,370	904,582
Accumulated depreciation	(79,344)	-	-	-	(1,456)	(68,320)	(9,568)	-	-	-
Carrying amount	**16,068,099**	**167,603**	**1,945,154**	**36,742**	**981**	**15,668**	**14,510**	**8,942,489**	**4,040,370**	**904,582**

Note:

(a) Includes transfers to intangible assets, refer to 4.2.

(b) Pre-tax revaluation increments and decrements (net increment balance of $768.1 million (2019-20: $3.2 million net decrement)) are recognised in the income statement as revenue via net gain on revaluation of non-financial assets $39.2 million (2019-20: nil), other expenses $5.9 million (Community Services Obligation discount applied for purchased land based on VGV valuation) (2019-20: $3.2 million) and increase in other comprehensive income $734.8 million (2019-20: nil). 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 $20.2 million (2019-20 $18.7 million) (refer to 4.2) and fleet vehicles $4.0 millon (2019-20 $3.7 million) (refer to purchased additions category).

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)	
	2021	2020
Land	882,189	863,470
Buildings	35,685	33,069
Infrastructure assets – owned	6,705,376	6,614,396
VDP service concession asset	3,994,341	4,071,895
Total	**11,617,591**	**11,582,830**

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 Measurement*. 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 (2019-20: $500) and a useful life of more than one year are recognised as assets, with the exception of life cycle 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 (2019-20: $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 five years (as required under *FRD 103I 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 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 103I. 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. The latest independent formal revaluation has been conducted at 30 June 2021.

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 for further information on the revaluation methods used for the asset classes and the valuation outcomes for 30 June 2021.

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		
	2021	**Level 1[(a)]**	**Level 2[(a)]**	**Level 3[(a)]**
Non-current assets held for sale	19,555	-	19,555	-
Non-specialised land	52,408	-	52,408	-
Specialised land	2,060,348	-	-	2,060,348
Total land	**2,132,311**	**-**	**71,963**	**2,060,348**
Non-current assets held for sale	-	-	-	-
Non-specialised buildings	2,157	-	2,157	-
Specialised buildings	34,585	-	-	34,585
Total buildings	**36,742**	**-**	**2,157**	**34,585**
Leasehold improvements	981	-	-	981
Plant and equipment	15,668	-	-	15,668
Fleet vehicles	14,510	-	-	14,510
Infrastructure assets	8,942,489	-	-	8,942,489
VDP service concession asset	4,040,370	-	-	4,040,370
Total other	**13,014,018**	**-**	**-**	**13,014,018**
Total land, buildings, infrastructure, plant and equipment	**15,183,071**	**-**	**74,120**	**15,108,951**

($ thousands)

		Fair value measurements		
	2020	**Level 1[(a)]**	**Level 2[(a)]**	**Level 3[(a)]**
Non-financial assets held for sale	9,086	-	9,086	-
Non-specialised land	58,715	-	58,715	-
Specialised land	1,420,778	-	-	1,420,778
Total land	**1,488,579**	**-**	**67,801**	**1,420,778**
Non-financial assets held for sale	-	-	-	-
Non-specialised buildings	578	-	578	-
Specialised buildings	27,164	-	-	27,164
Total buildings	**27,742**	**-**	**578**	**27,164**
Leasehold improvements	1,145	-	-	1,145
Plant and equipment	17,788	-	-	17,788
Fleet vehicles	13,665	-	-	13,665
Infrastructure assets	8,873,139	-	-	8,873,139
VDP service concession asset	4,071,895	-	-	4,071,895
Total other	**12,977,632**	**-**	**-**	**12,977,632**
Total land, buildings, infrastructure, plant and equipment	**14,493,953**	**-**	**68,379**	**14,425,574**

Note:
(a) Classified in accordance with the fair value determination of non-financial physical assets.

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
- 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 a formal valuation year under FRD 103I. The valuation was conducted by the VGV. The valuation resulted in a net pre-tax increase in value of $626.9 million for specialised and non-specialised land (2019-20: nil). This pre-tax increase in value was accounted for in revenue via net gain on revaluation of non-financial assets of $39.2 million (2019-20: nil) and increase in post-tax other comprehensive income of $530.8 million (2019-20: nil). The revaluation also resulted in an increase of $62.8 million in associated deferred tax liability.

Note: Total net land valuation increments and decrements of $626.9 million at note 4.1.1 also include a $5.9 million reduction for CSO discounts applied to land purchased during the year based on VGV valuation (2019-20: $3.2 million), which is recorded in other expenses in the Income Statement.

The valuation methodology to assess each property's land fair value 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.

The market that the assets (land and buildings) are valued in is being impacted by the uncertainty that the coronavirus (COVID-19) outbreak has caused. The current market environment, impacted by coronavirus (COVID-19), 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 a formal valuation year under FRD 103I. The valuation was conducted by the VGV. The valuation resulted in a net pre-tax increase in value of $4.6 million for specialised and non-specialised buildings (2019-20: nil). This pre-tax increase in value was accounted for through an increase in post-tax other comprehensive income of $3.2 million (2019-20: nil). The revaluation also resulted in an increase of $1.4 million in associated deferred tax liability.

The valuation methodology 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 (that is, 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.

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 a formal valuation year under FRD 103I. For leasehold improvements fair value is assessed through a managerial valuation. The valuation resulted in nil adjustments.

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 a formal valuation year under FRD 103I. For plant and equipment fair value is assessed through a managerial valuation. The valuation resulted in nil adjustments.

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 a formal valuation year under FRD 103I. For vehicles fair value is assessed through a managerial valuation. The valuation resulted in nil adjustments.

Infrastructure

The fair value of infrastructure was assessed by an independent valuation as required under FRD 103I for 2020-21 as a formal revaluation year to determine the fair value of infrastructure assets. 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) to their present value and arriving at an enterprise value range. A discounted tax amortisation benefit (TAB) is added to the enterprise value to represent the tax benefits available to a hypothetical purchaser in resetting the tax cost base. Non-infrastructure assets and liabilities (including Service Concession Asset and Liability) are deducted from the enterprise value range to obtain the infrastructure 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.

The valuation resulted in a net pre-tax increase in value of $90.6 million for infrastructure (2019-20: nil). This increase in value was accounted for through an increase in post-tax other comprehensive income of $63.4 million (2019-20: nil). The revaluation also resulted in an increase of $27.2 million in associated deferred tax liability.

The significant assumptions used in determining fair value under the income approach at 30 June 2021 are summarised below:

- Nominal after tax discount rate in the range of 4.2 per cent to 4.7 per cent (2019-20: 4.6 per cent to 5.3 per cent). The valuation was based on a mid point of 4.5 per cent (2019-20: 5.0 per cent). 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.
- Operating expenditure and revenue growth (excluding developer contributions) applied post initial five-year pricing period 3.0 per cent (2019-20: 3.0 per cent)
- Developer contributions growth at 2.5% (2019-20: 2.5 per cent) applied post initial five-year pricing
- Long-term growth rate of 3.25 per cent (2019-20: 3.25 per cent) – representing inflation and volume growth
- A 10-year explicit cash flow projection period, with cash flows beyond the projection period reflected in the terminal value (2019-20: 10 years)
- Normalised terminal capex used for steady state $520.0 million (2019-20: $540.0 million).
- The valuation considers climate change through forecast cash flows, growth and terminal capital expenditure assumptions (as noted above). 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. Table 4.1.2.3 highlights sensitivity of fair value measurement to changes in these significant unobservable inputs
- Impacts from COVID-19 have been incorporated into the cashflow forecasts. The direct impacts are expected to be relatively minor. The extent and duration of future macroeconomic measures (such as GDP, inflation and interest rates) remain uncertain. As a result the inherent risk associated with the macroeconomic uncertainty has increased and is reflected in the discount rate.

Assets Available to Support Output Delivery (continued)

VDP service concession asset

2020-21 is a formal revaluation year under FRD 103I. The VDP service concession asset is valued using the current replacement cost method under AASB 13, as required by *AASB 1059 Service Concession Arrangements: Grantors* and adjusted for the associated depreciation.

The fair value of the VDP service concession asset was assessed by an independent external valuation as at 30 June 2021. The valuation resulted in a net pre-tax increase in value of $46.0 million (2019-20: nil). This pre-tax increase in value was accounted for through an increase in pre-tax other comprehensive income of $46.0 million (2019-20: nil). There is no deferred tax impact to the revaluation adjustment for the VDP.

The VDP service concession asset is classified as level 3 fair value measurement as it contains significant unobservable inputs and adjustments.

The approach used by the external valuation expert to derive fair value was the cost approach under AASB 1059. This involved estimating the current cost to purchase or replace the assets (replacement costs new 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. Benchmarking analysis concluded that the unit costs for similar desalination projects in Australia fall within a comparable range taking into account factors such as location, post treatment and construction year. Significant assumptions used in determining fair value include engineering useful lives and industry-specific inflation indices.

Additional scenario analysis has also been undertaken by the independent expert to assess the impact to fair value if the accounting useful lives and future life cycle costs (as per the Project Deed arrangements) were incorporated. The analysis supported that they were not materially different.

The valuation is based on prevailing market, economic and other conditions as at the date of this report and corresponds with a period of recovery from the unprecedented social and community disruption as a result of COVID-19 and the economic stimulus and other measures implemented by governments to counter its spread. Equity markets have rebounded strongly from an initial period of volatility but 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.

