Melbourne Water Annual Report

2017-18

VICTORIA State Government

Melbourne Water
Enhancing Life and Liveability

Enhancing Life and Liveability

Melbourne Water makes a vital contribution to the famous Melbourne lifestyle by underpinning human health, enhancing community wellbeing, supporting economic growth and balancing the natural and urban environment.

We achieve this through the supply of affordable, high-quality water, reliable sewerage services and integrated drainage systems, building flood resilience, and protecting and enhancing our waterways and land.

Guided by our vision to enhance life and liveability through our three pillars of Healthy People, Healthy Places, and a Healthy Environment, we help make Melbourne a fantastic place to live now and into the future. We are owned by the Victorian Government and work hard to deliver sustainable public health, and financial and environmental solutions.

Melbourne Water does not work alone. We collaborate with a wide range of partners that include retail water companies, local councils, developers, contractors, government agencies and the community to deliver all that we do.

With more than 125 years of experience servicing Greater Melbourne, we focus on securing a sustainable and healthy community for future generations.

About this report

The *Melbourne Water Annual Report 2017-18* describes activities undertaken between 1 July 2017 and 30 June 2018 to meet our customer needs, regulatory obligations and contribute towards achieving our vision of Enhancing Life and Liveability.

Melbourne Water is a Victorian Government-owned corporation.

As part of our commitment to sustainability, we will print a limited number of copies of this report. An online version and accessible text format of this report are available at **www.melbournewater.com.au**

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

Aboriginal Acknowledgement

Melbourne Water respectfully acknowledges Aboriginal people as Australia's First Peoples and the local Traditional Owners as the original custodians of the land and water on which we rely and operate. We pay our deepest respects to their Elders past, present and future.

We acknowledge the continued cultural, social and spiritual connections Aboriginal people have with the lands and waters, and recognise and value that the Traditional Owner groups have cared for and protected them for thousands of generations.

In the spirit of reconciliation, we remain committed to working in partnership with local Traditional Owners to ensure their ongoing contribution to the future of the water management landscape, while maintaining their cultural and spiritual connections.

Cover photo (Platypus): Doug Gimesy

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The Year in Review

Report from the Chair and Managing Director

Melbourne is a vibrant, liveable and sustainable city. Melbourne Water draws on its 125 years of servicing the people of Melbourne, embracing the challenges our region faces to create opportunities as we plan for a bright future. We continue to work together with our partners to ensure the security of supply of our essential services to our customers and community, helping to make Melbourne a great place to live now and into the future.

Guided by our vision of creating healthy people, healthy places, and a healthy environment to enhance life and liveability, we delivered a range of significant initiatives to better support a more vibrant, liveable and sustainable region in 2017-18.

Through the services we provide, Melbourne Water is in a strong position to contribute to the global effort for sustainable development. As signatories to the United Nations Global Compact, we use the Sustainable Development Goals to guide us in working towards a sustainable future, both within the Melbourne region and, through our research and community partnerships, the broader community.

We are committed to managing our environmental impact, and have pledged to achieve net zero carbon emissions by 2030. We are well underway and in 2017-18 we continued to deliver innovation in resource recovery and drive improvements in renewable energy production. This included new biogas and solar initiatives, and a transition to a zero emission vehicle fleet to reduce our carbon footprint and deliver a healthy environment for future generations.

Our *Melbourne Water System Strategy* and *Flood Management Strategy* form part of our long-term direction-setting to identify opportunities to improve water security and respond to future growth and climate change. We expanded our planning further in 2017-18 through a refreshed 10-year *Healthy Waterways Strategy*, and a 50-year framework for sustainable waste management in the *Melbourne Sewerage Strategy*. Together with the 50-year community vision for the Yarra River, as part of the *Yarra Strategic Plan*, this critical foresight and long-term direction-setting for our region demonstrates the expertise we provide when collaborating with our community, customers and stakeholders.

With an expected population of eight million by 2051, we recognise the critical value that our essential infrastructure delivers to the liveability of our region. In 2017-18 we invested $533.47 million in capital works, upgrading existing infrastructure in our water, sewerage and drainage networks to support Melbourne's growing population.

Cities of the future need to become more integrated in their planning and delivery, and we have collaborated with our community and stakeholders to revitalise open spaces to support recreation and improve access to cooler, greener spaces.

Our Reimagine Your Creek program, delivered in partnership with councils, is restoring previously engineered stormwater channels to more natural systems, and enables communities to connect with their local waterways. We work with State and local government and planning authorities to support integrated water management design in significant urban renewal projects to improve flood management, open space, improved water quality and liveability. In 2017-18 this included Australia's largest urban renewal development in Fishermans Bend, which will house approximately 80,000 residents by 2050.

This year we transformed our digital offering to provide more relevant, personal information to the community, including a refreshed website, increased online engagement via *Your Say* and a new mobile application to support more than 1500 birdwatchers at the Western Treatment Plant. Our *Community Online Maps* web application is delivering more immediate access to information regarding Melbourne Water asset activities within local communities.

We have implemented a number of new digital technologies, tools and processes to enhance asset management, make operations safer and more efficient, and increase our customer service. Our efforts were recognised with a Worksafe Award and a nomination as a finalist in the national Digital Utility Awards in 2018.

We continue to transform the way we engage with our customers and the community to create more meaningful ways for people to influence – and be involved in – the decisions we make. The engagement principles from our Next Generation Engagement program have supported the development of key strategies and plans, including a collaborative governance model with multiple stakeholders to transform Moonee Ponds Creek.

Through collaboration, consultation and engagement we provided $8.3 million in grants to local government and waterways stakeholders to improve waterway health. As we implement the *Flood Management Strategy*, we are working with local councils and other partners to better understand flood risks through joint mapping, new risk assessment and prioritisation tools, and enhanced technology to support communication during flooding events.

Aboriginal and Torres Strait Islander inclusion has strengthened with increased consultation in water planning and relationship building. This has helped facilitate Wurundjeri involvement in key water planning strategies and the *Yarra Strategic Plan* to better protect Aboriginal water values. We have built on actions implemented as part of our *Reconciliation Action Plan 2016-2017* ensuring the contributions of Aboriginal and Torres Strait Islander peoples are an integral part of our work.

Melbourne Water has continued to embrace new ways of working in 2017-18, setting a generative safety culture standard at organisational and team levels. We believe that safety is a 'whole of life' experience, and have implemented programs that assist our people in being safer at home, on the road and at work.

We are also committed to an inclusive culture and ensuring our workforce reflects the diversity of the community we serve. Greater flexibility has resulted in 25 per cent of our workforce formally accessing flexible working arrangements and our continued focus on building an inclusive culture has seen an increase in voluntary disability self-reporting.

Financial improvements to deliver more valuable outcomes continued in 2017-18. We have embedded social values in the major construction contracts, unlocking greater value in both contracts and relationships. The solid delivery of our capital program was supported by new tools which provided greater operational management transparency, allowing us to invest more wisely in our assets. We are proud to play a role in providing a robust water sector with efficient and fiscally sound entities. This is important to our whole community as we manage a precious resource that requires stability to maintain the standards of service we experience in Melbourne, and Victoria more broadly.

We certify that the Melbourne Water Corporation has complied with the applicable Standing Directions of the Minister for Finance under the *Financial Management Act 1994* and Instructions. We are pleased to present the *Melbourne Water Annual Report 2017-18*.

John Thwaites
Chairman

24 August 2018

Michael Wandmaker
Managing Director

24 August 2018

Our Strategic Direction

Water is central to life. Water sustains our natural environment, our communities and the economy we depend on.

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 outcomes.

We are committed to enhancing life and liveability for the community of Melbourne and work toward achieving this by helping to create healthy people, healthy places and a healthy environment, now and into the future.

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.

We employ a team of diverse, smart and capable people to help make Melbourne a great place to live. Our people are skilled in balancing the immediate needs of the community with the long-term needs of the environment. By utilising a process of continuous improvement, our people are supported to be agile in their approach to embrace innovative ideas.

As a statutory authority owned by the Victorian Government, Melbourne Water works hard to deliver sustainable public health, and financial and environmental solutions, while building strong relationships with our customers, the government and industry.

Delivering the Victorian Government's water plan

Water for Victoria is the Victorian Government's state-wide 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 2017-18 to meet the changing needs of the Melbourne region and addresses priorities in *Water for Victoria*.

Our strategic performance

We track our performance through a set of key performance indicators aligned to our strategic direction. The indicators align directly to the strategic intent of our pillars and themes and provide us with a framework for setting performance targets in the long term beyond our statutory requirements.

See our statutory Performance Report (pp 138-142) for full detail on our operational performance for 2017-18.

Yan Yean Reservoir

Building a Sustainable Community

Melbourne Water is signatory to the United Nations Global Compact, the world's largest sustainability initiative.

This means we support the United Nations' Sustainable Development Goals (SDGs) that are part of the initiative, which aim to mobilise efforts to end all forms of poverty, fight inequalities and tackle climate change while ensuring that no one is left behind. The SDGs are a common set of goals that put the world on a sustainable path.

The vital role of water and related resources in creating and delivering sustainable communities puts Melbourne Water in a key position to contribute to this global effort. We look to the SDGs to help us assess our contribution to sustainability and guide where we can focus our efforts to support a more sustainable Melbourne region.

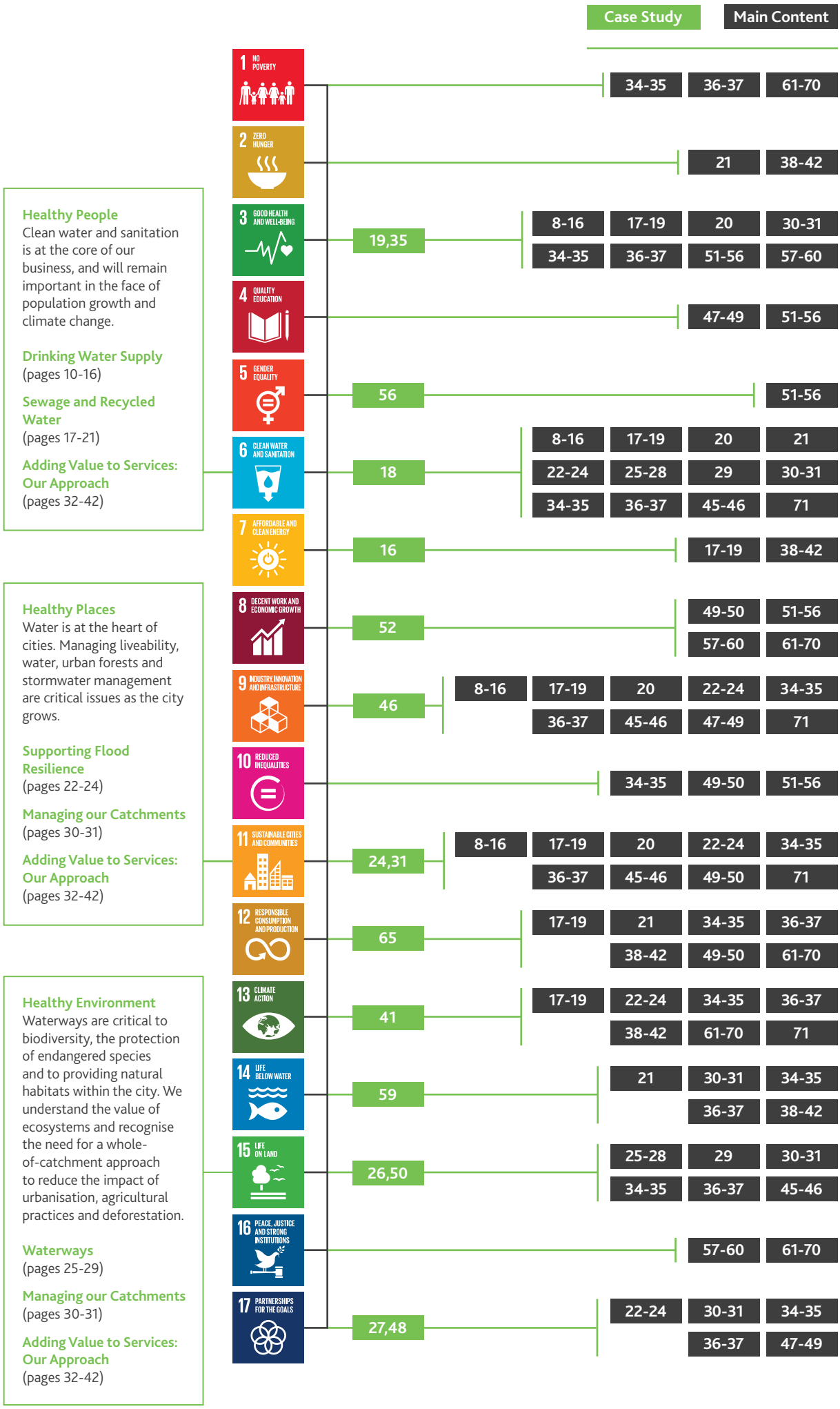
We enhance our contribution across all goals while demonstrating leadership for:

- SDG 6 – Clean Water and Sanitation
- SDG 11 – Sustainable Cities and Communities
- SDG 15 – Life on Land.

Maintaining the world's most liveable city is a collaborative effort. The goals provide us, our customers, the community and stakeholders with a common framework to work together to deliver ongoing community wellbeing and a sustainable, well-managed environment for future generations. The *Melbourne Water Annual Report 2017-18* provides information on how Melbourne Water is contributing across all the SDGs.

How to navigate this report from a sustainable reporting context

The interdependent nature of the 17 UN SDGs means that by delivering our strategic direction, Melbourne Water contributes to all 17 goals. SDGs which link to our work are aligned in the introduction of each section of this report. Melbourne Water demonstrates leadership in SDGs 6, 11 and 15. These three goals are aligned to our strategic pillars of Healthy People, Healthy Places, and Healthy Environment and are delivered through our 'Delivering Valued Services' and 'Our Approach' (see pages 8 to 42). Further, goals which align strongly within our organisation are linked with case studies. To learn more about how we determined our material goal focus, see the Global Reporting Initiative index (Appendix H).


Case Study
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Healthy People
Clean water and sanitation is at the core of our business, and will remain important in the face of population growth and climate change.
Drinking Water Supply
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Healthy Places
Water is at the heart of cities. Managing liveability, water, urban forests and stormwater management are critical issues as the city grows.
Supporting Flood Resilience
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Healthy Environment
Waterways are critical to biodiversity, the protection of endangered species and to providing natural habitats within the city. We understand the value of ecosystems and recognise the need for a whole-of-catchment approach to reduce the impact of urbanisation, agricultural practices and deforestation.
Waterways
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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.

Our 2017-18 investment included:

$94.07M
IN WATER SUPPLY

$220.36M
IN SEWERAGE & RECYCLED WATER

$58.1M
IN PROTECTING & REPAIRING OUR WATERWAYS

and

$58.57M
IN DRAINAGE & FLOOD PROTECTION

35GL
OF RECYCLED WATER SUPPLIED TO CUSTOMERS

ARTIFICIAL INTELLIGENCE REDUCING ENERGY COSTS AT WINNEKE TREATMENT PLANT by **20%**

50-YEAR STRATEGY
to support a reliable sewerage system for future generations

PLANNING AMENDMENTS TO APPROXIMATELY **25,000** PROPERTIES
improving liveability for thousands of people in Melbourne

$8.3M IN GRANTS TO IMPROVE THE CONDITIONS OF OUR WATERWAYS AND BAYS

Cutting edge technology pipe penetrating radar to monitor our sewerage assets

29GL
OF ENVIRONMENTAL WATER DELIVERED

109 KM OF WATERWAYS REVEGETATED

Refreshed Healthy Waterways Strategy, collaborative design with:

9000 WEBSITE VISITS

24 WORKSHOPS

and

400 PARTICIPANTS

Drinking Water Supply

Safe and secure water supply services are fundamental to life and liveability.

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. We prepare for droughts, floods, bushfires and other events.

Melbourne Water manages the wholesale supply of Melbourne's high-quality drinking water. Most of our drinking water comes from closed catchments in the Yarra Ranges where native forests filter rainwater as it flows across land into the rivers and reservoir storages. This water is passed through advanced monitoring and treatment processes to ensure the city's drinking water consistently meets the strict Australian guidelines.

156,700 HECTARES OF PROTECTED CATCHMENTS

and

142,000 HECTARES OF OPEN CATCHMENTS IN THE MID-YARRA

10 STORAGE RESERVOIRS

TOTAL CAPACITY

1812 BILLION LITRES

37 SERVICE RESERVOIRS

14 WATER TREATMENT *PLANTS*

221KM *AQUEDUCTS*

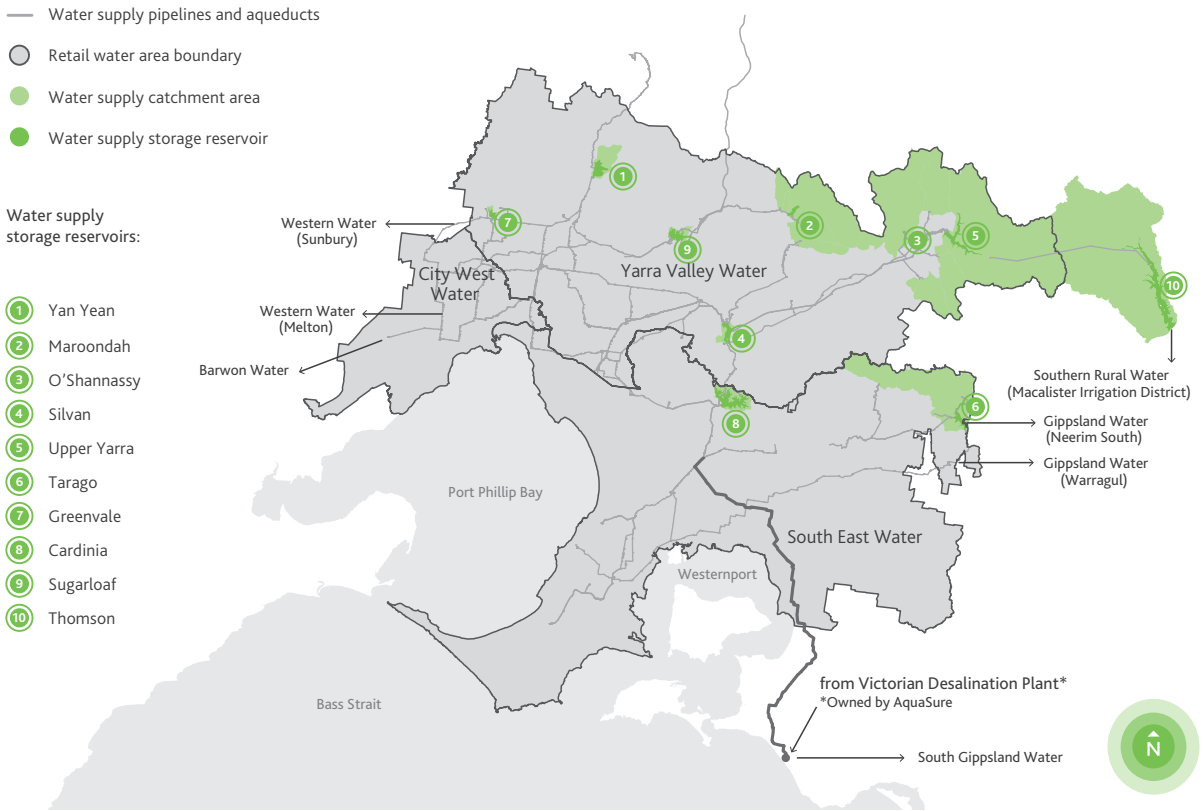
449 BILLION LITRES

HIGH-QUALITY DRINKING WATER DELIVERED TO CUSTOMERS AND THE COMMUNITY

MAXIMUM ANNUAL OUTPUT FROM THE VICTORIAN DESALINATION PLANT OF UP TO **150** BILLION LITRES

1067 KM WATER MAINS

Melbourne water supply system



Managing demand and supply

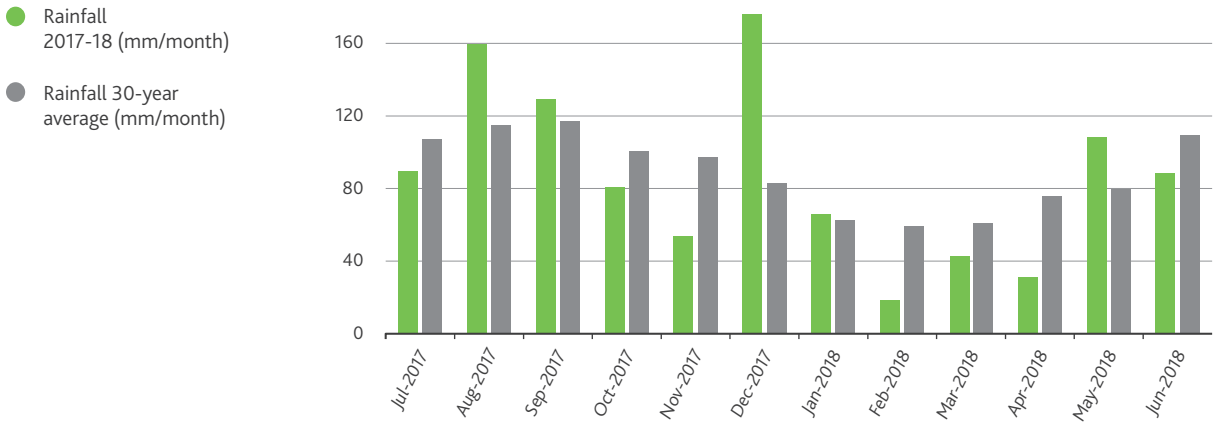
The storages started the year (in July 2017) at 62.2 per cent full (1126.3 billion litres), climbed to a maximum of 70.5 per cent (1277.5 billion litres) in October and finished (June 2018) at 58.3 per cent (1057.1 billion litres), a net decrease of 3.9 per cent (69.2 billion litres) over the year. Storage levels at 30 June 2018 were the lowest for this time of year since 2011. Storages remain well above the low of 26 per cent (453.2 billion litres) experienced in 2009.

The water contained in Melbourne's storages typically increases during the winter-spring 'filling season' before being drawn down during the warmer and drier summer-autumn period. The 2017 winter-spring period saw both catchment rainfalls (about 15 per cent below) and inflows (almost 25 per cent below) less than the 30-year average. Monthly rainfall across Melbourne's storage catchments varied between a low of 18 millimetres (in February) and a high of 176 millimetres (in December). The total rainfall of 1043 millimetres was 2 per cent below the 30-year average.

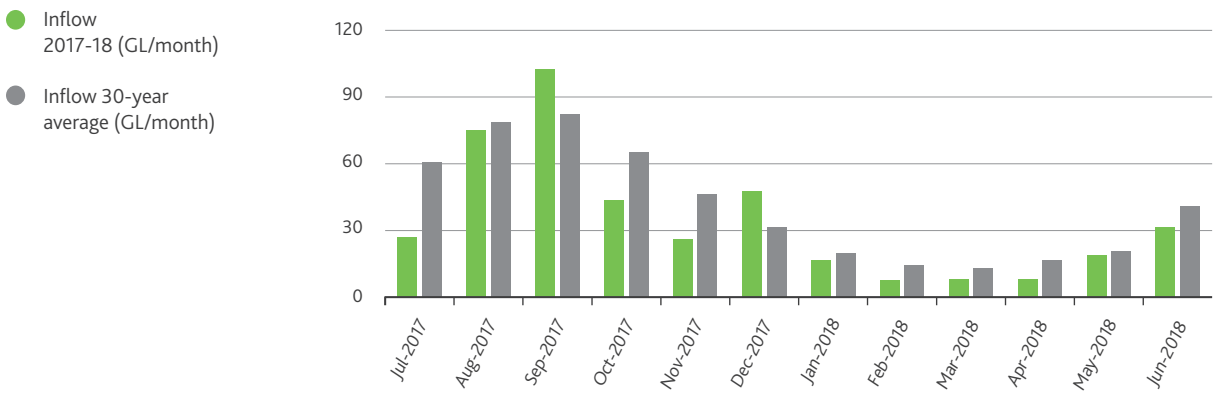
The monthly inflow into the reservoirs varied between a low of 8 billion litres (in February) and a high of 103 billion litres (in September). The total inflow of 413 billion litres was 16 per cent below the 30-year average.

The 2017-18 inflows to Melbourne's four major harvesting storages[1] of 413 billion litres were 33 per cent below the long-term annual average of 613 billion litres for the pre-Millennium Drought period (1913-14 to 1996-97). This result is 16 per cent below the average for the last 30 years (490 billion litres), which provides recent historical context to water resources data, and 1 per cent below the average for the period since 1997, which is one of the Department of Environment, Land, Water and Planning (DELWP) scenarios used for future water resources planning to represent recent streamflow conditions.

Monthly average rainfall at Melbourne's major harvesting reservoirs

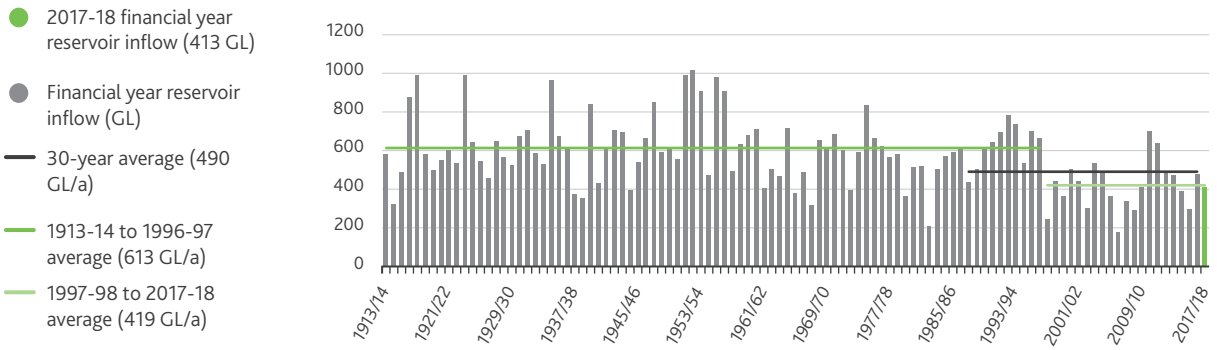


Monthly average inflow at Melbourne's major harvesting reservoirs

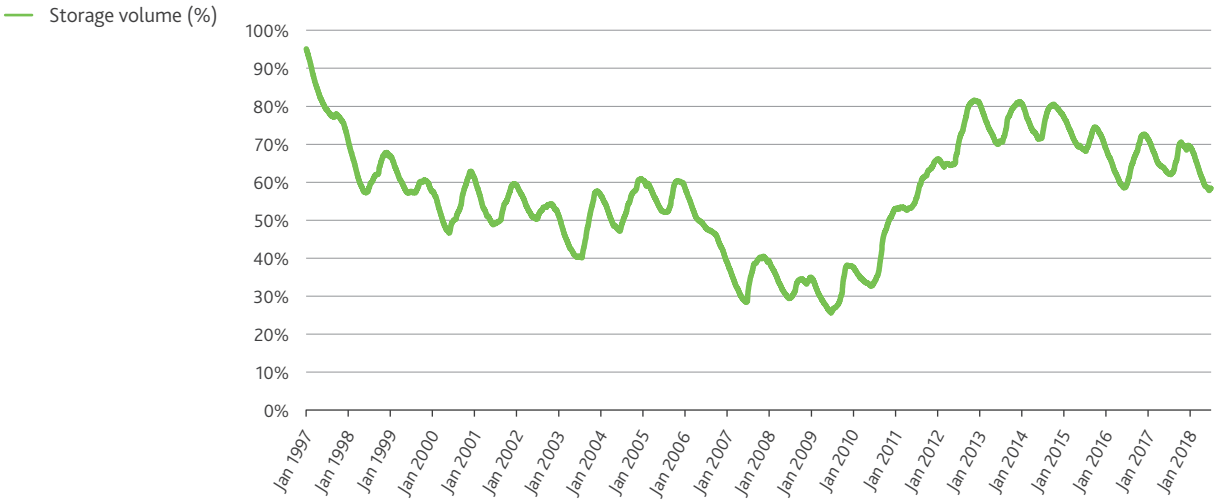


[1] Maroondah, O'Shannassy, Thomson and Upper Yarra reservoirs

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



Melbourne water storage



Water from the Victorian Desalination Project

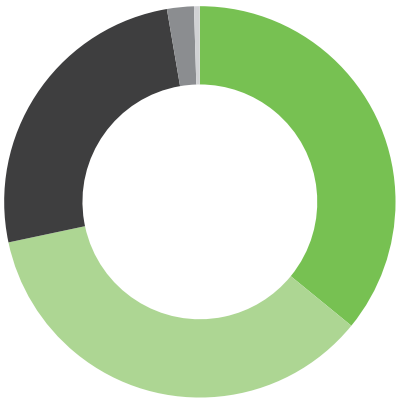
Melbourne's water system also includes the Victorian Desalination Project (VDP), which complements our catchments by providing a secure, rainfall-independent source of high-quality water. The plant can provide up to 150 billion litres of drinking water each year. The Minister for Water announced an order of 15 billion litres of water from the VDP in 2017-18 at no additional charge to customers. Operational and planning advice provided by Melbourne Water and Melbourne's retail water companies helped inform this decision.

The desalination pipeline is part of the water grid and provides a number of access points to supply water from both the VDP and Melbourne's water supply catchments. We have worked with our customers to extend the grid by using the pipeline from the VDP to Cardinia to enable regional water corporations access to additional water sources, as either desalinated water while the desalination plant is in operation, or accessing water from the Melbourne storages when it is not. This year, Melbourne Water signed a new bulk water supply agreement with South Gippsland Water and commenced supplying it with water from Melbourne's catchments. This is the first additional connection, with more expected over coming years, to the desalination pipeline as we work to support water resource availability with our customers.

Supplying our Customers

In total, Melbourne Water supplied 449 billion litres of water in 2017-18, which is 5 per cent more than the previous year, meeting all customer expectations.

2017-18 Retail water consumption



- 35.9% South East Water 161.1 billion litres
- 35.8% Yarra Valley Water 160.5 billion litres
- 25.6% City West Water 114.9 billion litres
- 2.2% Western Water 9.9 billion litres
- 0.5% Gippsland Water 2.1 billion litres
- 0.0% South Gippsland Water <0.1 billion litres

Ensuring our Water Quality

Our *Drinking Water Quality Strategy* guides Melbourne Water's ongoing delivery of safe and secure drinking water. In 2017-18 we commenced a whole-of-system water safety program, a systematic, evidence-based program for understanding Melbourne Water's drinking water source challenges. We completed sanitary surveys (measuring pathogen risk) in all source drinking water catchments and confirmed the adequacy of water treatment to deliver new microbial health based targets (HBTs) proposed nationally.

Our commitment to delivering high-quality drinking water was recognised in our strong performance during an independent audit of our drinking water quality management system. In 2017-18, we achieved all water quality targets, including those for *E. coli*, turbidity, colour, taste and odour, and provided drinking water without any incidents that could affect public health. There were no notifications of non-conformance.

Catchment Management Optimisation Program

In 2017-18 Melbourne Water, Parks Victoria and DELWP commenced the Catchment Management Optimisation Program, which will determine catchment condition targets and management regimes that will deliver the microbial health based targets (HBTs) and *Drinking Water Quality Strategy* outcomes from our water supply catchments. This program uses prioritisation tools to help decide where to focus future effort and effective investment to maintain the quality of our world-class drinking water.

The program builds on the learnings from the sanitary surveys completed for Melbourne Water's drinking water catchments in 2018. It will lead to clear strategic objectives and associated joint management plans to optimise the quality and quantity of water that can be harvested from these catchments and maximise the value of these protected, forested catchments for Melbourne's community.

The program has resulted in a better understanding between the land managers of the drinking water catchments, Melbourne Water, Parks Victoria and DELWP on how to manage the risks in the water supply catchments. Over the next year, the remaining water supply catchments will be assessed and a management program will be established to address the risks to drinking water.

Water consumption

The Melbourne community has continued to use water efficiently, and Permanent Water Saving (Use) Rules are in place across Victoria to ensure we continue to use water wisely. Melbourne's residential water use in 2017-18 was 161 litres per person per day, slightly above the Victorian Government target of 155 litres. This result was the same as last year and 1 per cent more than the last five-year average.

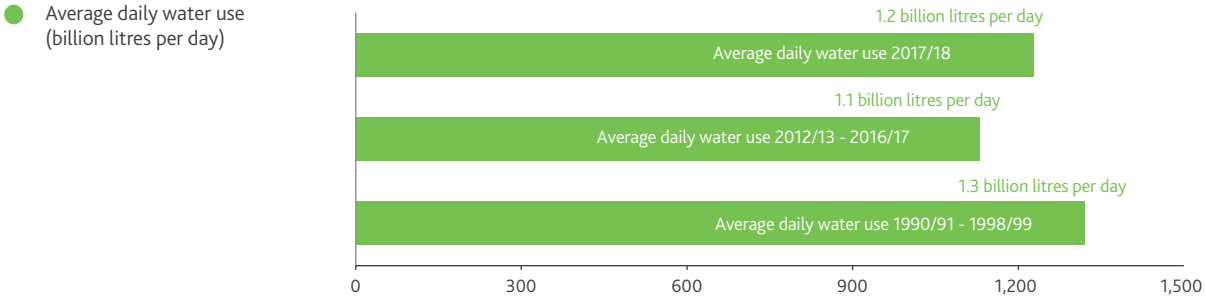
Including non-residential users, Melburnians used an average of 1.2 billion litres of water per day during the year, which was 9 per cent more than the last five-year average. While water consumption has been slowly increasing in recent years, it remains below the levels experienced in the 1990s.

For example, when metropolitan consumption reached its peak in 1997, Melbourne used an average of 1.5 billion litres per day for the year, or 26 per cent above current levels.

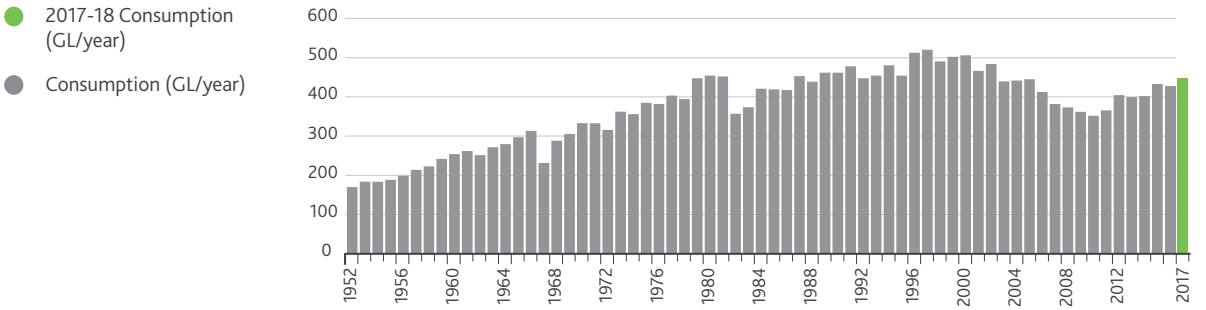
Temperature and rainfall influence water use, especially during warmer months for watering gardens, parks and sportsgrounds. However the largest proportion of residential water use now occurs inside the household (showers, toilets, taps, washing machines and cooling). Promoting efficiency for all water uses, while continuing to support liveability, is a key element in the metropolitan water industry's strategy for managing our water supply to meet the long-term challenges of a growing population and climate change.

Melbourne Water continues to work with partners, industry and the community to ensure we make the best use of our precious water supplies. We provide all available water use and storage level data online.

Average daily total water use for Melbourne



Financial year consumption



Maintaining our world-class infrastructure

In 2017-18, Melbourne Water invested $94.07 million in critical upgrades to our world-class water supply network, ensuring security for future generations. This included $10.87 million for replacing sections of the Maroondah Aqueduct with steel mains, the Preston Reservoir to Merri Creek M40 water main renewal ($10.25 million), and $12.23 million for the Fitzroy to East Melbourne M41 water main renewal.

In November 2017, we completed construction of a new 1.7 metre diameter water main to replace the existing 100-year-old pipeline from the Preston Reservoir to Regent Street Reservoir and from Oakover Road, Preston to Arthurton Road, Northcote. This project delivered significant engineering innovations, replacing the pipe within a very constrained space in the centre of an arterial road, between high voltage power lines for trams and a shared path used daily by up to 1400 cyclists. Working closely with key stakeholders and community representatives, we co-designed a reinstatement landscape plan that included a wider, safer shared path to improve safety, and the replacement of the boulevard of trees and understory plants.

The M41 water main, running through narrow, inner city streets of Fitzroy and East Melbourne, supplies drinking water to over 350,000 residents and businesses. After almost 100 years of service, the M41 needs to be replaced. In early 2018, CPB Contractors Black and Veatch Joint Venture was appointed to carry out the work which, following commencement in May 2018, will take approximately two years to complete at a cost of $30 million. We are committed to minimising impact on residents and the local environment. Early engagement during the planning phase has helped build awareness of the project and communicate the likely disruption of these major infrastructure works.

Case study

Driving efficiency with artificial intelligence and machine learning

Melbourne Water's role to ensure secure and reliable provision of essential services across Greater Melbourne has guided the development of a unique approach that uses artificial intelligence (AI) and machine learning to reduce electricity use in our water treatment operations.

Winneke Treatment Plant is one of the major water treatment sites for Melbourne's drinking water, with around 350 million litres of water, on average, moving through the plant each day before being distributed to millions of homes and businesses around the city. The plant has a daily flow rate for water production that differs every day to ensure Melbourne has the right amount of drinking water at all times. This means different pumps run at different speeds.

We are using a customised AI program that mines historical pump operational data to 'learn' the most efficient pump configuration at any given time.

Developed in-house using the Python software platform, the AI system is powerful and sophisticated enough to consider a range of factors in its decision making, including reservoir level, available pumps and past performance.

The program can utilise our historical data to determine the most energy efficient combinations of pumps, and the associated speeds at which to run them, to achieve the necessary flow rate. The program even allows us to switch to a special training mode where our operations team can test a range of pump combinations that may not normally be utilised, so the program can learn these for future reference.

The project is expected to reduce Melbourne Water's pump station energy costs at the Winneke site by up to 20 per cent per year. This approach to advanced process control will be deployed progressively across a range of Melbourne Water's operational environments.

Sewage and Recycled Water

Our sewerage system is vital to Melbourne's health, safely transporting sewage to our treatment plants for processing. We are increasingly recovering and reusing more recycled water, biosolids and energy from the sewage treatment process to enhance environmental outcomes.

Most of Melbourne's sewage is treated at the Western Treatment Plant (WTP) at Werribee and the Eastern Treatment Plant (ETP) at Bangholme. These plants rely on the sewerage transfer system to move large volumes of sewage across the city, including 400 kilometres of sewers, nine sewage pumping stations and 12 air treatment facilities. Together, they provide Melbourne with a vital service for protecting public health and the environment.

Both treatment plants produce recycled water for many uses, including onsite usage during the treatment process, supporting biodiversity at the sites, and agricultural and outdoor use.

Our Treatment Plants

The ETP and WTP treat sewage in different ways, removing solid waste, organic matter and chemicals. Melbourne Water is turning sewage into valuable resources, such as recycled water to support biodiversity and agriculture, renewable energy from biogas, and biosolids. (See Environmental Stewardship for further information.)

Operating to customer and regulatory standards, Melbourne Water treated a total of 320 billion litres of sewage at the ETP and WTP in 2017-18. Thirty billion litres of recycled water were delivered to our customers from the WTP and five billion litres from the ETP.

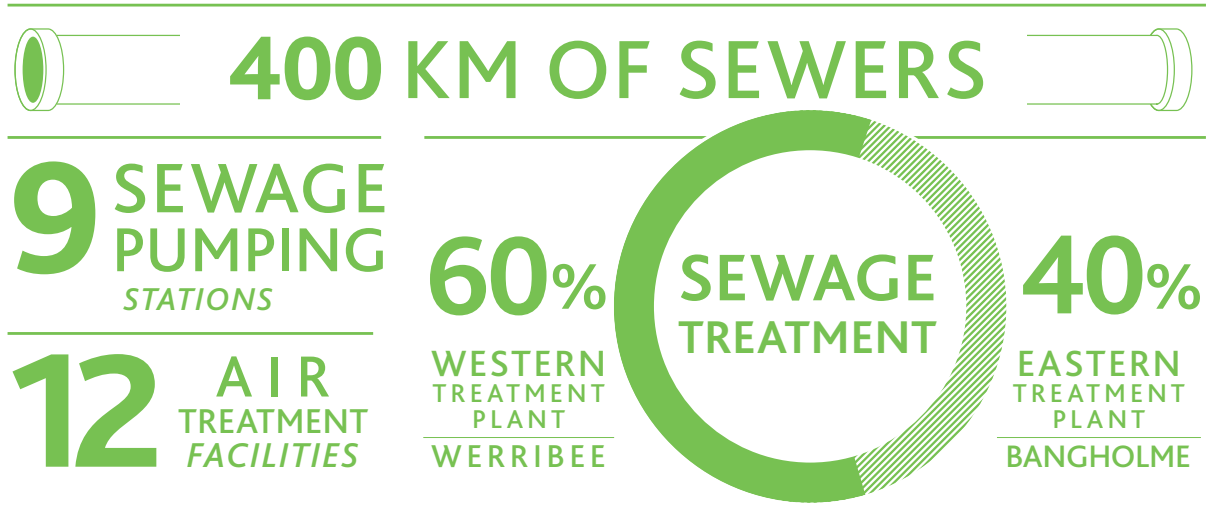
A total investment in capital works at our treatment plants of $152.88 million in 2017-18 enables us to continue to support Melbourne's future health and liveability through our world-class infrastructure. This includes $75.57 million to expand capacity at the WTP and $13.9 million to upgrade its high voltage system.

Improving our world-class infrastructure to support Melbourne's growing population

With Melbourne's population expected to reach eight million by 2051, we are continuing to expand our sewerage system to accommodate increased demand while safeguarding public health.

Construction of a $150 million nitrogen removal plant at the WTP continued in 2017-18 and is approximately 70 per cent complete and on track for commissioning in the summer of 2018-19. This is the second of a three-stage $290 million program of works that began in 2012 to increase the WTP's capacity. Technical and environmental innovations in the nitrogen removal plant's design will improve energy efficiency and deliver advanced monitoring to enhance the wastewater treatment process. Once complete, the plant will maintain nitrogen levels at concentrations which continue to support the environmental health of Port Phillip Bay. We are continuing a pilot trial program on new process technologies for the next stage of the program, and functional design will proceed in 2018-19.

Melbourne Water is implementing a process upgrade at the ETP, which will increase the capacity of the existing anaerobic digestion system (used to stabilise sludge and produce biogas for renewable energy generation) without the need to build additional digesters. In this way, the upgrade will ensure the maximum value from Melbourne Water's existing assets, contributing to more affordable services for our customers. Melbourne Water selected the process based on a broad-ranging survey of available technologies, backed by



a laboratory-scale study of the three short-listed options. As well as enabling Melbourne Water to select the best process for the upgrade, this study yielded a wealth of data which will be published later in 2018 to benefit the water industry more broadly. The project has also leveraged Melbourne Water's capability in virtual reality visualisation to identify, and subsequently 'design out', safety and operability issues prior to construction.

Consistent with the Adaptive Pathways approach proposed in the *Melbourne Sewerage Strategy* (see Transforming Our Sewerage case study), Melbourne Water has developed a staged implementation plan for recuperative thickening. Stage 1 is currently out to tender with our service providers, with completion expected in late 2020.

Case study

Transforming our sewerage system

As our population increases, Greater Melbourne faces a range of significant challenges including climate change, advancements in technology and service affordability. Broader issues, such as sustainable waste management and the role of the sewerage system in integrated water management (IWM), must also be considered. Decisions we make today have implications for future generations.

To secure the long-term stability of our sewerage system, Melbourne Water initiated the development of a collaborative 50-year *Melbourne Sewerage Strategy*. The strategy includes a bold new approach that defines the long-term vision for the sewerage system's role in waste management, and supporting liveability and resilience for a growing population.

The strategy has been developed in collaboration with City West Water, South East Water, Western Water and Yarra Valley Water. We have also worked closely with key stakeholders including DELWP, Environment Protection Authority Victoria (EPA) and the Department of Health and Human Services (DHS).

Between June and December 2017, workshops, targeted interviews and industry intelligence informed the foundations of the strategy's development and provided the basis for future activities to deliver a flexible and adaptive approach for sewerage services for Melbourne.

Further stakeholder and community engagement took place between April and June 2018, including social research, stakeholder workshops, Traditional Owner meetings, attendance at local government roadshows, an interactive survey, our *Your Say* platform and social media.

The *Melbourne Sewerage Strategy* will be completed by late 2018. Its importance in providing direction to ensure Melbourne's sewerage system continues to meet the needs of our future generations cannot be understated.

Case study

Upgrading the Williamstown Main Sewer

Our role is to ensure secure and reliable provision of essential services across Greater Melbourne now and for future generations. That means continued investment in our world-class infrastructure, such as the recent upgrade of the 100-year-old Williamstown Main Sewer.

Servicing Spotswood, Newport and historic Williamstown, this triple-brick ovoid sewer has been an essential piece of infrastructure, transferring sewage from homes and businesses.

Upgrading the sewer began in September 2017 with the insertion of new glass reinforced pipe sections into the existing sewer line. This Australian-first technology avoids bypass pumping sewage, allowing the sewer to operate with less impact on the community. We re-lined almost 4.5 kilometres of the sewer and 35 manhole shafts, installed new manhole lids, reinstated roads and grouted new pipes into place. Works are nearing completion at a cost of more than $20 million.

Building relationships with the community helped us to understand what it valued, allowed the project to avoid the summer trade period and drove a decision to minimise the visible impact of works in Williamstown's main shopping strip by installing 40 street trees, providing a project legacy.

Works were undertaken without interruptions, delays or complaints. Gina McVicar from Hobson Bay Chamber of Commerce said, "The effort that has gone into minimising disruptions has been greatly appreciated."

Engaging with our community

Engaging with our stakeholders, customers and communities enables us to identify and implement continuous environmental improvements at our treatment plants. In 2017-18 we increased community engagement and access to sites to complement our existing tour programs which support thousands of student and community group visits each year. For more on our broader engagement programs in 2017-18, see Engagement (page 47).

For the first time in over a decade, we invited visitors to the ETP as part of Open House Melbourne 2017. Tickets for the free tour were booked out within 24 hours and provided attendees with an understanding of the history of the plant, an overview of the sewage treatment process and insight into the urban water cycle.

The WTP is a vast 10,500 hectare site, with over 190 ponds and wetlands. More than 280 bird species have been recorded at the plant, including migratory shorebirds that travel from Siberia each year. It is therefore recognised as a wetland of international importance under the Ramsar Convention, and as one of Australia's best birdwatching sites with approximately 1500 birdwatching permit holders accessing the WTP.

As part of our Strategic Land Futures Program, in 2017-18 we continued to make the WTP a safer and more accessible destination through road upgrades and improved signage for birdwatchers, as well as simplifying access by enabling online applications through an improved process for applying for birdwatching permits. In March 2018, we facilitated a workshop with 25 organisations and 60 participants to explore a 100-year vision for the WTP. Melbourne Water is now working on a partnership plan to progress outcomes from that workshop.

Environmental Improvement Plan

To reflect our integrated approach to providing continuous improvement in environmental management at both treatment plants, we completed a combined *Environmental Improvement Plan for the Western and Eastern Treatment Plants* in November 2017. This is supported by an amalgamated Environmental Protection Authority (EPA) licence for both sites.

This combined approach promotes shared knowledge, consistency and transparent management practices between the plants, while acknowledging the significant differences between the two treatment processes, site characteristics, requirements and values. The plan's guiding principle is to enhance the natural environment at our treatment plants by minimising environmental impact, maximising resources such as recycled water, biosolids and renewable energy produced on site, and developing high community values through biodiversity and liveability.

Sewerage Transfer System

We constantly monitor and maintain our 400-kilometre sewerage system to keep it in good working condition to deliver safer, more cost-effective outcomes for the community.

We are trialling new devices to help monitor the condition of our sewerage mains across Melbourne and to improve service reliability and asset safety for our customers. We use radar, cameras, sensors and laser technologies to measure concrete pipe wall thickness and surrounding environmental conditions.

These devices provide important information about the remaining service life of assets, enabling more cost-effective management of these assets. This cutting-edge technology will help us to predict asset life and schedule maintenance work to optimise asset life cycle cost.

Melbourne Water plays an integral part in the Integrated Sewage Quality Management System (ISQMS), an industry-led integrated risk management framework, which drives continual improvement of sewage quality management. This year we collaborated with our retail water company partners to develop a cloud-based online dashboard for sewage demand forecasting, allowing for improved capacity planning and greater ability to undertake scenario development from a holistic sewage quality perspective.

We confirmed a three-year Sewer Re-lining Program in 2018, and will invest almost $100 million to upgrade six ageing sewerage mains located in Brighton, Maribyrnong, Hawthorn, Pascoe Vale, Kew and Spotswood. The six sewers will be re-lined using special trenchless technology, minimising impact on local communities and avoiding costly and time-consuming works to dig up the existing pipes. The program will deliver around 15 kilometres of sewer upgraded as part of Melbourne Water's 400-kilometre sewer network, and will improve public and environmental health and ensure future reliability by reducing the risks of sewage spills due to cracks, leaks and bursts.

In 2017-18 we invested $67.48 million into capital works to rehabilitate our sewer transfer assets. Major works include $11.61 million on the Upper Hobsons Bay Main Sewer Renewal and $9.84 million to rehabilitate the Williamstown Main Sewer.

Alternative Water Sources

Melbourne Water produces recycled water at the WTP and the ETP, providing Class A and Class C recycled water to customers. Class A is the highest class of recycled water and can be used for a range of non-drinking purposes. Class C water is treated to a lower standard and has greater restrictions on its use.

Using recycled water not only reduces the amount of treated sewage discharged into Port Philip Bay and the ocean but provides a valuable water source for agriculture close to the city. Using recycled water means the volume available is not dependent on the climate, providing a reliable source of water to support sustainable businesses.

Recycled water can be used to irrigate public open spaces, flush toilets and water gardens in residential estates and in industrial processes, including wash down facilities. It helps relieve the demand on our drinking water supply. The continued construction upgrades at the WTP will support our ability to provide quality recycled water with greater security of supply. The third and final stage is on track for commencement in 2018-19.

Recycled water volumes used on-site and supplied to our customers in 2017-18 are shown in Table 1.

Table 1: Recycled water produced for 2017-18

	Volume 2017-18 (ML)
Treated wastewater available for recycling	320,254
WTP	
Conservation flows used on site	5705
Non-agricultural on-site use	7
Agricultural on-site use	17,095
Southern Rural Water	
- Werribee Irrigation District	6864
- Werribee Tourist District	80
City West Water	
- Werribee Employment Precinct	144
- MacKillop College	26
- Water tankers/standpipes	1
- West Werribee Dual Supply (non-residential)	32
- West Werribee Dual Supply (residential/ commissioning)	58
WTP Sub Total	**30,011**
ETP	
Re-used on site	10,259
Trility – Eastern Irrigation Scheme	5360
Supply to South East Water – South Eastern Outfall	1655
ETP Sub Total	**17,274**
Total	**47,285**

Waterways and Drainage

Supporting Flood Resilience

Melbourne is a flood-prone city with a significant legacy flooding problem and a range of long-term issues. Melbourne Water collaborates with our partners and the community to reduce the effects of flooding and support more resilient cities and towns.

Urban flooding can significantly impact the community. Climate change, increased urban density and a growing city all pose challenges to flood management into the future. Climate change is expected to increase the risk of floods, with more frequent intense rainstorms and rising sea levels. We estimate over 232,000 properties in our region have at least 1 per cent chance of flooding in any given year.

As the floodplain manager for the Port Philip and Westernport catchments, Melbourne Water enhances liveability for our communities through flood prevention, response and recovery initiatives delivered collaboratively with our partners and local communities. We do this through delivery of the collective *Flood Management Strategy*.

Working with our stakeholders in 2017-18, Melbourne Water has progressed many of the 68 actions detailed in the strategy. The collaboration of all agencies in the region has led to successful planning and delivery of whole-of-catchment approaches to flood management in challenging catchments like Elster Creek (see Elster Creek Action Plan case study on page 24).

We have made substantial progress in meeting the intent of the strategy to work collaboratively on flood information. In the last two years, we have worked with Casey, Maroondah and Banyule councils to develop joint flood models for most of the municipality. We have also undertaken collaborative mapping on some catchments with Hume, Whittlesea and Yarra Ranges councils. This shared process delivers more accurate information, provides greater transparency for communities about their flood risk and improves long-term outcomes for our community. Further updates to our flooding and drainage mapping are in Appendix E.

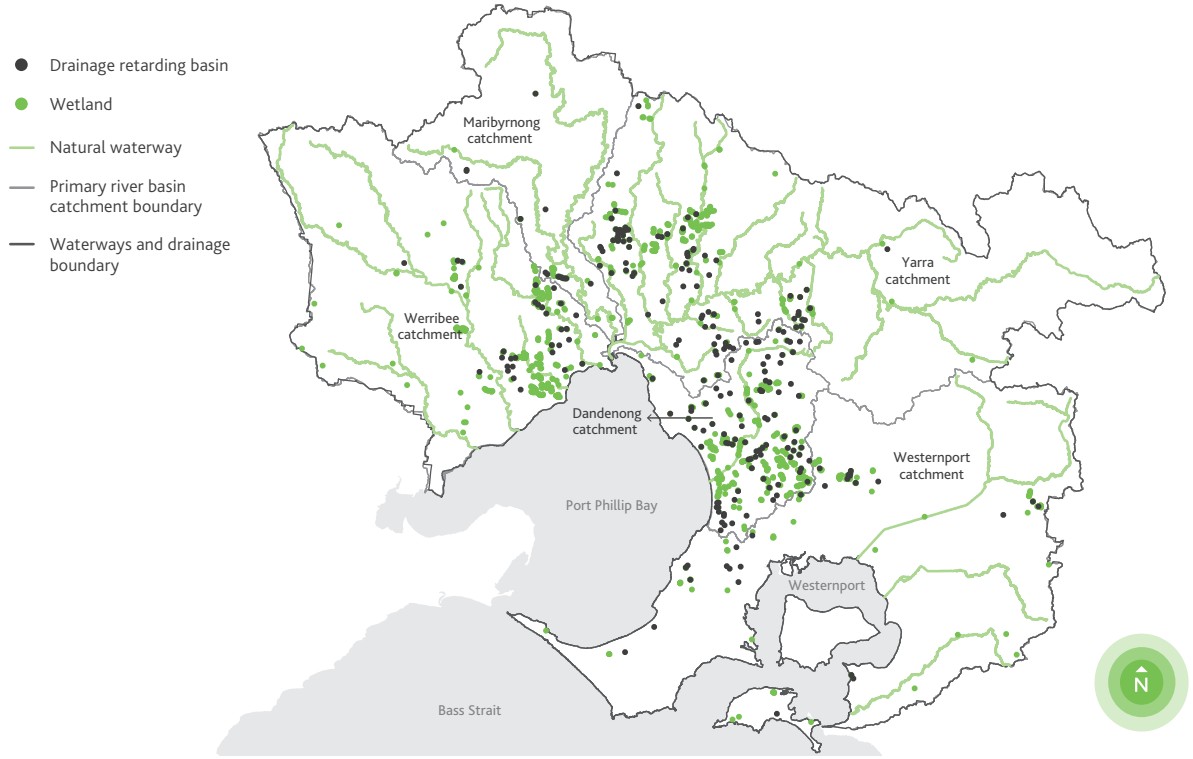
We continue to drive stronger planning controls through planning scheme amendments, which are one of the most effective ways of mitigating flooding through ensuring appropriate development in Melbourne. In conjunction with councils, we completed amendments to municipal planning schemes with Yarra Ranges, Stonnington, Cardinia, Manningham and Bayside and are progressing amendments with Kingston, South Gippsland and Baw Baw councils. These completed amendments delivered the flood data and planning controls for approximately 23,000 properties, improving liveability outcomes for thousands of people in Melbourne. We are also working closely with key stakeholders in planning, and local and State Government to support major urban developments with long-term flooding issues in Fishermans Bend and Arden Macaulay (see Building More Resilient Cities and Towns Through Integrated Water Management on page 36).

We have started working with councils to collaboratively deliver bespoke flood management plans that are suited to the unique needs of the local communities, replacing the fixed, templated processes of the past. Driven by our best practice next generation engagement principles, this is helping identify the best balance of social, economic and environmental outcomes for communities. In the last year during this period of reform and transition, we have completed more than 10 collaborative flood projects with councils including five flood management plans. Our new Flood Management Portal, designed in 2017-18, is providing more transparency for us and our council partners by reporting progress on our commitments.

During 2018, we will continue the new approach to flood management planning with relevant local councils, with a focus on increased innovation, transparency and community involvement.

Melbourne Water has worked in partnership with the Victoria State Emergency Service (VICSES) since 2008 to deliver shared goals of improved community flood education and emergency preparedness. Along with community engagement activities in targeted high risk flood zones, Melbourne Water and VICSES collaborated with Whittlesea City Council and the University of Melbourne to pilot an innovative action research project called Community Engagement for Disaster Risk Reduction. This project aims to generate longer-lasting engagement and behaviour change, and promote conversations within the community by coordinating data collection and follow-up activities between agencies and encouraging community advocacy in supporting flood resilience.

Melbourne Water's waterways and drainage system



Warning services can help communities take action to reduce the effects of floods. Melbourne Water's Flood Integrated Decision Support System integrates real time rainfall and river level data with our existing models to support our flood response. We issue flood warnings for our river systems to the Bureau of Meteorology (BoM) which disseminates these to State Emergency Services which in turn inform councils, community and media.

Melbourne Water is trialling a project for the new Internet of Things (IoT) to determine its suitability to replace existing sensing and monitoring devices on our assets and expand warning capability, with more detailed research planned for late 2018. We also commenced a review of how flood information from different organisations is managed and shared among agencies and the public. In the coming years, this work will enable us to ensure that correct information is available at the right time for the people who need it.

We have partnered with DELWP and the Municipal Association of Victoria to review the institutional arrangements in stormwater management. The aim is to provide clear allocation of roles and responsibilities to Melbourne Water and councils, remove inconsistencies and inefficiencies from the system and ensure the best level of service to communities. Industry-wide consultation to explore and analyse options is planned for 2018-2019 and will be led by the project steering committee.

Melbourne Water has continued to lead a collaborative approach to embed climate change scenarios into planning controls for our region and to guide local planning to mitigate the effects of flooding. In October 2017, the Minister endorsed our updated *Planning for Sea Level Rise Guidelines*, which were finalised in March 2017. The guidelines provide direction on the assessment of development applications in areas identified as being subject to future sea level rise. This year we have worked in partnership with the Mornington Shire Council to prepare and exhibit sea level rise mapping for Westernport.

In 2017-18 Melbourne Water invested $58.57 million in stormwater and drainage to support urban growth and manage flood risk. This includes key projects such the Murrumbeena Drain ($15.31 million). Melbourne Water designed an engineering solution to augment the current drainage system by installing a 1.8 metre diameter drain to assist the current 3.2 meter diameter drain. The new stormwater drain will collect water from heavy rainfall that flows over the streets and paved surfaces, reducing the impact of flooding to properties in the area. Capital works involved installing the new 1.8 metre diameter stormwater drain from The Rialto, Malvern East to Bute Street, Murrumbeena, and working through roads and parks in the Murrumbeena and Malvern East area.

This project offers significant community benefits including reducing flooding, and improving park and green space access by lowering the railway embankment that currently divides the suburb of Murrumbeena, which in turn will connect neighbours across the suburb.

Land development

With Melbourne's population increasing, and forecast to rise to over 8 million people by 2051, facilitating provision of housing to a growing city is of great importance to our community. Melbourne Water contributes to healthy places and a healthy environment by supporting our customers across the entire breadth of land development, from broad acre greenfield areas, through to urban renewal and development in established suburbs, to deliver developments that are resilient to flood and provide for stormwater treatment to protect the health of waterways and bays.

In 2017-18, our development services team facilitated stormwater management strategy designs for 16 precinct structure plans and three comprehensive development plans totalling over 12,500 hectares. We supported greenfield development in the Sunbury region surrounding the valleys of Jacksons Creek and Emu Creek with long-term drainage planning to address complex stormwater management issues. Following extensive public consultation and planning processes, Melbourne Water created 10 drainage strategies covering almost 3000 hectares, assisting more sustainable development for the future.

In 2017-18, over 1192 hectares of development land in growth areas met compliance requirements, meaning Melbourne Water supported the development industry to deliver around 25,500 homes. We also supported development capital works which included six flood-retarding basins, 8.7 kilometres of underground pipe to manage drainage and flood flows, 3.3 kilometres of waterway rejuvenation and 11 new wetlands to provide stormwater treatment and, importantly, habitats for diverse flora and fauna.

The number of agreements initiated for capital works increased by 70 per cent compared with 2016-17, reflecting the pace of activity in the land development industry. The majority of assets constructed transfer to Melbourne Water's ownership and are incorporated into our overall drainage networks in the Port Phillip and Westernport catchments. This significant and sustained growth in Melbourne Water's asset base requires additional ongoing maintenance activity and renewals planning.

We also provided input for stormwater and drainage planning for major State Government infrastructure projects. These included Melbourne's Level Crossing Removal Program, the Outer Suburban Arterial Road (West), the Westgate Tunnel Project, North East Link, the Ballarat Line Upgrade and the Melbourne Metro Rail Project.

In 2017-18, we reviewed 11,274 council planning statutory referrals, 14,330 non-statutory approvals and 2478 planning enquiries for development advice. These are key services that help maintain and enhance public safety and protect homes and other buildings in established areas from the effects of flooding. This process also ensures that standards for stormwater quality, waterway amenity and drainage management are achieved and that our waterways and bays are protected.

Case study

Elster Creek Action Plan

The Elster Creek Catchment, located in Melbourne's south-east, extends across four municipal boundaries. Many properties in this area are susceptible to flooding when excessive rainfall compromises the capacity of the catchment's drainage system.

Following extensive community consultation, the *Elster Creek Action Plan*, a collaboration between Melbourne Water and the cities of Bayside, Glen Eira, Kingston and Port Phillip, was adopted in October 2017. While we have been addressing flood impacts for many years, with some activities realising effective results, this collaborative approach allows us to achieve greater outcomes by sharing resources to deliver benefits across the catchment. Central to the plan is a commitment by Melbourne Water and participating councils to cooperate with government agencies to explore a whole-of-catchment approach.

The plan covers a range of issues including strategic and statutory planning improvements, identifying flood mitigation opportunities, effective and active community engagement, and ways to build community resilience to flooding.

A community reference group of local community members has sought input into future solutions, and a mobile flood application has been developed to provide the community with up-to-date and reliable flood information.

The ongoing collaborative partnership between Melbourne Water and the participating councils has led to the exploration of evidence-based and creative solutions to minimise flood risk and provide optimal community benefits. The community reference group will be consulted to discuss potential future options.

As a result of the *Elster Creek Action Plan*, Melbourne Water is also integrating this improved understanding of our council partners with adapted flood management plans for Glen Eira and Boroondara councils.

Waterways

We protect and improve the quality of our waterways. We manage these environments from catchment to coast, to protect and improve the quality of waterways, establish healthy ecosystems and enhance biodiversity in an increasingly urbanised region.

In 2017-18 Melbourne Water invested $58.1 million to repair and protect our waterways from a variety of threats, including those posed by climate change and population growth.

Melbourne's waterways provide valued recreation and amenity for people and important refuges for the environment. In recognition of this important role, Melbourne Water manages the health of Melbourne's rivers, creeks, wetlands and urban lakes across the Port Philip and Westernport regions. We contribute to the *Victorian Waterway Management Strategy* and *Regional Catchment Strategy* through implementation of its *Regional Waterway Strategy* (known as the *Healthy Waterways Strategy*, see case study on page 26). In partnership with local councils, land owners and the community we improve waterways, including the Yarra, Werribee and Maribyrnong rivers, their tributaries and many smaller suburban creeks.

Our river health and stormwater management programs help protect the condition of the region's waterways and bays, and their plant and animal habitats. For designated priority areas we restore vegetation and create new habitat. We also release environmental flows and manage a network of wetland and stormwater treatment systems. In addition we are involved in land use planning to ensure new developments protect and enhance waterways within their environs.

25,000 km RIVERS & CREEKS

479 WETLANDS

160 URBAN LAKES

314 MONITORING STATIONS

Managing the health of our rivers

Every year, Melbourne Water monitors and provides targeted maintenance for approximately 25,000 kilometres of rivers and creeks, and more than 700 stormwater treatment systems and wetlands. A major part of our work involves on-ground activities that directly affect rivers, wetlands and estuaries. We manage vegetation that supports a variety of habitats and wildlife, and maintain waterway infrastructure to protect public safety and the environment. The combined contribution of maintenance works, capital projects and incentives programs delivered waterways improvements in 2017-18 through:

- planting 109 kilometres of new vegetation to improve the health and amenity of waterways
- constructing 93 kilometres of stock exclusion fencing to improve water quality in our rivers and creeks
- rehabilitating 86 hectares of aquatic habitat including wetlands, billabongs and floodplains to improve indigenous vegetation structure which benefits local fauna and water quality
- removing three fish barriers to improve waterway connectivity for fish and other animals
- removing 3690 cubic metres of silt and debris so drains continue to protect from flooding
- removing 19,000 cubic metres of sediment removed from wetland systems so that wetlands continue to improve stormwater quality before it enters rivers and creeks
- stabilising river banks across 13 sites to protect the waterways as long-term assets.

In addition to the improvement of the overall health of our waterways, the above program provided the following benefits to the broader community by:

- increasing sustainable on-water access to rivers for recreational purposes by partnering with user groups and our stakeholders to selectively build safe public access infrastructure. This strategic approach complements Melbourne Water's stabilisation works.
- working with Indigenous groups including the Wurundjeri to restore natural and cultural values and, where appropriate, provide educational material to improve the awareness of the cultural heritage significance of waterways and wetlands to the greater public
- partnering with our customers including councils and Parks Victoria to improve access along waterways enabling communities to connect with the natural environment, and create places for communities to interact with one another. Furthermore, the linear nature of Melbourne's waterways allows active transport corridors for commuters, reducing infrastructure pressures on roads and railways and improving public health by encouraging exercise.

Case study

Healthy Waterways Strategy

The *Healthy Waterways Strategy* provides strategic direction for waterway management, from iconic rivers such as the Bunyip and Yarra, to wetlands such as the Ramsar-listed Edithvale-Seaford Wetlands and the vitally important rivers and creeks such as the Dandenong and Kananook creeks.

The current strategy was developed with significant community engagement and we are building on this by using a co-design framework to develop a new refreshed strategy. The co-design process combines lived experience and professional expertise. The collaborative process so far has involved both online and workshop processes, with 9000 independent visits to the website accessing over 38,000 pages, and over 400 participants in 24 workshops.

When asked what they particularly enjoyed about the process, participants responded with comments such as "The collaborative process ensures all voices are heard equally"; "Seeing the river through other people's eyes"; "Seeing definite progress"; "If you love the water, you have got to stand up for it, but you can't do it alone".

And when asked to name one collaboration that feels significant, the response was "Collaborations with planners, developers, engineers, VicRoads and the sectors outside of the typical environmental groups".

The collaborative process included working on a vision, goals and targets for each of the catchments across the Port Phillip and Westernport region. A range of stakeholders including government agencies, community groups, local government and the urban development sector have been involved and many new and significant partnerships have developed.

Waterways are community assets – and the refreshed *Healthy Waterways Strategy* seeks to put the community at the centre of waterways management. It proposes systems to share knowledge and information between communities and stakeholders to empower them to participate in and influence waterways management.

Case study

Launching a 50-year community vision for the Yarra

In May 2018, the Victorian Government released a 50-year community vision for the Yarra River, Birrarung – the first of its kind for an urban waterway in Australia.

Minister for Water Lisa Neville, Minister for Planning Richard Wynne and Minister for Energy, Environment and Climate Change Lily D'Ambrosio joined Member for Ivanhoe Anthony Carbines at the new Finns Reserve recreational facility to launch the *Yarra River 50 Year Community Vision*. Along with the three ministers, over 140 key stakeholders as well as a number of Wurundjeri Elders and community members attended the event.

To create the vision, more than 2000 Victorians from diverse backgrounds together with Traditional Owners were asked to nominate Yarra features that are most important to them and to imagine what they would like the river to look like in the future.

This consultation culminated in a community assembly in early 2018. Twenty-four passionate Victorians drawn from all parts of the Yarra's 242-kilometre length came together to consider input from the community and draft the *Yarra River 50 Year Community Vision*.

Members of the assembly heard from experts, including Wurundjeri Elders and community, about the history of the Yarra and its cultural significance to the Traditional Owners. The vision outlines the community's expectations, values and preferences for the entire length of the river over the next 50 years. It highlights the importance of the river to Melbourne's history and the deep connection of Traditional Owners with the river, as well as its recreational, environmental and economic value.

The River Health Incentives Program is one of the ways Melbourne Water is working to restore and protect our waterways by partnering with private landowners, farmers, community groups and land management agencies. Now in its 22nd year, on-ground management works funded through the program include fencing waterways to exclude stock, weed control, revegetation works, whole-farm planning, and nutrient and sediment reduction works. The program also provides advice and training to local landholders to help them develop their management skills, and to increase their knowledge about land and waterway condition and management.

In 2017-18 our River Health Incentives Program funded 1036 projects totalling over $5.1 million, which provided over 325,000 plants for planting along 56 kilometres of waterways, installed 77.5 kilometres of stock exclusion fencing and managed 200 kilometres of vegetation.

Our Sediment Basin Program intercepts and manages the flow of coarse sediments before they pollute waterways. Sediment basins and wetlands capture and treat sediments and nutrients from urban run off and prevent them from entering waterways and bays. Management of wetlands and sediment basins is one example of many activities Melbourne Water undertakes to improve water quality under the State Environment Protection Policy (Waters of Victoria) (SEPP). In 2017-18 we removed in excess of 19,000 cubic metres of coarse sediment from basins. We have further committed to removing 25,000 cubic metres of sediment 2018-19 and 50,000 cubic metres of sediment in 2019-20 which will significantly improve the health of our region's waterways and our bays. We also removed 3690 cubic metres of sediment and litter from the drainage system via our ongoing maintenance programs.

The Yarra Strategic Plan

The Yarra River and its environs underpin the liveability and economic prosperity of Greater Melbourne. The river provides 70 per cent of Melbourne's drinking water and its catchment is home to one-third of Victoria's animal species. The river is of great spiritual and cultural significance to the region's Traditional Owners.

In February 2017 the Victorian Government released the *Yarra River Action Plan*. It contained 30 actions to ensure the long-term protection of the Yarra River and its parklands.

Melbourne Water was designated as the lead agency to develop a *Yarra Strategic Plan*, one of the 30 actions in the Yarra River Action Plan, and is responsible for coordinating its delivery in partnership with Traditional Owners and those public entities with delivery responsibilities along the Yarra.

A significant milestone was reached in May 2018, with the launch of the *Yarra River 50 Year Community Vision* (see Launching a 50-year community vision for the Yarra case study above). The vision provides a springboard into further engagement to ensure the *Yarra Strategic Plan* is able to bring it to life and reflects the intent of the *Yarra River Protection* (*Wilip-gin Birrarung murron*) *Act 2017*.

The next phase of the *Yarra Strategic Plan*'s development will focus on coordinating and integrating the many existing plans, regulations and investment programs which are in place along the Yarra River. We will continue to work with Traditional Owners to find the best model for including their input into the plan's implementation.

The *Yarra Strategic Plan* will bring the community's vision to life to provide the basis for future planning and management of the river corridor, from catchment to coast. It will enable us to manage the Yarra as one living and integrated entity that will flourish for future generations.

Delivering environmental water releases

To enhance the natural environment, Melbourne Water, in conjunction with the Victorian Environmental Water Holder, releases water each year for the river systems of Port Phillip and Westernport catchments.

These releases help improve the environmental quality of the regulated rivers by flushing sediments from the rivers, encouraging vegetation growth and helping fish to spawn and migrate. The environmental flows also improve the quality of habitat for platypus, macroinvertebrates, fish and frogs. Monitoring has indicated a substantial increase in frog activity, with their calls tripling in noise level after environmental flows reached billabongs.

Melbourne Water delivered almost 29 billion litres of water in 2017-18, as shown in Table 2.

Table 2: Environmental water delivered for 2017-18

River	Volume	Outcomes
Yarra	24,079 ML	Four releases of environmental water were made into the Yarra system to allow the migration of Australian Grayling (*Prototroctes maraena*), improve water quality and improve access to breeding and feeding habitat by macroinvertebrates, platypus and fish (in particular Macquarie Perch). Movement opportunities for small native fish were also provided in the upper reaches or the river, and small rapids and pool habitats were refreshed in the middle reaches for improved macroinvertebrate, platypus and fish habitats. Environmental water was also released into two billabongs in the Yarra floodplain – Yering Backswamp and Bolin Bolin Billabong (see Watering Bolin Bolin Billabong case study on page 50) – primarily to improve wetland vegetation and provide habitat for frogs and birds.
Tarago	1764 ML	Three releases were made into the Tarago system to maintain water quality, provide habitat for River Blackfish, platypus and macroinvertebrates and support spawning of Australian Grayling.
Werribee	2666 ML	Two releases were made in the upper Werribee system (Pyrites Creek) to improve habitat for frogs and macroinvertebrates by flushing organic matter from benches and cleaning riffle habitats. An additional objective relating to recruitment and growth of riparian vegetation was also obtained. Two releases were made in the lower Werribee system to promote fish movement and improve water quality.
Maribyrnong	290 ML	Three environmental flow releases improved water quality and improved small rapids habitats in the upper reaches. Additional improvements included providing movement opportunities for small native fish in the upper reaches, while also refreshing small rapids and pool habitats in the middle reaches for macroinvertebrates, platypus and fish.