4.1.2.2 Net gain on revaluation of non-financial assets

($ thousands)

	2021	2020
Net gain on revaluation of non-financial assets (land)	39,219	-

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
2020 and 2021	2020 and 2021	2020 and 2021	2021	2020	2020 and 2021
Specialised land	Market approach	Community Service Obligation (CSO) adjustment	20-70% (45% weighted average)	20-90% (47% 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	$27-$10,000	$5-$8,500	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 (67 years weighted average)	5-150 years (63 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-$0.5M per unit	$500-$0.5M 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	3-15 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-$3.0M per unit	$500-$3.5M 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 (12 years weighted average)	3-50 years (11 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-$204,000 per unit	$5,600-$223,000 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 (6 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
Infrastructure assets	Income approach	Terminal value growth rate	3.25%	3.25%	If the terminal growth rate had changed by +/-.25% from the year end valuation, the impact to the valuation would have been an increase of $3,724.7 million in 2020-21 (2019-20: $2,274.5 million) and decrease by $2,440.3 million in 2020-21 (2019-20: $1,691.2 million)
		Terminal value capital expenditure (excluding growth)	$520.0 million	$540.0 million	If the quantum of the terminal value capital expenditure had changed by +/- $50 million that would result in a $2,424.4 million decrease in fair value in 2020-21 (2019-20: $1,618.6 million) or $2,424.4 million increase in fair value in 2020-21 (2019-20: $1,618.6 million)
		Weighted average cost of capital (WACC)	4.2-4.7%	4.6-5.3%	If the WACC had changed by +/-.25% from the year end valuation, the impact to the valuation would have been a decrease of $3,132.3 million in 2020-21 (2019-20: $1,966.9 million) and increase by $3,172.1 million in 2020-21 (2019-20: $2,667.6 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

Assets Available to Support Output Delivery (continued)

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
2020 and 2021	2020 and 2021	2020 and 2021	2021	2020	2020 and 2021
VDP service concession asset	Current replacement cost	Cost per unit	Buildings $ per sqm: 10,000-15,600 (14,700 weighted average) Pipeline $ per m: 11,000-15,400 (13,000 weighted average) Pumps $ per kW: 350-1,000 (700 weighted average) Transformers $ per MVA: 45,000-96,000 (75,000 weighted average) Pipeline $ per KL: 430-1,000 (675 weighted average)	Not applicable	A significant increase or decrease in unit costs would result in a significantly higher or lower fair value
		Engineering useful life for valuation	10-100 years (62 years weighted average)	Not applicable	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	8%-19% (12% weighted average)	7%-20% (12% weighted average)	A significant increase or decrease in estimated inflation factors would result in a higher or lower fair value

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 2019	1,428,516	21,430	8,330	14,981	12,436	8,801,118	4,149,448
Purchased additions	-	-	-	-	3,743	-	-
Developer contributed assets	-	-	-	-	-	38,512	-
Disposals and write-offs	(2,436)	(5,132)	-	(6)	(513)	(28,816)	-
Depreciation and amortisation	-	(954)	(416)	(6,423)	(2,001)	(317,910)	(77,553)
Transfers between classes	(5,607)	5,093	(6,769)	6,888	-	(1,972)	-
Transfers in/(out) of Level 3	(782)	-	-	-	-	-	-
Revaluation increments	-	-	-	-	-	-	-
Revaluation decrements	(3,157)	-	-	-	-	-	-
Capital contributions	-	-	-	-	-	-	-
Capitalisation of works in progress	4,243	6,727	-	2,348	-	382,207	-
At 30 June 2020	**1,420,777**	**27,164**	**1,145**	**17,788**	**13,665**	**8,873,139**	**4,071,895**
Opening balance 1 July 2020	1,420,777	27,164	1,145	17,788	13,665	8,873,139	4,071,895
Purchased additions	-	-	-	-	3,952	-	-
Developer contributed assets	-	-	-	-	-	38,484	-
Disposals and write-offs	(208)	-	-	(13)	(723)	(40,951)	-
Depreciation and amortisation	-	(1,029)	(163)	(5,035)	(2,346)	(331,359)	(77,554)
Transfers between classes	-	3,598	-	50	(38)	(3,602)	-
Transfers in/(out) of Level 3	(8,335)	-	-	-	-	-	-
Revaluation increments	683,580	4,107	-	-	-	90,577	46,029
Revaluation decrements	(57,052)	(1,170)	-	-	-	-	-
Capital contributions	-	-	-	-	-	-	-
Capitalisation of works in progress	21,585	1,915	-	2,878	-	316,201	-
At 30 June 2021	**2,060,347**	**34,585**	**982**	**15,668**	**14,510**	**8,942,489**	**4,040,370**

Assets Available to Support Output Delivery (continued)

4.1.3 Depreciation, amortisation and impairment

($ thousands)

	Notes	2021	2020
Depreciation			
Buildings	**4.1.1**	1,086	1,011
Leasehold improvements	**4.1.1**	164	416
Plant and equipment	**4.1.1**	5,035	6,423
Fleet vehicles	**4.1.1**	2,346	2,001
Infrastructure assets	**4.1.1**	331,359	317,909
VDP service concession asset	**4.1.1**	77,554	77,553
Right of use assets	**4.4**	8,272	7,915
Total depreciation		**425,816**	**413,228**
Amortisation			
Intangible assets	**4.2**	24,330	21,459
Total amortisation		**24,330**	**21,459**
Total depreciation and amortisation		**450,146**	**434,687**

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.

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 emerging 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 life cycle cost payments accounted for as expenditure. Guaranteed lives are used because life cycle costs cover repairs and maintenance and also asset replacements with shorter lives than the Project Deed.

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 (2019-20: 5 to 150 years)
Leasehold improvements	3 to 15 years (2019-20: 3 to 15 years)
Plant and equipment	3 to 50 years (2019-20: 3 to 50 years)
Infrastructure assets	2 to 245 years (2019-20: 2 to 245 years)
Fleet vehicles	1 to 15 years (2019-20: 1 to 15 years)
Intangible assets	2 to 25 years (2019-20: 2 to 25 years)
VDP service concession asset	9 to 100 years (2019-20: 9 to 100 years)
Right of use assets	3 to 8 years (2019-20: 3 to 8 years).

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.

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 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 considers 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 climate change and the impacts of COVID-19), there is a risk that the assumptions made 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 amount for most assets is 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)

	2021	2020
Intangible assets	171,473	185,358
Less: accumulated amortisation and impairment	(122,404)	(133,952)
Total intangible assets	**49,069**	**51,406**

Reconciliation of movements in intangible assets

($ thousands)

	Total	RECs[b]	IT[c]
Carrying amount at 1 July 2020	51,406	1,758	49,648
Additions	7,043	7,043	-
Disposals	(5,176)	(5,176)	-
Amortisation	(24,330)	-	(24,330)
Transfers between classes [a]	(8)	-	(8)
Impairment [d]	(21)	(21)	-
Capital expenditure	20,155	-	20,155
Carrying amount at 30 June 2021	**49,069**	**3,604**	**45,465**
Carrying amount at 1 July 2019	57,021	3,428	53,593
Additions	7,389	7,389	-
Disposals	(10,104)	(8,965)	(1,139)
Amortisation	(21,459)	-	(21,459)
Transfers between classes [a]	-	-	-
Impairment [c]	(94)	(94)	-
Capital expenditure	18,653	-	18,653
Carrying amount at 30 June 2020	**51,406**	**1,758**	**49,648**

Note:
(a) Includes transfers to physical assets, refer to 4.1.1.
(b) Renewable Energy Certificates (RECs).
(c) Information Technology.
(d) Impairment recognised in the income statement as other expenses $0.02 million (2019-20 :$0.1 million).

Assets Available to Support Output Delivery (continued)

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. Directly attributable costs incurred associated with acquisition of software as a service arrangement are capitalised where they meet the recognition criteria of intangible assets, otherwise are expensed.

The Corporation amortises intangible assets with a limited useful life using the straight line method over the estimated useful lives. 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. In addition, 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.

4.3 Non-current assets held for sale

($ thousands)

	2021	2020
Land	19,555	9,086
Buildings	-	-
Total non-current assets held for sale	**19,555**	**9,086**

The Corporation currently holds land for sale mainly as part of the Riverwalk Estate (Werribee) development. As at 30 June 2021, the Corporation has a joint arrangement with Development Victoria to actively market Riverwalk Estate lots for private sale.

Riverwalk Estate is a 197 hectare site which was previously part of the Werribee Treatment Plant. The land is owned by the Corporation. The Corporation has entered 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

The Statement of Financial Position shows the following amounts relating to leases:	($ thousands) 2021	2020
Right-of-use assets		
Buildings	46,634	54,567
Equipment	356	476
Other	287	515
Total right-of-use assets	**47,277**	**55,558**
Lease liabilities		
Current	7,430	6,551
Non-current	43,462	50,893
Total lease liabilities (included within interest bearing liabilities see Note 5.1)	**50,892**	**57,444**

There were no additions to the right-of-use assets during the 2020-21 financial year (2019-20: nil).

(ii) Amounts recognised in the Statement of Profit or Loss

The Statement of Profit or Loss shows the following amounts relating to leases:	($ thousands) 2021	2020
Depreciation charge of right-of-use assets		
Buildings	8,067	7,679
Equipment	120	151
Other	85	85
Total	**8,272**	**7,915**
Administrative expenses		
Expense relating to short-term leases	252	252
Expense relating to leases of low-value assets that are not short-term leases	2	13
Expense relating to variable lease payments not included in lease liabilities	2,311	2,360
Total	**2,565**	**2,625**
Finance expenses		
Buildings	1,238	1,373
Equipment	11	11
Other	9	9
Total	**1,258**	**1,393**

The total cash outflow for leases in 2020-21 was $7.8 million (2019-20: $7.5 million).

Assets Available to Support Output Delivery (continued)

(iii) The Corporation's leasing activities and how these are accounted for

The Corporation leases buildings, a rooftop space for a telecommunication tower, 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 the 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

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 2021.

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)	
	2021	**2020**
Within 1 year	1,997	1,837
Later than 1 year but not later than 5 years	5,557	5,679
Later than 5 years	1,431	1,996
Total operating lease receivable	**8,985**	**9,512**

During 2020-21 the Corporation provided rental waivers of $0.2 million to approved applicants (2019-20: $0.1 million) as part of the COVID-19 hardship program as directed by the Victorian Government. This has been reflected in the commitments receivable numbers and also in ex-gratia disclosures at note 7.6.

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)

	2021	2020
Current interest bearing liabilities		
VDP service concession liability	20,693	38,064
Lease liabilities	7,430	6,551
Borrowings	346,445	569,300
Total current interest bearing liabilities	**374,568**	**613,915**
Non-current interest bearing liabilities		
VDP service concession liability	3,544,228	3,564,920
Lease liabilities	43,462	50,893
Borrowings	3,900,000	3,585,000
Total non-current interest bearing liabilities	**7,487,690**	**7,200,813**
Total interest bearing liabilities	**7,862,258**	**7,814,728**

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. Refer to note 5.1.2.

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.

5.1.1 Breakdown of finance costs

($ thousands)

	2021	2020
Interest expense	132,730	147,817
VDP service concession liability	403,675	413,197
Lease liabilities	1,258	1,393
Financial Accommodation Levy	36,251	39,393
Total	**573,914**	**601,800**

5.1 Interest bearing liabilities (continued)

Finance costs include interest on short-term and long-term borrowings, finance charges associated with the VDP service concession liability, interest on leases, and 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 (2019-20: 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.

5.1.2 Refinancing gain on financial instruments

($ thousands)

	2021	2020
Total refinancing gain on financial instruments	**-**	**38,142**

Debt modification assessment

When there is a refinancing gain, AASB 9 requires an assessment to be conducted to determine if the modification of debt is substantial, meaning the difference is at least 10 per cent or greater between the present value of the modified cash flow and original cash flow, being the both discounted at the original effective interest rate. Substantial debt modification is to be treated as an extinguishment of the existing debt and a recognition of a new liability. There were no refinancing gains for 2020-21. For 2019-20, the refinancing gain was not considered to be a substantial modification to the existing debt as the change is less than 10 per cent and as such, AASB 9 requires the resulting gain from refinancing to be recognised in the Statement of Profit or Loss immediately and reduces the future liability and interest expense profile.

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 three 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)

	2021	2020
Profit for the period after tax	192,006	203,313
Plus/(less) non cash items:		
Depreciation and amortisation	450,146	434,687
Net gain on revaluation of non-financial assets	(39,219)	-
Net gain on sale of non-current assets (including RECs)	(16,554)	(15,207)
Assets written off/written down and asset transfers to council	44,725	38,730
Developer contributed assets received	(38,484)	(38,512)
Defined benefit superannuation plan expense	1,687	1,565
Defined contribution superannuation plan expense	-	406
RECs received	(7,043)	(8,813)
Net loss/(gain) on revaluation of non-financial assets	-	-
Refinancing (gain)/loss on financial instruments	-	(38,142)
Changes in operating assets and liabilities (net of investing items):		
(Increase)/Decrease in trade and other receivables	(2,909)	(3,951)
Decrease/(Increase) in other assets	(9,091)	(925)
Increase/(Decrease) in trade and other payables and contract liabilities	45,803	15,162
Increase/(Decrease) in provisions and employee benefits provisions	3,074	3,307
Increase/(Decrease) in other liabilities	666	(3,631)
Increase/(Decrease) in current tax liability	6,645	(12,157)
(Decrease)/Increase in deferred tax liabilities	(36,588)	(20,519)
Net cash provided by operating activities	**594,864**	**555,313**

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)

	2021	2020
Capital expenditure commitments		
Total capital expenditure contracted for the construction of water, sewerage and waterways and drainage infrastructure:		
Less than 1 year	338,841	230,220
1 year but less than 5 years	210,793	257,263
5 years or more	94	141
Total capital expenditure commitments	**549,728**	**487,624**

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	34,923	34,551
1 year but less than 5 years	65,734	75,348
Later than 5 years	43,987	56,164
Total other operating commitments	**144,644**	**166,063**

Build, own and operate (BOO) commitment

The commitment recognised in 2019-20 was in relation to the electricity generation BOO contract at the Western Treatment Plant with Sustainable Energy Infrastructure. The contract expired on 31 December 2020 and the Corporation has now taken ownership of the asset. At the end of 2020-21 there was no BOO commitment.

Less than 1 year	-	2,303
Total BOO commitment	**-**	**2,303**

5.4 VDP service concession arrangement

Victorian Desalination Project 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 WUPs in accordance with the Project Deed. The Corporation makes these payments to DELWP which is 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 WIA 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, DELWP (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, 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 note 4.1 and related liabilities are disclosed under interest bearing liabilities in note 5.1 respectively.

Changes in arrangement occurring in the current year

As at 30 June 2021 AquaSure had produced the 125GL for the 2020-21 water order (125GL for the 2019-20 water order).

On 31 March 2021 the Acting Minister for Water announced the 2021-22 Supply Notice with a Required Annual Water Volume for 125GL (2020-21 Supply Notice: 125GL) and non-binding forecasts of 125GL for 2022-23 and 2023-24 (2020-21 non-binding forecast: 150GL for 2021-22 and 2022-23).

Financing Our Operations (continued)

VDP service concession arrangement liability

As per information provided by DELWP (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)	
	2021	2020	2021	2020
VDP service concession arrangement liability				
Less than 1 year	422,025	441,738	20,693	38,064
1 year but less than 5 years	1,774,367	1,743,898	210,069	160,098
Later than 5 years	6,479,252	6,931,746	3,334,159	3,404,822
Minimum future liability payments	**8,675,644**	**9,117,382**	**3,564,921**	**3,602,984**
Less: Future finance charges	(5,110,723)	(5,514,398)	-	-
Total liability	**3,564,921**	**3,602,984**	**3,564,921**	**3,602,984**
Representing liability:				
Current (refer to 5.1) [a]			20,693	38,064
Non-current (refer to 5.1) [a]			3,544,228	3,564,920
Total liability			**3,564,921**	**3,602,984**

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% (2019-20: 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 life cycle 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 DELWP (in accordance with the WIA):

($ thousands)

	2021	2020
Less than 1 year	240,661	239,059
1 year but less than 5 years	658,061	650,464
Later than 5 years	3,064,038	3,307,587
Total other commitments (inclusive of GST) [a], [c]	**3,962,760**	**4,197,110**
Less GST recoverable from the Australian Taxation Office	(360,251)	(381,555)
Total other commitments (exclusive of GST)	**3,602,509**	**3,815,555**
Present value of other commitments [b]	**1,532,975**	**1,552,895**

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% (2019-20: 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 125 billion litres of water for 2020-21 financial year have been reflected in commitments for 2020-21 (2019-20: 125 billion litres of water). The announcement of the 125GL water order for 2021-22 is a binding commitment and has been included in 2021-22. The announcement of the 125GL water order for 2022-23 and 2023-24 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
- 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

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.

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 2021 (2019-20: nil).

Categories of financial instruments

($ thousands)

	2021	2020
Financial assets		
Cash and cash equivalents	3,703	14,324
Trade debtors	43,707	40,983
Other receivables	42,673	47,397
Total financial assets	**90,083**	**102,704**
Financial liabilities		
Payables	361,350	322,135
VDP service concession liability	3,564,921	3,602,984
Lease liabilities	50,892	57,444
Short-term borrowings	66,445	289,300
Floating rate notes	135,000	325,000
Fixed interest	4,045,000	3,540,000
Total financial liabilities	**8,223,608**	**8,136,863**

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 and staffing
- 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 Sustainability Strategy*, 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 (that is, fixed and floating) – During the 2020-21 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 per cent 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 repricing profile of the debt portfolio with the annual regulatory weighted average cost of capital (WACC) reset 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 2020-21 of $4,468.8 million (2019-20: $4,383.0 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 2021 was 50.1 per cent (2019-20: 50.8 per cent) and interest cover cash ratio was 2.2 times (2019-20: 2.2 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*.

Risk management (continued)

6.1.1 Interest rate risk

Interest rate exposure as at 30 June 2021 ($ thousands)

	Weighted average	Floating interest	Fixed interest	Non-interest bearing	Total carrying amount
Financial assets					
Cash and cash equivalents	0.29%	3,703	-	-	3,703
Trade debtors	-	-	-	43,707	43,707
Other receivables	-	-	-	42,673	42,673
Total financial assets		**3,703**	**-**	**86,380**	**90,083**
Financial liabilities					
Payables	-	-	-	361,350	361,350
VDP service concession liability [a]	11.28%	-	3,564,921	-	3,564,921
Lease liabilities	2.29%		50,892		50,892
Short-term borrowings	0.27%	66,445	-	-	66,445
Floating rate notes	0.24%	135,000	-	-	135,000
Fixed interest	2.94%	-	4,045,000	-	4,045,000
Total financial liabilities		**201,445**	**7,660,813**	**361,350**	**8,223,608**

Interest rate exposure as at 30 June 2020 ($ thousands)

	Weighted average	Floating interest	Fixed interest	Non-interest bearing	Total carrying amount
Financial assets					
Cash and cash equivalents	0.65%	14,324	-	-	14,324
Trade debtors	-	-	-	40,983	40,983
Other receivables	-	-	-	47,397	47,397
Total financial assets		**14,324**	**-**	**88,380**	**102,704**
Financial liabilities					
Payables	-	-	-	322,135	322,135
VDP service concession liability [a]	11.28%	-	3,602,984	-	3,602,984
Lease liabilities	2.29%		57,444		57,444
Short-term borrowings	0.42%	289,300	-	-	289,300
Floating rate notes	1.05%	325,000	-	-	325,000
Fixed interest	3.62%	-	3,540,000	-	3,540,000
Total financial liabilities		**614,300**	**7,200,428**	**322,135**	**8,136,863**

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'.

Interest rate risk sensitivity analysis

($ thousands)

2021	Profit or Loss		Equity	
	-50 basis points	+50 basis points	-50 basis points	+50 basis points
Cash and cash equivalents	(11)	11	(11)	11
Interest bearing liabilities	1,007	(1,007)	1,007	(1,007)
Total	**996**	**(996)**	**996**	**(996)**

($ thousands)

2020	Profit or Loss		Equity	
	-50 basis points	+50 basis points	-50 basis points	+50 basis points
Cash and cash equivalents	(10)	10	(10)	10
Interest bearing liabilities	3,072	(3,072)	3,072	(3,072)
Total	**3,061**	**(3,061)**	**3,061**	**(3,061)**

Exposures arise predominately from liabilities bearing variable interest rates as the Corporation intends to hold fixed rate liabilities to maturity. At 30 June 2020 and 30 June 2021, 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.

At 30 June 2021, the Corporation did not have any Forward Foreign Exchange Contracts (30 June 2020: nil).

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’s exposure to commodity price risk is minimal. If at any time the Corporation is exposed to a commodity price risk from business operations this is immediately identified, 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 (that is, contracts for electricity, chemicals and procurement process to deliver capital works).

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.

Risk management (continued)

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.

The major exposure to credit risk arises from trade debtors and other receivables.