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 activities for 2017-18 align with the *Victorian Biodiversity Plan 2037*.

Increasing environmental values

We are continuing to make the most of our large land assets, and have established our first native vegetation credit site at Paul and Belfrages Swamp. The proceeds from these credit sales are supporting the enhanced biodiversity business plan to create further sites, and improve biodiversity at other Melbourne Water sites. We are working to create accounting standards which quantify our natural asset base, to better manage and prioritise works on our extensive waterway and land assets.

Biodiversity conservation management

As waterways manager and a significant landowner, we have a critical role in protecting the waterways, estuaries and wetlands which are essential to the survival of much of our region's biodiversity. Threatened species such as Growling Grass Frog, Dwarf Galaxias, Latham's Snipe and Swamp Skink all depend on a thriving environment.

The Ramsar Convention on Wetlands of International Importance is an international treaty for the conservation and sustainable use of wetlands. Melbourne Water manages both the Edithvale-Seaford Wetlands Ramsar site and the WTP, which is a major portion of the Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site. Melbourne Water invests in biodiversity conservation at both of these sites. We also play an important role in managing nutrient and sediment input into the Westernport Ramsar site.

Our WTP site is one of the most important refuges for waterfowl in Victoria. It also supports migratory shorebird populations and a significant population of the endangered Growling Grass Frog. It is home to the critically endangered Spiny Rice-flower and Orange-bellied Parrots. Our significant investment of $1.1 million to support biodiversity conservation at the WTP in 2017-18 has included pest animal and plant control, environmental watering, species monitoring, research and meeting legislative requirements across the 10,500 hectare site. The site is managed in consultation with our key advisory committee, which is composed of community group representatives, experts, agencies and adjacent land managers.

Melbourne Water manages the Ramsar-listed Edithvale-Seaford Wetlands. These wetlands are the largest natural wetland of its type in the Port Phillip and Westernport basins and home to many bird species including the endangered Australasian Bittern. They also provide a critical overwinter habitat for migratory birds such as the Sharp-tailed Sandpiper which breeds in the high Arctic, providing essential food resources for at least six months of each year. Works in 2017-18 concentrated on managing threats to the site's international bird values through fox trapping, kangaroo management, weed control and water delivery.

Melbourne Water also manages another 41 sites of biodiversity significance (SoBS) known to support listed species or vegetation communities. In 2017-18 we have completed a five-year program to survey significant values at all sites and to ensure they all have an environmental management plan. We assess the effectiveness of our SoBS management through regular monitoring programs. In 2017-18 DELWP endorsed the revised *Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar Site Management Plan* that includes actions at the WTP.

Our *Healthy Waterways Strategy* provides a framework for how we protect and manage native biodiversity in our waterways (see Healthy Waterways Strategy case study on page 26).

Managing our Catchments

Taking a whole-of-catchment approach is a vital part of managing the health of our waterways.

Local government manages about 25,000 kilometres of street and local drainage infrastructure. Stormwater collected by these smaller local government systems drains into the regional assets managed by Melbourne Water or directly into the bays and waterways.

Melbourne Water improves the health of waterways by developing sustainable stormwater management practices in collaboration with our stakeholders. Designed to achieve long-term improvements in stormwater management, the Living Rivers program works in partnership with councils to build understanding, new skills and practical examples of how to protect our rivers, creeks and bays from urban stormwater. The program celebrated its 10th anniversary in 2017 has been integral in shaping the change in stormwater management over the last decade (see Ten Years of Living Rivers case study on page 31).

The objective of the Living Rivers program is to improve stormwater quality and reduce stormwater quantity for enhanced waterway and bay health. The program also provides a range of other benefits to the community such as greener open spaces, alternative water supply options and reduced localised flooding.

In 2017-18, Living Rivers awarded $3.2 million in funding for 59 projects across 24 council areas. These projects will be delivered over the coming three years and range from strategic planning and capital works to training and community engagement.

Once completed the projects are expected to lead to a reduction in the nitrogen reaching our waterways of 1066 kilograms per year, improving habitat for plants, animals and the overall health of the waterways and bays. Stormwater harvesting will also provide an alternative water source for irrigation, improve and enhance public open spaces and urban landscapes, and reduce localised flooding.

Stream flow management

Melbourne Water produces stream flow 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.

Melbourne Water is supporting the *Olinda Creek Stream Flow Management Plan's* Amendment Consultative Committee in reviewing the *Stream Flow Management Plan* for Olinda Creek. The objective of the plan is to manage the water resources of the Olinda Creek, develop sustainable allocations for agriculture and other uses and maintain an environmental water regime to sustain waterway health.

The Committee has identified potential improvements in the management of water licences and negotiated a series of recommendations that aim to both balance security for water users and maximise environmental gains. Public consultation will conclude in July 2018.

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.

The notices issued to Melbourne Water in 2015-16 regarding the requirement to clean up polluted silt removed from Stony and Kororoit creeks have been complied with. There is one outstanding clean-up notice for quarterly monitoring of the capping layer adjacent to Stony Creek which will achieve compliance by 20 December 2019. Yearly monitoring and maintenance of these sites, as required, will be undertaken thereafter.

In July 2017 the EPA issued Melbourne Water with a clean-up directive due to an oil spill from private land which made its way into a Melbourne Water drain. Melbourne Water educted oil from the affected drains, placed booms in the drains to protect downstream waterways and Port Phillip Bay, and removed contaminated soil from the private property. Melbourne Water is assisting the EPA in its investigations and cost recovery process.

The EPA inspected a site at the South Eastern Regional Office in late June 2018 regarding inappropriate disposal of wash out waters from herbicide containers and indicated it will issue a remedial notice to clean up the disposal area. Melbourne Water cooperated with the EPA in this inspection and will comply with the notice when it is received.

Case study

Ten years of Living Rivers

Over the last 10 years, the Living Rivers program has partnered with local councils to enable sustainable stormwater management outcomes and encourage innovation within the wider industry.

Early concerns about treating and using stormwater has made way for an acknowledgement that with Melbourne's population expected to exceed 8 million people by 2051, rainwater, stormwater and recycled water are valuable resources which can potentially be used to reduce demand on the water supply system.

The Living Rivers program has supported this transition through collaboration and partnership with councils, driving greater focus on strategic projects that deliver multi-benefit outcomes to the community.

Today, through strategic work such as master planning, many councils are now able to implement innovative stormwater solutions that deliver IWM outcomes and enhance liveability through greener open spaces.

One project recently completed was the Bolin Bolin Integrated Water Management project, a $2.8 million project which will treat more than 35 megalitres of stormwater per year and provide a reliable alternative water source, meeting close to 99 per cent of irrigation demand for the surrounding sports grounds and golf course.

Manningham City Council, Melbourne Water, the City of Boroondara, Carey Baptist Grammar School and DELWP were partners in this project, which received the Institute of Public Works Engineering Australasia award for Innovative Practice/Service Delivery in 2017.

Since its inception, the Living Rivers program, in partnership with councils, has made a huge contribution to stormwater management in Melbourne, including:

- partnership with 38 local councils
- contribution of $43 million in funding for 639 projects
- managing $11 million in council co-contributions
- removing 2350 kilograms per year of nitrogen from our rivers and bays through directly funded assets.

Adding Value to Services: Our Approach

We work with our customers and community to understand their needs and opportunities for different approaches in how we deliver our services to provide better outcomes.

We work in partnership to create more liveable places, protect and enhance the environment and build more resilient cities and towns through IWM.

Through these approaches, we contribute to our strategic pillars of Healthy People, Healthy Places and Healthy Environment and enhance life and liveability for the Greater Melbourne region.

20,870
TREES PLANTED ALONG GREENING THE PIPELINE

72KM
OF NEW CYCLING AND WALKING PATHS

80%
OF ELIGIBLE CAPITAL PROJECTS IMPROVED COMMUNITY ENJOYMENT OF NATURE AND RECREATION

BUILDING RESILIENT CITIES AND TOWNS:

POTENTIAL TO HARVEST
80GL
OF STORM WATER

Workshop with global leaders to reduce Scope 1 emissions

Cooler, greener spaces with 7 hectares of shade at Jacana and Edithvale wetlands

— NEW —
6MW BIOGAS
PLANT AT WTP TO MAXIMISE VALUE FROM OUR RESOURCES

IWM supporting urban growth planning in Arden Macaulay and Fishermans Bend

REIMAGINING YOUR CREEK
TRANSFORMING
— URBAN CHANNELS —

Creating More Liveable Places

A liveable city does not just meet the basic social, environmental and economic needs of its people – it also takes into account what the community values and wants when it comes to amenity, wellbeing and a sense of place.

Melbourne Water helps create more liveable places in all the services we provide, through the clean water we drink, our reliable world-class water and sewerage infrastructure, drainage and floodplain management which support resilient cities and towns and healthier waterways for a more sustainable region.

In 2017-18 other ways we have contributed to creating more liveable places include revitalising public open spaces through placemaking projects such as Greening the Pipeline, collaborative waterway corridor planning in Moonee Ponds Creek, improving urban spaces for a cooler, greener region, and transforming unsightly open concrete channels into more natural waterways, providing green spaces for the community to enjoy.

As one of the largest land managers in the State, we also focus on increasing community access to and use of our land for broader community benefit. In 2017-18, we signed three agreements to deliver 72 kilometres of cycling and walking paths for community benefit, adding to our total 226 kilometres of existing shared pathways. As Melbourne becomes increasingly urbanised, shared pathways will become more important as places where community members can recreate and exercise.

Community engagement via *Our Space Your Place* has helped community groups access the 20,728 hectares of land owned by Melbourne Water available for community use in 2017-18 (see the Our Space Your Place case study on page 35).

The Greening the Pipeline project exemplifies our approach to working in partnership to enhance the liveability of communities along a 27-kilometre corridor. The 'greening' along the reserve has continued throughout the year with 20,870 trees planted in, and adjacent to, the reserve by the local community.

The annual visitation at the Greening the Pipeline Pilot Park at Williams Landing increased by 62 per cent in 2017-18, demonstrating the demand for quality open space in this area, specifically the Main Outfall Sewer reserve. Melbourne Water hosted numerous site visits to the Pilot Park to showcase the project, with visits from local and international guests, such as two groups from China – Tianjin government leaders and the Ministry of Housing and Urban-Rural Development. The Pilot Park was shortlisted at the Stormwater Victoria Awards for Excellence in Integrated Stormwater Design.

In addition, new performance measures are now embedded across Melbourne Water's broader capital works program. Where capital projects are accessible or visible to the community, they are required to contribute to community enjoyment of nature and recreation. In the first year of this performance measure, over 80 per cent of our eligible capital projects have delivered improvements to community enjoyment of nature and recreation, exceeding our target of 60 per cent.

Melbourne Water facilitated the pilot Moonee Ponds Catchment Collaboration, an innovative collaborative governance model for addressing catchment-wide issues associated with urban waterways. Seventeen stakeholder groups, including four councils, are collaborating to transform the creek into an iconic waterway for Melbourne, with high social and environmental values. Since its launch in February 2017, the pilot collaboration has created a strong advocacy network for the creek which is now more coordinated and collaborative in its approach. The group is advocating for a range of on-ground projects and is working together to improve the ways information is shared and to strengthen planning controls.

As our cities become more dense and urbanised, community access to green spaces and the natural environment is reduced. We are working with stakeholders and the community to transform public land to create cooler, greener spaces that are enjoyable for more days of the year. Vegetation and water used to cool green spaces provide habitat, improve amenity, and help manage stormwater flows to waterways. In 2017-18 we delivered seven hectares of shade, cooling and greening by planting trees along paths at Jacana and Edithvale wetlands. By 2021 we plan to deliver a further 25 hectares in public places across Melbourne. While currently focused on Melbourne Water land, the program's wider partnership opportunities are also being explored.

We partnered with Melton, Knox and Maroondah councils to deliver the Reimagine Your Creek program, which restores previously engineered stormwater channels to more natural systems, and enables communities to connect with their local waterway, each other and the environment. The Melton West community helped to 'reimagine' the first site at Arnolds Creek in March 2018 which removed the existing concrete-lined channel and replaced it with a more natural waterway and surrounding open space that incorporates contemporary urban design, based on community aspirations and feedback. We are currently working with the Blind Creek (Boronia) and Tarralla Creek (Croydon) communities to reimagine their creeks. Construction at Arnolds Creek to deliver the first reimagined waterway is due to commence in late 2018 with other creeks to follow once designs are finalised with the community.

Case study

Our Space Your Place

The *Our Space Your Place* program helps our community identify opportunities to use Melbourne Water land for broader community benefits beyond the essential services the land is currently managed for.

The map-based online portal allows communities to explore the availability, size and potential use of some of the 33,000 hectares of land we manage across Greater Melbourne. This allows our community to apply to use the land and send in their project ideas to create safe, healthy, beautiful and more connected spaces for the benefit of their local areas. It supports a healthy lifestyle by creating more opportunities for exercise, interactions and access to local waterways, nature and neighbourhoods.

Working collaboratively with community groups and councils, a Community Start Up Package campaign was launched through Melbourne Water's *Your Say* webpage together with a local 'pop up' event to encourage more applications into the *Our Space Your Place* portal in March 2018.

'Mystery sites' for community use were revealed, the first being Merlynston Creek Reserve in Coburg North. We worked with the Moreland City Council to promote the site to community groups to better understand community ideas and concerns. After a co-design workshop in July 2018 to bring their ideas to life, selected applicants were awarded a Community Start Up Package which will include a two-year land lease and a $1000 contribution to materials to create healthier places.

Building More Resilient Cities and Towns Through Integrated Water Management

Melbourne Water is committed to collaborating with customer and stakeholders to deliver the best value we can from the whole of water cycle. Integrated Water Management (IWM) allows us to prepare for, and respond to, shocks from extreme events, and the challenges associated with climate change and population growth.

The central approach of IWM is to align water and land use planning, and make sure that investment decisions take into account non-market benefits including flood mitigation, urban cooling and a healthy environment.

IWM captures the idea that all parts of the water cycle and land use practices of the community are intrinsically connected and efficiencies can be gained when these parts are driven by consistent objectives.

In 2017-18, Melbourne Water's IWM approach helped shape the development of our key water management strategies, underpinned our service approach to major urban renewal precinct developments and improved the liveability and health of our waterways. Taken together, these strategies and initiatives are contributing to the five key benefits of integrated water management:

- safe, secure and affordable supplies in an uncertain future
- effective and affordable wastewater systems
- effective stormwater management protects our urban environment
- healthy and valued urban landscapes
- community values reflected in place-based planning.

Strategies

In 2017-18 we developed the new *Sewerage Strategy* and the *Healthy Waterways Strategy*, in collaboration with key stakeholders and the community, which with our existing *Flood Management Strategy* and *Melbourne Water System Strategy* all take an integrated approach to considering the water cycle, particularly in how we respond to future growth and climate change.

The *Melbourne Water System Strategy* presents a system view of water resource management across Melbourne and the surrounding region over the next 50 years. It identifies a tangible aspiration for IWM to deliver up to 80 billion litres per year by 2065 from diverse sources of water instead of the water supply system.

Stormwater is a finite resource, potentially valuable and, under business as usual management, is a significant threat to the health of the waterways within the Werribee region. In recognition of both the threat and opportunity of stormwater, the *Healthy Waterways Strategy* has identified priority areas for stormwater management, which collectively target over 80 billion litres per year of stormwater harvesting by 2051.

Taken together, the *Melbourne Water System Strategy* and the *Healthy Waterways Strategy* are tangible examples of the significant advantage IWM can provide to the region's water and environmental resources.

Servicing major urban renewal projects

With Melbourne's population projected to grow to almost eight million by 2051, and 70 per cent of that growth predicted to occur in existing areas, the pressure to deliver urban renewal projects is high.

Arden Macaulay is an important urban renewal area for Melbourne, likely to accommodate 45,000 new jobs and over 12,000 dwellings by 2051. Urban renewal of this area provides an opportunity to reshape the future of lower Moonee Ponds Creek with improved flood management, open space, improved water quality and liveability. Through the *Flood Mitigation Strategy* for the area, Melbourne Water has worked closely with the Victorian Planning Authority to assess around 40 options for mitigating flood risk, including different locations and sizes of infrastructure and above-ground storage in 2017-18. We are also continuing to support City of Melbourne to investigate greening and cooling options associated with the flood mitigation infrastructure, and City West Water in development of an *Integrated Water Management Plan* to explore the potential for stormwater harvesting.

Fishermans Bend is Australian's largest urban renewal project covering approximately 480 hectares, more than twice the size of Melbourne's current CBD. Its low position adjacent to the Yarra River makes it subject to flooding, which is further exacerbated by the impact of climate change. In collaboration with the City of Melbourne, City of Port Phillip and the State Government's Fishermans Bend Taskforce, Melbourne Water began development of a Flood Mitigation Solution in 2017-18 to reduce the flooded area and improve greening and liveability. This includes a combination of engineering controls in redesigned pipes, waterway levees and pumping station upgrades, planning controls, and redesigned open public spaces.

Improving liveability and health of our waterways

Building on a partnership with Yarra Ranges Council and the University of Melbourne which began in 2009, Melbourne Water has continued work with Yarra Ranges Council to make a planning amendment, known as an Environmental Significance Overlay (ESO), in the Little Stringybark Creek catchment permanent. This local planning control supports the 10-year restoration program underway in the catchment designed to replicate the natural water cycle balance and restore Little Stringybark Creek through stormwater control measures.

The amendment requires all new developments or home renovations in the catchment to include stormwater treatment control measures (such as rainwater tanks, raingardens or infiltration trenches) to collect and treat runoff created by hard urban surfaces like roofs and sealed driveways. The ESO has been an effective approach to manage excess runoff created by new developments so it does not compromise the current restoration trajectory of Little Stringybark Creek, which has begun to show improvements in water quality and flow regime. This approach may be replicated in other urbanising catchments, especially where waterways in good condition need to be protected.

IWM Forums

The Victorian Government's water policy, *Water for Victoria*, commits to putting IWM into practice and to ensuring community values and local opportunities are embedded in water planning. During 2017-18, five Melbourne Water executives and the Managing Director participated in 15 Integrated Water Management Forums across the Port Phillip and Westernport region. The forums were attended by State and local government and agencies, and provided an 'enabling environment' for identifying opportunities and developing and overseeing a prioritised work programs for collaboration and investment in IWM. These types of opportunities help us to protect waterways, reduce demands on the potable network, create a diverse water portfolio in an uncertain future and improve flooding. These are the outcomes we seek through IWM.

Environmental Stewardship

We will co-create a sustainable region through innovative resource recovery and reducing our emissions. Through improved sustainable business practices and operations, Melbourne Water aims to achieve balanced financial, environmental and social outcomes.

Our *Environmental Stewardship Strategy* enhances the value of our natural and cultural assets by ensuring resource availability and service provision for future generations. We also have a responsibility to protect and enhance the natural environment and support biodiversity through a range of activities (see Enhancing Biodiversity on page 29).

Planning for Sustainability and Resilience

Climate change

Climate change is a critical challenge for the entire community and our natural environment.

As one of the largest greenhouse gas emitters in Victoria, Melbourne Water's services and customers are affected by these challenges. Our services and infrastructure are likely to be affected by drought, fire, floods, storms and sea level rise. Melbourne Water is therefore working to address both market transition risks (such as carbon prices) and physical impacts of climate change.

The *Climate Change Act 2017* provides Victoria with a legislative foundation to manage climate change risks, maximise the opportunities that arise from decisive action, and drive our transition to a climate-resilient community and economy with net zero emissions by 2050. The Act sits alongside other key Victorian Government energy and climate change initiatives including Victoria's Climate Change Framework, Victoria's *Climate Change Adaptation Plan 2017-2020* and the *Victorian Renewable Energy Action Plan*.

In 2017, Melbourne Water adopted a new *Climate and Resilience Plan*, building on nearly two decades of effort to understand and respond to climate change. The new plan will continue to expand our climate change work, and support implementation of the new *Climate Change Adaptation Plan*.

The plan helps us to:

- understand what to prepare for and how to manage uncertainty
- ensure all our decisions take us in the right direction, reducing emissions and exposure to climate change risks
- work with others to share knowledge, build regional collaboration and engage communities.

The plan will assist Melbourne Water staff across the business to support community resilience, preserve our natural environment, reduce greenhouse gas emissions and prepare for the future.

Climate adaptation

We continue to embed planning for future climate variability and climate change in our water supply network. In 2017-18 Melbourne Water has implemented DELWP's *Guidelines for Assessing the Impact of Climate Change on Water Supplies* across a range of activities including:

- implementing the *Melbourne Water System Strategy*, which was developed in 2016-17
- supporting metropolitan water retail companies in the development of their urban water strategies, which are currently being implemented
- review of the Water Outlook Storage Zones, which were used in development of the Water Outlook 2018. Melbourne Water produces the Water Outlook annually with our metropolitan water retail partners to provide the community with more detail and greater certainty on water supply over each 12 month period
- development of the annual Desalinated Water Order Advice
- updating the recommended environmental flow regime for the Yarra and Tarago Rivers
- investigating the potential magnitude of shortfalls in environmental water for Melbourne's waterways under climate change.

The Guidelines have also been used in the development of the set of streamflow scenarios for water resource planning and reporting purposes with entitlement holders within the Melbourne Water Supply system. Details on our entitlement holders can be seen in Appendix C.

Our Performance

Toward net zero carbon emissions

Melbourne Water has a long history of undertaking carbon reduction initiatives, both in the use of its resources and infrastructure to generate its own electricity from renewable sources, including biogas and hydro-electricity schemes (reduced Scope 2 emissions), and in the capture of fugitive emissions both at the ETP and WTP (reduced Scope 1 emissions).

As part of our commitment to reduce our future greenhouse gas impacts, Melbourne Water has pledged to halve our net greenhouse gas emissions by 2025, putting us on a path to achieve net zero emissions by 2030. This pledge supports the Victorian Government commitment to achieve net zero carbon emissions by 2050. We developed a multi-faceted program to achieve this pledge, focusing on a collaborative approach and strong engagement with the State Government, industry partners, customers, the community and diverse stakeholders.

We have implemented a number of initiatives in 2017-18, including starting our transition to a zero emission vehicle fleet with the purchase of fully electric Renault ZOEs. Our existing fleet of petrol and diesel vehicles travel around 11 million kilometres per year and emit approximately 2752 tonnes of CO_2. Melbourne Water will no longer purchase additional combustion engine vehicles where a zero emissions electric vehicle alternative is available. By 2023 all our passenger vehicles will be zero emissions to be closely followed by all our light commercial vehicles – all at no additional cost to the community.

In recent years we have invested in technology to capture greenhouse gas emissions generated during sewage treatment as biogas to generate electricity. Scope 1 emissions have been reduced by covering anaerobic lagoons at the WTP. The methane-rich biogas captured is used to generate electricity on site and, on average, has the potential to meet 77 per cent of the site's electricity use. Design of an additional biogas power plant commenced in 2017-18, with construction due to begin in early 2019. This 6 megawatt biogas-fueled power plant will increase the WTP's renewable energy production to almost 120 per cent of its annual electricity use, making Melbourne Water a net energy exporter overall. Electricity exported off site will offset power costs at other Melbourne Water sites. Site emissions will be reduced with less electricity required on occasion from the grid to meet supply and demand for the WTP treatment process.

We are also conducting feasibility studies for solar power generation at some of our largest electricity-consuming sites, to significantly reduce the energy taken from the State's electricity grid. This expansion will complement our existing hydropower plants in our water transfer system, which already produce nearly 70,000 megawatt hours (MWh) per year, enough to power more than 14,000 homes.

Energy

Melbourne Water generates and uses significant amounts of energy to deliver water and sewerage services to its customers and the community. This year 50 per cent of the electrical energy consumed came from renewable sources. To provide water and wastewater treatment for 2017-18 we consumed a total of 1,730,665 gigajoules of energy. Wastewater treatment consumed 249,747 MWh of electricity from the grid, but is offset through the capture and combustion of biogas at the ETP and WTP enabling 89,891 MWh of renewable electricity generation. This renewable electricity was used onsite and any excess exported to the Victorian electricity grid.

Hydro-electricity production from the transfer and delivery of water to Melbourne metropolitan customers has been increased with the addition of five new hydro generation plants. Our water supply network is a net exporter of electricity, with some variability depending on how we transfer bulk water requirements around the reticulated network. In 2017-18 the distribution and treatment of water consumed 55,895 MWh of electricity and produced 62,723 MWh from hydro-electric plants.

Because Melbourne Water generates its own electricity we also create renewable energy certificates (RECs). These instruments can be retained and sold later if their value increases or sold upon receipt thereby producing an income for Melbourne Water to offset our operating costs. This financial year Melbourne Water surrendered 33,335 RECs to AGL in line with the Renewable Energy Target. We currently hold 52,881 RECs and have sold 300,007 RECs. There is only one hydro generation plant that is not eligible for RECs but it produced 5699 MWh of renewable energy in 2017-2018.

Melbourne Water methane and hydro-electric power generation

Emissions

Melbourne Water is working to achieve a net zero carbon emissions position by 2030. Scope 2 emissions produced through the use of grid electricity will be reduced through the use of our own renewable energy sources like hydro-electricity, biogas, solar and biomass. Reducing Scope 1 emissions generated from biological treatment processes will require additional monitoring, research and testing to develop long-term viable options. Ongoing research and international collaboration is underway to better understand these emission sources and enable Melbourne Water to make material reductions in these direct emissions.

Direct Scope 1 emissions of 214,376 tonnes of carbon dioxide equivalent (tCO_2-e) are due to methane and nitrous oxide produced from the wastewater treatment process. Scope 2 emissions of 239,101 tCO_2-e are indirectly created through the consumption of electricity purchased from the grid and used for pumping and treatment of both sewerage and water. In total our 2017-18 emissions were 453,477 tCO_2-e of greenhouse gases.

Case study

Emissions Impossible challenge

Addressing the challenge of climate change is central to Melbourne Water's commitment to protect the environment, promote conservation, and promise of safe sewage treatment and healthy drinking water.

In our bid to help create a sustainable region, we brought together a group of experts on greenhouse gas emissions from around the world to participate in the Emissions Impossible workshop in March 2018. Participants were challenged to identify innovative concepts to reduce methane and nitrous oxide gas emissions from wastewater treatment plants.

The workshop focused on fostering novel treatment and resource recovery ideas to produce less of these emissions, known as Scope 1 emissions. Identifying solutions for their reduction is a challenge but could radically change the way sewage is treated worldwide. More than 60 participants from across Australia and the world attended the workshop, which was followed by two days of site visits and smaller group discussions.

Tim Day, Managing Director of Isle Utilities in Australia said, "Melbourne Water has taken a global leadership role to address Scope 1 emissions within its operations. It is the first water corporation in the world to lead an event, bringing global experts from both research and industry together to develop a comprehensive strategy and plan to address Scope 1 emissions."

The outcomes will contribute to knowledge across the wastewater sector and help inform our carbon emissions research and planning studies. Insights to date have shaped focus areas for the Innovation Challenge, a global science contest planned for 2018.

Biosolids

Melbourne Water's biosolids beneficial re-use program marked its one millionth tonne of materials removed from on-site stockpiles in 2018, marking a major milestone in the program. Biosolids are the solid materials generated in the wastewater treatment process before being treated and dried. Recently, strong demand emerged for Melbourne Water's stockpiled clay-rich biosolid materials at the ETP to rehabilitate a collapsed landfill in outer Melbourne, meaning thousands of truckloads of material have now been re-used from the ETP site. We transported 240,169 dry tonne from the ETP in 2018.

The WTP biosolids re-use program continued for the second year, delivering 5598 dry tonne to support land agriculture in the Balliang farming area. In addition, further efforts are underway to increase additional biosolids re-use from the WTP, in consultation with the metropolitan water businesses. The megatonne milestone is a positive sign for the future of our re-use program, emphasising that the wastewater treatment process produces many valuable and beneficial resources and products.

Increasing Value: Improving Our Business

To successfully deliver our services in an era of rapid change, we need to build on a solid organisational foundation and adapt, evolve and develop.

In 2017-18, Melbourne Water has continued to strive for excellence under each of our four themes of Customer and Community, Safe and Inspired People, Continuous Improvement, and Business Sustainability.

Our Customers and the Community

We provide valued services to customers and the community who are at the centre of everything we do.

We provide a range of services to our customers. We also partner and develop relationships with them to deliver shared services to our community. Our community are 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 benefit from the services we provide with our customers and partners.

To assist the organisation to define and understand its customers, Melbourne Water separates its customer base into key segments. These are:

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

We also collaborate with Aboriginal Victorians and Traditional Owners who help inform our decisions about our future services.

80.8 CUSTOMER REPUTATION

↑ CONTINUING TO INCREASE ↑

EXCEPTIONAL DIGITAL EXPERIENCES

81,000 views via *Your Say*

50,000 downloads online maps

1.2 million website views

18,070 participants in education and citizen science programs

ENVIRONMENTAL AND CULTURAL WATERING at BOLIN BOLIN BILLABONG

in consultation with Wurundjeri Land Council

RECONCILIATION ACTION PLAN

building stronger community connections with Traditional Owners and the broader Aboriginal and Torres Strait Islander community

Improving the Customer Experience

Our customers and community have increasing expectations around digital empowerment. Melbourne Water has a strong focus on providing digital services to enable greater engagement, self-service and information sharing across multiple devices. This includes a *Your Say* community engagement platform and *Community Online Maps* web application to inform people of works going on in their area.

In 2017-18 we refreshed our brand, by clearly defining the value of the services and experiences we provide, and communicating this proactively to our customers and the community. This is leading to increased familiarity and a sense of trust and confidence in Melbourne Water. We also delivered a new *Customer and Community Strategy (2018-2023)*, which articulates the vision for how we will prepare for and respond to the needs of our customers and community over the next five years.

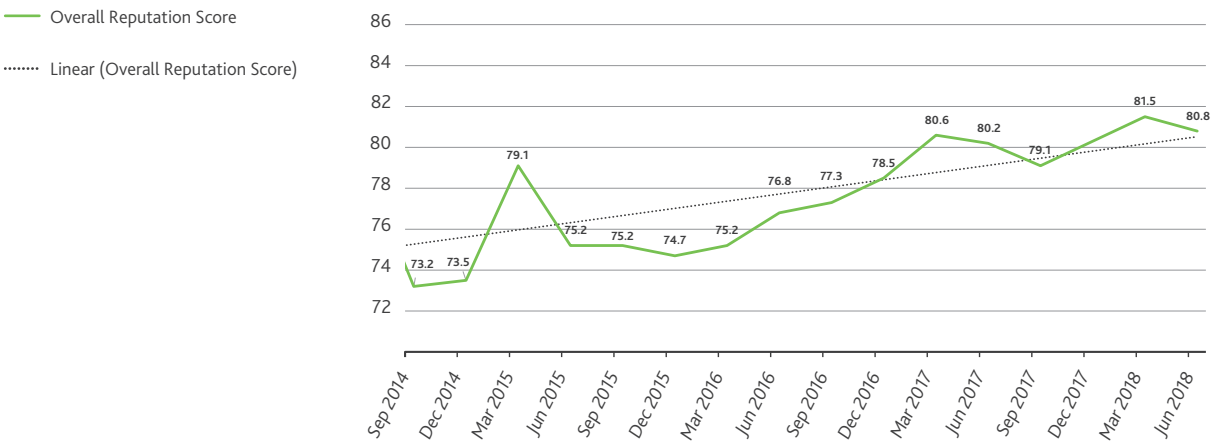
As an organisation focused on delivering services of value, relationships are critical to Melbourne Water. Through our *Relationship Management Framework*, we established relationship managers for each of our eight customer segments who are the dedicated customer point of contact. In providing customer capability and training to our people, we have ensured consistent, proactive and excellent customer service, to assist us in advocating for our customer's needs and expectations.

This advocacy and collaboration assisted our council partner, the City of Kingston, drive greater value for its residents, with the construction of a jetty at Patterson Lakes' Inner Harbour in 2018, located on waterways managed by the Victorian Government. Working with the City of Kingston, Parks Victoria and local community stakeholders, Melbourne Water helped negotiate the planning and construction of the jetty, unlocking value in our assets to support community liveability.

We continued our work with councils and hosted local government roadshows in April 2018. More than 100 council staff attended from 35 of the 38 councils within Melbourne Water's operating boundary. As well as providing clearer visibility to our council partners for our current and future priorities, the sessions were a forum to solve common problems and share some of the innovative ways Melbourne Water is managing emerging issues impacting our community.

A significant cornerstone of our efforts to improve customer experience in 2017-18 was our digital customer transformation program. Melbourne Water has enabled greater information sharing, improved the usability and accessibility of our website, providing online education resources and given the community the opportunity to contribute via *Your Say*, an online community engagement platform (see Delivering exceptional digital experiences case study on page 46).

Melbourne Water Reputation Score – Community & Customers



Measuring our customer performance

We monitor our performance with customers through research, data analysis and customer feedback which helps us drive improvement in the customer experience, and tailor solutions for better customer and community outcomes.

Our Customer Service Centre has provided over 100,000 consistent and valued experiences since its launch in October 2015. Recently, it was independently benchmarked against government, utilities and the private sector regarding customer experience, including timeliness, friendliness and how well issues were resolved. The results indicate Melbourne Water provides high levels of customer experience for the water industry in Australia.

In addition, we continue to monitor our reputation to understand customer and community perceptions and their satisfaction with the products and services we provide. Since 2016, our overall reputation score has steadily increased, reaching 80.8 in June 2018.

Case study

Delivering exceptional digital experiences

Our customers and community live in a digital era. Increasingly, they are expecting organisations to provide information on the channel or device of their choice. In 2017-18, through a range of initiatives, Melbourne Water's digital transformation program continued to improve customer experience.

Our customers and community are easily able to access their key, requested information on our website, which was refreshed in October 2017. Their experience is now simple and consistent across multiple devices and platforms. Since then, the Melbourne Water website has recorded 1.2 million external page views, is being accessed by a number of search engines and referral agencies (such as bom.gov.au) and is delivering content to desktop, mobile and tablet users enabling simpler access to the information customers require.

To provide our customers and the community with the opportunity to participate in shaping strategies, projects and plans that involve or impact them, we expanded our *Your Say* engagement platform, helping to establish a two-way dialogue between the community and Melbourne Water and build long-term, cohesive relationships. This year, *Your Say* received over 81,000 views, launched 10 new projects, recorded 1400 feedback responses and gained over 900 followers.

The *Community Online Maps* web application was launched in March 2018, allowing people to search for real-time information about Melbourne Water projects and events happening in their chosen location, including incidents, major and minor works, maintenance and community events. Since going live, there have been more than 50,000 map views.

By providing a variety of digital and human interaction touchpoints, Melbourne Water is catering to the needs of our diverse customers and community. As we further personalise real-time content, and explore opportunities with partners, customers and community, we will continue to leverage new and emerging technologies to make Melbourne a great place to live.

Building a Community that Values Water and the Environment

Each year we work with the community and the water industry to create better community spaces, increase literacy through visits to our sites and partner with volunteers to protect and care for our creeks and waterways.

Community members help us to plan how and where our world-class infrastructure should be built to service and supply Greater Melbourne with affordable, high-quality water, reliable sewerage, healthy waterways and integrated drainage and flood management services.

Engagement

In 2016 Melbourne Water launched the three-year Next Generation Community Engagement Program, our commitment to transform the way we engage with our customers and the community, to create more meaningful ways for people to influence and be involved in the decisions we make.

Over the last 12 months, we delivered Phase 2 of the program, resulting in a significant increase in engagement through *Your Say*, including more than 17,500 unique visits and over 1700 online contributions. Following the success of the small business guidelines in 2016, endorsed by the Victorian Small Business Commissioner as industry best practice, we expanded our procedural guidelines to drive best practice engagement in a range of operational areas, including community disturbance management, tree removal and flood management planning. This supports an integrated process between Melbourne Water employees and our contractors to ensure best practice engagement is at the core of our project delivery procedures. To further embed an engagement culture, we delivered the Next Gen Masterclass Series to more than 350 of our workforce, delivering six sessions on new innovative engagement techniques and topics.

The engagement principles from the Next Generation program have supported key strategies and plans, including the co-designed *Healthy Waterways Strategy*, with contributions from over 300 stakeholders and 100 staff, the citizen jury input via community assembly consultation as part of the *Yarra Strategic Plan*, and establishing a collaborative governance model with multiple stakeholders to transform Moonee Ponds Creek.

We have also focused on our essential major capital projects to maintain our world-class infrastructure to ensure community is considered at each stage of the project, from initiation and design to construction and delivery. Our best practice approach is achieving results – in 2017-18 we worked on 113 capital works projects which had potential to cause community impact and concern. Of these, 43 projects were completed. Evaluation with local impacted stakeholders indicated they had 79 per cent trust in Melbourne Water and 77 per cent overall satisfaction with project communications.