Trade debtors comprised of:

- metropolitan retail water companies 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 seven 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 companies 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 2021 (2019-20: 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 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)

2021	Total carrying amount	Total contractual cash flows	1 year or less	1 to 5 years	Over 5 years
Non-interest bearing	361,350	361,350	358,336	3,014	-
Variable rate	201,445	203,537	66,977	101,132	35,428
Fixed rate	7,660,813	14,113,901	861,325	3,933,266	9,319,310
Total	**8,223,608**	**14,678,788**	**1,286,638**	**4,037,412**	**9,354,738**

2020	Total carrying amount	Total contractual cash flows	1 year or less	1 to 5 years	Over 5 years
Non-interest bearing	322,135	322,135	321,668	467	-
Variable rate	614,300	617,317	431,848	185,470	-
Fixed rate	7,200,428	14,129,201	901,111	3,670,690	9,557,400
Total	**8,136,863**	**15,068,654**	**1,654,626**	**3,856,627**	**9,557,400**

6.1.6 Other matters

Net holding gain/(loss) on financial instruments by category ($ thousands)

2021	Net holding gain	Interest revenue/ (expense)	Total
Financial assets	-	110	110
Financial liabilities at amortised cost	-	(573,914)	(573,914)
Total	**-**	**(573,804)**	**(573,804)**

2020	Net holding gain	Interest revenue/ (expense)	Total
Financial assets	-	79	79
Financial liabilities at amortised cost	38,142	(601,800)	(563,658)
Total	**38,142**	**(601,721)**	**(563,579)**

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)

	2021		2020	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Cash and cash equivalents	3,703	3,703	14,324	14,324
Trade debtors	43,707	43,707	40,983	40,983
Other receivables	42,673	42,673	47,397	47,397
Total financial assets	**90,083**	**90,083**	**102,704**	**102,704**
Financial liabilities				
Payables	361,350	361,350	322,135	322,135
VDP service concession liability [(a)]	3,564,921	4,921,831	3,602,984	4,845,410
Lease liabilities	50,892	50,892	57,444	57,444
Short-term borrowings	66,445	66,445	289,300	289,300
Floating rate notes	135,000	135,445	325,000	325,715
Fixed interest	4,045,000	4,246,769	3,540,000	3,870,461
Total financial liabilities	**8,223,608**	**9,782,732**	**8,136,863**	**9,710,465**

(a) 2019-20 comparative fair value has been restated for consistency with the current year (formerly $3,602,984). The 2019-20 fair value estimate was not available in the previous financial year.

Risk management (continued)

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)

	2021	2020
Contingent assets	12,971	15,257
Contingent liabilities [(a)]	45,254	45,146

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 2020-21 are $40.9 million (2019-20: $40.9 million).

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 per cent to 7.5 per cent 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 applying to long-term Commonwealth Government Bonds with six years' duration (2019-20: six years) reflecting future service. 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.

Other Disclosures (continued)

7.1 Superannuation – defined benefit plan (continued)

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 three 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.

Reconciliation of the present value of the defined benefit superannuation obligation

($ thousands)

	2021	2020
Present value of defined benefit obligation at beginning of the year	62,250	62,381
Current service cost	1,769	2,126
Interest cost	469	713
Contributions by Plan participants	544	581
Benefits paid	(5,621)	(4,846)
Taxes and premiums paid	(176)	(292)
Actuarial losses/(gains) arising from changes in demographic assumptions	-	4,021
Actuarial (gains)/losses arising from changes in financial assumptions	(3,351)	(42)
Actuarial (gains)/losses arising from liability experience	(224)	(2,047)
Contributions to accumulation section [a]	-	(345)
Contributions to accumulation section in relation to prior year [a]	-	-
Present value of the defined benefit obligation at year end	**55,660**	**62,250**

Reconciliation of the fair value of Plan assets

($ thousands)

	2021	2020
Fair value of Plan assets at beginning of the year	74,157	77,374
Contributions by Plan participants	544	581
Benefits paid	(5,621)	(4,846)
Taxes and premiums paid	(176)	(292)
Interest income	551	868
Actual return on Plan assets less interest income	6,704	817
Contributions to accumulation section [a]	-	(345)
Fair value of Plan assets at year end [b]	**76,159**	**74,157**

Reconciliation of the assets and liabilities recognised in the Statement of Financial Position

($ thousands)

	2021	2020
Net defined benefit asset/(liability) at start of year	11,907	14,993
Current service cost	(1,769)	(2,126)
Net interest	82	155
Actual return on Plan assets less interest income [c]	6,704	817
Actuarial (losses)/gains arising from changes in demographic assumptions [c]	-	(4,021)
Actuarial gains/(losses) arising from changes in financial assumptions [c]	3,351	42
Actuarial gains/(losses) arising from liability experience [c]	224	2,047
Net defined benefit asset at year end	**20,499**	**11,907**

(a) Includes no contributions (2019-20: $0.3 million) 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 $10.3 million (2019-20: losses of $1.1 million) and after tax gain of $7.2 million (2019-20: losses of $0.8 million).

Other Disclosures (continued)

7.1 Superannuation – defined benefit plan (continued)

The Corporation has recognised an asset in the Statement of Financial Position in respect of its defined benefit superannuation Plan arrangements at 30 June 2021 (2019-20: 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 2020-21, the contributions rate continued to be zero due to sufficient surplus in the Plan (2019-20: zero).

Significant actuarial assumptions at the balance sheet date ($ thousands)

	2021	2020
Assumptions to determine defined benefit cost		
Discount rate [a]	0.80%	1.20%
Expected salary increase rate	2.00%	2.60%
Expected pension increase rate	2.00%	2.50%
Assumptions to determine defined benefit obligation		
Discount rate	1.40%	0.80%
Expected salary increase rate [b]	2.00%	2.00%
Expected pension increase rate	2.00%	2.00%
Pension take up rate	25.0%	25.0%

(a) In 2021, the discount rate has reduced significantly in comparison to prior year as a result of a number of market variables that have been impacted by COVID-19. Market variables include changes to government policies, higher unemployment, low inflation, changes in business productivity and drops in business and consumer confidence.
(b) 2% per annum for the next five years and 2.5% per annum thereafter.

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 those Directions, 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 Lisa Neville, MP	1 July 2020 to 30 June 2021
Acting Minister for Water	Hon Richard Wynne, MP	15 February 2021 to 30 June 2021
Chair	John Thwaites	1 July 2020 to 30 June 2021
Managing Director	Michael Wandmaker	1 July 2020 to 30 June 2021
Deputy Chair	Merran Kelsall	1 July 2020 to 30 June 2021
Director	Kathleen Bailey-Lord	1 July 2020 to 30 June 2021
Director	Hugh Gleeson	1 July 2020 to 30 June 2021
Director	Robyn McLeod	1 July 2020 to 30 June 2021
Director	Garry Smith	1 July 2020 to 30 June 2021
Director	Russell Anderson	1 July 2020 to 30 June 2021
Director	Fiona Rowland	1 July 2020 to 30 June 2021

Remuneration

The Minister's remuneration and allowances is set by the *Parliamentary Salaries and Superannuation Act 1968* and is reported within the Department of Parliamentary Services Financial Report. Other relevant interests are declared in the Register of Members' Interests which each Member of Parliament completes.

The number of responsible persons whose remuneration from the Corporation was within the specified bands were as follows:

	Total Remuneration	
	2021	2020
Income Band ($)	Number	Number
40,000 - 49,999	2	2
50,000 - 59,999	5	5
90,000 - 99,999	1	1
530,000 - 539,000	1	1
Total numbers	**9**	**9**
Total remuneration ($000)	**996**	**993**

Other Disclosures (continued)

7.3 Remuneration of executives

The number of executives, other than ministers, and their total remuneration during the reporting period are shown in the table below. 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 (including executives defined as Key Management Personnel in note 7.4)	($ thousands) 2021	2020
Short-term employment benefits [a]	3,833	3,805
Post-employment benefits [b]	272	248
Other long-term benefits	96	94
Termination benefits [c]	98	-
Total remuneration	**4,299**	**4,147**
Total number of executives [d]	**13**	**13**
Total annualised employee equivalent [e]	**12**	**12**

Note:
a) Short-term benefits increased marginally as a result of roles that were carried as vacancies for short periods within 2019-20 (FTE 11.85) being fully held and remunerated in 2020-21 (FTE 12.08). No remuneration increases were provided to executive officers in 2020-21.
b) Post-employment benefits increased marginally as a result of an increase to the Superannuation Contributions Cap (SGC) for 2020-21 and SGC applicable to a termination benefit.
c) Termination benefits increased as a result of the early completion of an executive contract as per the terms of the Public Entity Executive Remuneration Policy for executive contracts.
(d) The total number of executive officers includes people who meet the definition of Key Management Personnel (KMP) of the entity under *AASB 124 Related Party Disclosures* and are also reported within the related parties note disclosure.
(e) 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 (that is, 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 arm's length basis.

KMP of the Corporation include the Portfolio Minister and all Directors or executives who have the authority and responsibility for planning, directing and controlling the activities of the Corporation, directly or indirectly, during the financial year.

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 Department of Parliamentary Services' Financial Report.

($ thousands)

Compensation of KMP	2021	2020
Short-term employment benefits	1,334	1,334
Post-employment benefits	83	81
Other long-term benefits	23	23
Termination benefits	-	-
Total [(a)]	**1,440**	**1,438**

Note:
(a) Note that executives that meet the definition of KMP are also reported in the disclosure of remuneration of executives.

Transactions with KMP and other related parties

During the year, related parties of KMP 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.

($ thousands)

Lisa Neville (Minister for Water) and Richard Wynne (Acting Minister for Water)	2021	2020
The Honourable Lisa Neville and Honourable Richard Wynne are responsible for the Department of Environment, Land, Water and Planning (DELWP). All dealings with this entity were on normal terms and conditions during the reporting period.		
Total payments made to DELWP were (including VDP payments):	711,630	754,667

Robyn McLeod – Director		
Robyn McLeod is a Director of the Victorian Water Industry Association. All dealings with this agency were on normal terms and conditions during the reporting period.		
Total payments made to Victorian Water Industry Association were:	193	168

Hugh Gleeson – Director		
Hugh Gleeson is a Director of Energy Queensland Limited. Ergon Energy Queensland is a subsidiary of Energy Queensland Limited. All dealings with this agency were on normal terms and conditions during the reporting period.		
Total payments received from Ergon Energy Queensland were:	429	759

All other transactions that have occurred with KMP 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.

Other Disclosures (continued)

7.4 Related parties (continued)

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 Environment, Land, Water and Planning (DELWP)

DELWP 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. DELWP 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 DELWP, 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 (2019-20: $50 million). DTF also collects income taxes, the Financial Accommodation Levy, Local Government Rates Equivalent and dividend payments from the Corporation.

City West Water, South East Water, Yarra Valley Water, Western Water and Barwon Water

City West Water, South East Water, Yarra Valley Water, Western 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
- State Revenue Office
- Southern Rural Water Corporation
- Victoria State Emergency Service
- Victorian Water Industry Association
- Victorian Workcover Authority
- Department of Jobs, Precincts and Regions
- Monash University
- Holmesglen Institute
- Department of Education and Training.

Other related parties with arm's-length transactions greater than $0.1 million have been disclosed above. In the below summaries, all other related parties transactions and payable balances below $0.1 million have also been included.

Material transactions with related parties

($ thousands)

	2021	2020
Receipts from related parties (inclusive of GST)		
DELWP	9,011	12,060
City West Water	416,064	425,386
South East Water	616,741	624,717
Yarra Valley Water	620,705	628,837
Western Water	10,454	10,031
Barwon Water	8,167	2,111
TCV	-	-
Development Victoria	10,685	13,077
Other related parties	8,303	6,086
Receipt of contributed assets		
DELWP	-	-

($ thousands)

	2021	2020
Payments to related parties (inclusive of GST)		
DELWP	711,630	754,667
DTF	172,639	196,823
City West Water	5,536	5,680
South East Water	5,941	6,526
Yarra Valley Water	7,189	6,698
Western Water	254	165
Barwon Water	114	29
TCV	137,616	155,401
Development Victoria	-	5
Other related parties*	34,072	28,088
Dividend paid		
DTF	62,800	73,000
Repayment of equity contributions		
DTF	-	-
Transfer of contributed assets		
DELWP	-	-

* 2019-20 other related parties balance has been restated (increase of $6.3M) for comparative purposes

Other Disclosures (continued)

7.4 Related parties (continued)

Outstanding balances arising from sales/purchases of goods and services ($ thousands)

	2021	2020
Receivables		
DELWP	253	-
City West Water	16,075	17,511
South East Water	9,191	18,345
Yarra Valley Water	13,814	16,398
Barwon Water	-	96
Development Victoria	141	
Other related parties	1,123	-
Payables		
DELWP	3,564,921	3,602,984
DTF	27,998	22,392
City West Water	337	3
South East Water	440	-
Yarra Valley Water	559	526
Western Water	67	-
TCV	4,279,177	4,191,779
Other related parties	676	1,605

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.

7.5 Remuneration of auditors

($ thousands)

	2021	2020
Audit of financial report by the Victorian Auditor-General's Office	196	184
Total amount paid/payable	**196**	**184**

7.6 Ex-gratia expenses

In accordance with *FRD 11A Disclosure of Ex-Gratia Expenses* the Corporation must disclose in aggregate the total amount of material (greater than $5,000) expenses.

For 2020-21, the Corporation incurred $237,081 ex-gratia expenses (2019-20: $73,172) due to rental waivers provided to approved applicants as part of the Victorian Government's COVID-19 hardship program.

7.7 Subsequent events

Refer to note 1 for Port Phillip and Westernport Catchment Management Authority (PPWCMA) Integration information as a significant event.

No other matter or circumstance has arisen since 30 June 2021 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 2021.

7.8 Prospective accounting and reporting changes

Certain amendments to accounting standards that are deemed relevant to the Corporation have been published, but are not mandatory for the 30 June 2021 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 2020-1 Amendments to Australian Accounting Standards – Classification of Liabilities as Current or Non-Current. (effective date: 01 January 2023)

Amends AASB 101 to require a liability to be classified as current when companies do not have a substantive right to defer settlement at the end of the reporting period.

AASB 2020-3 Amendments to Australian Accounting Standards – Annual Improvements 2018-2020 and Other Amendments (effective date: 01 January 2022)

Various minor amendments to existing accounting standards. particularly in relation to:

AASB 9 – to clarify the fees an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability.

AASB 116 – to require an entity to recognise the sales proceeds from selling items produced while preparing infrastructure, property, plant and equipment for its intended use and the related cost in profit or loss, instead of deducting the amounts received from the cost of the asset.

AASB 137 Provisions, Contingent Liabilities and Contingent Assets – to specify the costs that an entity includes when assessing whether a contract will be loss-making.

Management has concluded that these are not likely to have a material impact on Corporation's financial statements in future reporting periods.

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 2021
- 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 2021 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 assets and liabilities - the Victorian Desalination Plant (the VDP) *Note 5.4 – VDP Service Concession Arrangements*	
VDP Service Concession Assets: $4.040 billion **VDP Service Concession liability**: $3.565 billion **VDP commitment disclosures**: → Minimum future payments: $8.675 billion → Other expense commitments: $3.963 billion I considered this to be a key audit matter because: → the VDP assets, liability and future commitments are financially significant → the contractual rights and obligations are complex → the corporation places significant reliance on the Department of Environment, Land, Water and Planning (DELWP) for information to account for and disclose its financial liability and commitments → the service concession arrangement (SCA) liability and commitments model is highly complex, involves significant management judgements and is underpinned by various subjective assumptions → the application of AASB 1059 *Service Concession Arrangements: Grantors* involves significant management judgement, and the accounting and disclosures are complex and require interpretation → the SCA liability's carrying value and commitments are sensitive to small changes in the contractual terms and conditions, including refinancing amendments → the fair value estimate of the VDP asset is derived using a current replacement cost method → the commitment disclosures involve significant management judgements and estimates, and amendments were required in prior years.	My key procedures included: → reviewing the key contractual changes for the current year → reviewing and assessing management's accounting policy for the application of AASB 1059 and the re-financing adjustments against the requirements of AASB 9 *Financial Instruments* → engaging a subject matter expert to assist in obtaining sufficient, appropriate audit evidence for the SCA liability and commitment disclosures, including the: - reasonableness and consistency of the liability model assumptions - identification of any model or assumption changes - reasonableness of model inputs, with specific reference to underlying data and supporting documentation - model's computational accuracy - appropriateness of re-financing adjustments - appropriateness of all related financial report disclosures as required by AASB 1059 → engaging a subject matter expert to review and assess the approach used by the corporation in determining the current replacement cost of the VDP asset, including the appropriateness and reasonableness of the assumptions → evaluating both the subject matter expert's reports, including assessing it for consistency with other audit evidence obtained, and the relevance and reasonableness of their workings and concluding the work was adequate for the purposes of our audit → obtaining the corporation's representation from DELWP relating to the underlying data for the accounting and disclosures.

Key audit matter	How I addressed the matter
The Fair Value Estimate of Infrastructure Assets *Note 4.1 – Land, Buildings, Infrastructure, Plant and Equipment*	
Fair value estimate of Infrastructure assets: $8.942 billion. I considered this to be a key audit matter because: → infrastructure assets are financially significant to the corporation → the fair value estimate is derived from an income-based valuation approach that uses a discounted cashflow (DCF) model → the fair value estimate relies on management's use of an external valuation expert → the DCF model is highly complex and involves significant management judgements, underpinned by various subjective assumptions → the calculated value is sensitive to small changes in key assumptions used in the DCF model → the 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) and the Assistant Treasurer issued Financial Reporting Direction 103I *Non-financial physical assets* (FRD 103I) both require extensive financial report disclosures.	My key procedures included: → obtaining an understanding of management's approach to estimating the fair value of infrastructure → assessing the competence 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 reasonableness and consistency of all the assumptions used in the DCF model - identification of any changes to the DCF model and/or assumptions - the reasonableness of all inputs used in the model, with specific reference to underlying data and supporting documentation - the DCF model's computational accuracy - the appropriateness of all infrastructure asset related financial report disclosures with regard to AASB 13 and FRD 103I, including the significant observable and unobservable inputs utilised in the model and the sensitivity analysis. → evaluating our subject matter expert's workings and concluding the work was adequate for the purposes of our audit.

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
2 September 2021

Paul Martin
as delegate for the Auditor-General of Victoria

Sugarloaf Reservoir

Performance Reporting

Contents

Performance Report

Financial Performance Indicators

KPI Number [1]	Key Performance Indicator	2019-20 Result	2020-21 Result	2020-21 Target	Variance to prior year	Notes	Variance to target	Notes
F1	**Cash Interest Cover** Net operating cash flows before net interest and tax/net interest payments	2.2	2.2	2.0	0.0%		10.0%	[2]
F2	**Gearing Ratio** Total debt (including service concession liabilities and leases)/total assets * 100	50.8%	48.1%	51.3%	5.3%		6.2%	
F3	**Internal Financing Ratio** Net operating cash flow less dividends/ net capital expenditure * 100	98.0%	87.2%	70.9%	-11.0%	[3]	23.0%	[3]
F4	**Current Ratio** Current assets/current liabilities (excluding long-term employee provisions and revenue in advance)	0.15 times	0.19 times	0.09 times	26.7%	[4]	111.1%	[4]
F5	**Return on Assets** Earnings before net interest and tax/ average assets * 100	6.0%	5.5%	4.9%	-8.3%		12.2%	[5]
F6	**Return on Equity** Net profit after tax/average total equity * 100	3.5%	3.1%	1.7%	-11.4%	[6]	82.4%	[6]
F7	**EBITDA Margin** Earnings before interest, Tax, Depreciation and Amortisation/total revenue * 100	68.1%	66.2%	66.3%	-2.8%		-0.2%	

Notes – to Performance Report:

[1] Performance indicators as mandated in Ministerial Reporting Direction 01 - Performance Reporting (MRD 01) have been marked with their MRD 01 reference numbers. As required by MRD 01 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 2020-21 result for Cash Interest Cover is favourable to target mainly due to higher than target receipts from customers ($73.6 million) due to higher cash receipts from developer contributions ($61.9 million) and government grants ($10.9 million).

[3] The 2020-21 result for the Internal Financing Ratio is unfavourable compared to last year mainly due to payments for increased capital program ($115.4 million) and higher payments to suppliers ($21.3 million), partially offset by lower income tax paid ($22.4 million) and financing costs ($30.5 million).

The 2020-21 result for Internal Financial Ratio is above the target range and in line with business expectations. It is anticipated that future year-on-year variances will fluctuate in line with expected revenue and the capital expenditure profile.

[4] The 2020-21 result for the Current Ratio is favourable to last year due to lower current interest bearing liabilities either refinanced or repaid during the year ($239.3 million) partially offset by higher payables ($52.9M).

The 2020-21 result for the Current Ratio is favourable to target due to lower trade and other receivables ($43.2 million), lower interest bearing liabilities ($190.7 million) partially offset by higher trade and other payables ($69.4 million).

[5] The 2020-21 result for Return on Assets is favourable to target due to higher earnings before net interest and tax during the year ($115.4 million) compared to target. Improved performance is mainly due to higher revenue from developer contributions and contributed assets ($65.2 million) and net gain on revaluation of non-financial assets ($39.2 million).