Education and citizen science

Melbourne Water continued to support a community that values water and the environment in 2017-18. Our education programs provide opportunities to improve water literacy in the Victorian Curriculum and for citizen scientists to monitor the health of our waterways and catchments to contribute to scientific research. In 2017-18, there were 18,070 participants in our programs, ranging from tours of sewage treatment plants to citizen science activities such as monitoring frogs and platypuses.

With a focus on improving water literacy across our programs in 2017-18, we expanded the sustainability program, River Detectives, providing training for 23 River Detective groups in schools and helping 1163 students to participate in monitoring activities on their local waterway. We have expanded our digital service offerings to help drive engagement in our citizen science volunteer network. More than 1500 people contributed to our platypus engagement program, using the PlatypusSpot app, and provided eDNA samples to support platypus distribution data. Our Frog Census app continues to engage citizen scientists with 2935 frog reports submitted by over 1100 volunteers since its launch in 2016. The Frog Census app received the IAP2 Core Values Award (Environment) in 2017, in recognition of the collaborative design process involved and innovative community engagement outcomes achieved.

To support Melbourne Water's strategic direction to provide education on water literacy, we are also developing a digital immersive education experience. This will provide a virtual exploration of Melbourne's water assets and allow the audience to explore wetlands, water cycles, sewage treatment and catchment areas at the WTP.

Clearwater capacity building

With a focus on building individual, intra and inter-organisational capacity of the Victorian water industry, Clearwater delivers a suite of initiatives to support awareness and adoption of IWM. Through network building, specialised training workshops, guided technical tours and other knowledge sharing activities, Clearwater ensures the latest technical and scientific information is put into practice by a wide range of water professionals, so that water resources are managed for the long term, and contribute to healthy, resilient and liveable communities. In 2017-18 Clearwater helped improve IWM capacity both at home and overseas.

On a local scale, Clearwater continued its IWM capacity building programs in regional Victoria, building on its existing stormwater management practices improvement program in metropolitan Melbourne. This regional expansion began in 2016 with DELWP funding, and it enables Clearwater to work with a growing number of stakeholders, including catchment management authorities, retail water companies and local government practitioners. DELWP's funding, together with Melbourne Water's ongoing support, allowed Clearwater to help deliver Victoria's new water plan in 2017-18, *Water for Victoria*, associated IWM Framework, and the rollout of IWM Forums across the State.

In the past 12 months, Clearwater has successfully delivered 36 events and connected with over 1000 participants from over 170 organisations across the State to help our stakeholders deliver IWM and realise the outcomes of *Water for Victoria*.

A partnership with the Monash Sustainable Development Institute supported international IWM capacity building in Suva, Fiji, through the Revitalising Informal Settlements and their Environments (RISE) project. Clearwater delivered a workshop on best practice in sustainable urban water management to the RISE team, local partners and government counterparts. The workshop focused on the water management problems facing Fiji and the Pacific and opportunities to integrate IWM design with existing infrastructure to provide a range of benefits to the environment, community health and wellbeing, and urban growth. Clearwater also hosted young water leaders from more than 10 countries as part of Canada's Waterlution program (see Waterlution in Australia case study on page 48).

Collaboration and Partnerships

The water sector is evolving in response to rapidly changing community expectations of water services. This evolution requires Melbourne Water, along with the retail water companies, to think more broadly now and into the future about the values of water for our community and the role of water corporations responsible for acting in accordance with these values.

Case study

Waterlution in Australia

In May 2018, 40 national and international participants, from engineers to entrepreneurs aged between 20 and 35, gathered in Melbourne with one goal: to create collaborative innovations to respond to our most pressing urban water challenges. The participants were attending the Water Innovation Lab (WIL), a global initiative of the Canadian non-government organisation, Waterlution, presented in Australia for the first time.

The young water leaders from more than 10 countries were asked to reflect on emerging and future global trends, learn about systems thinking, innovative tools and techniques, and think through complex social and technical challenges in the water industry.

With Melbourne Water and Clearwater as lead partners, alongside innovation partners Jacobs and the Water Services Association of Australia – and community and advisory partners DELWP, City of Melbourne, Resilient Melbourne, Yarra Valley Water, Water Research Australia, ICEWaRM and the International Water Centre – the Australian WIL discussed themes such as low-cost technology and solutions for rural access, traditional knowledge for water management, urban design, water quality and resilience, and agriculture, drought and flooding.

A two-day field tour hosted by Clearwater set the local context and included a diverse range of topics and projects, including the WTP, *Yarra Strategic Plan*, Daylighting the Dandenong Creek project, and the Little Stringybark Creek water retention and creek restoration project.

Participants appreciated the opportunity to share knowledge, learn and connect with diverse water practitioners, and support a more holistic water sector approach.

"Due to this experience, I'm going to transition from only designing and building water infrastructure to creating better conversations and re-shifting how communities value water and the effect on the decision-making process."

Kalaparan Sritharan | Mechanical Process Engineer – Associated Engineering

In 2017-18 Melbourne Water participated in a Managing Directors' collaboration forum with the retail water companies, to capitalise on the advantages of whole-of-water-cycle management, from our collective experiences. Areas for focus are a shared narrative for communicating the 'value' of the water sector, to develop a joint submission in response to the draft SEPP, Aboriginal engagement, and IT and technology innovation and training.

We partner with a number of stakeholders to create recreation and education opportunities along waterways that strengthen the wellbeing of our community. In 2017-18 we continued our ongoing support for community-based events to enhance our healthy waterways vision for the Melbourne area.

Melbourne Water was the major sponsor for the Inflatable Regatta along Melbourne's Yarra River, an event which saw 2000 participants paddle two kilometres from Richmond to Hawthorn. The event supports our *Healthy Waterways Strategy* and focus on liveability, enabling the community to interact with our rivers in diverse ways.

In 2017 the *Melbourne Water Kids Teaching Kids Conference* celebrated its 11th year in partnership with Melbourne Water. Over 500 students from 56 schools attended the conference to be part of programs that discussed issues affecting our water catchments.

Emergency Response

As part of our emergency management, Melbourne Water is committed to the prevention of, response to, and recovery from emergency incidents. We work in partnership with Emergency Management Victoria, and our agency partners including the State Emergency Service (SES), Metropolitan Fire Brigade (MFB), and EPA to support an 'all communities, all emergencies' effort to broaden the approach to emergencies, and put the community at the centre of our decision making.

In 2017-18 our incident response efforts included supporting Victoria Police with search efforts for a missing person in our reservoir, response to a cyber event which affected a long list of major Australian companies, and preparation for wet weather in December 2017 which was forecast to significantly impact residents throughout Melbourne. Our pre-emptive management approach for the December event involved rostering over 300 staff internally, deploying staff to the State control centre and incident control centres in Dandenong to support State arrangements for managing the event. Our flood modelling team and hydrology team provided essential support and assistance in conjunction with BoM to provide updated modelling for emergency services.

We are assisting the MFB and the Country Fire Authority (CFA) to develop a set of guidelines for controlling and managing firewater runoff into waterways from fire sites. Waterway pollution from fire events has a significant impact on public and environmental health, and we continued to work with DELWP, MFB, EPA and local fire authorities on how best to manage these incidents to support our communities.

In July 2017, a fire broke out at a recycling facility in Coolaroo which took three weeks to fully extinguish. Over 40 staff contributed at various stages to Melbourne Water's response effort, and we liaised with the EPA, Hume City Council, Yarra Valley Water, Department of Human Health and Services and the fire services to manage environmental and social impacts from the fire.

Partnering with Aboriginal Victorians and Traditional Owners

Melbourne Water has a strong commitment to reconciliation and recognises that partnering with Traditional Owners and Aboriginal Victorians is integral to providing essential services to our community and caring for our environment.

Victoria's Traditional Owners have managed land and water sustainably over thousands of generations. Their cultural, spiritual and economic connection to land, water and resources remains strong through their relationship with Country.

We recognise the benefits of working collaboratively with Traditional Owners and Aboriginal Victorians who make a vital contribution to Melbourne Water's decisions about our future services, and to asset and resource management. We are therefore committed to the continuation of our strong and respectful partnerships with Traditional Owners and Aboriginal Victorians.

In 2017-18, this collaboration was delivered with input into key water planning strategies as well as two key programs, our *Reconciliation Action Plan* and the Heritage Improvement Program.

Water planning consultation

The development of the *Melbourne Water System Strategy*, the *Healthy Waterways Strategy* and the *Yarra Strategic Plan* provided an opportunity to involve Traditional Owners and other Aboriginal groups in water planning. This was the first time Melbourne Water had taken this approach. It allowed everyone to come together to develop a course of action for more inclusive water planning as we implement these strategies and plans, drawing on traditional knowledge to protect Aboriginal water values.

The Wurundjeri Land Council, as Traditional Owners, provided valuable and extensive input for the development of the annual plan for environmental water delivery in the Yarra catchment – the Yarra River Seasonal Watering Proposal 2018-19. As part of the 2017-18 environmental watering program for the Yarra system, Melbourne Water invested $500,000 in restoring the Bolin Bolin Billabong, a site of cultural significance, in consultation with Wurundjeri Land Council (see the Watering Bolin Bolin Billabong case study on page 50).

Reconciliation Action Plan

We continue to build on the actions implemented as part of our *Reconciliation Action Plan 2016 -2017* ensuring the contributions of Aboriginal and Torres Strait Islander peoples are an integral part of our work.

We are building stronger community connections with Traditional Owners and the broader Aboriginal and Torres Strait Islander community. In September 2017, we seconded a Melbourne Water employee to the Wurundjeri Land Council as a Senior Water Policy Advisor. The role has been essential to facilitate the legislated requirement for the Wurundjeri's inclusion in the *Yarra Strategic Plan*, and increased information sharing between Melbourne Water and the Wurundjeri.

Our Aboriginal and Torres Strait Islander Career Portal has helped increase representation of Aboriginal and Torres Strait Islander people in our workforce, with a number of Aboriginal and Torres Strait Islander employees joining us during the last financial year. We offer a wide range of activities to build employee awareness of Aboriginal culture and history, in addition to cultural competency training, to support a culturally safe workplace.

In addition, our presence at community events, such as the Long Lunch and the Long Walk, helps us to foster genuine relationships with Aboriginal communities and supports the delivery of our *Reconciliation Action Plan*.

Our second *Reconciliation Action Plan (2018-2020)* has been endorsed by Reconciliation Australia. The plan has a number of areas of focus, which will guide how we progress reconciliation and understanding of the importance of cultural and historical knowledge in helping to shape a reconciled future. A key component of the plan will be a continued focus on providing employment and development opportunities for Aboriginal and Torres Strait Islanders.

Protecting cultural heritage

As custodians of a vast and diverse range of cultural heritage resources, we recognise our responsibility to manage sites of cultural and historic significance.

In 2017-18 we developed and implemented training modules to build increased organisational capability concerning heritage compliance, and updated our Cultural Heritage Risk Matrix to reduce the risk of harm to Aboriginal cultural heritage in our daily operations. These tools are building the capability of our workforce to better manage potential heritage risks at both planning and delivery stages of site work projects in line with legislation, while ensuring better integration of cultural heritage management into our services.

Case study

Watering Bolin Bolin Billabong

Bolin Bolin Billabong is an important element of the Yarra floodplain with major significance for the Wurundjeri people. It is valued within a much larger cultural landscape and is used for many recreational activities.

The Wurundjeri Land Council describes the importance of the site: "At iuk (eel) harvest time (at the end of the warmer season) the river flats were a place where our ancestors, the Woi-wurrung people, held important ceremonial meetings, negotiations, and traded with neighbouring tribes of the Kulin. The gatherings at iuk harvest time were large, comprising hundreds of people. Prior to European contact (and for a few years post contact) Bolin Bolin and nearby billabongs had such a plentiful iuk population, that they were able to sustain these large gatherings in the river valley for eight to 12 weeks at a time."

The billabong is under threat, mainly from urban development which has changed the quantity and quality of water it receives. High flows from the Yarra River occasionally fill the billabong; however, changes to river flows over many years have reduced the frequency of these fills. As a result, the billabong does not receive the watering it needs.

Given the importance of Bolin Bolin Billabong, there was an opportunity to stage environmental watering and focus the cultural values mapping project on this site of the Yarra system in the short term.

In partnership with the Wurundjeri Tribe Land and Compensation Cultural Heritage Council, the Victorian Environmental Water Holder, Parks Victoria and key government agencies, Melbourne Water worked to restore natural water flows, improve amenity and wildlife habitat, and rehabilitate the Bolin Bolin Billabong area.

We are building on the learnings for how the nexus of environmental water and cultural flows can be planned and delivered to support Aboriginal environmental outcomes at other sites in the Yarra system.

Minister Lisa Neville and Wurundjeri elders Aunty Alice Kolasa and Aunty Joy Murphy officially turned on the watering to the Bolin Bolin Billabong in October 2017, ensuring animals and plants of the billabong and nearby area will continue to thrive, and the Indigenous cultural integrity of the area is enhanced into the future.

Safe and Inspired People

Melbourne Water aims to be a leader in world-class integrated water, sewerage, waterways and amenity management. This will be achieved by our diverse, capable, collaborative and resilient people who are reflective of our community, and working in a safe and inspired organisation.

1,000,000 HOURS INJURY FREE IN MAJOR CAPITAL PROGRAM

MELBOURNE WATER'S ENGAGEMENT

↑ — SCORE INCREASED BY — ↑

6% to 72

VIRTUAL REALITY LEADING THE WAY IN AWARD WINNING SAFETY PROGRAM

25% of workforce accessing formal flexible working arrangements

BUILDING A LEARNING ORGANISATION

- **15** ENGINEERING SCHOLARSHIPS
- **45** GRADUATES IN CERTIFICATE III
- **80** PEOPLE SPONSORED IN FORMAL TECHNICAL QUALIFICATIONS

and

270 EMPLOYEES COMPLETED CAREER DEVELOPMENT WORKSHOPS

Safety

We will keep our people and the community safe.

Keeping our people safe is our highest priority. As an organisation, Melbourne Water has continued to focus on the safety of our employees, contractors, volunteers and the community.

Melbourne Water has continued to embrace new ways of working in 2017-18, setting a generative safety culture standard at organisational and team levels. An organisational Generative Safety Culture is characterised as a culture where 'safety' is just how we do things around here – and the culture improvement model is based upon the work of notable and globally renowned safety expert Professor Patrick Hudson. This year we have operationalised Professor Hudson's academic work and we are now well on our way to creating the kind of safety improvements we aspire to.

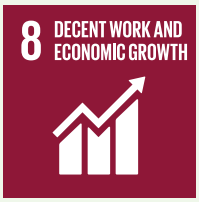
This has created a shift in thinking about what success looks like, how we measure it and what leadership behaviours are required to support this change. This cultural drive is supported by increasingly creative and innovative approaches to the safety issues that organisations face, these being relevance, collaboration, engagement, trust, action, and systems and tools that really deliver better health and safety outcomes. We do not differentiate our workforce and work hard to create a single class of safety for all people involved in our operations, be they an employee, contractor, volunteer or a member of the broader community.

We believe that safety is a 'whole of life' experience, starting in the home and reinforced in the workplace. To this end we have implemented programs that assist our people in being safer at home, on the road and at work. We provide training on topics that we believe will enrich our peoples' lives, ranging from First Aid for Children and Care of the Elderly, through to topics that address common work and non-work stressors relevant to greater psychological health and safety. These training and educational opportunities are open to our entire workforce including contractors, as well as their family members and friends.

A key example of innovation in our approach to safety is demonstrated in the new Control of Work system which drives the management of safety risk at the right place in the value chain, ensuring safety is designed in and managed at the most effective point, not left to front line workers at the point of delivery. This places emphasis on ensuring that safety is planned for as early as possible in work initiation and empowers our people to maintain focus on the risks they face.

Case study

Train safely in a virtual world



Melbourne Water has made groundbreaking inroads that challenge traditional thinking about safety assessment and safer environments as it continues to provide best practice infrastructure, systems and processes for essential services across Greater Melbourne.

Using world-first technology, Melbourne Water partnered with Deakin University to build a purpose-built online platform that allows technicians to safely conduct training about managing highly toxic chemicals without the inherent, real-world safety risks.

A virtual replica of the ozone generator at the ETP was developed, allowing users to interact in the same virtual space from anywhere in the world.

Scott McMillan, Melbourne Water's Safety Manager for Technology and Innovation, said the new technology had several applications. "We are using virtual reality to change the way we train technicians and eliminate safety risks. Isolating and opening the generator is very dangerous and it's done infrequently, so we wanted to develop a virtual world where we could train our operators and technicians on the task. We wanted them to be able to work side by side and without harm."

The virtual reality technology was showcased to an audience of 350 people at Melbourne Knowledge Week at Federation Square in May 2018. Deakin University's Associate Professor Ben Horan was in China and connected virtually with Melbourne Water's Corporate Safety Manager Julianna Pais at Federation Square and to the ozone generator at the ETP.

The platform is initially being used to train staff on managing ozone, a dangerous chemical used in the wastewater treatment process. Ten times more deadly than chlorine, the platform allows technicians to learn about ozone without exposure to risks. The virtual training has added benefits of reducing construction costs to modify safety issues, safer environments and greater access.

The new technology is expected to have far reaching applications in other industries. The first training of operators and technicians on the virtual generator started in July 2018.

Another key shift in our approach has been to break down the divide between home and work safety behaviour. We know from our return-to-work plans that more injuries occur at home than at work. Home safety kits have also been introduced which include lead paint testers, a stud/cable finder, a radioman monitor for microwaves and a gas detector for carbon monoxide levels in heaters. In use at home, one staff member found a heater was emitting 100 times the acceptable levels of carbon monoxide. This was a potentially lifesaving check that was possible as a result of providing these kits.

Our major capital safety forums, delivered jointly by our major program delivery team and our contractor and subcontractor partners, are fostering genuine engagement and supporting safer environments for all. Working within a set of agreed and consistent safety behaviours and a common handbook for working at Melbourne Water, our major capital project teams recorded six months and almost 1 million safe working hours in 2017-18. Our small-scale capital delivery partner Aqua Metro Services has also recorded 90,711 safe working hours, and a continuous injury-free period since September 2017. Hazard and near-miss reporting continued through this period, confirming that our efforts to embed a generative safety culture are delivering results.

Over the past year, we have trained a significant cohort of investigators in investigation techniques. This, combined with the emphasis on learning, has significantly increased the quality of our organisational learning and our ability to resolve safety issues and establish key lessons and initiatives to prevent events from happening in the future.

Safety leadership is critical to being a learning and generative organisation and we have established an Event Review Group, made up of our executive leaders, which looks at the outcomes from an investigation to determine whether there is further applicable learning or if we need to address any systemic or cultural issues. This group has led to powerful improvements in safety supervision and contractor management.

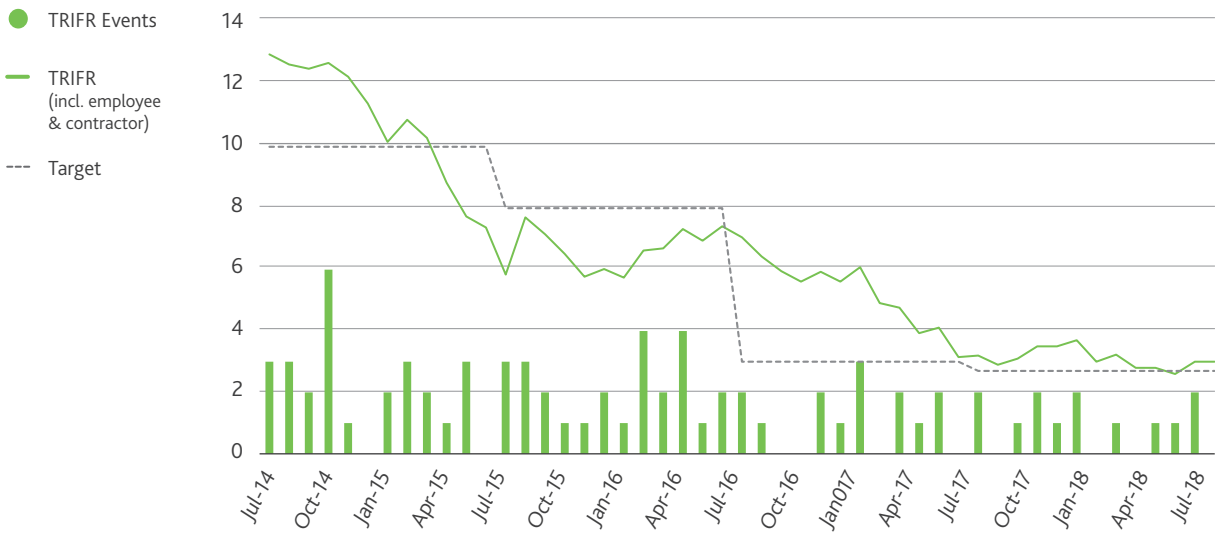
Melbourne Water uses cutting-edge technology, such as virtual and augmented reality, to provide safer outcomes for our people. In 2017 we won the Worksafe Award for our work in improving hazard identification and embedding virtual reality into our safety in design process. In addition, we have developed a virtual reality training program for the prevention and first aid of snake bite that generated local and international media attention.

Thinking differently about training has also led to the development of an innovative isolation trailer which allows learners to practice planning and implementing positive isolations and our Lock Out Tag Out procedure. Feedback has been extremely positive and other utilities have indicated an interest in purchasing the trailer.

We have also created a health and safety representative network which meets quarterly to share lessons learned. This focus has led to extensive improvements in our health and safety committees and allowed the representatives to network, share insights, support innovation and solve problems, making them a powerful force for positive safety culture change.

Our relentless focus on safety has resulted in a sustained reduction in injuries over the last five years. We will work to ensure this trend continues, leading to an ongoing decline in harm to our people. This year we achieved a total recordable injury frequency rate (TRIFR) of 3.0 against a target of 2.7. There were 13 injuries that contributed to the frequency rate of which six involved employees and seven involved contractors. For further information and data on our safety results, see Appendix G.

Total Recordable Injury Frequency Rate



Our People

Melbourne Water is focused on being a learning organisation in order to meet the challenges of climate change, urbanisation, population growth and changes to the way we work.

Our organisation employs a passionate, truly diverse, future-focused team of experts, who collaborate with a wide range of partners to skilfully balance the social, economic and liveability needs of the community with the long-term benefit of the environment.

Workforce capability

As part of our commitment to being a learning organisation, we continued to build the capability and performance of our workforce in 2017-18 by:

- expanding the use of our new Performance, Opportunity and Development system, with 94 per cent of 2017-18 performance reviews completed using the system. This has allowed us to establish clear alignment between all individuals' work plans with our strategic and operational business objectives, and establish accountability for each person's role in achieving a high-performance workplace
- designing new Leadership Development programs and Certificate III and IV technical qualifications, enabling our people to build their formal qualifications and networks across the business. We sponsored 80 of our people in formal water sector, civil construction and conservation and land management qualifications to enhance our technical competency, and currently have 45 graduates in Certificate III
- awarding 15 engineering scholarships to recipients from six of the eight Melbourne universities, to increase our pipeline of future talent, develop our next generation engineers through science, technology, engineering and mathematics (STEM) qualifications, and to strengthen as a learning organisation. After a rigorous application and panel-assessment process, each recipient has received $5000 to aid in their final year of study, and will receive a further $1500 on successful completion of their qualification. Several engineering disciplines have been represented – chemical, civil, environmental and mechanical – and we have awarded scholarships to eight females and seven males. Scholarship recipients will be fast-tracked in their eligibility to participate in our Melbourne Water Graduate Program when they have completed their studies
- delivering Career Development Workshops to our operational employees, empowering them to create and work toward their career goals and encourage them to take accountability for their development. Over 270 of our employees attended career coaching sessions.

Developing an inclusive workplace

Melbourne Water is committed to ensuring our culture is inclusive and our workforce reflects the diversity of the community we serve. Our *Diversity and Inclusion Strategy* outlines actions to improve gender equity, workforce flexibility, accessibility and lesbian, gay, bisexual, transgender and intersex (LGBTI) inclusion. The strategy also outlines actions to improve reconciliation with Aboriginal and Torres Strait Islander people. For details on reconciliation, see *Reconciliation Action Plan* on page 50.

In 2017-18 we have undertaken a range of actions designed to attract, retain and create opportunities for both women and men at Melbourne Water (see Reshaping traditional gender roles case study on page 56).

We launched the pilot of Elevate, a program designed to increase the leadership readiness of high-potential women and completed our third annual gender pay equity analysis which confirmed no gender pay gap. We implemented Melbourne Water's Gender Equity Shortlist Policy that requires all hiring managers to strive for gender equitable short-lists prior to commencing the interview process. This has contributed to an increase in women in management roles from 28 per cent to 35 per cent in 2017-18.

We continued to embed greater workforce flexibility, with 25 per cent of our workforce formally accessing flexible working arrangements. Through our employee engagement survey results we know that 80 per cent of our employees believe that Melbourne Water supports flexible work arrangements. Through our Inclusive Leadership program, we are upskilling our leaders to confidently manage a diverse and flexible workforce. We enhanced support of employees on parental leave by providing them with current business updates, important information on events, and coaching and support during their transition back to paid employment. Our flexible workplace program was a finalist for Best Workplace Flexibility Program in the 2018 Australian HR Awards.

With a continued focus on building an inclusive culture, we experienced a significant increase in voluntary self-reporting of disability, with 7 per cent of our organisation reporting to have a disability in 2017-18. We arranged three disability awareness sessions to build further understanding of disability and two events to support carers.

Our LGBTI working group, Refract, ran a series of events to build awareness and support inclusion, and launched the LGBTI Awareness and Ally Training in partnership with Pride in Diversity.

In 2018, Melbourne Water participated for the first time in the Australian Workplace Equality Index (AWEI), the definitive national benchmark on LGBTI workplace inclusion. The results have provided important information that will guide the preparation of a further plan of action to support the delivery of LGBTI inclusion.

Compliance with the *Disability Act 2006*

Accessibility is an important part of our inclusion strategy. Melbourne Water's *Accessibility Inclusion Action Plan (2016-2018)* is a two-year plan that outlines our commitment to disability inclusion and sets specific actions to achieving a more inclusive workplace culture in line with our *Diversity and Inclusion Strategy* and the *Disability Act 2006*.

In 2017-18 this activity included:

- promoting flexible working arrangements for carers and employees with a disability, and supporting these employees with reasonable adjustments to enable their work
- training on producing accessible communications for communications employees
- accessibility and recruitment training delivered by the Australian Network on Disability (AND) to support the recruitment of people with a disability
- guest speakers at events from Guide Dogs Australia, Vision Australia, Carers Victoria and the former Disability Discrimination Commissioner to raise awareness
- development of Melbourne Water's second *Accessibility Inclusion Action Plan (2018-2021)* in collaboration with the Disability Advocacy Employee Network, following consultation with representatives of peak disability bodies, including Australian Federation of Disability Organisation, *Vision Australia*, and AND
- participating in a number of corporate and community events including AND round tables, Equal Employment Opportunity networking, and community and fundraising events for Scleroderma and Vision Australia.

Melbourne Water's *Accessibility Inclusion Action Plan (2016-2018)* is aligned with *Absolutely everyone: State disability plan 2017-2020*, which is the Victorian Government's framework for enabling people with a disability to participate and contribute to the social, economic and civic life of their community.

Building our organisational engagement

Organisational engagement can influence the performance, productivity and motivation of our employees. We measure our employee engagement annually through our Alignment and Engagement Survey. Our employee engagement rose by 6 per cent to 72 per cent this year, with a significant uplift in our strategic business goals of alignment and performance. Increases in our engagement score validates the efforts within Melbourne Water to build a resilient, innovative and professional workforce, equipped to deliver great outcomes for our community and the environment.

Our workforce by numbers

At 30 June 2018:

- our total workforce was 1135 compared with 1114 at 30 June 2017
- the proportion of women in our workforce was 36 per cent, compared with 35 per cent at 30 June 2017.

During 2017-18:

- 297 roles were filled with 49 per cent being internal candidates
- 16,364 training sessions for staff were conducted using both face-to-face and online modes covering issues relating to induction, safety, leadership and technical and professional development.

Case study

Reshaping traditional gender roles

Melbourne Water recognises that actively supporting a diverse and inclusive workforce reflects and meets the needs of our diverse community. It also helps attract, retain and develop exceptional talent. We are committed to building a workforce that is inclusive across all areas of the business where both women and men have opportunities to learn, grow and achieve their full potential.

Bushfires pose serious threats to the quality and quantity of our drinking water supply. Melbourne Water employs around 40 firefighters year-round, with an extra 60-plus firefighters on board during the fire season. To detect fires early we use fire towers, lightning trackers and a 'spotter chopper'. Ongoing maintenance such as grass cutting, creating fire breaks and access roads, and planned burns help to reduce the risk of fires. We have a fire-bombing helicopter, 25 fire trucks, five bulldozers and 40 water tanks to fight fires.

Melbourne Water's growing team of female firefighters was bolstered with New Mexico water bombing pilot, Jennifer Bartley, joining the team in 2018. An experienced pilot who has fought many major wildfires, Jennifer is based at our Healesville depot with the Forest Air helicopter which provides vital emergency fire management protection for our world-class catchments. Jennifer joined the growing team of seven full-time female firefighting employees and eight casual female project firefighters for the summer's operations.

Executive General Manager, Service Delivery at Melbourne Water, Charmaine Quick, said the addition of the outstanding American pilot was providing benefits for the rest of the team. "Having Jennifer working with our team is a wonderful demonstration of the diverse roles available for women at Melbourne Water. But we have some way to go. Our female firefighters currently make up around 30 per cent of our total firefighting team and it would be great to see this closer to parity."

The visibility of female role models in typically male-dominated areas at Melbourne Water has contributed to an increase in applications from women for firefighting positions. We are committed to a diverse and representative workforce where there are no barriers for women in any areas, including firefighting.

Continuous Improvement

We embrace an agile and innovative approach to new ideas, and we encourage business improvements so that we always exceed customer and community expectations.

SMARTER DATA

DELIVERING A MORE MOBILE WORKFORCE

new tools, resources and management to improve capital investment planning

OUR FIRST HACKATHON

SHOWCASING AGILE DELIVERY

8 HOURS + 12 TEAMS = 12 SOLUTIONS

eDNA

RESEARCH SAMPLING TRANSFORMING OUR WATERWAY MANAGEMENT

$5.78M

FOR AWARD WINNING RESEARCH PROGRAM

Improving the way we do business

By streamlining our processes, we will have greater freedom to innovate and work with the community to solve problems of climate change, increased urbanisation and liveability.

In 2017-18 we continued to drive discipline in the execution and governance of our strategies, through development of the Strategy Methodology and Reporting Framework, which streamlines development and delivery of strategies to support customer and stakeholder needs in line with our strategic direction.

A significant achievement was implementing the Portfolio, Program, Project Improvement (P3i) program to improve the project management of capital investment through greater operational transparency. This ensures we continue to meet stakeholder and customer expectations. One of the program's tools, Project Online, has enabled 1500 corporate projects to be visible in one system, and helped drive substantial efficiencies in how projects are allocated and managed.

We improved our compliance management practice, achieved through a new organisational compliance management framework, to better understand and manage the significant amount of legislation, regulations, licences, obligations and certification standards with which Melbourne Water is required to comply. We streamlined the process to identify and report on new and changing external obligations, and invested in a software system to record, manage and report on compliance to consolidate our compliance obligations across the business into a controlled location. A new overarching framework, strategy and implementation plan has supported regular compliance attestations and set corrective actions where needed to ensure future compliance.

In addition, our two-year program to simplify administration and reduce red tape delivered improvements and automation to business performance reporting, quality control and systems integration. Employees identified 235 opportunities to simplify business processes, and addressing these remains a focus.

Improving value through digital technologies

In 2017-18 we implemented a number of new digital technologies, tools and processes to enhance asset management, make operations safer and more efficient, and improve the service provided to our customers. Our advancements in digital technologies were acknowledged, with Melbourne Water nominated as a finalist in the national Digital Utility Awards in 2018.

We have introduced remote Internet of Things (IoT) asset monitoring for assets that have previously been too difficult or too expensive to monitor. Using a prototype developed this year, we completed testing on multiple sites and will expand production in 2018-19. Cathodic protection is a technique used to protect steel from corrosion. With support from Green Technology Services (GTS) Group and Sigfox network operator Thinxtra, Melbourne Water is adopting an IoT system to monitor our 200 cathodic protection stations which will significantly reduce maintenance costs and enable more efficient response to failures in the cathodic protection systems that protect our water transfer mains worth many billions of dollars.

We are driving technology improvements through smarter use of data in the field, challenging the way we perform maintenance on our land and infrastructure assets. We have implemented our OneView solution using the Elafent online platform, delivering a data rich mobile tool that provides integrated asset information, including GIS maps, documents and work order details, to our workforce while out in the field. Work orders can be raised within minutes, detailed graphical and map information can be shared with customers in real time, and users can access information on our assets at a site without needing to call on others or return a second time with paper plans. As we move forward to OneView implementation across more of our operational areas we are exploring options to include additional data sets that add value to our workforce, such as real-time asset performance data, building access and customer interactions. As we build on the improvements to deliver a better customer digital experience (see Delivering exceptional digital experiences case study on page 46), we are continuing to explore the possibility of sharing more data with our customers.

Case study

eDNA – uncovering life underwater

Each year, Melbourne Water invests in research programs to improve the management of our world-class infrastructure and support a thriving environment. One project, a collaboration between Melbourne Water, the University of Melbourne, Cesar and the Australian Research Council, is transforming the way we monitor aquatic biodiversity in our waterways that informs our activities to protect key species including fish, frog, bird and platypus. This information is critical for underpinning delivery of the refreshed *Healthy Waterways Strategy*.

Using a powerful new technique involving environmental DNA (eDNA) sampling, our scientists are able to detect the presence of aquatic animals such as fish, platypus, frogs and birds by measuring trace DNA (for example, faeces, urine, mucous, skin cells) in water samples from streams and wetlands.

eDNA has demonstrated some important advantages over traditional aquatic biodiversity monitoring methods (such as netting, trapping, electrofishing). For example, eDNA is significantly more cost effective, can be used to sample sites that are otherwise difficult to survey, is safer because it does not require entry to the water and is less stressful to wildlife by removing the need for capture or handling. However, it will not completely replace the need for traditional surveys that may be required to provide information such as the health, sex and age of animals.

One area where eDNA techniques is expected to be particularly beneficial is as a broad-scale biodiversity screening tool. Our research team has recently undertaken the first comprehensive survey of aquatic biodiversity in the Greater Melbourne region, sampling approximately 300 sites. This survey is expected to generate valuable new information for our waterway management programs that has not previously been feasible in terms of time, budget and site constraints.

eDNA is also being used by a range of Melbourne Water teams and our stakeholders to support services and infrastructure planning decisions. Volunteer citizen scientists contributing to our Waterwatch program are also playing a role, with 1500 people participating in our platypus engagement program, and 80 people collecting platypus eDNA. By combining citizen science with new technologies, we are empowering the community to participate in waterway management, as well as raising awareness of platypuses and the threats they face.

Our eDNA research program has received formal recognition by winning the 2017 River Basin Management Society Innovation Award and was a finalist in the 2017 AWA Victoria Innovation Awards.

In 2017-18 we increased our remotely-operated technology program to optimise the maintenance and management of land and assets. This included investment in a new terrestrial remotely-operated vehicle capable of supporting gas sensing, visual inspection and physical manipulation work at reduced risk, as well as new mini submersibles to complete underwater inspections. We also acquired and built internal capacity to deploy a fleet of eight multi-rotor drones, with seven Melbourne Water staff completing aviation Remote Pilot Licence accreditation.

Through the implementation of these technologies, Melbourne Water is accessing rich sources of data that support better life cycle management of our infrastructure, in a safer environment for our workforce. These improved technologies are driving greater efficiencies and cost savings and contributing to more affordable services for our customers.

Enhancing our digital approach

In order to best utilise technologies of the future, we have instigated a number of initiatives in 2017-18 to build a more agile digital approach in delivering valued services to the community.

We facilitated technology innovation sessions for our water industry partners, to explore digital technologies that may help solve operational problems, share data and improve customer service. Industry experts from a range of sectors presented alternative approaches to deliver digital innovation. Focus areas included AI and operational technology and we are continuing to explore different opportunities for innovation to deliver better customer experiences.

Our insourced agile software development teams are creating fit-for-purpose applications that are valued by our business. We conducted a 'hackathon' event where 12 teams created, built and programmed 12 mobile solutions for Melbourne Water in one day. Teams were challenged to create usable software in a very tight timeframe, working in intensive collaboration for eight hours. It demonstrated the value that agile teams can provide through partnering with the broader Melbourne Water business to deliver benefit to our customers.

We are also embedding agile delivery into our broader information technology service operations, to drive pace of delivery and continuous improvement, and significantly improve customer experience by delivering value more frequently. In 2017-18 we commenced the New Ways of Working initiative, which is embedding more agile practices around the way we fund, resource, procure and govern IT initiatives. Through greater collaboration, responsive feedback loops and streamlining processes to deliver a clearer return on investment, New Ways of Working is driving greater agility in the way Melbourne Water works, thinks and supports the delivery of our strategic goals.