[6] The 2020-21 result for Return on Equity is unfavourable to last year due to current year increase in asset revaluation reserve ($640.3 million) resulting from asset revaluations.

The 2020-21 result for Return on Equity is favourable to target mainly due to higher net profit after tax ($91.0 million) partially offset by higher equity resulting from asset revaluations and retained profits. Improved net profit after tax is mainly due to higher revenue from developer contributions and contributed assets ($65.2 million) and net gain on revaluation of non-financial assets ($39.2 million).

Performance Report (continued)

Water, sewerage and other service performance indicators

KPI Number [1]	Key Performance Indicator	2019-20 Result	2020-21 Result	2020-21 Target	Variance to prior year	Notes	Variance to target	Notes
WQ1	**Water Quality** Compliance with Bulk Water Service Agreement (BWSA): Microbiological Standards — *E. coli*	100.0%	100.0%	100.0%	0.0%		0.0%	
WQ2	**Water Quality** Compliance with BWSA: Aesthetics — Turbidity	97.9%	94.7%	91.5%	-3.3%		3.5%	
CRM1	**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%	
EM1	**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%	
EM2	**Compliance with EPA Victoria discharge licence requirements**							
EM2.1	Western Treatment Plant (WTP)	100.0%	100.0%	100.0%	0.0%		0.0%	
EM2.2	Eastern Treatment Plant (ETP)	100.0%	100.0%	100.0%	0.0%		0.0%	
E2	**Total net CO2 emissions** Net tonnes CO2 equivalent	513,696	468,666	430,000	8.8%	[7]	-9.0%	[7]
WW1	**Waterways — Drainage and Flood protection** % reduction in flood effects achieved by projects in delivery by Melbourne Water	2.45%	2.90%	15.00%	18.4%	[8]	-80.7%	[8]
WW2	**Waterways condition** Waterways that have undergone active management will be maintained or improved against an established baseline	100.0%	100.0%	80.0%	0.0%		25.0%	[9]

Notes – to Performance Report:

[1] Performance indicators as mandated in Ministerial Reporting Direction 01 – Performance Reporting (MRD 01) have been marked with their MRD 01 reference numbers. As required by MRD 01 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.

[7] The favourable variance compared to last year was largely due to changes made to the nitrous oxide emission factor set by the Clean Energy Regulator. This resulted in a 50% reduction in nitrous oxide emissions and reduced total reportable emissions for the current year. In the absence of the changes from the Clean Energy Regulator our reportable emissions would have been comparable to last year.

The unfavourable result against target is due to operational factors such as the WTP aerated ponds having high sludge inventories which contributed to higher than forecast methane emissions.

Melbourne Water has pledged to reduce its greenhouse gas emissions to 204,380 tCO2-e by 2025, which corresponds to a 50% reduction from a baseline set in 2017 (based on our average emissions from 2011 to 2016). Melbourne Water is on track to meet this commitment via onsite renewable energy generation, procurement of renewable energy and market-based instruments (offsets). In parallel, investigative studies have commenced to better understand longer term opportunities to reduce direct scope 1 emissions.

[8] The favourable variance compared to last year was due to the increase in number of properties benefiting from flood warning systems and the community flood education program.

The 2020-2021 target is 15%, not 7.5% as described in the Corporate Plan.

The unfavourable variance is due to the adoption of Average Annual Damages (AAD) as the appropriate measure of the broader economic damages associated with flooding. The adoption of AAD meant that the planned work and associated investment over the last price period was not designed or aligned to the agreed 5 year target of 15% reduction in flood effects.

The recently refreshed Flood Strategy institutes a revised approach to the use of AAD and sets a new target outcome. As a result of Melbourne Water's flood risk reduction program maturing significantly over the last 5 years, there is now a developed and effective balanced suite of flood risk reduction interventions in place (including a more robust pipeline of mitigation projects) which will align to achievement of the emerging update to Flood Strategy objectives.

[9] The 2020-21 result for Waterways Condition is favourable to target due to 100% of waterways that have undergone active management being on track to achieve condition improvement trajectories compared to their expected response trajectory target of 80%.

Water, sewerage and other service performance indicators (continued)

KPI Number [1]	Key Performance Indicator	2019-20 Result	2020-21 Result	2020-21 Target	Variance to prior year	Notes	Variance to target	Notes
RW1	**Recycled Water** WTP recycled water schemes fully compliant with regulatory obligations and their contractual requirements, as outlined in the relevant Bulk Recycled Water Service Agreements (BRWSAs)							
RW1.1	Volume demands	100.0%	100.0%	100.0%	0.0%		0.0%	
RW1.2	Reliability	99.8%	91.3%	100.0%	-8.5%	[10]	-8.7%	[10]
RW1.3	Quality	99.3%	90.3%	100.0%	-9.1%	[10]	-9.7%	[10]
RW2	**Recycled Water** ETP recycled water schemes fully compliant with regulatory obligations and their contractual requirements, as outlined in the relevant BRWSAs							
RW2.1	Volume demands	100.0%	100.0%	100.0%	0.0%		0.0%	
RW2.3	Quality	100.0%	100.0%	100.0%	0.0%		0.0%	

Notes – to Performance Report:

[1] Performance indicators as mandated in Ministerial Reporting Direction 01 – Performance Reporting (MRD 01) have been marked with their MRD 01 reference numbers. As required by MRD 01 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.

[10] The 2020-21 results for WTP Recycled Water Quality and Reliability are both unfavourable to last year and target. This was due to the following events through the year impacting the results compared to target:

- high pH in the source water due to a bloom of diatoms in the 55E lagoon (September 2020)
- unplanned maintenance resulting from corrosion of a recycled water pipe supplying customers (October 2020)
- high dicamba in the source water impacting Class A treated water (December 2020, January & May 2021)
- elevated blue-green algae levels in Class A from 55E Lagoons (February & March 2021)
- unplanned maintenance resulting from a PLC failure causing the UV disinfection lamps to be inundated with water (April 2021).

These separate events were managed in consultation with affected customers and are being investigated and rectified.

Certification of Performance Report for 2020-21

We certify that the accompanying Performance Report of Melbourne Water Corporation in respect of the 2020-21 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 *2020-21 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

27 August 2021

Michael Wandmaker
Managing Director

27 August 2021

Anthony O'Shannessy
Chief Financial Officer

27 August 2021

Dated this 27th day of August 2021

Independent Auditor's Report

Victorian Auditor-General's Office

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 2021, 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 in respect of the year ended 30 June 2021 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.

Level 31 / 35 Collins Street, Melbourne Vic 3000
T 03 8601 7000 enquiries@audit.vic.gov.au www.audit.vic.gov.au

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.

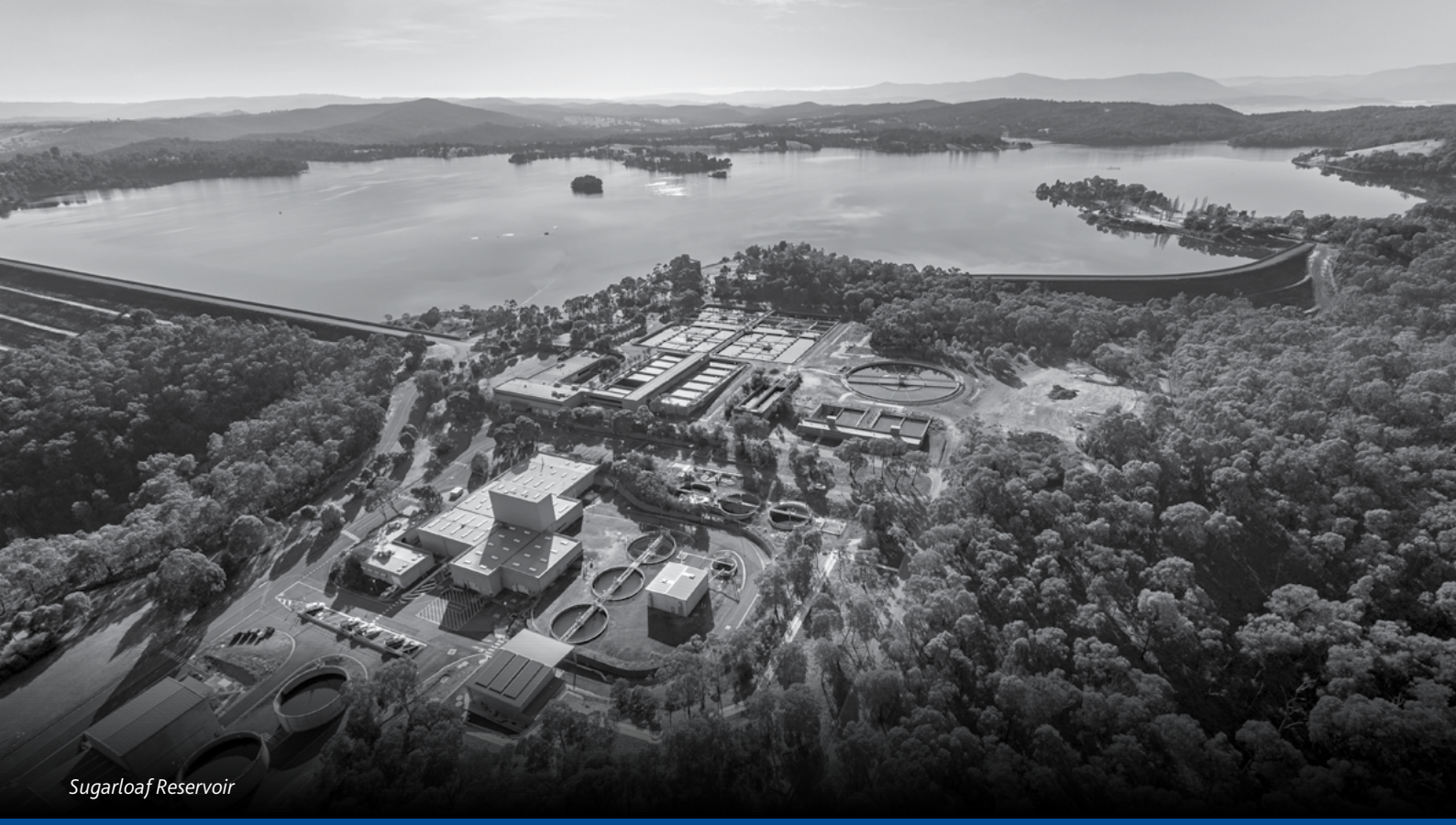
As part of an audit in accordance with the Australian Standards on Assurance Engagements, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- 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
2 September 2021

Paul Martin
as delegate for the Auditor-General of Victoria



Sugarloaf Reservoir

Appendices

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Appendix A – Disclosure index

The *Melbourne Water Annual Report 2020-21* is prepared in accordance with all relevant Victorian legislation and pronouncements. This index has been prepared to facilitate identification of Melbourne Water's compliance with statutory disclosure requirements

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Appendix B – Corporate Information

Consultancy Expenditure

The following is a summary of consultancy expenditure by Melbourne Water over the 2020-21 financial year. Details of individual consultancies are outlined on Melbourne Water's website at www.melbournewater.com.au

Consultancies valued at $10,000 or greater

In 2020-21, there were 14 consultancies engaged during the year where the total fees payable to the consultants were $10,000 or greater. The total expenditure incurred during 2020-21 in relation to these consultancies was $840,261 (2019-20: $1,361,270) (excl. GST).