In keeping with the cyber information age, we consolidated our cyber security assets, along with personnel and physical security, within our enterprise security framework. We also embedded an elevated cybersecurity function within our management structure, and trained almost 900 employees in essential cybersecurity management to support more secure digital infrastructure.

Using research to drive innovation

To ensure Melbourne Water continues to provide valued services, research and development initiatives are undertaken to improve efficiency through scientific excellence, innovation and the adoption of new technology. We invested $5.78 million in 2017-18, much of this in collaborative projects, with our activities including the following:

- installing seven state-of-the-art water quality monitoring stations in our drinking water reservoirs, at a total cost of over $1 million, which provide sophisticated data on reservoir behaviour to support improvements in our drinking water quality program. A 'Reservoir Dashboard' provides instant data to our workforce via mobile phone or computer, and the stations can also be operated and calibrated from the shore, minimising the time spent on water and reducing the safety risk for our workforce
- conducting computer modelling of sediment in Westernport to test how reduced sediment targets affect the overall condition of the bay and its ecology, particularly seagrass growth. The modelling information is supporting Melbourne Water's collaboration with DELWP and the EPA to revise SEPP targets for improving the health of water environments
- undertaking the Westernport Environment Research Program, a collaborative approach to understanding and managing the major threats to Westernport such as urban growth, climate change, sediment inputs and toxicants. Melbourne Water invested over $2 million from 2011 to 2018 to guide the strategic management of Westernport. This work has significantly expanded understanding of the Westernport ecosystem processes, habitats, fauna and threats to this internationally significant environment. This program was a finalist in the 2018 Victorian Coastal Council Awards
- conducting drone imagery trials to capture data on increased seaweed growing on rock platforms at Boags Rocks. This data is linked to water quality research into environmental improvement opportunities for our wastewater treatment discharge from the ETP into the sea at Boags Rocks. This technology could significantly reduce the need for scientists to physically gather data on rock platforms in the future
- catchment-scale interventions in Little Stringybark Creek, delivered through the Melbourne Waterway Research-Practice Partnership – a collaboration between Melbourne Water and the University of Melbourne, which won the Melbourne Engagement Excellence Awards for Industry-Engaged Research. The project has gathered a long-term, diverse set of data and evidence that provides critical information for Melbourne Water, the State Government, and urban water managers internationally to assess the effectiveness of alternative approaches to stormwater management for stream protection.

Business Sustainability

When delivering services, we always consider our social responsibility, the natural environment and our financial accountability.

$208.8M
NET PROFIT AFTER TAX

MANAGED DEBT PORTFOLIO TO:
reduce interest
minimise risk

$500M
FRAMEWORK AGREEMENTS INCLUDING SOCIAL VALUES

- reconciliation
- diversity
- gender equality

FINANCIAL SUSTAINABILITY STRATEGY

DELIVERING IMPROVED ORGANISATIONAL AND COMMERCIAL CAPABILITY

Financial Sustainability

We place customer affordability at the heart of our decision making.

Financial performance

Melbourne Water's ongoing focus on business sustainability has again delivered strong financial outcomes for the organisation in 2017-18 with a positive Net Profit After Tax result of $208.8 million.

Our 2016 Pricing Determination delivered lower prices to customers and ensured stability in our core revenues for bulk water and sewerage services, with approximately 90 per cent of these charges being fixed. Higher than expected population growth has, however, seen an increase in demand for our services and this is reflected in our revenue growth for bulk water and sewerage charges. Waterways and drainage services revenue has reduced on the prior year due to the lower prices delivered to customers. Volatility in our revenue comes primarily from the demand for land development services and Melbourne's growth continues to drive strong performance in this area.

We take seriously our obligation to spend public money wisely and make prudent commercial decisions. Business efficiency and value for money is part of the language of our business. This emphasis has ensured careful management of both our operating and capital expenditures, while ensuring we manage the demands of population growth and climate change as well as excellence in the delivery of our services.

Our theme of continuous improvement underpins financial sustainability; Melbourne Water's commitment to improving the performance of our business by embracing innovation and change to always look for opportunities to improve every activity we undertake. As we embrace a digital future, our use of technology is also helping to drive efficient business practices that are changing the way we work and improving outcomes for both our employees and our customers. Through the rollout and use of mobility apps we are improving the productivity of our field staff and by employing predictive analytics across the water supply network we are reducing our energy usage.

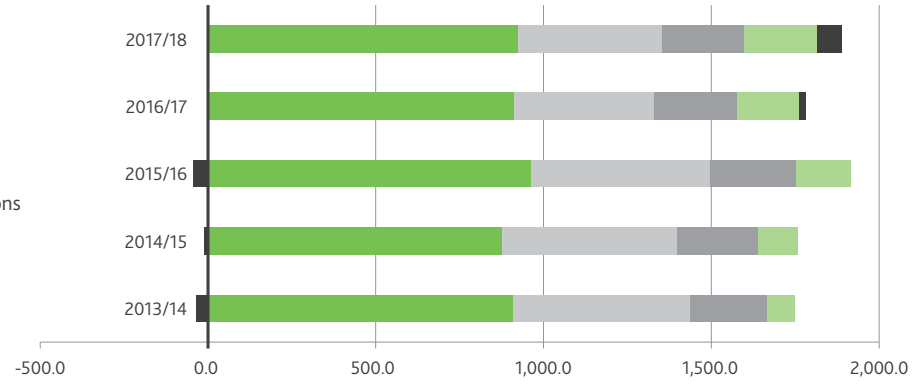
Our efforts on effective management of our debt portfolio has ensured we are realising savings in interest costs as well as minimising interest rate risk exposure by aligning our portfolio to the trailing average approach outlined in the 2016 Pricing Determination.

During 2017-18, Melbourne Water made cash payments to the Victorian Government of $286.4 million ($265.8 million in 2016-17). We are proud to play a role in providing a robust water sector with efficient and fiscally sound entities. This is important to our whole community as we manage a precious resource that requires stability to maintain the standards of service we experience in Melbourne, and Victoria more broadly.

During the year we implemented a number of initiatives from our *Financial Sustainability Strategy*. These include improvements to our financial systems and processes and delivery of a suite of activities to uplift organisational commercial and financial capability. We will continue our commitment to excellence in financial management practices and we will build on our maturity to further develop longer-term financial planning incorporating our *20 Year Capital Plan* across successive regulatory periods. This will ensure that we are continuing to make sound business decisions that consider the impacts on our customers and financial metrics not only today but long into the future.

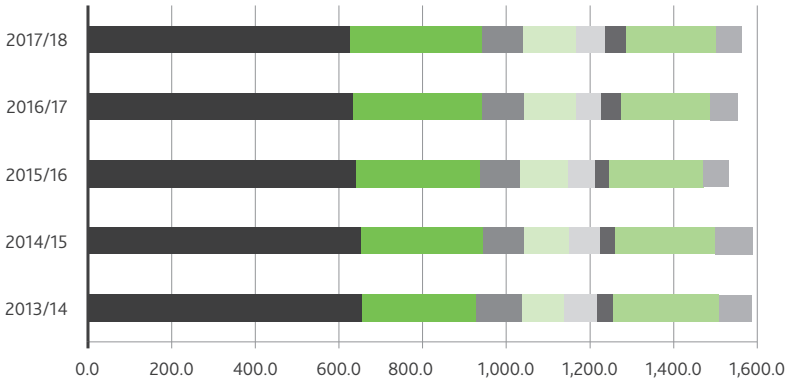
Revenue ($M)

- Bulk water services
- Bulk sewerage services
- Waterways charges
- Developer charges, contributions & contributed assets
- Other revenue and rebates



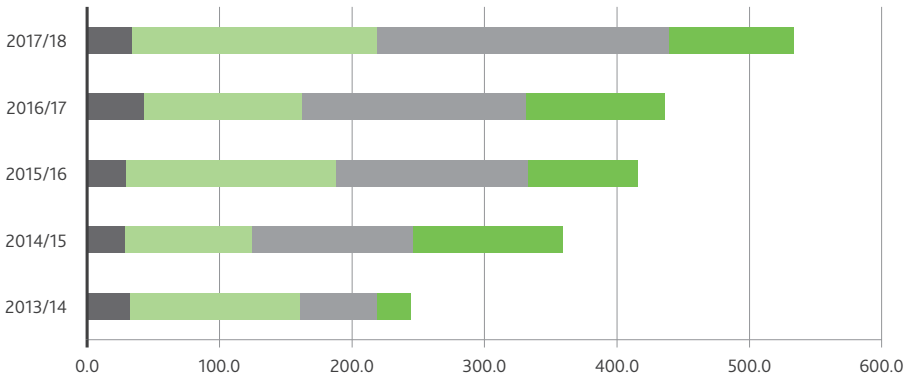
Expenditure ($M)

- Desalination plant expenses (operating, finance & amortisation)
- Depreciation & amortisation (excluding desalination)
- Operational
- Employee benefits
- Repairs & maintenance
- Administrative
- Finance costs (excluding desalination)
- Other expenses



Capital Expenditure ($M)

- Corporate
- Waterways and Drainage
- Sewerage
- Water



Five-Year Financial Summary

Summary of Financial Results

Statement of Profit or Loss for the year ended 30 June – Extract	2018 $M	2017 $M	2016 $M	2015 $M	2014 $M
Revenue and other income	1,890.4	1,791.4	1,871.6	1,749.7	1,716.7
Operating and other expenses	(525.3)	(512.5)	(481.8)	(514.6)	(505.6)
Depreciation and amortisation expenses	(392.1)	(383.8)	(373.8)	(367.5)	(351.6)
Finance expenses	(645.3)	(657.2)	(676.7)	(707.2)	(727.6)
Net profit from operations before tax	**327.7**	**237.9**	**339.3**	**160.4**	**131.9**
Tax expense	(118.9)	(87.5)	(185.9)	(44.2)	(42.0)
Net profit for the period after tax	**208.8**	**150.4**	**153.4**	**116.2**	**89.9**

Statement of Financial Position as at 30 June – Extract	2018 $M	2017 $M	2016 $M	2015 $M	2014 $M
Current assets	115.7	95.6	103.8	189.1	233.4
Non-current assets	15,212.9	14,786.5	14,717.2	14,346.2	14,105.8
Total assets	**15,328.6**	**14,882.1**	**14,821.0**	**14,535.3**	**14,339.2**
Current liabilities	1,216.4	1,032.7	1,018.7	852.5	702.2
Non-current liabilities	8,497.2	8,579.3	8,656.5	8,890.8	9,154.1
Total liabilities	**9,713.6**	**9,612.0**	**9,675.2**	**9,743.3**	**9,856.3**
Net assets/Total equity	**5,615.0**	**5,270.1**	**5,145.8**	**4,792.0**	**4,482.9**

Statement of Cash Flows for the year ended 30 June – Extract	2018 $M	2017 $M	2016 $M	2015 $M	2014 $M
Net cash inflow from operating activities	465.8	439.7	526.0	373.2	503.5
Net cash outflow from investing activities	(446.2)	(444.4)	(357.7)	(302.9)	(221.0)
Net cash (outflow)/inflow from financing activities	(21.2)	5.9	(207.1)	(140.3)	(316.6)

Summary of Financial Performance

Key Financial Performance Indicators

Performance Indicators	2018 $M	2017 $M	2016 $M	2015 $M	2014 $M
Cash Interest Cover	**1.9**	2.0	2.1 x	1.6 x	1.8 x
Gearing Ratio	**52.6%**	53.6%	53.6%	55.9%	57.5%
Internal Financing Ratio	**78.6%**	89.0%	135.3%	103.4%	166.7%
Current Ratio	**0.10 times**	0.09 times	0.10 times	0.23 times	0.34 times
Return on Assets	**6.4%**	6.0%	6.9%	6.0%	5.9%
Return on Equity	**3.8%**	2.9%	3.1%	2.5%	2.0%
EBITDA Margin	**72.2%**	71.4%	74.2%	70.5%	70.3%

Explanatory Notes:

Refer to the Performance Report (pages 138 to 142) for definitions of financial performance indicators and reporting of all 2017-18 performance indicators (financial and non-financial) against targets with supporting explanations for any significant variations.

Procurement That Supports Social Sustainability

As chair of the Victorian Social Procurement Working Group, Melbourne Water collaborated to develop a common Supplier Code of Practice (SCoP). The SCoP is a statement of values to which suppliers can align their thinking and identify opportunities to assist in the implementation of social procurement, where we deliver economic and social value. It includes areas such as reconciliation, gender diversity, disability inclusion, business integrity and environment and wellbeing.

In parallel, the Victorian Government is launching a Social Procurement Framework, effective from September 2018. We have proactively worked to embed this Framework into our operations, gaining benefits from leveraging our purchasing power to deliver social value.

This was driven through our new Procurement Framework, launched in 2017-18, which supports social diversity and inclusion values into our purchasing. The Framework has delivered simpler contracts for our suppliers and embedded KPIs, making it easier to do business with Melbourne Water. Additionally, diversity and inclusion goals support our commitments to social procurement as part of the SDGs. Five hundred employees have completed an eLearn program to raise awareness of the new policy and processes, and more than 80 staff members have received face-to-face training on contract management, delivering an increase in commercial skills.

Procurement has a role to play in achieving the SDGs. Our next step is to alert our supply chain that it is within all our collective sphere of influence and opportunity to contribute to these goals.

For example, our personal protective equipment (PPE) and apparel tender resulted in the selection of Safeman, a supplier which committed to a 2 per cent target for purchases from Indigenous-owned businesses, contributing to a direct outcome of reconciliation and economic empowerment through jobs and employment.

We are also working more closely with our existing suppliers by sharing our environmental and diversity and inclusion strategies, and focusing on ways to identify opportunities that deliver mutual value. In line with our *Environmental Stewardship Strategy* target to reduce our ecological footprint and our global SDG commitments to cleaner use of energy and sustainable cities, we include environmental criteria in our selection processes. Our transition to a zero emission fleet is one of the components of our carbon reduction pledge (see Our Performance: Toward net zero carbon emissions on page 39).

Case study

Social procurement: unlocking greater value for the water sector

As an organisation which procures more than $500 million in goods and services each year, Melbourne Water is building social values into its purchasing power, unlocking greater value in our contracts and relationships. The Victorian Government's procurement requirements are exacting and increasingly include diversity and inclusion, but for our critically important infrastructure projects we wanted to raise that bar even higher.

Following a rigorous process focusing on social procurement, we recently signed agreements with two joint ventures (John Holland/KBR and RCR/Abergeldie/Stantec) to construct critical water and sewerage assets. These joint ventures will enable access to approximately $500 million of Melbourne Water's capital works program over the next three years. A first of this scale, by signing the joint venture agreement process we continue our collaborative Victorian water sector approach.

Our social procurement process was shaped by the SCoP which was developed across the Victorian water industry and incorporated into our procurement processes. It required short-listed candidates to identify opportunities and targets to support reconciliation, diversity and gender equality through their work for Melbourne Water.

The requirements extend beyond the primary service providers as the successful joint ventures must ensure that all subcontractor agreements closely reflect their commitments to diversity and inclusion.

Applicants also completed Hudson Safety Culture surveys to demonstrate their organisational safety culture, and Hogan personality tests to identify cultural alignment with Melbourne Water. Traditional metrics of cost and capability were considered, and the tender achieved rates similar to those of five years ago. As our partners construct some of the most important water supply and sewerage assets for our growing city, Melbourne Water continues to deliver overall savings for our customers, greater value for the community and better safety outcomes.

Corporate Governance

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 Board has adopted a Director's 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 Melbourne Water's Code of Conduct.

Policies and procedures exist for directors and employees in relation to the identification of actual and potential conflicts of interest. These documents are regularly updated. The Corporate 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 distributed and widely publicised to our employees.

Powers and accountability

Melbourne Water operates under the *Water Act 1989*.

Melbourne Water has two current by-laws: *Extension By-Law No. 1: Water Supply Protection (2018)* and *By-Law No. 2: Waterways, Land and Works Protection and Management (2009)*.

The Minister for Water has delegated powers of management under the *Water Act 1989* relating to licenced private water diversions from waterways to Melbourne Water, effective as of 1 July 1999. The Act and by-laws can be purchased via the publications directory at vic.gov.au

The Honourable Lisa Neville MP, Minister for Water, was the Minister responsible for Melbourne Water from 1 July 2017 to 30 June 2018. Melbourne Water works with officers of the Department of Environment, Land, Water and Planning (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 the following:

- ensuring the Board meets frequently enough to fulfil its duties and obligations, holding 11 Board meetings during 2017-18, 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
- monthly updates on Board activities are made available on the Melbourne Water website
- a structured induction program exists for new Board and committee members
- development opportunities are made available 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. The Managing Director and the relevant General Manager attend meetings of committees by invitation. The Board approves the charters of 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
- risk management
- corporate governance
- audit (internal and external) and assurance
- information technology.

The ARFC comprised Dana Hlavacek (Chair), John Thwaites, Merran Kelsall and Hugh Gleeson for the period 1 June 2017 to 30 September 2017.

From 1 October 2017 to 30 June 2018, the ARFC comprised Merran Kelsall (Chair), John Thwaites, Fiona Rowland and Hugh Gleeson. 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
- strategic human resources (including but not limited to diversity and inclusion, change management, employee engagement)
- organisation capability
- remuneration.

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

The PSRC comprised David Buckingham (Chair), Kathleen Bailey-Lord and Robyn McLeod for the period 1 June 2017 to 30 September 2017.

At 30 June 2018, the PSRC comprised Kathleen Bailey-Lord (Chair), Russell Anderson, Hugh Gleeson and Robyn McLeod. 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 in fulfilling its business objectives and responsibilities relating to:

- delivery of customer-driven and resilient services providing multiple benefits
- affordable asset delivery to enable these services
- protecting the environment and public health.

The CSDC comprised Garry Smith (Chair), Kathleen Bailey-Lord and Robyn McLeod for the period 1 June 2017 to 30 September 2017.

At 30 June 2018 the CSDC comprised Garry Smith (Chair), Russell Anderson, Fiona Rowland and Robyn McLeod. 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 is Chair of Melbourne Water.

Mr Thwaites is a Professorial Fellow at Monash University and Chair of ClimateWorks Australia, the Monash Sustainable Development Institute, and the Peter Cullen Water and Environment Trust.

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

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 in October 2015. She is 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 directorships at RACV Limited and VicSuper, and Deputy President at CPA Australia Ltd. She was previously Chair and CEO of Auditing and Assurance Standards Board, and Member, 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.

Russell Anderson, Director

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

Mr Anderson was appointed as a Director of Western Region Water Corporate in 2007 and is also the Deputy Chair of the Loddon Mallee Waste and Resource Recovery Group.
Mr Anderson is currently Strategy, Governance and Risk Advisor at Australian Health Service Alliance Ltd and is also self-employed as a governance consultant to the water industry. Mr Anderson's previous roles include Strategy, Risk and Corporate Governance Manager for Australian Air Express Pty Ltd and Chief Internal Auditor, Air New Zealand Group. Mr Anderson has a Bachelor of Commerce and a Graduate Diploma of Applied Corporate Governance.

Kathleen Bailey-Lord, Director

Kathleen Bailey-Lord was appointed to the Board in October 2015. She is Chair of the PSRC.

Ms Bailey-Lord is an experienced company board director with international senior executive experience across diverse industries – technology, financial services, professional services and marketing.

Ms Bailey-Lord serves on the Board's PSRC and CSDC. Currently, Ms Bailey-Lord is a non-executive director of QBE Insurance (Australia and New Zealand) where she chairs the Remuneration and Nomination Committee. Her past board experience includes the Australian Government Solicitor, Trinity College, University of Melbourne, Chief Executive Women, and the Diversity Council of Australia.

Hugh Gleeson, Director

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

Mr Gleeson has over 30 years' experience in the energy and utilities sector.

Mr Gleeson is currently a director of Energy Queensland, the Ausgrid Partnership and GDI-Allgas Energy. He recently retired as the CEO of electricity and gas distribution businesses, United Energy and Multinet Gas, 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 Melbourne Water Board on 1 October 2015.

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.

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. She is currently a director of VicWater.

In May 2017, Ms McLeod joined the of Governance Working Group of the board of the Good Shepherd Australia and New Zealand. Previous board positions include as an inaugural director of the Australian Centre for Social Innovation and Chair of this organisation's ARFC.

Fiona Rowland, Director

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

Ms Rowland is an experienced corporate senior executive and company director in the areas of financial services, trusts and asset management with 15 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 is currently appointed to the boards of Macquarie Life Limited and St Vincent's Institute of Medical Research, is an Independent External Compliance Committee Member of Franklin Templeton Investments Australia Limited and a Member of the Australian Securities & Investment Commission Financial Services & Credit Panel. 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 Chair of the CSDC.

Mr Smith has extensive experience in the water sector and is a director with DG Consulting, 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.

Mr Smith's previous roles include 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.

Organisational Structure

Chair
John Thwaites
(ARFC)

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

Chief Financial Officer	Executive General Manager Service Delivery	General Manager Integrated Planning	General Manager Customer and Strategy	General Manager People and Capability	General Manager Safety	General Manager Major Program Delivery
Anthony O'Shannessy	**Charmaine Quick**	**Chris Williams**	**Gavan O'Neill**	**Linda Heron**	**David Tregoweth**	**Eamonn Kelly**

Chief Technology Officer	General Manager Waterways and Land	General Manager Wholesale Services	General Manager Asset Management Services
Geoff Purcell	**Tim Wood**	**Craig Dixon**	**Gerald FitzGibbon**

Risk and Emergency Management

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

Melbourne Water maintains an Enterprise Risk Management Framework consistent with the Australian/New Zealand Risk Management Standard (AS/NZS ISO 31000:2018) and the requirements of the Victorian Government Risk Management Framework 2016.

Melbourne Water's Enterprise Risk Management Framework is made up of a number of key elements which, when combined, create an environment for effectively managing risk and pursuing opportunities across the Corporation. This includes:

- an established Risk Management Policy and Risk Appetite Statement
- ongoing management of strategic risks that may impact on the achievement of our strategic objectives
- ongoing management of operational risks that may impact on the achievement of our operational objectives – such as financial, asset, product quality, environmental, safety, security, information technology and project execution risks
- ongoing education and development of risk capability across the Corporation, and maintaining a risk aware 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 its 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.

Directors' Report

Directors

The Directors of Melbourne Water Corporation ('the Corporation') in office during the 2017-18 financial year were:

John Thwaites (Chairman)
Michael Wandmaker (Managing Director)
Merran Kelsall (Deputy Chairman)
Dana Hlavacek (appointment concluded 30/9/2017)
David Buckingham (appointment concluded 30/9/2017)
Garry Smith
Hugh Gleeson
Kathleen Bailey-Lord
Robyn McLeod
Fiona Rowland (appointed 1/10/2017)
Russell Anderson (appointed 1/10/2017)

Particulars of the directors' qualifications, experience and special responsibilities are set out on pages 68-69 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 (Chairman)	9	11	3	4	-	-	-	-
Michael Wandmaker (Managing Director)	11	11	-	-	-	-	-	-
Merran Kelsall (Deputy Chairman)	10	11	4	4	-	-	-	-
Dana Hlavacek	3	3	1	1	-	-	-	-
Garry Smith	11	11	-	-	-	-	4	4
Kathleen Bailey-Lord	11	11	-	-	4	4	1	1
Hugh Gleeson	10	11	4	4	2	3	1	1
David Buckingham	1	3	-	-	1	1	-	-
Robyn McLeod	11	11	-	-	3	4	4	4
Fiona Rowland	8	8	3	3	-	-	3	3
Russell Anderson	8	8	-	-	3	3	3	3

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 (Chairman)	-	-	1	1	-	-	-	-
Michael Wandmaker (Managing Director)	-	-	-	-	-	-	-	-
Merran Kelsall (Deputy Chairman)	-	-	1	1	-	-	-	-
Dana Hlavacek	-	-	1	1	-	-	-	-
Garry Smith	-	-	-	-	-	-	-	-
Kathleen Bailey-Lord	-	-	-	-	-	-	-	-
Hugh Gleeson	-	-	1	1	-	-	-	-
David Buckingham	-	-	-	-	-	-	-	-
Robyn McLeod	-	-	-	-	-	-	-	-
Fiona Rowland	-	-	-	-	-	-	-	-
Russell Anderson	-	-	-	-	-	-	-	-

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 2018 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 2017-18 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 region. The Corporation delivers innovative integrated planning to establish Melbourne as a water sensitive city. The Corporation also provides 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 potential 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 and dividend

The Corporation's profit, after providing for income tax was $208.8 million (2016-17: $150.4 million). Total dividends of $77.1 million have been paid in 2017-18. A final dividend for 2017-18 has not yet been determined or paid. Dividends are determined by the Treasurer of Victoria after consultation with the Corporation's Board of Directors and the Minister for Water. Following determination by the Treasurer of Victoria, the Corporation has also paid $27.9 million in 2017-18 as a capital repatriation.

Review of operations

The directors' review of the Corporation's operations during the financial year ended 30 June 2018 is set out in the Report from the Chair and Managing Director on pages 2 and 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 2018.

John Thwaites
Chairman

24 August 2018

Michael Wandmaker
Managing Director

24 August 2018

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 2018. The following structure provides users with information about the Corporation's stewardship of resources entrusted to it.

Notes to the financial statements (continued)

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 Direction 5.2 of the Standing Directions of the Minister for Finance under the *Financial Management Act 1994,* applicable Financial Reporting Directions, 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 2018 and the financial position of the Corporation at 30 June 2018.

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 24 August 2018.

On behalf of the Board:

John Thwaites
Chairman

24 August 2018

Michael Wandmaker
Managing Director

24 August 2018

Anthony O'Shannessy
Chief Financial Officer

24 August 2018

Statement of Profit or Loss and Other Comprehensive Income

For the year ended 30 June 2018

($ thousands)

Revenue	Notes	2018	2017
Revenue	**2.1**	1,833,493	1,782,579
Other income	**2.2**	56,879	8,784
Total revenue		**1,890,372**	**1,791,363**
Expenses			
Depreciation and amortisation expenses	**4.1.3**	(392,137)	(383,834)
Operational expenses	**3.1**	(220,740)	(216,277)
Employee benefits expenses	**3.2**	(126,769)	(122,546)
Repairs and maintenance expenses	**3.3**	(66,443)	(60,763)
Administrative expenses	**3.4**	(49,377)	(48,457)
Finance expenses	**5.1**	(645,278)	(657,207)
Government rates and taxes	**3.5**	(27,675)	(25,320)
Asset transfers to Council	**3.6**	(26,294)	(24,904)
Other expenses	**3.7**	(7,946)	(14,102)
Total expenses		**(1,562,659)**	**(1,553,410)**
Net profit from operations before tax		**327,713**	**237,953**
Tax expense	**3.8.1**	(118,881)	(87,520)
Net profit for the period after tax		**208,832**	**150,433**
Other comprehensive income after tax			
Items that will not be reclassified to profit or loss			
Actuarial gain on defined benefit superannuation plan asset [(a)]	**7.1**	2,202	10,095
Revaluation increase of land, buildings and infrastructure [(b)]	**4.1.2**	238,900	-
Decrease in asset revaluation reserve due to disposal of land, buildings and infrastructure [(c)]		(3,062)	(5,140)
Realised gain on disposal of land, buildings and infrastructure [(c)]		3,062	5,140
		241,102	**10,095**
Items that may be reclassified to profit or loss			
Changes in fair value of cash flow hedges		-	107
		-	107
Other comprehensive income for the period after tax		**241,102**	**10,202**
Total comprehensive income for the period after tax		**449,934**	**160,635**

The above Statement of Profit or Loss and Other Comprehensive Income should be read in conjunction with the accompanying notes on pages 83 through to 133.

Note: Pre-tax amounts are:
(a) Actuarial gain on defined benefit superannuation plan asset $3.1 million
(b) Revaluation increase of land, buildings and infrastructure $254.1 million
(c) Decrease in asset revaluation reserve due to disposal of land, buildings and infrastructure $3.1 million

Statement of Financial Position

As at 30 June 2018

	Notes	2018 ($ thousands)	2017 ($ thousands)
Assets			
Current assets			
Cash and cash equivalents		2,008	3,620
Trade and other receivables	**2.3**	83,283	73,871
Other current assets	**3.10**	13,736	11,584
Non-financial assets held for sale	**4.3**	16,651	6,499
Total current assets		**115,678**	**95,574**
Non-current assets			
Land, buildings, infrastructure, plant and equipment	**4.1**	15,135,900	14,706,832
Intangible assets	**4.2**	53,201	57,088
Defined benefit superannuation plan asset	**7.1**	23,765	22,589
Total non-current assets		**15,212,866**	**14,786,509**
Total assets		**15,328,544**	**14,882,083**
Liabilities			
Current liabilities			
Trade and other payables	**3.9**	348,497	331,029
Interest bearing liabilities	**5.1**	816,418	650,552
Provisions	**3.11**	7,982	7,644
Current tax liability	**3.8.1**	9,422	7,066
Employee benefits provision	**3.2**	34,075	36,432
Total current liabilities		**1,216,394**	**1,032,723**
Non-current liabilities			
Trade and other payables	**3.9**	892	648
Interest bearing liabilities	**5.1**	7,244,385	7,326,447
Provisions	**3.11**	914	850
Net deferred tax liabilities	**3.8.2**	1,238,064	1,239,675
Employee benefits provision	**3.2**	12,984	11,631
Total non-current liabilities		**8,497,239**	**8,579,251**
Total liabilities		**9,713,633**	**9,611,974**
Net assets		**5,614,911**	**5,270,109**
Equity			
Contributed equity		502,393	530,425
Reserves		3,110,717	2,874,879
Retained profits		2,001,801	1,864,805
Total equity		**5,614,911**	**5,270,109**

The above Statement of Financial Position should be read in conjunction with the accompanying notes on pages 83 through to 133.

Statement of Changes in Equity

For the year ended 30 June 2018

($ thousands)

	Contributed equity	Asset revaluation reserve	Other reserves	Retained profits	Total
Balance at 1 July 2017	530,425	2,874,879	-	1,864,805	**5,270,109**
Comprehensive income for the period after tax					
Net result for the period after tax	-	-	-	208,832	**208,832**
Other comprehensive income for the period after tax	-	235,838	-	5,264	**241,102**
Total comprehensive income for the period after tax	-	235,838	-	214,096	**449,934**
Transactions with equity holders					
Dividends paid [(a)]	-	-	-	(77,100)	**(77,100)**
Net decrease in contributed equity [(b)]	(28,032)	-	-	-	**(28,032)**
Total transactions with owners	(28,032)	-	-	(77,100)	**(105,132)**
Balance at 30 June 2018	**502,393**	**3,110,717**	**-**	**2,001,801**	**5,614,911**
Balance at 1 July 2016	530,429	2,896,825	(107)	1,718,579	**5,145,726**
Prior period adjustment	-	(16,806)	-	8,965	**(7,841)**
Restated balance at 1 July 2016	530,429	2,880,019	(107)	1,727,544	**5,137,885**
Comprehensive income for the period after tax					
Net result for the period after tax	-	-	-	150,433	**150,433**
Other comprehensive income for the period after tax	-	(5,140)	107	15,128	**10,095**
Total comprehensive income for the period after tax	-	(5,140)	107	165,561	**160,528**
Transactions with equity holders					
Dividends paid [(a)]	-	-	-	(28,300)	**(28,300)**
Net decrease in contributed equity [(b)]	(4)	-	-	-	**(4)**
Total transactions with owners	(4)	-	-	(28,300)	**(28,304)**
Balance at 30 June 2017	530,425	2,874,879	-	1,864,805	**5,270,109**

The above Statement of Changes in Equity should be read in conjunction with the accompanying notes on pages 83 through to 133.

Note:
(a) During 2017/18 the Corporation paid total dividends of $77.1 million (2016/17: $28.3 million). Dividends are determined by the Treasurer of Victoria after consultation with the Corporation's Board of Directors and the Minister for Water.
(b) The decrease in 2017/18 contributed equity is in relation to capital repatriations amounting to $27.9 million (2016/17: $0) and transfers of crown assets of $122K (2016/17: $4K).

Statement of Cash Flows

For the year ended 30 June 2018

	Notes	2018 ($ thousands)	2017 ($ thousands)
Cash flows from operating activities			
Receipts from customers (inclusive of goods and service tax)		1,718,971	1,719,382
Developer charges and contributions		167,708	146,061
Payments to suppliers and employees (inclusive of goods and service tax [a]		(644,365)	(590,438)
Income tax paid		(134,226)	(192,529)
Interest received		27	28
Interest and other costs of finance paid		(655,556)	(659,820)
Other receipts		13,257	17,034
Net cash inflow from operating activities	**5.2**	**465,816**	**439,718**
Cash flows from investing activities			
Payments for property, plant and equipment and intangibles		(494,383)	(462,060)
Proceeds from sales of property, plant and equipment and intangibles		48,186	17,650
Net cash outflow from investing activities		**(446,197)**	**(444,410)**
Cash flows from financing activities			
Proceeds from borrowings [b]		140,879	79,547
Repayments of borrowings [b]		-	-
Repayments for the Victorian Desalination Plant (VDP) finance lease liability		(57,100)	(45,301)
Dividends paid	**7.4**	(77,100)	(28,300)
Capital repatriation paid	**7.4**	(27,910)	-
Net cash inflow/(outflow) from financing activities		**(21,231)**	**5,946**
Net (decrease)/increase in cash and cash equivalents		(1,612)	1,254
Cash and cash equivalents at the beginning of the financial year		3,620	2,366
Cash and cash equivalents at the end of the financial year		**2,008**	**3,620**

The above Statement of Cash Flows should be read in conjunction with the accompanying notes on pages 83 through to 133.

Note:

(a) Includes government rates and taxes (including land tax and FBT, excluding income tax).

(b) Proceeds and repayments of 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 2018. This report informs users about the Corporation's stewardship of the resources entrusted to it.

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**)
- defined benefit superannuation asset/liability (refer to **7.1**)
- employee benefits expenses and provisions (refer to **3.2** and **3.11**)
- useful lives of plant, property and equipment (refer to **4.1.3**)
- recognition of deferred tax balances (refer to **3.8**)
- contingent liabilities (refer to **6.3**)
- VDP operating commitments (refer to **5.3**)

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 Minister for Finance.

In particular, they are presented consistent with the requirements of AASB 101 *Presentation of Financial Statements*.

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

($ thousands)

	2018	2017
Sales revenue		
Bulk water services	925,187	912,343
Bulk sewerage services	430,182	419,729
Waterways and drainage charges	245,182	245,806
Total sales revenue	**1,600,551**	**1,577,878**
Other revenue		
Developer charges and contributions	167,708	146,061
Developer contributed assets	48,068	40,846
Interest revenue	27	28
Rental income	2,900	3,122
Other revenue	14,239	14,644
Total other revenue	**232,942**	**204,701**
Total revenue	**1,833,493**	**1,782,579**

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.

Waterways and drainage charges are recognised in the year for which the charge is levied. Charges are levied either quarterly or annually in advance and are collected from both residential and non-residential properties 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.

The Essential Services Commission (ESC) regulates the prices and service standards for the provision of storage operator services and bulk water and sewerage services. The ESC's general regulatory powers are set out in:

- The *Essential Services Commission Act 2001*
- Part 1A of the *Water Industry Act 1994*
- A Water Industry Regulatory Order made under section 4D of the *Water Industry Act 1994*

Developer charges and contributions are collected from developers in order to fund drainage scheme infrastructure and stormwater quality treatment works. The associated revenue is recognised when received.

Developer contributed assets consist of assets received free of charge or for nominal consideration and are recognised as revenue at fair value on practical completion of works and their acceptance by the Corporation.

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.

Other revenue includes legal settlements, fees and charges and other miscellaneous revenue which are all recognised in the period in which they are incurred.

2.2 Other Income

($ thousands)

	2018	2017
Reversal of land revaluation decrements	39,231	-
Net gain on disposal of property, plant and equipment	14,777	7,856
Government grants	2,871	928
Total other income	**56,879**	**8,784**

Reversal of land revaluation decrements previously recognised through profit and loss. Revaluation decreases 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.

The net gain on disposal of property, plant and equipment from sales in relation to the Corporation's arrangements with Development Victoria are recognised upon settlement due to the nature of the arrangement between Development Victoria and the Corporation. Other property sales are recognised on signing of an unconditional contract of sale. Property sales are recognised in the Statement of Profit or Loss and Other Comprehensive Income on a net basis of sale proceeds less costs.

Government grants are recognised at their fair value where 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 deferred income (included in Trade and other payables) 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)

	2018	2017
Trade debtors	48,790	42,887
Other receivables	20,809	17,169
Net GST receivable from the ATO	13,775	13,906
Less: provision for impaired other receivables	(91)	(91)
Total current receivables	**83,283**	**73,871**

Trade debtors and other receivables are recognised at the amounts receivable less any impaired other receivables. 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. A provision for impaired other receivables is established when there is objective evidence that the Corporation is highly unlikely to collect all amounts due according to the original terms of receivables. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the effective interest rate. The amount of the provision is recognised in the Statement of Profit or Loss and Other Comprehensive Income.

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			Impaired	Total
30 June 2018	0-30 days	31-60 days	61-90 days	91 days +		
Receivables						
Trade debtors	37,344	4,130	1,430	5,886	-	**48,790**
Other receivables	20,809	-	-	-	-	**20,809**
Total receivables	**58,153**	**4,130**	**1,430**	**5,886**	-	**69,599**

	Current	Past due but not impaired			Impaired	Total
30 June 2017	0-30 days	31-60 days	61-90 days	91 days +		
Receivables						
Trade debtors	28,783	3,423	1,054	9,627	-	**42,887**
Other receivables	17,169	-	-	-	-	**17,169**
Total receivables	**45,952**	**3,423**	**1,054**	**9,627**	-	**60,056**

The Cost of Delivering Our Services

Introduction

This section accounts for the major components of expenditure incurred by the Corporation in relation to operating activities during the year, as well as any related obligations outstanding as at 30 June 2018.

Structure

3.1 Operational expenses

($ thousands)

	2018	2017
VDP operating expenses	117,117	113,474
Energy expenses	30,522	30,760
External professional services expenses [(a)]	21,816	19,095
Contract works [(a)]	14,539	15,152
Materials, chemicals and laboratory expenses	13,347	14,104
Grants and contributions expenses	8,267	9,184
Transport expenses	4,059	3,855
Insurance expenses	3,622	3,062
Other expenses	7,451	7,591
Total operational expenses	**220,740**	**216,277**

Operational expenses represent the day-to-day running costs incurred in normal operations. VDP operating expenses include the costs of labour, maintenance, chemicals and energy. They are expensed in the period in which they are incurred.

Note:
(a) The 2016/17 balances have been restated to reclassify $5.7 million between contracts works to external professional services.

The Cost of Delivering Our Services (continued)

3.2 Employee benefits expenses and employee benefits provision

($ thousands)

	2018	2017
Salary and wages expenses	89,636	86,259
Annual, long service and shift leave expenses	11,304	10,997
Defined contribution plans (superannuation accumulation fund) expense	10,415	9,673
Defined benefit superannuation plan expense	1,710	2,379
Other employee expenses	13,704	13,238
Total employee benefits expenses	**126,769**	**122,546**

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 (including; payroll tax, Work Cover (post-1985), workers' compensation (pre-1985), rostered days off, leave loading, redundancy payments and performance payments). They are expensed in the period in which they are incurred.

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)

	2018	2017
Current		
Accrued salaries and wages		
Accrued salaries and wages	3,470	3,544
Annual leave		
Unconditional and expected to settle after 12 months	6,480	6,235
Long service leave		
Unconditional and expected to settle within 12 months	2,480	1,892
Unconditional and expected to settle after 12 months	14,735	15,753
On-costs		
Unconditional and expected to settle within 12 months	1,274	1,380
Unconditional and expected to settle after 12 months	2,182	2,720
Other employee benefits	3,454	4,908
Total current employee benefits and on-costs	**34,075**	**36,432**
Non-current		
Long service leave	3,764	3,156
On-costs on long service leave	558	545
Other employee benefits	8,662	7,930
Total non-current employee benefits and on-costs	**12,984**	**11,631**
Total employee benefits and on-costs	**47,059**	**48,063**

Reconciliation of movement in on-cost provision	($ thousands)	
	2018	2017
Opening balance	4,645	4,537
Additional provisions recognised	1,040	1,499
Additions due to LSL transfers	8	18
Reductions arising from payments/other sacrificies of future economic benefits	(1,679)	(1,409)
Closing balance	**4,014**	**4,645**
Current	3,456	4,100
Non-current	558	545

Liabilities for **salaries, wages and annual leave** are all recognised in the provision for employee benefits as 'current liabilities' as per AASB 119 *Employee Benefits*, because the Corporation does not have an unconditional right to defer settlements of these liabilities. Liabilities for salaries, wages and annual leave are measured at:

- undiscounted value; if they will be wholly settled within 12 months; or
- present value; if not expected to be wholly settled within 12 months.

Sick leave payments are made in accordance with relevant awards, determinations and Corporation policy. No provision is made in the Financial Statements for unused sick leave entitlements as these are non-vesting benefits (i.e. can't be transferred or paid out when an employee leaves).

Long Service Leave (LSL) is recognised in the provision for employee benefits. LSL is recognised as a current liability when there is no unconditional right to defer settlement should an employee take LSL they are entitled to within the next 12 months, even when the Corporation does not expect to settle the liability within 12 months. The components of this current LSL liability are measured at:

- undiscounted value; if they expect to be wholly settled within 12 months; or
- present value; if not expected to be wholly settled within 12 months.

LSL is recognised as a non-current liability when there is an unconditional right to defer the settlement of the entitlement until the employee has completed 7 years of service. This non-current LSL liability is measured at present value. Expected future cash payments are discounted using market yields attached to the Reserve Bank of Australia's 10 year rate for semi-annual coupon bonds at the end of the reporting period with terms to maturity that closely match the estimated future cash outflows (use of this rate is mandated by the Department of Treasury and Finance (DTF)).

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 $10.8 million (2016/17: $9.5 million) has been made for outstanding claims incurred and not settled, and for claims incurred but not reported at 30 June 2018. 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 2018 is $9.2 million (2016/17: $8.0 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 commited 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)

	2018	2017
Repairs and maintenance	60,341	55,676
Information technology maintenance	6,102	5,087
Total repairs and maintenance expenses	**66,443**	**60,763**

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)

	2018	2017
Waterways charges billings and collection	12,853	12,989
Information technology and telecommunication expenses	17,321	16,908
Rental and lease expenses	7,922	7,783
Education and training expenses	3,809	3,857
Legal expenses	397	260
Other expenses	7,075	6,660
Total administrative expenses	**49,377**	**48,457**

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.

3.5 Government rates and taxes

($ thousands)

	2018	2017
Government rates and taxes	27,675	25,320
Total government rates and taxes	**27,675**	**25,320**

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)

	2018	2017
Asset transfers to council	26,294	24,904
Total asset transfers to council	**26,294**	**24,904**

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)

	2018	2017
Assets written off/written down	6,969	12,346
Bad and doubtful debt expenses	3	96
Other expenses	974	1,660
Total other expenses	**7,946**	**14,102**

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 bad and doubtful debts. They are expensed in the period in which they are incurred.

3.8 Income and deferred tax

The Corporation is subject to the National Tax Equivalent Regime (NTER), which is administered by the Australian Taxation Office (ATO.) The difference between the NTER and the Commonwealth tax legislation is that the tax liability is paid to the Victorian State Government rather than the Commonwealth Government.

The income tax expense for the period is the tax payable on the current period's taxable income based on the national corporate income tax rate of 30%, adjusted for current tax of prior periods and changes in deferred tax assets and liabilities attributable to temporary differences between the tax bases of assets and liabilities and their carrying amounts in the financial statements.

Deferred tax assets and liabilities are recognised as temporary differences at the tax rate expected to apply when the assets are recovered or liabilities settled, based on those tax rates which are enacted or substantially enacted.

The relevant tax rates are applied to the cumulative amounts of deductible and taxable temporary differences when they arise in a transaction that at the time of the transaction did not affect either accounting or taxable profit or loss. Deferred tax assets are recognised as deductible temporary differences and unused tax losses only if it is probable that future taxable amounts will be available to utilise those temporary differences and losses. Current and deferred tax is recognised in the Statement of Profit or Loss, except to the extent that it relates to items recognised in Other Comprehensive Income or directly in equity. In this case, tax is also recognised in Other Comprehensive Income or directly in equity respectively.

The Cost of Delivering Our Services (continued)

3.8.1 Income Tax

Components of tax expense

($ thousands)

	2018	2017
Current tax	136,898	114,460
Deferred tax relating to temporary differences	(18,159)	(16,682)
Adjustments for current tax of prior periods	142	(10,258)
Total tax expense	**118,881**	**87,520**

Reconciliation of income tax to prima facie tax payable

($ thousands)

	2018	2017
Profit before income tax	327,713	237,953
Tax at the Australian tax rate of 30% (2016-17: 30%)	98,314	71,386
Tax effect of amounts which are not deductible/(taxable) in calculating taxable income:		
Adjustment in respect of income tax of previous year	142	(10,258)
Non assessable and non-deductible for income tax purposes	18,525	26,396
Assessable income not booked	2,487	734
Research and development tax incentive	(587)	(738)
Income tax as reported in the Statement of Profit or Loss and Other Comprehensive Income	**118,881**	**87,520**

Income tax payable

($ thousands)

	2018	2017
Current tax payable	9,422	7,066
Total income tax payable	**9,422**	**7,066**

Income tax recognised in other comprehensive income

($ thousands)

	2018	2017
Deferred tax arising on items recognised in other comprehensive income		
Increment/(decrement) in deferred tax on land & buildings revalued	15,183	8,059
Reversal of deferred tax on disposal of land previously revalued	(37)	(218)
Increment in deferred tax on infrastructure assets revalued	-	-
Increase/(decrease) in deferred tax on actuarial gain on the defined benefit plan	944	4,327
Changes in fair value of cash flow hedges	-	46
Total income tax recognised in other comprehensive income	**16,090**	**12,214**

3.8.2 Net deferred tax liabilities - non-current

($ thousands)

	2018	2017
Amounts recognised in Profit or Loss		
Property, plant and equipment	267,172	284,153
Employee entitlements	(9,441)	(12,536)
Developer contributions	1,894	2,888
Provisions	(4,000)	(1,608)
Revenue in advance	(66)	(67)
Other	(2,882)	(2,452)
Total recognised in Profit or Loss	**252,677**	**270,378**
Amounts recognised in Other Comprehensive Income		
Gain on revaluation of land and buildings	67,945	52,799
Net gain on revaluation of infrastructure assets	907,585	907,585
Actuarial gain on the defined benefit plan	9,857	8,913
Total recognised in Other Comprehensive Income	**985,387**	**969,297**
Net deferred tax liability	**1,238,064**	**1,239,675**

Movements

($ thousands)

	2018	2017
Opening balance	1,239,675	1,250,849
Credited to Profit or Loss	(18,159)	(16,682)
Debited to Other Comprehensive Income	16,089	12,214
Adjustment in respect of deferred tax of prior period	459	(6,706)
Closing balance	**1,238,064**	**1,239,675**
Net deferred tax liabilities to be recovered after more than 12 months	1,250,156	1,252,767
Net deferred tax liabilities to be recovered within 12 months	(12,092)	(13,092)
Total non-current liabilities - deferred tax liabilities	**1,238,064**	**1,239,675**

The Cost of Delivering Our Services (continued)

3.9 Trade and other payables

($ thousands)

	2018	2017
Current trade and other payables		
Trade creditors	70,778	77,925
Interest payable	47,301	54,679
Accruals	212,895	176,385
Unearned revenue	12,962	18,466
Other payables	4,561	3,574
Total current trade and other payables	**348,497**	**331,029**
Non-current trade and other payables		
Other payables	892	648
Total non-current trade and other payables	**892**	**648**
Total trade and other payables	**349,389**	**331,677**

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.

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 or in accordance with contract terms.

Unearned revenue represents revenue received in advance for grants and other services and will be recognised as revenue when the services are performed.

Other payables represent liabilities that are mostly made out of miscellaneous security deposits held.

3.10 Other current assets

($ thousands)

	2018	2017
Prepayments	5,564	3,645
Inventories	8,172	7,939
Total other current assets	**13,736**	**11,584**

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. All stores are valued at the lower of cost and net realisable value.

3.11 Provisions

($ thousands)

	2018	2017
Current		
Insurance claims	1,436	1,359
Other provisions	6,546	6,285
Total provisions - current	**7,982**	**7,644**
Non-current		
Insurance claims	914	818
Other provisions	-	32
Total provisions - non-current	**914**	**850**
Total provisions	**8,896**	**8,494**

Reconciliation of movement in provisions

($ thousands)

	Insurance claims	Other provisions	Total
Carrying amount at 1 July 2017	2,177	6,317	8,494
Additional provisions recognised	942	4,925	5,867
Amounts utilised during the year	(769)	(4,696)	(5,465)
Carrying amount at 30 June 2018	**2,350**	**6,546**	**8,896**
Carrying amount at 1 July 2016	2,240	8,912	11,152
Additional provisions recognised	398	2,647	3,045
Amounts utilised during the year	(461)	(5,242)	(5,703)
Carrying amount at 30 June 2017	**2,177**	**6,317**	**8,494**

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. 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.

Insurance claims are independently assessed by actuaries. 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 increase the likelihood that the liability estimate will be sufficient. The actuaries take into account projected inflation and other factors to arrive at expected future payments. These are then discounted at the reporting date using a market determined, risk-free discount rate.

The measurement of the liability for outstanding insurance claims is on the basis of actuarially estimated costs of future claims payments, which are discounted to a present value at balance sheet date. 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

4.1.1 Reconciliation of movements in carrying values of infrastructure, property, plant and equipment

($ thousands)

	Total	Crown land	Freehold land	Buildings	Leasehold improvements	Plant and equipment	Fleet vehicles	Infrastructure	VDP infrastructure	Capital works in progress
Year ended 30 June 2017										
Opening balance	14,664,892	103,728	1,261,799	24,614	11,089	17,442	12,540	8,400,750	4,382,104	450,826
Purchased additions	3,821	-	-	-	-	-	3,532	289	-	-
Developer contributed assets	40,846	-	6,263	200	-	-	-	34,383	-	-
Disposals and write-offs (a)	(36,606)	(12)	(7,721)	-	-	(53)	(1,401)	(25,691)	-	(1,728)
Depreciation and amortisation	(373,647)	-	-	(868)	(1,028)	(8,501)	(2,780)	(282,916)	(77,554)	-
Transfers between classes (b)	(3,206)	-	11	2,958	89	2,868	37	(9,169)	-	-
Assets classified as held for sale	(2,359)	-	(2,359)	-	-	-	-	-	-	-
Revaluation decrements (a)	(7,922)	-	(7,922)	-	-	-	-	-	-	-
Capital expenditure (c)	421,013	-	-	-	-	-	-	-	-	421,013
Capitalisation of works in progress	-	-	18,752	-	-	10,000	-	324,902	-	(353,654)
Closing carrying amount	**14,706,832**	**103,716**	**1,268,823**	**26,904**	**10,150**	**21,756**	**11,928**	**8,442,548**	**4,304,550**	**516,457**
At 30 June 2017										
Gross carrying amount	15,359,104	103,716	1,268,823	27,871	15,199	84,094	18,421	8,661,730	4,662,793	516,457
Accumulated depreciation	(652,272)	-	-	(967)	(5,049)	(62,338)	(6,493)	(219,182)	(358,243)	-
Carrying amount	**14,706,832**	**103,716**	**1,268,823**	**26,904**	**10,150**	**21,756**	**11,928**	**8,442,548**	**4,304,550**	**516,457**
Year ended 30 June 2018										
Opening balance	14,706,832	103,716	1,268,823	26,904	10,150	21,756	11,928	8,442,548	4,304,550	516,457
Purchased additions	2,228	-	-	-	-	-	2,228	-	-	-
Developer contributed assets	48,068	-	-	-	-	-	-	48,068	-	-
Disposals and write-offs	(36,536)	(108)	(6,384)	-	-	(46)	(1,344)	(26,484)	-	(2,170)
Depreciation and amortisation	(377,738)	-	-	(1,249)	(1,102)	(9,468)	(2,805)	(285,562)	(77,552)	-
Transfers between classes (b)	-	-	-	-	-	1	-	(1)	-	-
Assets classified as held for sale	(10,151)	-	(10,151)	-	-	-	-	-	-	-
Revaluation increments (d)	293,277	23,249	270,028	-	-	-	-	-	-	-
Revaluation decrements	(3,737)	(133)	(3,604)	-	-	-	-	-	-	-
Impairment losses	-	-	-	-	-	-	-	-	-	-
Impairment losses reversed	-	-	-	-	-	-	-	-	-	-
Capital expenditure (c)	513,657	-	-	-	-	-	-	-	-	513,657
Capitalisation of works in progress	-	1,011	26,699	2,512	352	7,506	-	378,274	-	(416,354)
Closing carrying amount	**15,135,900**	**127,735**	**1,545,411**	**28,167**	**9,400**	**19,749**	**10,007**	**8,556,843**	**4,226,998**	**611,590**
At 30 June 2018										
Gross carrying amount	16,142,684	127,735	1,545,411	30,382	15,551	86,440	17,588	9,045,194	4,662,793	611,590
Accumulated depreciation	(1,006,784)	-	-	(2,215)	(6,151)	(66,691)	(7,581)	(488,351)	(435,795)	-
Carrying amount	**15,135,900**	**127,735**	**1,545,411**	**28,167**	**9,400**	**19,749**	**10,007**	**8,556,843**	**4,226,998**	**611,590**

Note:
(a) The 2016/17 disposals and write-offs balance has been restated to show revaluation decrements as a separate category.
(b) Includes transfers to intangible assets, refer to 4.2
(c) Represents total capital expenditure, exclusive of intangibles, refer to 4.2
(d) Revaluation increments are recognised in the income statement as revenue $39.2 million (pre-tax) and other comprehensive income $254.1 million (pre-tax).

Assets Available to Support Output Delivery (continued)

If land, buildings and infrastructure were measured at historical cost, the carrying amounts would be as follows:

	($ thousands)	
	2018	2017
Land [a]	837,317	818,165
Buildings	32,094	30,517
Infrastructure assets - owned	6,170,756	5,990,151
Infrastructure assets - under finance lease	4,226,998	4,304,550
Total	**11,267,165**	**11,143,383**

Note:
(a) The 2016/17 balance has been restated to exclude revaluation adjustments of $240.7 million previously included in the balance.

Initial recognition

All non-financial physical assets are measured and recognised initially at cost. 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. The initial cost for non-financial physical assets under a finance lease is measured at amounts equal to the fair value of the leased asset or, if lower, the present value of the minimum lease payments, each determined at the inception of the lease. Capital Works In Progress are recorded at cost.

Items with a cost or value in excess of $500 (2016/17: $500 capitalisation threshold) and a useful life of more than 1 year are recognised as assets with the exception of lifecycle costs (total of all recurring and one-time costs over the full life span of a good, service, structure or system) for the VDP which are expensed. All items with a cost or value less than $500 (2016/17: $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

Revaluations are conducted either independently (as required under FRD 103G Non-Financial Physical Assets) or using management expertise and classified as a managerial revaluation. Fair value assessment is performed annually as a managerial valuation, utilising external experts to conduct the infrastructure valuation, with formal independent valuations being completed every 5 years. The Corporation also considers more frequent revaluations in regards to infrastructure during price determination years as valuations are closely linked to income. 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 last independent formal revaluation was conducted at 30 June 2016.

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) 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.

4.1.2 Fair value determination of non-financial physical assets

The fair values of non-financial physical assets are determined 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; and
- 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		
	2018	Level 1 [a]	Level 2 [a]	Level 3 [a]
Non-financial assets held for sale	16,651	-	16,651	-
Non-specialised land	72,221	-	72,221	-
Specialised land	1,600,925	-	-	1,600,925
Total land	**1,689,797**	**-**	**88,872**	**1,600,925**
Non-specialised buildings	692	-	692	-
Specialised buildings	27,475	-	-	27,475
Total buildings	**28,167**	**-**	**692**	**27,475**
Leasehold improvements	9,400	-	-	9,400
Plant and equipment	19,749	-	-	19,749
Fleet vehicles	10,007	-	-	10,007
Infrastructure assets	8,556,843	-	-	8,556,843
Infrastructure assets under finance lease	4,226,998	-	-	4,226,998
Total other	**12,822,997**	**-**	**-**	**12,822,997**
Total land, buildings, infrastructure, plant and equipment	**14,540,961**	**-**	**89,564**	**14,451,397**

Note:
(a) Classified in accordance with the fair value hierarchy

($ thousands)

		Fair value measurements		
	2017	Level 1 [a]	Level 2 [a]	Level 3 [a]
Non-financial assets held for sale	6,499	-	6,499	-
Non-specialised land [a][b]	75,539	-	75,539	-
Specialised land [a][b]	1,297,000	-	-	1,297,000
Total land	**1,379,038**	**-**	**82,038**	**1,297,000**
Non-specialised buildings	807	-	807	-
Specialised buildings	26,097	-	-	26,097
Total buildings	**26,904**	**-**	**807**	**26,097**
Leasehold improvements	10,150	-	-	10,150
Plant and equipment	21,756	-	-	21,756
Fleet vehicles	11,928	-	-	11,928
Infrastructure assets	8,442,548	-	-	8,442,548
Infrastructure assets under finance lease	4,304,550	-	-	4,304,550
Total other	**12,790,932**	**-**	**-**	**12,790,932**
Total land, buildings, infrastructure, plant and equipment	**14,196,874**	**-**	**82,845**	**14,114,029**

Note:
(a) Classified in accordance with the fair value hierarchy
(b) The 2016/17 balances have been restated to include a $1.5 million reclassification between specialised and non-specialised land.

Assets Available to Support Output Delivery (continued)

Non-financial assets held for sale are treated as current and classified as held for sale if their carrying amount will be recovered through a sale transaction rather than through continuing use.

This condition is regarded as met only when:

- the asset is available for immediate use in the current condition; and
- the sale is highly probable and the asset's sale is expected to be completed within 12 months from the date of classification.

These non-financial 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 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.

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 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 would be classified as Level 3 assets.

2017/18 was not a formal valuation year and as such an interim managerial valuation was conducted using Valuer-General Victoria (VGV) postcode indices. The managerial valuation resulted in a $293.3 million increase in asset values (2016/17: zero). Revaluation increments are recognised in the income statement as revenue $39.2 million (pre-tax) and other comprehensive income $254.1 million (pre-tax).

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.

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.

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.

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.

The fair value of **Infrastructure** was assessed by an independent valuation in 2017/18 to determine if it differed from the carrying value recorded by the Corporation. The income approach was used for the fair value assessment by discounting reliable estimates of the Corporation's future cash flows 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 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.

As there was not a material difference between the carrying amount of infrastructure versus the fair value assessment, the infrastructure balance has not been adjusted. The significant assumptions used in determining fair value under the income approach at 30 June 2018 are summarised below:

- Nominal after tax discount rate in the range of 5.0% to 5.6% (2016/17: 5.3% to 5.9%) - representing 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% (2016/17: 3.0%)
- Developer contributions growth at 2.5% (2016/17: 2.5%) applied post initial five year pricing
- Long term growth rate of 3.25% (2016/17: 3.25%) - representing inflation and volume growth
- A 10 year explicit cash flow projection period (reflecting one actual and one estimated price determination), with cash flows beyond the projection period reflected in the terminal value (2016/17: 10 years)
- The 5 year average of long-term capex forecasts, less the 5 year average of normalised long-term growth related capex, used as a proxy for capex in the steady state (2016/17: 5 years).

Assets Available to Support Output Delivery (continued)

4.1.2.1 Description of significant unobservable inputs to Level 3 valuations

Asset Category	Valuation	Significant unobservable inputs	Range/weighted average		Sensitivity of fair value measurement to changes in significant unobservable inputs
2017 and 2018	2017 and 2018	2017 and 2018	2018	2017	2017 and 2018
Specialised land	Market approach	Community Service Obligation (CSO) adjustment	20-90% (47% weighted average)	20-70% (44% 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	$16-$8,400	$20-$4,100	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 (68 years weighted average)	5-150 years (65 years weighted average)	A significant increase or decrease in estimated useful life of the asset would result in a significantly higher or lower fair value
Leasehold improvements	Depreciated replacement cost	Cost per unit	$600-$4.7M per unit	$1,100-$5.2M 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-$1.1M per unit	$500-$1.2M 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 (7 years weighted average)	3-50 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
Fleet vehicles	Depreciated replacement cost	Cost per unit	$5,600-$261,000 per unit	$5,640-$279,337 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 (5 years weighted average)	1-15 years (5 years weighted average)	A significant increase or decrease in estimated useful life of the asset would result in a significantly higher or lower fair value

4.1.2.1 Description of significant unobservable inputs to Level 3 valuations (continued)

Asset Category	Valuation	Significant unobservable inputs	Range/weighted average		Sensitivity of fair value measurement to changes in significant unobservable inputs
2017 and 2018	2017 and 2018	2017 and 2018	2018	2017	2017 and 2018
Infrastructure assets (owned and VDP finance lease)	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 a decrease of $1,630.8 in 2017/18 (2016/17: $1,031.6 million) and increase by $1,276.2 in 2017/18 (2016/17: $1,277.2 million)
		Terminal value capital expenditure (excluding growth)	5 year average ($447.8 million)	5 year average ($432.7 million)	If the quantum of the terminal value capital expenditure had changed by +/- $50 million that would result in a $1,291 million (2016/17: $1,084 million) decrease or $1,291 million (2016/17: $1,084 million) increase in fair value
		Weighted average cost of capital (WACC)	5.0-5.6%	5.3-5.9%	If the WACC had changed by +/-.25% from the year end valuation, the impact to the valuation would have been a decrease of $1,731.0 in 2017/18 (2016/17: $997 million) and increase by $1,480.3 in 2017/18 (2016/17: $1,877.9 million)
		Useful life	2-200 years (77 years weighted average)	3-200 years (77 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)

4.1.2.2 Reconciliation of Level 3 fair value

($ thousands)

	Specialised land	Specialised buildings	Leasehold improvements	Plant and equipment	Fleet vehicles	Infrastructure	VDP infrastructure
Opening balance 1 July 2016	1,284,522	23,740	11,089	17,442	12,540	8,400,750	4,382,104
Purchased additions	-	-	-	-	3,532	289	-
Developer contributed assets	6,263	200	-	-	-	34,383	-
Disposals and write-offs [a]	(10,120)	-	-	(53)	(1,401)	(25,691)	-
Depreciation and amortisation	-	(814)	(1,028)	(8,501)	(2,780)	(282,916)	(77,554)
Transfers between classes	11	2,958	89	2,868	37	(9,169)	-
Transfers in/(out) of Level 3	(2,428)	13	-	-	-	-	-
Revaluation increments	-	-	-	-	-	-	-
Revaluation decrements	-	-	-	-	-	-	-
Capitalisation of works in progress	18,752	-	-	10,000	-	324,902	-
At 30 June 2017 [a]	**1,297,000**	**26,097**	**10,150**	**21,756**	**11,928**	**8,442,548**	**4,304,550**
Opening balance 1 July 2017	1,297,000	26,097	10,150	21,756	11,928	8,442,548	4,304,550
Purchased additions	-	-	-	-	2,228	-	-
Developer contributed assets	-	-	-	-	-	48,068	-
Disposals and write-offs	(3,423)	-	-	(46)	(1,344)	(26,484)	-
Depreciation and amortisation	-	(1,107)	(1,102)	(9,468)	(2,805)	(285,562)	(77,552)
Transfers between classes	-	-	-	1	-	(1)	-
Transfers in/(out) of Level 3	500	-	-	-	-	-	-
Revaluation increments	282,873	-	-	-	-	-	-
Revaluation decrements	(3,737)	-	-	-	-	-	-
Capitalisation of works in progress	27,711	2,485	352	7,506	-	378,274	-
At 30 June 2018	**1,600,924**	**27,475**	**9,400**	**19,749**	**10,007**	**8,556,843**	**4,226,998**

(a) The 2016/17 balances have been restated to include a $1.5 million reclassification between specialised and non-specialised land.

4.1.3 Depreciation, amortisation and impairment

($ thousands)

		2018	2017
Depreciation			
Buildings	**4.1.1**	1,249	868
Leasehold improvements	**4.1.1**	1,102	1,028
Plant and equipment	**4.1.1**	9,468	8,501
Fleet vehicles	**4.1.1**	2,805	2,780
Infrastructure assets	**4.1.1**	285,562	282,916
Total depreciation		**300,186**	**296,093**
Amortisation			
VDP infrastructure assets under finance lease	**4.1.1**	77,552	77,554
Intangible assets	**4.2**	14,399	10,187
Total amortisation		**91,951**	**87,741**
Total depreciation and amortisation		**392,137**	**383,834**

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. 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 (2016/17: 5 to 150 years)
Leasehold improvements	3 to 15 years (2016/17: 3 to 15 years)
Plant and equipment	3 to 50 years (2016/17: 3 to 50 years)
Infrastructure assets	2 to 200 years (2016/17: 3 to 200 years)
Fleet vehicles	1 to 15 years (2016/17: 1 to 15 years)
Intangible assets	2 to 25 years (2016/17: 2 to 25 years)
VDP under finance lease	9 to 100 years (2016/17: 9 to 100 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.

Assets Available to Support Output Delivery (continued)

Impairment

Intangible assets with indefinite useful lives (and intangible assets not yet available for use) are tested annually for impairment and whenever there is an indication that the asset may be impaired.

All other assets are assessed annually for indications of impairment, except for:

- inventories (refer to 3.10)
- Non-financial 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.

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 are measured at the higher of the present value of future cash flows expected to be obtained from the asset or fair value less costs to sell.

4.2 Intangible assets

($ thousands)

	2018	2017
Intangible assets	152,713	142,638
Less: accumulated amortisation and impairment	(99,512)	(85,550)
Total intangible assets	**53,201**	**57,088**

Reconciliation of movements in intangible assets

($ thousands)

	2018	2017
Opening balance	57,088	41,728
Purchased additions	14,524	10,726
Disposals and write-offs	(23,927)	(1,379)
Amortisation	(14,399)	(10,187)
Transfers between classes [(a)]	-	3,206
Impairment losses	-	(97)
Capital expenditure	19,915	13,091
Carrying amount	**53,201**	**57,088**

Note:
(a) Includes transfers to physical assets, refer to 4.1.1

Intangible assets consist primarily of information technology software and Renewable Energy Certificates (RECs). They represent identifiable non-monetary assets without physical substance. Intangible assets are measured at cost less accumulated amortisation (RECS are not amortised) and impairment. Costs incurred subsequent to initial acquisition are capitalised when it is expected that additional future economic benefits will flow to the Corporation.

The Corporation amortises intangible assets with a limited useful life using the straight line method over the estimated useful lives. 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-financial assets held for sale

($ thousands)

	2018	2017
Land	16,651	6,499
Total non-financial assets held for sale	**16,651**	**6,499**

The Corporation currently holds land for sale mainly as part of the Riverwalk Estate (Werribee) development. As at 30 June 2018, the Corporation has a joint arrangement with Development Victoria to actively market these lots for private sale.

Refer to **4.1.2** for further details on fair value measurement of non-financial assets held for sale

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)

	2018	2017
Current interest bearing liabilities		
VDP finance lease	70,339	54,052
Borrowings	746,079	596,500
Total current interest bearing liabilities	**816,418**	**650,552**
Non-current interest bearing liabilities		
VDP finance lease	3,999,385	4,076,447
Borrowings	3,245,000	3,250,000
Total non-current interest bearing liabilities	**7,244,385**	**7,326,447**
Total interest bearing liabilities	**8,060,803**	**7,976,999**

Interest bearing liabilities mainly come from borrowings raised through the Treasury Corporation of Victoria (TCV), along with finance leases for the Victorian Desalination Plant (VDP). 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. Borrowings are subsequently measured at amortised cost using the constant interest rate method, with interest expense recognised on an effective yield basis.

Where the Corporation has an unconditional right to defer settlement of the liability for at least 12 months after the balance date, borrowings are classified as non-current liabilities. Otherwise borrowings are classified as current liabilities.

Breakdown of finance costs

($ thousands)

	2018	2017
Interest expense	169,712	171,423
VDP finance lease interest	431,574	443,798
Financial Accommodation Levy	43,992	41,986
Total	**645,278**	**657,207**

Finance costs are recognised as expenses 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. Therefore, any 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.

Finance costs include interest on short-term and long-term borrowings, finance lease charges associated with the Victorian Desalination Plant and the Victorian Government's Financial Accommodation Levy.

5.2 Cash flow information and balances

Cash and cash equivalents include cash on hand, deposits held at call with financial institutions, other short-term and highly liquid investments with original maturities of 3 months or less, that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value.

Deposits held and advances received are categorised as financial liabilities at amortised cost.

Reconciliation of net profit to net cash flows from operating activities

($ thousands)

	2018	2017
Profit for the period after tax	208,832	150,433
Plus/(less) non cash items:		
Depreciation and amortisation	392,137	383,834
Net gain on sale of non-current assets	(14,777)	(7,856)
Assets written off/written down and asset transfers to Council	33,263	29,888
Developer contributed assets received	(48,068)	(40,846)
Defined benefit superannuation plan expense	1,710	2,379
Defined contribution superannuation plan expense	260	-
RECs received	(14,140)	(2)
Net gain on sale of RECs	(1,815)	(361)
Reversal of land revaluation decrements	(39,231)	-
Changes in operating assets and liabilities (net of investing items):		
(Increase)/Decrease in trade and other receivables	(9,413)	11,697
(Increase)/Decrease in other assets	(2,152)	33
(Decrease)/Increase in provision for impaired receivables	-	68
(Decrease)/Increase in trade and other payables	(16,144)	24,057
(Decrease)/Increase in provisions and employee benefits provisions	(602)	1,403
Decrease in other liabilities	(8,699)	(10,000)
Increase/(Decrease) in current tax liability	2,356	(81,671)
Decrease in deferred tax liabilities	(17,701)	(23,338)
Net cash provided by operating activities	**465,816**	**439,718**

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)	
	2018	2017
Capital expenditure commitments		
Total capital expenditure contracted for the construction of water, sewerage and waterways and drainage infrastructure:		
Less than 1 year	239,191	226,538
1 year but less than 5 years	219,575	59,957
Total capital expenditure commitments	**458,766**	**286,495**

The Corporation as lessee		
Operating and lease commitments		
The Corporation leases buildings and motor vehicles under non-cancellable operating leases. The building lease agreements have varying terms, escalation clauses and renewal rights. On renewal, the terms of the leases are renegotiated. Commitments for minimum lease payments in relation to non-cancellable operating leases are payable as follows:		
Less than 1 year	9,484	9,131
1 year but less than 5 years	41,210	39,812
5 years or more	46,626	57,254
Total operating and lease commitments	**97,320**	**106,197**

Other operating commitments		
Total other operating expenditure (excluding leases) contracted for at balance date are as follows:		
Less than 1 year	29,838	28,496
1 year but less than 5 years	57,211	54,105
Later than 5 years	80,243	91,451
Total other operating commitments	**167,292**	**174,052**

Build, Own and Operate (BOO) commitment		
The Corporation has allocated a parcel of land at the Western Treatment Plant (WTP) for the operation of a 9.9 Megawatts biogas electricity generation plant, managed under a BOO contract with AGL. The Corporation delivers biogas extracted from the treatment process to AGL, who in turn provides this generated electricity exclusively to the Corporation. From July 2018, the AGL contract will be taken over by Sustainable Energy Infrastructure. The arrangement expires on 31 December 2020.		
Less than 1 year	4,526	4,415
1 year but less than 5 years	6,987	11,513
Total Build, Own and Operate commitment	**11,513**	**15,928**

5.3 Commitments (continued)

	($ thousands)	
	2018	2017
The Corporation as lessor		
Operating lease receivable		
Operating leases 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:		
Less than 1 year	1,786	1,738
1 year but less than 5 years	4,037	4,336
5 years or more	3,374	4,821
Total operating and lease commitments	**9,197**	**10,895**

Victorian Desalination Plant (VDP) finance lease and other commitments

On 30 July 2009, the State of Victoria ('the State') through the Department of Environment, Land, Water and Planning (DELWP) entered into a 30 year Project Deed with the AquaSure consortium to build and operate the desalination plant in Wonthaggi under a Public Private Partnership (PPP) arrangement, with a connection to the Melbourne water system. Construction of the desalination plant began in September 2009. The project operation term commenced from the date of commercial acceptance which occurred on 17 November 2012, triggering the recognition of the finance lease payable.

The Minister for Environment, Climate Change and Water issued a Statement of Obligations (SoO) to the Corporation under section 4I of the *Water Industry Act 1994* on 26 June 2009. The SoO requires the Corporation to pay all monies payable by the State under the Project Deed with AquaSure.

The Corporation also entered into a Victorian Desalination Project 'Water Interface Agreement' (WIA) and a Supplementary Water Interface Agreement with the State to record the terms of the interface and financial arrangements between the Project and the Corporation.

Under the arrangement, the Corporation has an obligation to make Project Deed payments to DELWP, who are managing the contract with AquaSure on behalf of the State. The portions of the Project Deed Payments that relate to the right to use the project assets are accounted for as a finance lease as disclosed below. In addition, the Project Deed Payments also include other commitments for operating, maintenance and lifecycle costs. The desalination plant assets will transfer from DELWP to the Corporation at the end of the project contract term (presently planned for 2039).

On 26 March 2018 the Minister for Water issued the 2018-19 Supply Notice with a Required Annual Water Volume of 15GL in 2018-19 and non-binding forecasts of 100GL for 2019-20 and 125GL for 2020-21.

As per information provided by DELWP (in accordance with the WIA), the Corporation has recognised the following finance lease liability.