Consultancies valued at less than $10,000

In 2020-21, there were six consultancies engaged during the year where the total fees payable to the consultants were less than $10,000. The total expenditure incurred during 2020-21 in relation to these consultancies was $17,036 (2019-20: $13,810) (excl. GST).

Advertising campaigns

Melbourne Water had no advertising campaigns with a value greater than $100,000.

ICT Expenditure

For the 2020-21 reporting period, Melbourne Water had a total ICT expenditure of $56,690,277 (2019-20 $56,912,777) 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)
49,925	6,766	-	6,766

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.

Disclosure of Major Contracts

Melbourne Water has disclosed, in accordance with the requirements of government policy and accompanying guidelines, all contracts greater than $10 million in value entered into during the year ended 30 June 2021. Details of contracts can be viewed on Melbourne Water's website.

Competitive Neutrality Policy

Melbourne Water is corporatised and therefore has an independent Board, with independent and objective performance monitoring. The Corporation faces equivalent tax treatment, borrowing requirements and regulations as a private business. As outlined above, we also operate 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 had no legal actions pending or completed during the reporting period for anti-competitive behaviour.

Pricing

Melbourne Water's wholesale water and sewerage prices decreased by approximately 4.3 per cent plus inflation in 2020-21 reflecting the Essential Services Commission Price Determination for 2020-21 with updates to cost of debt and desalination plant costs. The annual residential waterways and drainage charge increased only by inflation in 2020-21 to $104.32.

Freedom of Information

Melbourne Water is subject to the *Freedom of Information Act 1982* (FOI Act) and is committed to releasing documents in our possession unless exempt. We also welcome enquiries about the broad range of documents we 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 29 freedom of information requests. We finalised 31 requests including nine from the previous year. Of the remaining requests made this year, three were withdrawn and four were still in progress.

Eight requests were from members of the public, eight from law firms and 10 from a planning consultant, one from an interest group and two from media outlets. No requests were for personal information.

We released 458 documents, 451 of them in full. Exemptions applied where disclosure of personal affairs would be unreasonable or disclosure of information obtained in confidence.

Finalised requests 31	Other requests 77
Access outcomes: • Access in full: 22 • Access in part: 3 • No documents: 6 • Access denied: 0	**Outcomes:** • Withdrawn: 3 • Not yet finalised: 4
Related to: • Asset Management: 7	**Related to:** • Environment and Planning: 3

Reviews and complaints

No reviews or complaints were received from the Information Commissioner. No Victorian Civil and Administrative Tribunal applications in relation to reviews of decisions or complaints were received.

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 be accompanied by the required application fee of $30.10 (as of 1 July 2021).

General enquiries about Freedom of Information may 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 *Freedom of Information Act* is available on our website.

The statement includes information about Melbourne Water functions, decision making, consultation arrangements and publications. It also outlines how to make a Freedom of Information request and how to request information outside the scope of the FOI Act.

Categories of documents

Melbourne Water uses a computerised records management system to manage our correspondence and documents. 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.

Appendix B – Corporate Information (continued)

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 2020-21:

The number of major works projects undertaken (greater than $50,000):	14
The number of building permits, occupancy permits or certificate of final inspection issued in relation to buildings owned by the entity:	13 building permits 1 occupancy permit 5 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 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 at Melbourne Water. People wanting 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

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 on 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 melbournewater.com.au

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 that Melbourne Water is not able to receive public interest disclosures. Melbourne Water has had no incidents of corruption in 2020-21.

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 melbournewater.com.au

Contacts

Emma Braun
General Counsel and Company Secretary
Melbourne Water
PO Box 4342
Melbourne VIC 3001
Phone (03) 9679 7111

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 (https://www.ibac.vic.gov.au/) for the secure email disclosure process which also provides for anonymous disclosures.

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 was 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 were assigned to Barwon Water, City West Water, South East Water, South Gippsland Water, Western Water, Westernport Water and Yarra Valley Water (the 'primary entitlement holders' – PEHs).

As the Resource Manager for the Melbourne headworks system, Melbourne Water allocates water to the primary entitlement holders by making seasonal determinations to them. Melbourne Water is also the Storage Manager (under section 171B of the *Water Act 1989*) for water sources in the Melbourne headworks 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 2020-21 (i). Total inflows[(a)]; (ii). Total storage volumes[(b)]; and (iii). Total outflows[(c)]	N/A	Clause 15.1 (a) (i). 352,862 ML (ii). 494,472 ML (iii). 317,656 ML	Clause 14.1 (a) (i). 2,604 ML (ii). No storage is available in Silver and Wallaby (iii). 2,604 ML	Clause 15.1 (a) (i). 212,161 ML (ii). 727,037 ML (iii). 67,478 ML	Clause 15.1 (a) (i). 26,670 ML (Tarago) 2,190 ML (Bunyip) (ii). 34,580 ML (Tarago) No storage is available in Bunyip (iii). 11,475 ML (Tarago) 2,190 ML (Bunyip)
Compliance with the diversion limit	304,339 ML[1]	Clause 15.1 (b) 234,257 ML[3]	Clause 14.1 (b) 3,768 ML[6]	Clause 15.1 (b) 67,478 ML[8]	Clause 15.1 (b) 14,478 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) Nil	Clause 14.1 (e) Nil	Clause 15.1 (e) Nil	Clause 15.1 (e) Nil

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 2021)	N/A N/A	Clause 15.1 (f) Greater Yarra System – Thomson River Pool[4] 115,337 ML (City West Water) 155,709 ML (South East Water) 165,896 ML (Yarra Valley Water) 12,078 ML (Barwon Water) 755 ML (South Gippsland Water) 755 ML (Westernport Water) 13,776 ML (Western 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 2021 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 2020-21.

Yarra River

2. Melbourne Water holds the Bulk Entitlement (Yarra River – Melbourne Water) Order 2014 – WSE000185.
3. This is the volume diverted in 2020-21.

Appendix C – Bulk Entitlements (continued)

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 2020-21.

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 2020-21	Clause 19.1 (b), 115 ML
Compliance with the five-year rolling average annual bulk entitlement diversion limit of 1,096 ML	328 ML
Melbourne Water's share of flow into Rosslynne Reservoir in 2020-21	Clause 19.1 (a.iii), 672 ML
Melbourne Water's share of storage volume in Rosslynne Reservoir at 30 June 2021	Clause 19.1 (a,ii), 754 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 2020-21	Clause 19.1 (a,i), 0 ML
Releases from Melbourne Water's share of flow to meet minimum flows	Clause 19.1 (a,v), 155 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 4 transfers of licences were made: 1) two licences part surrenders; 2) two licences made minor amendment)
Any amendment to the bulk entitlement	Clause 19.1 (g), nil
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 1813 licences to use water from farm dams and waterways in the Yarra River, Maribyrnong River, Stony Creek, Kororoit Creek, Laverton Creek, Mordialloc 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 1193 with a combined volume of 35,134.8 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 2020-21.

Licence Totals	No. Licences	Volume (ML)	Metered Usage (ML)
Farm Dam Registrations	522	6771.0	0.0
Farm Dam Licences	44	1004.5	143.5
Take and Use Licences Yarra	1146	34025.8	8718.1
Take and Use Licences Maribyrnong	47	1109.0	177.5
Stormwater Licences	54	3624.7	900.0
Environmental Water Licence	8	1634.2	0.0

Policy Requirements and Review Recommendations

Melbourne Water has been working closely with DELWP and Mr Des Pearson, AO, on the recent Compliance and Enforcement Review. The review recommended that Melbourne Water :

- Develop a compliance and enforcement strategy
- Review our Compliance and Enforcement Manual.

Our *Healthy Waterways Strategy* and *Stream Flow Management Plans* provide guidance on our compliance and enforcement priorities which are now further supported by our new Compliance and Enforcement Statement. The Statement is now available on our website and outlines our approach to compliance and enforcement and was developed in line with DELWP's *Non-Urban Compliance and Enforcement Guidelines for Water Corporations 2019*. This document can be assessed here.[3] The Compliance and Enforcement manual has been reviewed and updated.

Our compliance priorities include 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 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 including additional training to relevant staff. This enhanced capability will assist Melbourne Water to support the introduction of Penalty Infringement Notices (PINs).

[3] https://www.melbournewater.com.au/water-data-and-education/waterway-diversions/water-use-compliance

Appendix D – Private Diversion Licences (continued)

Compliance and Enforcement Actions

A summary of the investigations into non-compliances and their resolutions over the past two years is provided in Table 11.

Table 11: Compliance actions undertaken in the past two years.

Type	2019-20	2020-21
Potential breaches detected		
Investigations commenced	18	7
Investigations commenced – formal Interview		2
Investigation finalised	33	44
Totals	**51**	**53**
Resolutions		
Under investigation	18	9
Dismissed (insufficient evidence)	1	5
No further action required	21	25
Referred to another agency		2
Verbal warning		7
Advisory letter	3	0
Formal warning	8	5
Formal interview		0
Penalty Infringement Notice		0
s.151 Notice of Contravention		0
s.133 Notice of Entry		0
Recommended for prosecution		0
Finalised prosecution		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 AS4747 compliant meters and telemetry to provide real-time water usage data to Melbourne Water and our customers. Rollout of our Metering Action 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 130 meters and the installation of 195 data loggers remaining by 2025. Our Non-Urban Metering Action Plan plus summary can be found here[4].

Table 12: Summary of licensed metered sites as of July 2021.

Category	2020-21
1. AS4747 Compliant Meters	322
2. AS4747 Compliant Meters Still in Progress	14
3. Subtotal	336
4. Contemporary Meters[5]	130
5. Exempt Meters	324
Total	**790**

The 790 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 2021, we have 72 per cent of total required meter fleet compliant with AS4747 meters with the remaining 130 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 five years by a Certified Meter Validator. During 2020-21, there were approximately 218 meters were validated onsite.

[4] https://www.melbournewater.com.au/water-data-and-education/waterway-diversions/metering-pump-and-offtake-guidelines
[5] To be upgraded to AS4747 compliant meters as per our capital program by 2025

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 here[6].

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.

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[7] and is available by calling Melbourne Water on 131 722 at any time or via an automated SMS services to subscribed customers.

During 2020-21, we sent out 4630 text messages to 240 subscribed customers advising them on waterway pumping restrictions and/or bans.

Table 13: Summary of bans and restrictions in 2020-21.

Catchment	Restriction Days	Ban Days	Licence Ban Days	Days Available
Arundel Creek	N/A	9	N/A	356
Cockatoo Shepherds Creek (SFMP)	30	0	N/A	335
Darebin Creek	N/A	54	N/A	311
Diamond Creek	N/A	103	N/A	262
Dixons Creek (SFMP)	N/A	90	212	63
Don River (SFMP)	N/A	0	N/A	365
Gardiners Creek	N/A	4	N/A	361
Hoddles Creek (SFMP)	N/A	73	N/A	292
Kororoit Creek	N/A	0	N/A	365
Little Yarra River (SFMP)	0	0	N/A	365
Maribyrnong River (All Year)	N/A	14	N/A	351
Maribyrnong River (Winterfill)	N/A	2	243	121
McCrae Creek (SFMP)	49	1	N/A	315
Merri Creek	N/A	0	N/A	365
Moonee Ponds Creek	N/A	9	N/A	356
Mullum Mullum Creek	N/A	27	N/A	338
Olinda Creek (Lower) – SFMP	1	0	N/A	364
Olinda Creek (Upper) – SFMP	32	129	N/A	204
Pauls Creek (SFMP)	N/A	103	213	50
Plenty River	N/A	50	N/A	315
Steels Creek (SFMP)	N/A	97	213	56
Stringybark Creek (Lower) – SFMP	N/A	0	N/A	365
Stringybark Creek (Upper) – SFMP	N/A	29	N/A	336

[6] https://www.melbournewater.com.au/water-data-and-education/waterway-diversions/water-use-compliance
[7] https://www.melbournewater.com.au/water-data-and-education/waterway-diversions/restriction-and-ban-status

Appendix D – Private Diversion Licences (continued)

Table 13: Summary of bans and restrictions in 2020-21 continued.

Catchment	Restriction Days	Ban Days	Licence Ban Days	Days Available
Wandin Yallock Creek (SFMP)	N/A	0	N/A	365
Watsons Creek	N/A	0	N/A	365
Watts River	N/A	0	N/A	365
Woori Yallock Creek (SFMP)	0	0	N/A	365
Yarra River (Lower)	73	1	N/A	291
Yarra River (Upper)	101	0	N/A	264

Statewide Key Performance Indicators

The following KPI's have been adopted by DELWP:

- 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 these KPIs and shows that we have met both of them in 2020-21. The results shown above differ to the results reported directly from the Victorian Water Register, yet represent the actual unauthorised take which has occurred. The variation between these results and the VWR results are something which both Melbourne Water and DELWP are looking into with the aim of addressing in 2021-22 to ensure ongoing consistency of results.

Table 14: Unauthorised take Key Performance Indicators

	Licences		Volume		
Year	Number of Negative Licences	KPI%	Volume (ML) of water taken under corporation issued licences	Volume (ML) of Unauthorised Take	KPI %
2019-20	17	0.9 %	6507.7	-110.3	1.7 %
2020-21	6	0.3 %	9939.1	-140.2	1.4 %

Appendix E – Flooding and Drainage

Item	2020-21		2019-20		2018-19	
	km	%	km	%	km	%
Underground Drains						
Total length of Melbourne Water assets	1743		1720		1700	
Total length of Melbourne Water assets excluding drainage scheme areas	1089		1085		1076	
Mapped 100yr ARI	582	53%	576	53%	576	53%
Mapped 20yr ARI	439	53%	426	39%	426	39%
Mapped 10yr ARI	290	27%	304	28%	304	28%
Mapped 5yr ARI	319	29%	296	27%	296	27%
Natural Waterways						
Total length of Melbourne Water assets	8700		8696		8688	
Total length of Melbourne Water assets excluding drainage scheme areas, forested areas and French Islands	6546		6610		6532	
Mapped 100yr ARI	4303	66%	4292	65%	4275	65%
Mapped 20yr ARI	656	10%	518	8%	565	9%
Mapped 10yr ARI	577	9%	500	8%	547	8%
Mapped 5yr ARI	507	8%	502	8%	438	7%
Channels						
Total length of Melbourne Water channels	1971		1885		1870	
Mapped 100yr ARI (underground drains)	99		128		115	
Mapped 100yr ARI (waterways)	1394		1501		1344	
Mapped 100yr ARI (total)	1493	76%	1629	86%	1459	78%
Total						
Total length of Melbourne Water assets	12,414		12,301		12,258	
Total length of Melbourne Water assets excluding drainage scheme areas, forested areas and French Island	9606		9580		9478	
Mapped 100yr ARI	6378	66%	6497	68%	6322	67%

Appendix F – Communication on Progress, UN Global Compact

The following index shows where Melbourne Water has reported our policies, programs and actions that align with the 10 principles of the United Nations Global Compact within the *2020-21 Annual Report*.

Global Compact Principles		Description	Page Reference
Human Rights 	1. Businesses should support and respect the protection of internationally proclaimed human rights. 2. Make sure that they are not complicit in human rights abuses.	Melbourne Water's commitment to these principles is demonstrated in our commitment to building a diverse workforce and an inclusive workplace culture, underpinned by the fundamental consideration for the health, safety and wellbeing of our staff, customers and community. This commitment is implemented through the following strategies and programs, detailed within this report: • Diversity Strategy and associated programs • safety performance, measurement and programs • our management of customers' confidential and personal information • our actions toward Reconciliation and Aboriginal Engagement.	 50-51 54-55 148 36-37
Labour 	3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining. 4. The elimination of all forms of forced and compulsory labour. 5. The effective abolition of child labour. 6. The elimination of discrimination in respect of employment and occupation.	Melbourne Water's commitment to these principles is demonstrated in our commitment to building a diverse workforce and an inclusive workplace culture. Our commitment to ensuring equality and fair treatment across the business is detailed in this report through: • continued analysis of our workforce statistics to support programs • Diversity Strategy and associated programs, including inclusion, gender equity, parental leave, domestic violence leave and flexible working arrangements • our actions toward increasing cultural awareness • the Melbourne Water Enterprise Agreement 2020 which sets our terms and conditions of employment, and is a collective agreement between Melbourne Water, enterprise agreement employees and their union representatives. This agreement does not cover Senior Managers or the Waterways and Catchment Operations Delivery team. The agreement was approved by the Fair Work Commission • our management of suppliers.	 51-55 50-51 36-37 37, 64

Global Compact Principles		Description	Page Reference
Environment 	7. Businesses should support a precautionary approach to environmental challenges. 8. Undertake initiatives to promote greater environmental responsibility. 9. Encourage the development and diffusion of environmentally friendly technologies.	Our contribution to supporting a healthy environment is one of Melbourne Water's three strategic pillars and part of our core business. We contribute to this through improving waterway quality, reducing greenhouse gas emissions and being innovative with resource recovery. We also help protect Melbourne's natural assets by improving biodiversity and building strong relationships with the community. This commitment is implemented through the following strategies and programs, detailed within this report: • waterway quality programs and the *Healthy Waterways Strategy* — 23-27 • our flooding and drainage programs and supporting strategies — 20-22, 157 • our biodiversity program and supporting *Environmental Stewardship Strategy* — 46 • our environmental programs including energy, resource recovery and climate risk management — 39-45 • our community engagement and education programs. — 15, 30, 33-34	
Anti-corruption 	10. Businesses should work against corruption in all its forms, including extortion and bribery.	We are committed to a high standard of governance, with the Melbourne Water Board having overall responsibility for corporate governance. We maintain a fraud and corruption framework, including ongoing education and awareness and avenues for reporting any allegations. We undertake detailed fraud and corruption risk assessments in line with our Enterprise Risk Management Framework, consistent with the requirements of the Victorian Government Risk Management Framework 2015. We have an extensive compliance management framework ensuring ongoing compliance with relevant laws and regulations including the *Independent Broad-based Anti-corruption Commission 2011 and the Protected Disclosure Act 2012*. We provide assurance over our control environment through a robust assurance management program. This commitment is implemented through the following strategies and programs, detailed within this report: • our corporate governance programs and policies — 58-61 • our risk management program and frameworks — 62-65 • our compliance in accordance with Acts of Parliament — 58, 146-149 • our Code of Conduct — Melbourne Water's website[8] • our public interest policy and procedure. — 149	

[8] https://www.melbournewater.com.au/

Appendix G – Letter of Expectations

Priority Area: Climate change	
Principles and Description	**Page Reference**
E2 Emissions reduction	42-43
E3 Climate adaptation	39-41

Priority Area: Customer and community outcomes	
Principles and Description	**Page Reference**
C1 Customer satisfaction	35, 138
C2 Customer and community engagement	33-34

Priority Area: Water for Aboriginal cultural, spiritual and economic values	
Principles and Description	**Page Reference**
AC1 Engagement of Aboriginal Communities	36-37
AC2 Engagement of Traditional Owners	36-37
AC3 Reconciliation Action Plan	37

Priority Area: Resilient and liveable cities and towns	
Principles and Description	**Page Reference**
L1 Integrated water management	29-31
L2 Water efficiency	15

Priority Area: Recognising recreational values	
Principles and Description	**Page Reference**
Rec1 Recreational values	21, 23, 26, 31-32

Priority Area: Leadership and culture	
Principles and Description	**Page Reference**
G1 Diversity and inclusion	50-51
G3 Health and safety	54-55

Priority Area: Financial sustainability	
Principles and Description	**Page Reference**
F1 interest cover F2 gearing ratio F3 internal financing ratio F4 current ratio F5 return on assets F6 return on equity F7 EBITDA margin	See Performance Report (137)
F8 credit rating	not required

ISSN: 1838-3718 (Print)
ISSN: 1838-3734 (Online)

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