Financing Our Operations (continued)

Victorian Desalination Plant (VDP) finance lease and other commitments (continued)

	($ thousands)			
	Minimum future lease payments		Present value of minimum future lease payments	
	2018	2017	2018	2017
VDP finance lease liability				
Less than 1 year	492,863	492,626	70,339	54,052
1 year but less than 5 years	1,840,452	1,911,076	212,869	217,313
Later than 5 years	7,957,147	8,516,071	3,786,516	3,859,134
Minimum future lease payments	**10,290,462**	**10,919,773**	**4,069,724**	**4,130,499**
Less: Future finance charges	(6,220,738)	(6,789,274)	-	-
Total finance lease liability	**4,069,724**	**4,130,499**	**4,069,724**	**4,130,499**
Representing finance lease liability:				
Current (refer to 5.1) [a]			70,339	54,052
Non-current (refer to 5.1) [a]			3,999,385	4,076,447
Total finance lease liability			**4,069,724**	**4,130,499**

Note:
(a) The present value of the minimum future lease payments have been discounted to 30 June of the respective financial years using the weighted average interest rate of 10.45% (2017: 10.68%). These payments exclude finance charges.

Other commitments payable

Under the PPP arrangement that the state entered into with AquaSure the State pays a base water security payment, provided the plant is maintained to the appropriate standard, that includes other commitments for its operation, maintenance and lifecycle costs. The nominal amounts for the other commitments below represent the charges payable under the agreement at the end of the reporting period.

The Project Deed 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 will be controlled by the Department.

The other commitments payable are disclosed based on information provided by DELWP (in accordance with the WIA):

	($ thousands)	
	2018	2017
Less than 1 year	136,762	128,031
1 year but less than 5 years	595,729	585,147
Later than 5 years	3,597,462	3,796,104
Total other commitments (inclusive of GST)	**4,329,953**	**4,509,282**
Less GST recoverable from the Australian Taxation Office	(393,632)	(409,935)
Total other commitments (exclusive of GST)	**3,936,321**	**4,099,347**
Present value of other commitments [a]	**1,423,477**	**1,416,804**

Note:
(a) As per standard practice, the present value of the other commitments has been discounted to 30 June of the respective financial years. The discount rate of 9.99% is the nominal pre-tax discount rate representative of the overall risk of the project at inception. The basis for discounting has been to take each 12 month period of cash flows and discount at the end of the period using the annual discount rate.

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, fines and penalties). Such assets and liabilities do not meet the definition of financial instruments in AASB 132 *Financial Instruments: Presentation.*

The Corporation's principle financial instruments are contractual in nature and comprise:

- Cash and cash equivalents
- Trade debtors and other receivables
- Trade creditors, accruals and interest payable
- VDP lease liabilities
- Other payables
- Borrowings (including short term, floating rate notes and fixed interest)

Categories of financial instruments ($ thousands)

	2018	2017
Financial assets		
Cash and cash equivalents	2,008	3,620
Trade debtors	48,790	42,887
Other receivables	20,718	17,078
Total financial assets	**71,516**	**63,585**
Financial liabilities		
Trade and other payables	349,389	331,677
VDP finance lease liabilities	4,069,724	4,130,499
Short term borrowings	571,079	96,500
Floating rate notes	400,000	400,000
Fixed interest	3,020,000	3,350,000
Total financial liabilities	**8,410,192**	**8,308,676**

Risk management (continued)

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 2016 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, the Treasury Management Guidelines issued by DTF and the Victorian Public Sector Debt Management Objectives.

These objectives are consistent with the Corporate Risk Management Policy and Framework of the Corporation, the Corporation's Financial Sustainability Strategy, the Treasury Management Guidelines issued by DTF and the Victorian Public Sector Debt Management Objectives.

The Corporation's Treasury Management Policy manages financial risk by:

- Managing the financial risks arising from the regulatory price determination process, specifically the mismatch between the regulator's revenue allowance for debt costs and actual debt costs throughout the regulatory period
- Actively managing liquidity and funding risk

The following are the key measures used to manage financial risk:

Portfolio composition (i.e. fixed and floating) - During the 2017/18 financial year, the Corporation reviewed its Treasury Management Policy and have made no changes from the prior year bands by which it manages its debt portfolio:

Floating interest rate borrowings	0-30%
Fixed interest rate borrowings	70-100%

Physical maturity profile - Debt maturity of fixed and floating rate notes is not to exceed 15% of the total debt portfolio in any financial year.

Interest rate risk profile - Interest Rate Swaps and Forward Rate Agreements are used to mitigate the risk from adverse interest rate increases where the actual interest rates paid to finance debt are at risk of being higher than the debt allowance received in revenue to finance debt. The Corporation's goal is to align the actual interest rate risk profile to the profile used by the Essential Services Commission (ESC) in setting our revenue.

Aligning the interest rate re-pricing profile of the debt portfolio with the annual regulatory weighted average cost of capital (WACC) re-set based on the 10-year trailing average approach used by the ESC to determine revenue aims to reduce the regulatory interest rate mismatch risk. The Corporation also aims to align the modified duration of its debt portfolio in line with the regulatory benchmark portfolio.

Financing arrangements - The capacity to borrow funds and manage the associated risks is subject to the provisions of the *Borrowing and Investment Powers Act 1987*. In accordance with this Act, the Treasurer of Victoria issues an annual approval, permitting new borrowings and the refinancing of all loan maturities for that year and non-maturing loans upon request. All funding is sourced from the Treasury Corporation of Victoria (TCV).

The Corporation's total approved maximum borrowing limit for 2017/18 of $4,157.7 million (2016/17: $4,086.7 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 2018 was 52.6% (2016/17: 53.6%) and interest cover cash ratio was 1.9 times (2016/17: 2.0 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.

Interest rate risk is the risk that over the regulatory period the actual cost of debt is higher than the regulatory cost of debt allowance that the Corporation receives as part of the regulatory determination.

Interest rate risk is managed by:

- Strategic management of the mix of floating and fixed rate debt within a range of Board approved parameters, in order to minimise exposure to fluctuations in variable rates and to minimise the long-term net cost of funding
- Aligning the Corporation's modified duration with the regulatory benchmark portfolio modified duration
- The utilisation of interest rate swaps to align the re-pricing of the actual costs of debt with the timing of the setting of the regulatory cost of debt allowance

The interest rate exposure table provides details of the carrying amounts of financial assets and liabilities that expose the Corporation to either interest rate fair value risk or interest rate cash flow risk.

Risk management (continued)

6.1.1 Interest rate risk

Interest rate exposure as at 30 June 2018 ($ thousands)

	Weighted average	Floating interest	Fixed interest	Non-interest bearing	Total carrying amount
Financial assets					
Cash and cash equivalents	1.45%	2,008	-	-	2,008
Trade debtors	-	-	-	48,790	48,790
Other receivables	-	-	-	20,718	20,718
Total financial assets		**2,008**	**-**	**69,508**	**71,516**
Financial liabilities					
Trade and other payables	-	-	-	349,389	349,389
VDP lease liabilities [(a)]	10.45%	-	4,069,724	-	4,069,724
Short term borrowings	1.67%	571,079	-	-	571,079
Floating rate notes	2.25%	400,000	-	-	400,000
Fixed interest	4.62%	-	3,020,000	-	3,020,000
Total financial liabilities		**971,079**	**7,089,724**	**349,389**	**8,410,192**

Interest rate exposure as at 30 June 2017 ($ thousands)

	Weighted average	Floating interest	Fixed interest	Non-interest bearing	Total carrying amount
Financial assets					
Cash and cash equivalents	1.47%	3,620	-	-	3,620
Trade debtors	-	-	-	42,887	42,887
Other receivables	-	-	-	17,078	17,078
Total financial assets		**3,620**	**-**	**59,965**	**63,585**
Financial liabilities					
Trade and other payables	-	-	-	331,677	331,677
VDP lease liabilities [(a)]	10.68%	-	4,130,499	-	4,130,499
Short term borrowings	1.69%	96,500	-	-	96,500
Floating rate notes	2.25%	400,000	-	-	400,000
Fixed interest	4.75%	-	3,350,000	-	3,350,000
Total financial liabilities		**496,500**	**7,480,499**	**331,677**	**8,308,676**

Note:
(a) The weighted average interest rate for VDP lease liabilities is the interest rate implicit in the lease.

Interest rate risk sensitivity analysis

($ thousands)

2018	Profit or Loss		Equity	
	-50 basis points	+50 basis points	-50 basis points	+50 basis points
Cash	(8)	8	(6)	6
Interest Bearing Liabilities	4,855	(4,855)	3,399	(3,399)
Total	**4,847**	**(4,847)**	**3,393**	**(3,393)**

($ thousands)

2017	Profit or Loss		Equity	
	-50 basis points	+50 basis points	-50 basis points	+50 basis points
Cash	(6)	6	(4)	4
Interest Bearing Liabilities	2,483	(2,483)	1,738	(1,738)
Total	**2,477**	**(2,477)**	**1,734**	**(1,734)**

Exposures arise predominately from liabilities bearing variable interest rates as the Corporation intends to hold fixed rate liabilities to maturity. At 30 June 2017 and 30 June 2018, 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 million. The Corporation's policy requires all hedging to be undertaken through TCV in the form of forward Foreign Exchange Contracts.

At 30 June 2018, the Corporation did not have any Forward Foreign Exchange Contracts (30 June 2017: 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 main price risk exposure to the Corporation is the potential decline in market value of the RECs. This may impact on the realisable value of RECs the Corporation currently holds and future RECs it will be receiving. The current strategy is to realise on an ongoing basis the value of the RECs given they are no longer required by the Corporation. Other lower level exposures will exist with supply and service contracts mitigating this risk where possible.

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 allowance for impaired receivables. Receivables are reviewed on an ongoing basis to identify amounts which cannot be collected. Debts which cannot be collected are written off. A provision for impaired receivables is established when there is objective evidence that the Corporation will not be able to collect all amounts due according to the original terms of receivables.

The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the effective interest rate. The amount of the provision is recognised in the Statement of Profit or Loss and Other Comprehensive Income.

The major exposure to credit risk arises from Trade Debtors and Other Receivables, which have been recognised net of any provision for doubtful debts.

Trade Debtors are made up predominantly by the metropolitan retail water businesses with minimal credit risk exposure to the Corporation. These debtors are invoiced in two parts. The first part is a usage charge that is invoiced weekly and paid within 7 days. The second part is an availability charge that is invoiced monthly and paid within 14 days.

Other receivables primarily consist of a large number of residential and business customers across a diverse range of industries to which the Corporation provides waterways and drainage services. These receivable balances are monitored on an ongoing basis to ensure that exposure to bad debts is not significant. The collection of payments and overdue receivables is managed by the metropolitan retail water businesses as part of billings and collection agreements with the Corporation. In addition any unpaid debt is allocated against the property title and will be extinguished if there is a change in property ownership.

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 won't 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)

2018	Total carrying amount	Total contractual cash flows	1 year or less	1 to 5 years	Over 5 years
Non-interest bearing	349,389	349,389	348,497	892	-
Variable rate	971,079	1,008,064	590,303	417,761	-
Fixed rate	7,089,724	14,810,482	1,229,991	3,568,801	10,011,690
Total	**8,410,192**	**16,167,935**	**2,168,791**	**3,987,454**	**10,011,690**

2017	Total carrying amount	Total contractual cash flows	1 year or less	1 to 5 years	Over 5 years
Non-interest bearing	331,677	331,677	331,029	648	-
Variable rate	496,500	530,064	106,577	373,266	50,221
Fixed rate	7,480,499	15,891,825	1,261,695	3,930,438	10,699,692
Total	**8,308,676**	**16,753,566**	**1,699,301**	**4,304,352**	**10,749,913**

6.1.6 Other matters

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

($ thousands)

	2018	2017
Interest revenue/(expense)		
Financial assets	27	28
Financial liabilities at amortised cost	(645,278)	(657,207)
Net holding gain/(loss)		
Financial liabilities recognised in other comprehensive income	-	-
Total	**(645,251)**	**(657,179)**

Risk management (continued)

6.2 Fair value determination of financial assets and liabilities

The fair values of the Corporation's financial assets and liabilities are determined as follows:

- Level 1 – the financial instruments with standard terms and conditions and traded in an active liquid market are determined with reference to quoted market prices;
- Level 2 – the fair value of other financial assets and financial liabilities (excluding derivative instruments) are determined in accordance with generally accepted pricing models based on discounted cash flow analysis, using prices from observable current market transactions; and
- Level 3 – the fair value of derivative instruments are calculated using quoted prices. Where such prices are not available, use is made of discounted cash flow analysis using the applicable yield curve for the duration of the instrument for non-optional derivatives, and option pricing models for optional derivatives.

Carrying amounts, fair values and fair value hierarchy ($ thousands)

	2018		2017	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Cash and cash equivalents	2,008	2,008	3,620	3,620
Trade debtors	48,790	48,790	42,887	42,887
Other receivables	20,718	20,718	17,078	17,078
Total financial assets	**71,516**	**71,516**	**63,585**	**63,585**
Financial liabilities				
Trade and other payables	349,389	349,389	331,677	331,677
VDP lease liabilities	4,069,724	4,069,724	4,130,499	4,130,499
Short term borrowings	571,079	571,079	96,500	96,500
Floating rate notes	400,000	402,546	400,000	403,764
Fixed interest	3,020,000	3,174,886	3,350,000	3,566,774
Total financial liabilities	**8,410,192**	**8,567,624**	**8,308,676**	**8,529,214**

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
- 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)

	2018	2017
Contingent assets		
Legal claims arising out of the Corporation's business dealings	10,045	10,433
Total contingent assets	**10,045**	**10,433**
Contingent liabilities		
Legal claims arising out of the Corporation's business dealings [(a)]	32,060	17,950
Total contingent liabilities	**32,060**	**17,950**

Note:
(a) Included within total contingent liabilities for 2017/18 is $30.0 million (2016/17: $17.9 million) of compulsory land acquisitions where the Corporation will receive an equivalent land asset, which has not been disclosed separately. Compulsory land acquisitions are considered assets due to the Corporation receiving equivalent land. Given the significant estimation uncertainty, these are not treated as provisions. The Corporation only recognises assets and liabilities once the Notice of Acquisition has been issued to the landowner.

Other Disclosures (continued)

Introduction

This section includes those additional disclosures required by 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 (the Plan) provides lump sum benefits based on length of service and final superannuable salary for employees engaged prior to 31 December 1993. Employees contribute at rates between 0% to 7.5% of their superannuable salary. The Corporation contributes to the Plan based on the Corporation's commitments under the Employee Participation Agreement and Contribution Policy with the Trustee of the Plan.

Defined benefit members receive lump sum benefits on retirement, death, disablement and withdrawal. Some defined benefit members are also eligible for pension benefits in some cases. The defined benefit section of the Plan is closed to new members.At each reporting date, a liability or asset in respect of defined benefit superannuation obligations is recognised. This is measured as the difference between the present value of the defined benefit obligations at the reporting date and the net market value of the Plan's assets.

The present value of defined benefit obligations is based upon future payments, which are expected to arise due to membership of the Plan to date, taking into account the taxes payable by the Plan.

Consideration is given to expected future salary levels and employee departures. Expected future payments are discounted to present values using yields applying to long-term Commonwealth Government Bonds. 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.

	($ thousands)	
	2018	2017
Employer contributions to the defined benefit superannuation plan	-	-

The Superannuation Industry Supervision (SIS) legislation governs the superannuation industry and provides the framework within which superannuation plans operate. The SIS Regulations require an actuarial valuation to be performed for each defined benefit superannuation plan every 3 years, or every year if the plan pays defined benefit pensions.

The Plan's Trustee is responsible for the governance of the Plan. The Trustee has a legal obligation to act solely in the best interests of Plan beneficiaries. The Trustee has the following roles:

- Administration of the Plan and payment to the beneficiaries from Plan assets when required in accordance with the Plan rules;
- Management and investment of the Plan assets; and
- 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 higher than expected, resulting in pensions being paid for a longer period. Secondly, the risk that a greater proportion of eligible members will elect to take a pension benefit, which is generally more valuable than the corresponding lump sum benefit.

The Plan assets are invested by the Trustee in a pool of assets with plans providing defined benefits for other employers. The allocation both globally and across sectors is diversified.

Other Disclosures (continued)

7.1 Superannuation

Reconciliation of the present value of the defined benefit superannuation obligation

($ thousands)

	2018	2017
Present value of defined benefit obligation at beginning of the year	69,610	80,833
Current service cost	2,397	2,561
Interest cost	1,469	1,517
Contributions by Plan participants	523	758
Benefits paid	(14,173)	(9,346)
Taxes and premiums paid	(270)	(452)
Actuarial gains arising from changes in demographic assumptions	-	(7)
Actuarial gains arising from changes in financial assumptions	(1,627)	(1,526)
Actuarial losses arising from liability experience	3,336	(4,728)
Present value of the defined benefit obligation at year end	**61,265**	**69,610**

Reconciliation of the fair value of Plan assets

($ thousands)

	2018	2017
Fair value of plan assets at beginning of the year	92,199	91,379
Contributions by Plan participants	523	758
Benefits paid	(14,173)	(9,346)
Taxes and premiums paid	(270)	(452)
Interest Income	1,896	1,699
Actual return on Plan assets less interest income	4,855	8,161
Fair value of Plan assets at year end	**85,030**	**92,199**

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

($ thousands)

	2018	2017
Net defined benefit (asset)/liability at start of year	(22,589)	(10,546)
Current service cost	2,397	2,561
Net interest	(427)	(182)
Actual return on Plan assets less interest income [(a)]	(4,855)	(8,161)
Actuarial gains arising from changes in demographic assumptions [(a)]	-	(7)
Actuarial gains arising from changes in financial assumptions [(a)]	(1,627)	(1,526)
Actuarial losses/(gains) arising from liability experience [(a)]	3,336	(4,728)
Net defined benefit asset at year end	**(23,765)**	**(22,589)**

Note:
(a) Actuarial gains before tax were $3,146k (2016/17: $14,422k) (after tax: $2,202k (2016/17: $10,095k)).

The Corporation has recognised an asset in the Statement of Financial Position in respect of its defined benefit superannuation Plan arrangements at 30 June 2018 (2016/17: 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 2017/18, the contributions rate continued to be zero due to sufficient surplus in the Plan (2016/17: zero).

Fair value of the Plan assets as at 30 June 2018

($ thousands)

	Total	Level 1 [a]	Level 2 [b]	Level 3 [c]
Asset category				
Investment funds	85,030	-	85,030	-
Total	**85,030**	**-**	**85,030**	**-**

Fair value of the Plan assets as at 30 June 2017

($ thousands)

	Total	Level 1 [a]	Level 2 [b]	Level 3 [c]
Asset category				
Investment funds	92,199	-	92,199	-
Total	**92,199**	**-**	**92,199**	**-**

Notes:
(a) Quoted prices (unadjusted) in active markets for identical assets or liabilities.
(b) Inputs based on observable market data (either directly using prices or indirectly derived from prices).
(c) Inputs not based on observable market data.

Significant actuarial assumptions at the balance sheet date

($ thousands)

	2018	2017
Assumptions to determine defined benefit cost		
Discount rate	2.20%	2.00%
Expected salary increase rate	3.25%	3.25%
Expected pension increase rate	2.50%	3.00%
Assumptions to determine defined benefit obligation		
Discount rate	2.50%	2.20%
Expected salary increase rate	3.25%	3.25%
Expected pension increase rate	2.50%	2.50%

Other Disclosures (continued)

7.2 Responsible persons

The relevant Portfolio Minister and directors of the Corporation are deemed to be the responsible persons by Ministerial Direction pursuant to the provisions of the *Financial Management Act 1994*. In accordance with 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 2017 to 30 June 2018
Chairman	John Thwaites	1 July 2017 to 30 June 2018
Managing Director	Michael Wandmaker	1 July 2017 to 30 June 2018
Deputy Chairman	Merran Kelsall	1 July 2017 to 30 June 2018
Director	Kathleen Bailey-Lord	1 July 2017 to 30 June 2018
Director	Hugh Gleeson	1 July 2017 to 30 June 2018
Director	Robyn McLeod	1 July 2017 to 30 June 2018
Director	Garry Smith	1 July 2017 to 30 June 2018
Director	Russell Anderson	1 October 2017 to 30 June 2018
Director	Fiona Rowland	1 October 2017 to 30 June 2018
Director	Dana Hlavacek (retired)	1 July 2017 to 30 September 2017
Director	David Buckingham (retired)	1 July 2017 to 30 September 2017

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	
	2018	2017
Income Band ($)	Number	Number
10,000 - 19,999	2	-
20,000 - 29,999	-	-
30,000 - 39,999	2	-
40,000 - 49,999	2	7
50,000 - 59,999	3	-
60,000 - 69,999	-	-
90,000 - 99,999	1	1
480,000 - 489,999 [(a)]	-	1
509,999 - 520,000 [(a)]	1	-
Total numbers	**11**	**9**
Total remuneration ($000)	**952**	**919**

Note:
(a) Remuneration received by the Managing Director

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 Key Management Personnel disclosed in Note 7.4)	($ thousands) 2018	2017
Short-term employment benefits	3,493	3,148
Post-employment benefits	199	241
Other long-term benefits	82	79
Termination benefits	-	-
Total remuneration[a]	**3,774**	**3,468**
Total number of executives	**12**	**12**
Total annualised employee equivalent[b]	**11**	**11**

Note:
(a) 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.
(b) Annualised employee equivalent is based on the time fraction worked over the reporting period.

7.4 Related Parties

The Corporation is a wholly owned and controlled entity of the State of Victoria. Related parties of the Corporation include all key management personnel and their close family members and personal business interests (i.e. controlled entities, joint ventures and entities they have significant influence over), all Cabinet Ministers and their close family members; and all departments and public sector entities that are controlled and consolidated into the whole of State consolidated financial statements. All related party transactions have been entered into on an arm's length basis.

Key management personnel (KMP) of the Corporation include the Portfolio Minister and all Directors 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.

Other Disclosures (continued)

	($ thousands)	
Compensation of KMP	**2018**	**2017**
Short-term employment benefits	1,276	1,222
Post-employment benefits	78	76
Other long-term benefits	20	19
Termination benefits	-	-
Total[(a)]	**1,374**	**1,317**

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

Transactions with key management personnel and other related parties

During the year, related parties of KMPs were awarded contracts on terms and conditions equivalent for 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 arms length basis with a materiality threshold set at $100K.

These transactions are as follows:	($ thousands)	
	2018	**2017**
Lisa Neville MP - Minister for Water		
The Honourable Lisa Neville is one of the Ministers responsible for the Department of Environment, Land, Water and Planning. All dealings with this entity were on normal terms and conditions during the reporting period.		
Total payments made to DELWP were (including VDP payments):	672,571	667,554
Michael Wandmaker - Managing Director		
Michael Wandmaker is a member of the Monash Industry Council of Advisers at Monash University. He ceased to be a Director of Water Services Association of Australia in 2016. All dealings with these agencies were on normal terms and conditions during the reporting period.		
Total payments made to Water Services Association of Australia:	-	348
Total payments made to Monash University were:	545	612
John Thwaites - Chair		
John Thwaites is the Chairman of the Monash Sustainable Development Institute. All dealings with this agency were on normal terms and conditions during the reporting period.		
Total payments made to Monash University were:	545	612
Merran Kelsall - Director		
Merran Kelsall is the Chairman of the Risk, Audit and Compliance Committee for the Environmental Protection Authority Victoria (EPAV) and a member of the Monash University Business Advisory Board. All dealings with these entities were on normal terms and conditions during the reporting period.		
Total payments made to EPAV were:	946	928
Total payments made to Monash University were:	545	612

Transactions with key management personnel and other related parties (continued)

	($ thousands) 2018	2017
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:	92	-
Dana Hlavacek - Director		
Dana Hlavacek 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:	80	139

All other transactions that have occurred with KMPs and their related parties have been trivial or civil in nature. In this context, transactions are only disclosed when they are considered of interest to users of the financial report in making and evaluating decisions about the allocation of scarce resources and to better understand the effects of related party transactions on the financial statements.

Related parties with significant transactions

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) and Department of Treasury and Finance (DTF)

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 Plan. The Corporation makes Victorian Desalination Plant payments directly to DELWP, who are managing the contract with AquaSure on behalf of the State.

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 $50 million (2016/17: $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 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.

Other Disclosures (continued)

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

- Australian Institute of Management
- Chisholm Institute
- Environment Protection Agency Victoria
- Energy Safe Victoria
- Level Crossing Removal Authority
- Melbourne Metro Railway Authority
- Monash University
- Westernport Region Water Corporation
- Macedon Ranges Shire
- Urban Renewal Authority Victoria
- Port Philip & Westernport Catchment Management Authority
- Parks Victoria
- Southern Rural Water Corporation
- Victoria State Emergency Service
- Victorian Water Industry Association
- Victorian Workcover Authority
- Water Services Association of Australia
- Department of Economic Development, Jobs, Transport and Resources
- VicRoads
- Victorian Rail Track

Other related parties with arms-length transactions greater than $100K have been disclosed above.

In the below summaries, all other related parties transactions and payable balances below $100k have also been included.

Material transactions with related parties

($ thousands)

	2018	2017
Receipts from related parties (inclusive of GST)		
DELWP	3,279	1,168
City West Water	405,461	404,440
South East Water	588,110	584,619
Yarra Valley Water	589,318	582,892
Western Water	8,682	9,135
Barwon Water	-	21,482
TCV	178	-
Development Victoria	4,691	2,817
Other related parties	3,378	1,692

($ thousands)

	2018	2017
Payments to related parties (inclusive of GST)		
DELWP	672,571	667,554
DTF	216,387	263,372
City West Water	4,950	5,197
South East Water	5,494	5,370
Yarra Valley Water	5,726	5,381
Western Water	151	159
Barwon Water	-	6
TCV	177,127	174,036
Development Victoria	394	8,399
Other related parties	4,590	5,228
Dividend paid		
DTF	77,100	28,300
Repayment of equity contributions		
DTF	27,910	-
DELWP	122	4

Other Disclosures (continued)

Material transactions with related parties (continued)

Outstanding balances arising from sales/purchases of goods and services

($ thousands)

	2018	2017
Receivables		
DELWP	-	107
City West Water	8,203	10,055
South East Water	8,579	8,611
Yarra Valley Water	11,510	13,375
Development Victoria	-	36
Other related parties	354	44
Payables		
DELWP	4,069,975	4,130,863
DTF	20,607	17,714
Yarra Valley Water	-	5
TCV	4,038,380	3,901,179
Other related parties	4,259	385

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)

	2018	2017
Audit of financial report by the Victorian Auditor-General's Office	175	170
Total amount paid/payable	**175**	**170**

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 2017/18, the Corporation incurred no ex-gratia expenses (2016/17: $0).

7.7 Subsequent events

No matters or circumstances have arisen since the end of the reporting period which significantly affected or may significantly affect the operations of the Corporation, or the results of those operations.

7.8 Prospective accounting and reporting changes

Certain new accounting standards and interpretations that are deemed relevant to the Corporation have been published, but are not mandatory for the 30 June 2018 reporting period. The Corporation has not adopted these standards early in accordance with DTF guidance.

The Corporation's assessment of the impact of these new standards and interpretations is set out below:

AASB 15 *Revenue from Contracts with Customers*

The core principle of the Standard requires an entity to recognise revenue when the entity satisfies a performance obligation by transferring a promised good or service to a customer and is effective from 1 January 2018. The new Standard is based on the principle that revenue is recognised when control of a good or service transfers to a customer with the notion of control replacing the existing notion of risks and rewards. The Corporation has completed an impact assessment of this new Standard in the 2018 financial year and has concluded that there are no material changes to revenue recognition, other than for developer charges and contributions. Currently developer charges and contributions are recognised on receipt. Under AASB 15 we expect that developer charges and contributions will instead be recognised at the point in time the Statement of Compliance (SOC) is issued to the developer, which is later than receipt. This will require recognition of receipts as income in advance to the Statement of Financial Position to be released to revenue as the SOC is issued. The financial impact of the change is still being quantified.

The above assessment also included the following amendments to AASB 15:

- AASB 2014-5 Amendments to Australian Accounting Standards arising from AASB 15
- AASB 2015-8 Amendments to Australian Accounting Standards – Effective date of AASB 15
- AASB 2016-3 Amendments to Australian Accounting Standards – Clarifications to AASB 15

AASB 16 *Leases*

This Standard will primarily affect accounting by lessees and will result in the recognition of almost all leases on the Statement of Financial Position and is effective 1 January 2019. The Standard removes the current distinction between operating and financing leases and requires recognition of an asset (the right to use the leased item) and a financial liability to pay rentals for almost all lease contracts. Accounting by lessors will not significantly change. Management has conducted an assessment over current operating leases and has made an assessment of the impact in regards to the new Standard. In line with recommendations from DTF, Melbourne Water is planning to apply a retrospective modified approach and will recognise an asset and liability predominantly for two office buildings and a parking area. The financial impact of the change is still being quantified

AASB 9 Financial Instruments

The key changes to this Standard include the simplified requirements for the classification and measurement of financial assets, a new hedging accounting model and a revised impairment loss model to recognise impairment losses earlier, as opposed to the current approach that recognises impairment only when incurred. An assessment undertaken by management has identified that historical writeoffs have been not material, with future expected losses to also be immaterial. As such, it is expected that there will be no need to raise future provisions for doubtful debts. Whilst there may be no significant impact to the Corporation arising from AASB 9, there will be a change to the way financial instruments are disclosed. This is effective 1 January 2018.

VAGO
Victorian Auditor-General's Office

Independent Auditor's Report

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 2018
- 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 2018 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
Long term procurement of the Victorian Desalination Plant (VDP) using a private public partnership (PPP) agreement and Department of Environment, Land, Water and Planning (DELWP) contracts *Refer to Note 5.1 Interest bearing liabilities and Note 5.3 Commitments*	

VDP finance lease liability: total $4.069 billion, current $70.339 million, and non-current $3.999 billion.
 	
VDP commitment disclosures: minimum future lease repayments $10.291 billion and other expense commitments $4.329 billion.
 	
I considered this to be a key audit matter because:
• the finance lease liability and future VDP commitments are financially significant
• the VDP's contractual rights and obligations with DELWP are complex
• the corporation places significant reliance on DELWP for the underlying data for the accounting and disclosures
• the finance lease model is highly complex, involves significant management judgement and is underpinned by various subjective assumptions
• the accounting for, and disclosures related to, the VDP are inherently complex with limited authoritative accounting guidance available
• small changes to the contractual terms and conditions (for example—refinancing requirements) significantly impact the liability carrying value
• the VDP's commitment disclosures involve significant management judgements and estimates, and amendments were required in prior years.
	My key procedures included:
	• gaining an understanding of the key contractual changes for the current year
	• engaging a subject matter expert to assist in obtaining sufficient, appropriate audit evidence for the finance lease liability and commitment disclosures, including of the:
	  • appropriateness of re-financing adjustments
	  • reasonableness and consistency of all the finance lease model assumptions
	  • identification of any model or assumptions changes
	  • reasonableness of all model inputs, with specific reference to underlying data and supporting documentation (i.e. contracts, water orders)
	  • model's computational accuracy
	  • appropriateness of all VDP related financial report disclosures as required by AASB 117 *Leases*
	• evaluating the subject matter expert's report, including assessing it for consistency with other audit evidence obtained, and the relevance and reasonableness of their findings and assumptions
	• 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 estimate of the fair value of infrastructure assets is derived from an income-based valuation approach that uses a complex discounted cashflow model ('DCF model'). *Note 4 - Key* assets used to support delivery of our services	

Fair value estimate of infrastructure assets: $8.557 billion.
 	
I considered this to be a key audit matter because the:
• infrastructure assets are financially significant to the corporation
• fair value estimate relies on management's use of an external valuation expert
• DCF model is highly complex and involves significant management judgements, underpinned by various subjective assumptions
• assumptions used in the model can be significantly affected by small adjustments in the calculated value
• model's forecast period is long, and includes a terminal value, which increases the difficulty in accurately estimating the DCF
• applicable accounting standard AASB 13 *Fair Value Measurement* (AASB 13), and the Minister for Finance issued Financial Reporting Direction 103F *Non-financial physical assets* (FRD 103F) require extensive financial report disclosures.
	My key procedures included:
	• obtaining an understanding of management's approach to estimating the fair value of infrastructure assets including evaluating the design and operating effectiveness of the key controls relating to this area
	• 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
	  • identify 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 (i.e. approved Corporate Plans, Water Plans, ABS data)
	  • the DCF model's computational accuracy
	  • the appropriateness of all infrastructure asset related financial report disclosures with regard to AASB 13 and FRD 103F, including the significant observable and unobservable inputs utilised in the model and the sensitivity analysis.
	• evaluating our subject matter expert's findings and concluded the findings are 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 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 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 the 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
28 August 2018

Paul Martin
as delegate for the Auditor-General of Victoria

Performance Reporting

Contents

Performance Report

Financial Performance Indicators

KPI Number [1]	Key Performance Indicator	2016-17 Result	2017-18 Result	2017-18 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	2.0	1.9	1.8	-5.0%	[2]	5.6%	
F2	**Gearing Ratio** Total Debt (including finance leases) / total assets * 100	53.6%	52.6%	54.6%	-1.9%		-3.7%	
F3	**Internal Financing Ratio** Net operating cash flow less dividends / net capital expenditure * 100	89.0%	78.6%	70.0%	-11.7%	[3]	12.3%	[4]
F4	**Current Ratio** Current assets / current liabilities (excluding long-term employee provisions and revenue in advance)	0.09 times	0.10 times	0.05 times	11.1%	[5]	100.0%	[6]
F5	**Return on Assets** Earnings before net interest and tax / average assets * 100	6.0%	6.4%	5.4%	6.7%		18.5%	[7]
F6	**Return on Equity** Net profit after tax / average total equity * 100	2.9%	3.8%	1.6%	31.0%	[8]	137.5%	[9]
F7	**EBITDA Margin** Earnings before Interest, Tax, Depreciation and Amortisation / total revenue * 100	71.4%	72.2%	71.7%	1.1%		0.7%	

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.

[2] The variance to prior year is as a result of higher cash payments to suppliers and employees $53.9 million. The 2017-18 result is above the target range and in line with business expectations.

[3] The variance to prior year is as a result of higher cash payments for capital expenditure of $32.4 million and higher dividend payments of $48.8 million compared to prior year. The 2017-18 result 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 as per the 2016 pricing determination and capital expenditure profile.

[4] The favourable variance to target is due to an increase in operating cash flows due to stronger trading results and lower cash payments for capital expenditure compared to plan.

[5] The variance to prior year is favourable due to an increase in current assets being higher trade and other receivables of $9.4 million and assets held for sale $10.2 million at the end of June 2018.

[6] The favourable variance to target is due to higher current assets being trade and other receivables $37.7 million and assets held for sale $16.6 million.

[7] The favourable variance to target is due to higher Earnings Before Net Interest and Tax during the year of $160.8 million due to higher revenue and lower expenditure.

[8] The variance to prior year is favourable due to higher Net Profit After tax of $58.4 million due to higher revenue and lower expenditure.

[9] The favourable variance to target is due to higher Net Profit After Tax during the year compared to plan of $123.8 million. Improved performance is mainly due to higher than anticipated revenue predominantly from developer contributions and lower operating and finance expenses.

Performance Report

Water, sewerage and other service performance indicators

KPI Number [1]	Key Performance Indicator	2016-17 Result	2017-18 Result	2017-18 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	97.8%	98.9%	91.5%	1.1%		8.1%	[10]
CRM1	**Customer Responsiveness** Complaints referred to Energy and Water Ombudsman Victoria (EWOV) responded to within EWOV established time	98.0%	100.0%	100.0%	2.0%		0.0%	
EM1	**Non-Compliance with other EPA Victoria License 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	100.0%	100.0%	100.0%	0.0%		0.0%	
EM2.2	Eastern Treatment Plant	100.0%	100.0%	100.0%	0.0%		0.0%	
E2	**Total net CO2 emissions** Net tonnes CO2 equivalent	N/A	453,477	N/A		[11]		[11]
WW1	**Waterways — Drainage and Flood protection** % reduction in flood effects achieved by projects in delivery by Melbourne Water by 2021	N/A	0.0%	0.0%	0.0%		N/A	
WW2	**Waterways condition** Active management of waterways will contribute to maintaining or improving waterway health	94.0%	90.0%	80.0%	N/A	[12]	12.5%	[12]

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.

[10] The positive result is due to major storage reservoirs being well managed and there were no significant events impacting water turbidity.

[11] This is a new performance indicator this year and was not included in the Corporate Plan. Therefore there is no comparable target.

[12] The KPI for waterways condition is now an outcome based target measured as part of the new Waterways Drainage Investment Plan and replaces the 2016-17 KPI measured as part of the *Healthy Waterways Strategy*. Therefore the variance to prior year assessment is not applicable. The positive result for 2017-18 is due to 90% of waterways that have undergone active management being on track to achieve condition improvement trajectories compared to the monitoring target of 80%.

Water, sewerage and other service performance indicators (continued)

KPI Number [1]	Key Performance Indicator	2016-17 Result	2017-18 Result	2017-18 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	100.0%	100.0%	100.0%	0.0%		0.0%	
RW1.3	Quality	100.0%	100.0%	100.0%	0.0%		0.0%	
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%	
RW2.2	Reliability	N/A	N/A	100.0%	N/A	[13]	N/A	[13]
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.

[13] ETP – Recycled Water (Reliability) metric is not applicable as the retailer has not specified any contractual service or regulatory obligation based on their customer requirements. Communication protocols have been established between the plant and retailer regarding any scheduled or unexpected outages.

Certification of Performance Report for 2017-18

We certify that the accompanying Performance Report of Melbourne Water Corporation in respect of the 2017-18 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 *2017-18 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
Chairman

24 August 2018

Michael Wandmaker
Managing Director

24 August 2018

Anthony O'Shannessy
Chief Financial Officer

24 August 2018

Dated this 24th day of August 2018

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 2018, which comprises the: • financial performance indicators • water, sewage and other service performance indicators • certification of performance report. In my opinion, the performance report of the Melbourne Water Corporation for the year ended 30 June 2018 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*. I and my staff 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 statement of performance that is free from material misstatement, whether due to fraud or error.
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.

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

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 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 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
28 August 2018

Paul Martin
as delegate for the Auditor-General of Victoria

Appendices

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The *Melbourne Water Annual Report 2017-18* 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 2017-18 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 2017-18, there were twenty three consultancies engaged during the year where the total fees payable to the consultants were $10,000 or greater. The total expenditure incurred during 2017-18 in relation to these consultancies was $1,090,992 (excl. GST).

Consultancies valued at less than $10,000

In 2017-18, there were three consultancies engaged during the year where the total fees payable to the consultants were less than $10,000. The total expenditure incurred during 2017-18 in relation to these consultancies was $12,100 (excl. GST).

Advertising Campaigns

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

ICT Expenditure

For the 2017-18 reporting period, Melbourne Water had a total ICT expenditure of $57,284,417 (2016-17: $55,526,957) with the details shown below.

Business as usual (BAU) ICT expenditure ($000)	Non-business as usual (non-BAU) ICT expenditure (operational and capital expenditure) ($000)	Non-BAU ICT expenditure (operational expenditure) ($000)	Non-BAU ICT expenditure (capital expenditure) ($000)
$31,804	$25,481	-	$25,481

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 2018. Details of contracts can be viewed on Melbourne Water's website at www.melbournewater.com.au

Competitive Neutrality Policy

Melbourne Water is corporatised and therefore has an independent Board, with independent and objective performance monitoring. We face 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 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 actions for anti-competitive behaviour.

Pricing

Following an 11 per cent decrease (plus inflation) in 2016-17, Melbourne Water's wholesale water and sewerage prices will increase approximately in line with inflation for the remaining four years of the Essential Service Commission Price Determination (until 2020-21), which increases an average household water bill by approximately $25 per annum (depending on inflation). The annual waterways and drainage charge of $98.88 for 2017-18 will also increase by inflation.

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	Acting Authorised Officer
Mr J Thwaites	Mr M Keough	Ms J Cowley
Chair, Melbourne Water Board	FOI and Privacy Advisor and Government Liaison	Records Coordinator

Requests for information

We received 24 requests. We finalised 16. Four of the other requests did not proceed and one was processed outside the FOI Act. Three were still in progress.

Sixteen requests were from members of the public, three from law firms, two from interest groups, two from corporations and one from a journalist. No requests were for personal information.

We released 162 documents, 145 of them in full. Exemptions applied where disclosure of personal affairs would be unreasonable or disclosure of information of a business, commercial or financial nature would unreasonably disadvantage an undertaking.

Finalised requests 16	Other requests 8
Access outcomes: • Access in full: 9 • Access in part: 4 • No documents: 2 • Access denied: 1	**Outcomes:** • Not proceeded with: 4 • Not yet finalised: 3 • Finalised outside the Act: 1
Related to: • Property development: 7 • Capital works: 2 • Flooding: 2 • Leases: 2 • Waterway management: 2 • Partnerships: 1 • Property damage: 1	**Related to:** • Waterway management: 3 • Flooding: 2 • Water supply: 2 • Property development: 1

Reviews and complaints

A complaint accepted by the Information Commissioner in relation to a request received in the previous year was resolved by agreement of the complainant.

Access to documents

People wanting access to Melbourne Water documents under the FOI Act may use our online FOI application on our website at: melbournewater.com.au

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 ($28.90 from 1 July 2018).

General enquiries about FOI may be made by contacting the Freedom of Information Officer on (03) 9679 7111 between 9am and 5pm Monday to Friday or via email to foi@melbournewater.com.au

Information required under Part II of the FOI Act is available on our website, melbournewater.com.au

The statement includes information about Melbourne Water functions, decision making, consultation arrangements and publications. It also outlines how to make an FOI 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 II Information Statement on our website at melbournewater.com.au

Appendix B – Corporate Information (continued)

Building Compliance

Melbourne Water continues to work toward compliance with the *Building Act 1993* across our substantial property and building portfolio. A compliance program is in place which we continue to action.

Melbourne Water has developed and is implementing an ongoing compliance program to obtain Maintenance Determinations and is working to update its Asset Management System to ensure the Essential Safety Measures are identified and have maintenance regimes specified and executed. Melbourne Water engages Building Practitioners to conduct Annual Essential Safety Measure Reports for buildings as part of the Compliance Program. Rectification works are initiated by maintenance co-ordinators and asset managers depending whether the works require maintenance or renewal/replacement respectively. The corporation's Asset Management System is used to schedule works and record activity undertaken.

In 2017-18:

number of major works projects undertaken by (greater than $50 000)	11
number of building permits, occupancy permits or certificate of final inspection issued in relation to buildings owned by the entity	8 building permits 2 occupancy permits 2 certificates of final inspection
number of emergency orders and building orders issued in relation to buildings	0 emergency orders 0 building orders
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* and the *Health Records Act 2001* and 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 complaints in relation to privacy intrusions this year or notifications of complaints received by the Information Commissioner or the Health Complaints Commissioner.

Melbourne Water is committed to openness and transparency and welcomes any queries 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 (03) 9679 7100 (within the rest of Australia) or write to:

Privacy Advisor
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 Minister for Finance, 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 www.melbournewater.com.au

Protected Disclosure

The *Protected Disclosure Act 2012* (the Act) assists people to expose wrongdoing in public life and protects them from any reprisals. The Act applies to Melbourne Water and members of our community must be able to 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 disclosure such conduct. Melbourne Water is committed to ensuring transparency and accountability in our administrative and management practices and support the making of disclosures that reveal corrupt conduct, conduct involving a substantial mismanagement of public resources or conduct involving a substantial risk to public health and safety or the environment. Our commitment is incorporated in our Code of Conduct and our Protected 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 'protected disclosure'?

You can make a protected 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 protected disclosures. Melbourne Water has had no incidents of corruption in 2017-18.

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 protected disclosure about Melbourne Water or its employees. You can access our procedures at melbournewater.com.au

Contacts

Bernadette Doyle, General Counsel
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

www.ibac.vic.gov.au
Phone: 1300 735 135

See the IBAC website for the secure email disclosure process which also provides for anonymous disclosures.

Industry Memberships

Melbourne Water maintains several industry memberships and associations, particularly those associated with the Australian water industry and provision of infrastructure. We often serve on committees from both a governance perspective and on issue specific initiatives. We engage frequently with the following organisations:

- Water Services Association of Australia
- VicWater
- Stormwater Victoria
- Water Research Australia
- Australian Water Association
- Climate Research Centre for Water Sensitive Cities
- Infrastructure Partnerships Australia
- Institute of Water Administration
- Committee for Melbourne
- Global Compact Network
- CEDA – Committee for the Economic Development of Australia
- Urban Development Institute of Australia (EnviroDevelopment)
- Association of Land Development Engineers Australia
- Engineers Australia
- Water Stewardship Australia.

As a State Government-owned entity, Melbourne Water does not make any political donations or contributions

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').

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 2017-2018 (i) Total inflows[a]; (ii)Total storage volumes[b]; and (iii)Total outflows[c]	N/A	Clause 15.1 (a) (i). 287,796 ML (ii). 407,068 ML (iii). 316,463 ML	Clause 14.1 (a) (i). 757 ML (ii). No storage is available in Silver & Wallaby (iii). 757 ML	Clause 15.1 (a) (i). 96,534 ML (ii). 566,017 ML (iii). 133,540 ML	Clause 15.1 (a) (i). 13,657 ML (Tarago) 2,190 ML (Bunyip) (ii). 28,330 ML (Tarago) No storage is available in Bunyip (iii). 16,851 ML (Tarago) 2,190 ML (Bunyip)
Compliance with the diversion limit	386,160 ML[1]	Clause 15.1 (b) 279,209 ML[3]	Clause 14.1 (b) 4,874 ML[6]	Clause 15.1 (b) 104,057 ML[8]	Clause 15.1 (b) 11,316 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
Volume of water made available to PEHs from seasonal determinations (on 1 June 2018)	N/A	Clause 15.1 (f) Greater Yarra System – Thomson River Pool[4] 90,755 ML (City West Water) 122,522 ML (South East Water) 130,538 ML (Yarra Valley Water) 9,503 ML (Barwon Water) 594 ML (South Gippsland Water) 594 ML (Westernport Water) 10,840 ML (Western Water)	Clause 14.1 (f)	Clause 15.1 (f)	Clause 15.1 (f)

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)
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 2018 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 Compliance with the long-term average diversion limit of 555,000 ML was assessed for 2017-18 and confirmed using a 15-year rolling average annual diversion. During 2017-18 the Minister for Water approved a new diversion limit compliance method proposed by Melbourne Water as required by its bulk entitlements. Compliance for 2017-18 will be recalculated using the new diversion limit compliance method and reported in the 2018-19 Annual Report.

Yarra River

2 Melbourne Water holds the Bulk Entitlement (Yarra River – Melbourne Water) Order 2014 – WSE000185.

3 Compliance with the long-term average diversion limit of 400,000 ML was assessed for 2017-18 and confirmed using a 15-year rolling average annual diversion. During 2017-18 the Minister for Water approved a new diversion limit compliance method proposed by Melbourne Water as required by its bulk entitlements. Compliance for 2017-18 will be recalculated using the new diversion limit compliance method and reported in the 2018-19 Annual Report.

Greater Yarra System – Thomson River Pool

4 The Greater Yarra System – Thomson River Pool includes the following Bulk Entitlements held by Melbourne Water:

- Bulk Entitlement (Yarra River – Melbourne Water) Order 2014 – WSE000185
- Bulk Entitlement (Silver and Wallaby creeks – Melbourne Water) Order 2014 – WSE000018
- Bulk Entitlement (Tarago and Bunyip Rivers – Melbourne Water) Order 2014 – WSE000041
- 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 Compliance with the long-term average diversion limit of 171,800 ML was assessed for 2017-18 and confirmed using a 15-year rolling average annual diversion. During 2017-18 the Minister for Water approved a new diversion limit compliance method proposed by Melbourne Water as required by its bulk entitlements. Compliance for 2017-18 will be recalculated using the new diversion limit compliance method and reported in the *2018-19 Annual Report*.

Appendix C – Bulk Entitlements (continued)

Notes for compliance with Bulk Entitlements (continued)

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 2017–18	Clause 19.1 (b), 418 ML
Compliance with the five-year rolling average annual bulk entitlement diversion limit of 1,096 ML	423 ML
Melbourne Water's share of flow into Rosslynne Reservoir in 2017–18	Clause 19.1 (a,iii), 97 ML
Melbourne Water's share of storage volume in Rosslynne Reservoir at 30th June 2018	Clause 19.1 (a,ii), 595 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 2017–18	Clause 19.1 (a, i), 300 ML
Releases from Melbourne Water's share of flow to meet minimum flows	Clause 19.1 (a,v), 37 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[2]
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

[2] In total 31 transfers of licences were made: 1) one licence transferred; 2) one licence surrendered; 3) 29 licence transfers to Victorian Environmental Water Holder with 300 ML.

Appendix D – Private Diversion Licences

Melbourne Water manages 1823 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 1212 with a combined volume of 34,969.4 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 2017-18.

Licence Totals	No. Licences	Volume (ML)	Metered Usage
Farm Dam Registrations	523	6811.5	21.2
Farm Dam Licences	44	1009.5	219.5
Take & Use Licences Yarra	1168	33938.4	6295.0
Take & Use Licences Maribyrnong	44	1031	117.6
Stormwater Licences	44	2690.4	914.3
Environmental Water Licence	5	103.0	–

Appendix E – Flooding and Drainage

	2017-18	2016-17	2015-16	
Underground Drains				
Total Length of Melbourne Water Assets	1672	1668	1618	km
Total Length of Melbourne Water Assets excluding drainage scheme areas	1065	1061	1022	km
Mapped 100yr ARI	977	867	809	km
Percentage Mapped	91	81	79	%
Mapped 20yr ARI	627	517	486	km
Percentage Mapped	59	49	47	%
Mapped 10yr ARI	306	196	180	km
Percentage Mapped	29	18	18	%
Mapped 5yr ARI	264	154	138	km
Percentage Mapped	25	15	14	%
Natural Waterways				
Total Length of Melbourne Water Assets	8665	8684	8685	km
Total Length of Melbourne Water Assets excluding drainage scheme areas, forested areas and French Islands	6425	5616	5661	km
Mapped 100yr ARI	4270	3990	3350	km
Percentage Mapped	66	71	60	%
Mapped 20yr ARI	309	254	194	km
Percentage Mapped	5	5	4	%
Mapped 10yr ARI	302	256	196	km
Percentage Mapped	7	5	4	%
Mapped 5yr ARI	281	236	178	km
Percentage Mapped	7	4	4	%
Channels				
Total Length of Melbourne Water Channels	1860	1859	1490	km
Mapped 100yr ARI (underground drains)	138	134	81	km
Mapped 100yr ARI (waterways)	1416	1416	1288	km
Mapped 100yr ARI (total)	1554	1560	1369	km
Percentage Mapped	84	84	92	%
Total				
Total length of Melbourne Water Assets	12,197	12,211	11,793	
Total length of Melbourne Water Assets excluding drainage scheme areas, forested areas and French Island	9350	8536	8173	
Mapped 100yr ARI	6801	6417	5528	
Percentage Mapped	73	75	68	

Appendix F – Environmental Data

Energy Consumption

Our electricity consumption across our services and other in megawatt hours (MWh) is set out in the following table.

Energy consumption reporting

Performance Indicator	(a) total energy use	renewable energy use (MWh)						(h) renewable energy use (%) ((h)/(a)) * 100	Renewable Energy Generated for Export (MWh)	Renewable energy use target (%) pre 2020
		(b) solar panels	(c) hydro-electric	(d) wind power	(e) biogas	(f) green power	(g) other	(h) total		
Water treatment and supply	118,069	0	53,208	0	0	0	0	53,208	45.06%	53,023	
Sewerage treatment and management	337,909	0	0	0	89,891	0	0	89,891	26.60%	4,899	
waterways	14,577	0	0	0	0	0	0	0			
Transport	10,186										
Other (office, workshops, depots etc.)											
Offsets		0	0	0	0	0	0	0			
Total	480,741	0	53,208	0	89,891	0	0	143,098	35.83%	57,922	25.00%

Note: Melbourne Water is committed to increasing its use of renewable energy. Please refer to details in Energy and Emissions, pages 40-41

Greenhouse Gas Emissions

Our electricity consumption across our services and other in megawatt hours (MWh) is set out in the following table.

Greenhouse gas emissions over the past five years in equivalent tonnes of carbon dioxide (t-CO2e)

Performance Indicator	Tonnes CO2-e			Variance (%)	Commentary
	Baseline	2017-18 Target	2017-18 result		
Water treatment and supply	n/a	n/a	60,398	-5%	Operational variance
Sewerage treatment and management	n/a	n/a	385,649	5%	Operational variance
Vehicle fleet	n/a	n/a	2,564	-5%	Operational variance
All other energy use (non-fleet)	n/a	n/a	4,866	44%	Increase in liquid fuels (Diesel) for stationary energy use increasing scope 1 emissions.
Offsets	n/a	n/a	n/a		
Total	408,860	379,649	453,477	19.45%	Melbourne Water is committed to emissions reduction. Please refer to details in Energy and Emissions, pages 40-41

Melbourne Water Corporate Consumption

Melbourne Water's consumption is 1.085kl or 1.0kl/FTE/year based on our operations at our corporate office at 990 La Trobe Street.

Appendix G – Workforce Statistics

Safety

The following safety statistics are provided as additional information in support of statutory reporting and other obligations.

Table G1 – Number of reported safety incidents per 100 full time equivalent (FTE) staff

	FTE	Hazards	Hazards/ 100 FTE	Incidents	Incidents/ 100 FTE	Total	Total/ 100 FTE
2016–17:	1002	503	50.2	438	43.7	941	93.9
2017–18:	1029	546	53.1	303	29.4	763	74.1

Table G2 – Number of lost time standard claims for the year per 100 FTE

	Number of Claims	Claims/100 FTE
2016–17	1	0.10
2017–18	3	0.3

Table G3 – Average cost per claim for the year (including payments to date and estimates of outstanding claim costs advised by WorkCover)

	Cost of Claim $
2016–17	65,339
2017–18	59,736

Table G4 – Types of Injury

	2017–18
Lost time injury (LTI)	3
Restricted work injury (RWI) / Medical treatment injury (MTI)	10
First Aid	74
Total	**88**

Total lost days in 2017-18 were 8.

People

The following employee-related statistics are provided as additional information in support of statutory reporting and other obligations.

Table G5 – Employee profile 2017-18

	Full-time permanent employees (Headcount)	Part-time permanent employees (Headcount)	Permanent employees (Headcount)	Fixed-term and casual employees (Headcount)	Permanent employees (FTE)	Fixed-term and casual employees (FTE)
June17	834	144	978	136	946	94
June18	840	156	996	139	960	94

Employee profile by type 2017-18

	Jun-17						
	All Employees		Ongoing			Fixed term and casual	
	Number Headcount	FTE	Full Time Headcount	Part Time Headcount	FTE	Number Headcount	FTE
Gender							
M	723	700	618	35	648	70	52
F	391	340	216	109	298	66	42
Age							
Under 25	19	16	10	0	10	9	6
25-34	288	272	224	24	243	40	29
35-44	363	338	257	74	312	32	26
45-54	255	243	205	29	228	21	15
55-64	166	153	131	12	142	23	12
Over 65	23	17	7	5	11	11	7
Classification							
Casual	75	36				75	36
Total 1-Senior Officer	653	631	517	86	583	50	48
1	2	2	1	0	1	1	1
2	47	46	43	2	44	2	2
3	68	67	67	1	67	0	0
4	50	48	38	9	45	3	3
5	128	126	105	8	112	15	14
6	111	106	85	21	102	5	5
7	237	227	172	43	205	22	21
Senior Officer	10	9	6	2	7	2	2
Senior Employees	386	373	317	58	363	11	10
Senior Manager	373	360	304	58	350	11	10
Executives	13	13	13	0	13	0	0

Graduates are excluded from workforce data, as per FRD29B guidance.
Employees on leave without pay or maternity leave without pay are excluded, as per FRD29B guidance.
Four employees were acting in long-term senior positions at the last full pay period in June of 2018.

Appendix G – Workforce Statistics (continued)

Employee profile by type 2017-18 (continued)

	Jun-18						
	All Employees			Ongoing		Fixed term and casual	
	Number Headcount	FTE	Full Time Headcount	Part Time Headcount	FTE	Number Headcount	FTE
Gender							
M	732	707	620	44	657	68	50
F	403	347	220	112	303	71	44
Age							
Under 25	31	26	13	1	13	17	12
25-34	279	262	217	25	237	37	26
35-44	386	356	269	80	330	37	27
45-54	252	239	196	32	221	24	18
55-64	166	155	136	13	147	17	8
Over 65	21	16	9	5	13	7	4
Classification							
Casual	65	28				65	28
Total 1-Senior Officer	687	658	529	97	603	61	55
1	7	7	0	1	1	6	6
2	52	49	39	4	41	9	8
3	74	73	71	1	71	2	2
4	54	51	43	7	48	4	3
5	115	110	90	13	100	12	10
6	115	112	93	16	106	6	6
7	242	229	173	51	212	18	16
Senior Officer	28	27	20	4	23	4	4
Senior Employees	383	369	311	59	357	13	12
Senior Manager	369	355	298	59	344	12	11
Executives	14	14	13	0	13	1	1

Graduates are excluded from workforce data, as per FRD29B guidance.
Employees on leave without pay or maternity leave without pay are excluded, as per FRD29B guidance.
Four employees were acting in long-term senior positions at the last full pay period in June of 2018.

Total number and rates of new employee hires by age group and gender

Gender	Headcount
M	97
F	74

Age	
Under 25	21
25-34	54
35-44	58
45-54	26
55-64	11
Over 65	1

Total number and rates of employee turnover by age group and gender

Gender	Headcount
M	94
F	60

Age	
Under 25	3
25-34	30
35-44	57
45-54	32
55-64	25
Over 65	7

Hours of training for the financial year 2017-18

	All Melbourne Water		
Age	F	M	All
Total Completed Hours of Training	9879	24,773	34,652
Total Number of Employees Completed Training	422	768	1190
Average Completed Training Hours Per Employee	23	32	29

Ratio of basic salary and remuneration of women to men by employee category by significant locations of operation

	Ratio (F/M)	
Corporate	Base	Remuneration
MW EA 1	N/A	N/A
MW EA 2	N/A	N/A
MW EA 3	0.96	1.04
MW EA 4	1.05	1.06
MW EA 5	1.02	1.05
MW EA 6	1.00	1.00
MW EA 7	0.99	1.00
SO	0.94	0.95
Senior Management	0.98	0.98
Executive	0.94	0.95

	Ratio (F/M)	
Service Delivery	Base	Remuneration
MW EA 1	1.14	1.10
MW EA 2	0.99	1.00
MW EA 3	0.99	0.95
MW EA 4	1.03	0.94
MW EA 5	0.97	0.82
MW EA 6	0.99	0.93
MW EA 7	0.98	0.91
SO	0.95	0.94
Senior Management	0.93	0.90
Executives	1.13	1.14

In addition:

- 100% of senior management were hired from the local community at significant locations of operation
- there is no minimum notice period regarding consultation of operational changes
- there were no grievances about labour practices filed
- 94.1% of employees were covered by the Enterprise Agreement
- human rights are not part of Melbourne Water's current training program
- no incidents of discrimination have been raised with Melbourne Water
- no incidents of violations involving the rights of Indigenous peoples have occurred
- no incidents of human rights violations have been recorded.

Appendix G – Workforce Statistics (continued)

Local Jobs First – Victorian Industry Participation Policy (VIPP)

In accordance with the *Victorian Industry Participation Act 2003*, the following VIPP contracts commenced or were completed during the 2017-18 financial year.

Contracts commenced to which the VIPP applied

Melbourne Water commenced 13 metropolitan contracts to which the VIPP applied. These contracts totalled $153.1 million. The Industry Capability Network (ICN) deemed that there were no contestable items on seven contracts and therefore a VIPP plan was not required.

The commitments by contractors that required a VIPP plan included:

- local content of 85 per cent of the total value of the contracts
- 319 FTE jobs
- 39 FTE apprenticeships and traineeships.

Contracts completed to which the VIPP applied

The Corporation completed three metropolitan contracts to which the VIPP applied. These contracts totalled $39.8 million. The outcomes reported by contractors under the VIPP included:

The outcomes reported by contractors under the VIPP included:

- local content of 95 per cent of the total value of the contracts
- 125 FTE jobs
- 1 FTE apprenticeships and traineeships.

Grants and design contracts:

- Nil.

Strategic Projects:

- Nil.

Appendix H – Global Reporting Initiative

Melbourne Water is signatory to the UN Global Compact and supports the UN Sustainable Development Goals (SDGs). We provide our Communication on Progress to the UN Global Compact through our Annual Report.

Melbourne Water's approach to reporting against the SGDs is through our Strategic KPIs in our *Corporate Plan* and through a formal sustainability reporting mechanism, the Global Reporting Initiative (GRI).

GRI and the UN Global Compact have established an initiative '*Business Reporting on the SDGs*' which will produce a handbook in December 2017 for SDG business reporting in the meantime. This report adopts the GRI Sustainability Standards (conforming to Core level of reporting)[3] as they are the current global standard for sustainability reporting and represent best practice. They are designed to be used by organisations to report about their impacts on the economy, the environment and/or society.

Sustainable development and materiality

Sustainability reporting requires an organisation to report on their significant economic, environmental and social impacts or that substantively influence the assessments and decisions of stakeholders.

In order to determine the issues that are material to Melbourne Water, engagement was undertaken to establish the relative significance of the SDGs to Melbourne Water's strategic activities and to understand our impact or influence on the UN Sustainable Development Goals. Melbourne Water stakeholders, customers, and staff contributed to an understanding of what SDGs are material to us and where opportunities for leadership lie. The following activities were undertaken to support this materiality assessment:

- external stakeholder interviews
- interviews with Melbourne Water Leadership Team and managers
- all staff survey
- mapping of Melbourne water strategies and activities against the SDGs and targets
- review of industry priorities
- review of peer reporting.

The results showed that Melbourne Water impacts across all 17 goals, albeit to differing degrees. The goals that are most material to us, SDGs 6, 11 and 15, align with the three pillars of our strategic direction. SDGs 3, 5, 7, 8, 9, 12, 13, 14 and 17 also featured as material with Melbourne Water having less direct impact on SDGs 1, 2, 4, 10 and 16.

Melbourne Water's approach to sustainable development and to supporting the SDGs is to enhance our contribution across all UN SDGs, while demonstrating leadership for SDGs 6, 11 and 15.

Given this, our GRI reporting (Core) covers most topics. In the few cases where specific disclosures are not relevant to our organisation they have been noted in the table. We have also reported on issues as they relate to the UN Global Compact Communication on Progress (see Appendix I, The UN Global Compact).

Reporting

The *Melbourne Water Annual Report 2017-18* content was defined through a combination of extensive, business-wide consultation, including with senior management and executives. Melbourne Water is also required to report under a range of regulatory instruments and our content also reflects these requirements.

Unless otherwise specified, topics are relevant across the entire Melbourne Water organisation and only inside the organisation. Refer to Tables H1 to H7 for Melbourne Water's GRI Standards disclosures.

Melbourne Water has not sought to have this report externally assured this year.

Our last Annual Report was published in 2016-17. No restatements of information have been made.

[3] Melbourne Water's 2015-16 Annual Report used G4 Guidelines. From 2016-17 we have moved to the GRI Standards framework

Appendix H – Global Reporting Initiative (continued)

H1: General Disclosures

Indicator	Disclosure	Location
GRI 102-1	Report the name of the organisation	Inside cover
GRI 102-2	Report the primary brands, products, and services	Inside cover, 8-42
GRI 102-3	Report the location of the organisation's headquarters	Rear cover
GRI 102-4	Report the number of countries where the organisation operates	Inside cover
GRI 102-5	Report the nature of ownership and legal form	66-67
GRI 102-5	Report the markets served	Inside cover, 44-50
GRI 102-7	Report the scale of the organisation including total number of employees, total number of operations, net sales or revenue, total capitalisation broken down for debt and equity, quantity of products or services provided	56, 61-70, 158-162
GRI 102-8	Information on employees and other workers	158-162
GRI 102-9	Describe the organisation's supply chain	65
GRI 102-10	Report any significant changes during the reporting period regarding the organisation's size, structure, ownership, or its supply chain	None to report
GRI 102-11	Report whether and how the precautionary approach or principle is addressed by the organisation	71
GRI 102-12	List externally developed economic, environmental and social charters, principles, or other initiatives to which the organisation subscribes or which it endorses	65-71
GRI 102-13	Membership of associations	149
GRI 102-14	Provide a statement from the most senior decision maker of the organisation about the relevance of sustainability to the organisation and the organisation's strategy for addressing sustainability	2-4, 6-7, 167-168
GRI 102-16	Values, principles, standards, and norms of behaviour	66
GRI 102-18	Report the governance structure of the organisation, including committees of the highest governance body. Identify any committees responsible for decision making on economic, environmental and social impacts	66-71
GRI 102-40	Provide a list of stakeholder groups engaged by the organisation	18, 22-24, 34-37, 44, 47-50, 66-67
GRI 102-41	Percentage of total employees covered by collective bargaining agreements	159
GRI 102-42	Report the basis for identification and selection of stakeholders with whom to engage	66-71
GRI 102-43	Report the organisation's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process	22-24, 26-27, 34-37, 44-50, 66-67, 163
GRI 102-44	Report key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns.	19, 22-24, 47-49, 66-67, 163
GRI 102-45	Entities included in the consolidated financial statements	71-74
GRI 102-46	Report the process for defining the report content and the topic boundaries and how the organisation has implemented the Reporting Principles for defining report content	163-166
GRI 102-47	List all the material Aspects identified in the process for defining report content	163-166
GRI 102-48	Restatements of information	N/A
GRI 102-49	Significant changes from previous reporting periods in the list of material topics and topic Boundaries	N/A
GRI 102-50	Reporting period for information provided	Front cover
GRI 102-51	Date of most recent previous report	2016-17
GRI 102-52	Reporting cycle	Annual
GRI 102-53	Contact point for questions regarding the report	Inside cover
GRI 102-54	Claims of reporting in accordance with the GRI Standards	163
GRI 102-55	GRI content index	163-166
GRI 102-56	External assurance	163

H2: Economic Indicators

Indicator	Disclosure		Location
Management Approach			
103-1	Explanation of the material topic and its Boundaries		10-11, 17-18, 23, 25, 163
103-2	The management approach and its components		62-65, 151
103-3	Evaluation of the management approach		66-67
Material topics			
201-1	Economic Performance	Direct economic value generated and distributed	75-133
202-2	Market Presence	Proportion of senior management hired from the local community	158-162
203 -1	Indirect Economic Impacts	Infrastructure investments and services supported	9-21, 24-43, 65
204-1	Procurement Practices	Proportion of senior management hired from the local community	158-162
205-1	Anti-corruption	Confirmed incidents of corruption and actions taken	151
206-1	Anti-competitive Behaviour	Legal actions for anti-competitive behaviour, anti-trust and monopoly practices	148

H3: Environmental Indicators

Indicator	Disclosure		Location
Management Approach			
103-1	Explanation of the material topic and its Boundaries		163
103-2	The management approach and its components		8-10, 25, 38-39
103-3	Evaluation of the management approach		66-67
Material topics			
301-1	Materials	Materials used by weight or volume	10-15
302-1	Energy	Energy consumption within the organisation	40, 157
303-1	Water	Water withdrawal by source	11-15
304-1	Biodiversity	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	29
305-1	Emissions	Direct (Scope 1) GHG emissions	39, 41, 142
306-1	Effluents and Waste	Water discharge by quality and destination	21
307-1	Environmental Compliance	Non-compliance with environmental laws and regulations	17, 31

Appendix H – Global Reporting Initiative (continued)

H4: Social Indicators

Indicator	Disclosure		Location
Management Approach			
103-1	Explanation of the material topic and its Boundaries		51-56
103-2	The management approach and its components		54-55
103-3	Evaluation of the management approach		66-67
Material topics			
401-1	Employment	New employee hires and employee turnover	161
402-1	Labor/Management Relations	Minimum notice periods regarding operational changes	161
403-2	Occupational Health and Safety	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities withdrawal by source	50, 158
404-1	Training and Education	Average hours of training per year per employee	161
405-1	Diversity and Equal Opportunity	Diversity of governance bodies and employees	66-67, 159-161
405-2	Diversity and Equal Opportunity	Ratio of basic salary and remuneration of women to men	161
406-1	Non-discrimination	Incidents of discrimination and corrective actions taken	161
407-1	Freedom of Association and Collective Bargaining	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	161
408-1	Child Labor	Operations and suppliers at significant risk for incidents of child labor	65, 66-67
409-1	Forced or Compulsory Labor	Operations and suppliers at significant risk for incidents of forced or compulsory labor	65, 66-67
411-1	Rights of Indigenous Peoples	Incidents of violations involving rights of indigenous peoples	161
412	Human Rights Assessment	Employee training on human rights policies or procedures	161
413-1	Local Communities	Operations with local community engagement, impact assessments, and development programs	22-24,47-50
414-1	Supplier Social Assessment	New suppliers that were screened using social criteria	65
415-1	Public Policy	Political contributions	151
416-2	Customer Health and Safety	Incidents of non-compliance concerning the health and safety impacts of products and services	138-142
418-1	Customer Privacy	Substantiated complaints concerning breaches of customer privacy and losses of customer data	148-149
419-1	Socioeconomic Compliance	Non-compliance with laws and regulations in the social and economic area	66

Appendix I – The UN Global Compact

The following index shows where we have reported our policies, programs and actions that align with the 10 principles of the UN Global Compact within the *2017-18 Annual Report*.

Global Compact Principles	Description	Page Reference
Human Rights		
1. Businesses should support and respect the protection of internationally proclaimed human rights	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	54-56
2. Make sure that they are not complicit in human rights abuses	• Safety performance, measurement and programs	52-54
	• Our management of customers' confidential and personal information	66, 148-149
	• Our actions toward Reconciliation and Aboriginal Engagement	49-50
Labour		
3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	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	158-162
	• Diversity Strategy and associated programs, including inclusion, gender equity, parental leave, domestic violence leave and flexible working arrangements	54-56
4. The elimination of all forms of forced and compulsory labour.	• Our actions toward increasing cultural awareness	49-50, 55-56, 65
5. The effective abolition of child labour.	• The Melbourne Water Enterprise Agreement 2016 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 Land Delivery team. The agreement was approved by the Fair Work Commission.	161
6. The elimination of discrimination in respect of employment and occupation.	• Our management of suppliers	65

Appendix I – The UN Global Compact (continued)

Global Compact Principles	Description	Page Reference
Environment		
7. Businesses should support a precautionary approach to environmental challenges.	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:	
8. Undertake initiatives to promote greater environmental responsibility. 9. Encourage the development and diffusion of environmentally friendly technologies.	• Waterway quality programs and supporting strategies	25-31
	• Our flooding and drainage programs and supporting strategies	22-24
	• Our biodiversity program and supporting *Environmental Stewardship Strategy*	29, 38
	• Our environmental programs including energy, resource recovery and climate risk management	17-21, 36-37, 38-42
	• Our community engagement and education programs	47-49
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	66-67
	• Our risk management program and frameworks	71
	• Our compliance in accordance with Acts of Parliament	71, 146-149
	• Our Code of Conduct	www.melbournewater.com.au

Appendix J – Letter of Expectations

Priority Area	Key Performance Indicator	Page reference
Climate Change Provide services that minimise environmental impacts, mitigate climate change and put in place adaptation strategies.	E2 Emission reduction pledges.	39-41
	E3 Climate adaptation Apply the *Guidelines for Assessing the Impact of Climate Change on Water Suppliers in Victoria* and demonstrate adaptation by: • their application in drought preparedness and urban water strategies (urban). • rural water corporations develop low flow contingency plans that include an appropriate range of climate scenarios (as applicable)	38-39
Customer and Community Outcomes All aspects of service delivery will be customer and community centred.	C1 Customer satisfaction with response (including digitally).	Not required
	C2 ESC customer satisfaction survey.	Not required
	C3 Appropriate engagement methods used when working with communities.	2, 16, 19, 22, 24, 26-27, 30, 34-35, 45-49
	CR1 Water quality complaints about colour, turbidity, taste and odour reduced year on year. WQ1- Water quality (Melbourne Water only) WQ2- Water quality (Melbourne Water only)	Reported under MRD 01: 138-142
	CRM1 – Customer responsiveness (MW only)	Reported under MRD 01: 138-142
Water for Aboriginal cultural, spiritual and economic values Recognise and support Aboriginal cultural values and economic inclusion in the water sector.	AC1 Effective engagement of Aboriginal communities for involvement in business opportunities and access to water for economic development.	65
	AC2 Effective engagement of Traditional Owners for inclusion of Aboriginal values in water planning.	26, 49-50
Resilient and liveable cities and towns Contribute to healthy communities by supporting safe, affordable, high quality services and resilient environments.	L1 Enabling local government and communities to realise liveability benefits.	26-28, 30-37
	L2 Water efficiency	15
	L3 Victorian water bills are among the lowest in Australia.	Not required
	L4 Hardship programs.	Not required

Appendix J – Letter of Expectations (continued)

Priority Area	Key Performance Indicator	Comments
Recognising recreational values Support the wellbeing of rural and regional communities by considering the recreational values in water management.	Explicit inclusion of recreational values in planning and reporting activities	25-27, 33-34, 49
Leadership and Culture Water corporations reflect the needs of our diverse communities.	G1 Gender and cultural diversity in workforce including gender equity in executive leadership.	50, 54-56, 157-158
	G2 Annual board performance report prepared.	Not required
	G3 Health and safety.	51-53, 156
Financial Sustainability Delivering safe and cost-effective water and wastewater services in a financially sustainable way.	F1 interest cover F2 gearing ratio F3 internal financing ratio F4 current ratio F5 return on Assets F6 return on equity F7 EBITDA Margin	Reported under MRD 01: 138-142
	F8 Credit rating.	Not required

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