Annual Report 2020/21

Leading through change.

EPA VICTORIA

Preparing Victorians for new environment protection laws

400+
Activities and events to support awareness and compliance

3,000+
Organisations engaged

1,000+
Registrations with EPA's Industry Partnership Program

+13,000
Webinar views (on EPA's YouTube channel)

Preventing environmental harm

18,121
26% increase on 2019-20
Pollution reports from community

487
Pollution abatement notices issued

9,115
Fines for environmental offences

2,595
Inspections

22
Prosecutions

Our Zero Tolerance Fire Prevention Program

352
inspections across **213 sites**

11
comprehensive fire investigations

Fire prevention
onsite posters translated into **five languages**

Revised guidelines
for combustible recyclable and waste materials

43%
of inspected sites issued with a notice or sanction referral

Contents

All images in this annual report were taken in accordance with relevant public health measures at the time.

Cover images: Top: EPA officers inspect the Broderick Road cleanup site. This clean-up will see the removal and safe disposal of approximately 335,000m³ of waste and is on track for completion by mid-2022.

Bottom left: A Senior Environment Protection Officer attends the August 2020 MRI Battery Recycling fire in Campbellfield to monitor fire fighting run-off quality.

Bottom right: Supporting local businesses to understand their obligations under Victoria's new environment laws.

01 Declaration

In accordance with the *Financial Management Act 1994*, we are pleased to present Environment Protection Authority Victoria's Annual Report for the year ending 30 June 2021.

Professor Kate Auty
Chair
Responsible Body

Melbourne
1 November 2021

Mr Lee Miezis
Chief Executive Officer
Accountable Officer

Melbourne
1 November 2021

02 About EPA Victoria and this Annual Report

Environment Protection Authority Victoria (EPA) is an independent statutory authority under the *Environment Protection Act 2017*. EPA's Governing Board is responsible for the governance, strategic planning and pursuit of EPA's objective — to protect human health and the environment by reducing the harmful effects of pollution and waste. EPA is part of the portfolio of the Hon. Lily D'Ambrosio MP, Minister for Energy, Environment and Climate Change and Minister for Solar Homes.

Our vision

A healthy environment that supports a liveable and prosperous Victoria now and always.

Our strategic goals

To do our part in creating a healthy environment, we focus on five goals:

1. **Prevent harm:** We prevent harm from pollution and waste by leveraging good environmental performance across community, business and government.
2. **Equip community and business:** We support Victorians to understand the condition of their environment and we work to ensure shared responsibility is accepted and understood by community and business.
3. **Be an influential authority:** We are a trusted source of advice on Victoria's environment and influential in working with others to address complex problems resulting from pollution and waste.
4. **Respond to harm:** We hold polluters to account and work with our partners to respond to pollution, emergency incidents and legacy contamination to minimise harm to Victoria's environment and people.
5. **Organisational excellence:** As an organisation, we commit to delivering on our goals by enabling a high-performance culture that values our people and supports them with fit-for-purpose systems and expertise.

Our purpose

We protect the environment and people by preventing and reducing harm from pollution and waste.

Our values

Successful implementation of EPA's organisational strategy, *Our environment, Our health*, requires every staff member to live our values. These values, applied consistently by our people in our interactions with Victorians, will deliver one experience of EPA.

In addition to being exemplars of the Victorian Public Service values, EPA's values are:

Excellence

- We focus effort for best result
- We are evidence and risk based
- We learn from experience
- We are agile and innovative.

Partnership

- We support each other
- We welcome diversity
- We listen and learn
- We involve people in decisions that affect them.

Accountability

- We do what we say we will
- We make timely decisions
- We use sound judgement
- We are transparent and objective.

Definitions

Scientific and technical terms used in this annual report are defined on page 83.

EPA publications

All publications referred to in this Annual Report can be accessed at **www.epa.vic.gov.au/publications**

EPA acknowledges Aboriginal people as the first peoples and Traditional custodians of the land and water on which we live, work and depend. We pay respect to Aboriginal Elders past and present. As Victoria's environmental regulator, we pay respect to how Country has been protected and cared for by Aboriginal people over many tens of thousands of years. We acknowledge the unique spiritual and cultural significance of land, water and all that is in the environment to Aboriginal people and Traditional custodians – and the continuing connection and aspirations for Country.

03 Chair's report

As Victorians navigated the challenges of a global pandemic and a year of significant uncertainty, our focus on *Leading through Change* could not be more relevant.

This year marked a significant milestone for EPA, with the commencement of new laws that provide us with the regulatory tools and powers to be more agile and support our focus of proactively working with others to reduce the risk of harm from pollution and waste before it occurs.

This shift to preventative action in our regulatory focus required extensive engagement with stakeholders to explain our new legislation in the context of their operations. Due to the pandemic, this engagement took new forms, including online webinars and live question and answer sessions.

I would like to acknowledge and thank our former Chief Executive Officer, Dr Cathy Wilkinson, for her tremendous contribution during her five years with EPA and welcome incoming Chief Executive Officer, Mr Lee Miezis, who joined us in February.

It was also with some sadness — but also great pride — that EPA farewelled Victoria's inaugural Chief Environmental Scientist, Dr Andrea Hinwood, following her appointment as Chief Scientist with the United Nations Environment Programme.

I look forward to working with our new Chief Environmental Scientist, Professor Mark Patrick Taylor, who joined us in July from Macquarie University where he was Professor of Environmental Science and Human Health, specialising in environmental contamination.

I also acknowledge our Governing Board for their commitment and ongoing support to me in my capacity as chair. In October 2020 we welcomed Ms Kay Rundle, an accomplished business leader and chair of both the Public Transport Ombudsman and Western Leisure Services. A special thank you to former board member, Professor Rebekah Brown, for her contribution to EPA.

Finally, I want to thank our many stakeholders and the community for their support, and our people at EPA for their resilience during a year of unprecedented change.

Notwithstanding the challenges of the past year, EPA continues to protect both the health of our environment and our community from the harmful effects of pollution and waste — fundamental work for Victoria's future prosperity and liveability.

I eagerly anticipate the year ahead as we continue to work together with, and on behalf of, all Victorians.

Professor Kate Auty
Chair
Environment Protection Authority Victoria

1 November 2021

04 Chief Executive Officer's report

2020-21 marked a year of change and uncertainty as we continued to navigate the global pandemic.

For EPA, this called for new ways to deliver our services and a focus on supporting our people, vulnerable communities and government partners involved in responding to coronavirus (COVID-19).

The year also saw the conclusion of our multi-year transformation program with the commencement of the *Environment Protection Act 2017* on 1 July 2021 — new laws that equip EPA with stronger and more contemporary regulatory powers to prevent harm to communities and the environment from pollution and waste.

Supporting Victoria's coronavirus response

As part of the Victorian Government's response to the pandemic, EPA supported industry and business compliance through participation in a multi-agency surveillance program focused on high-risk industries. Key to compliance was our oversight of clinical waste treatment and disposal facilities and secondary storage sites.

We also partnered with the Department of Environment, Land, Water and Planning (DELWP) and the Municipal Association of Victoria to manage onsite domestic wastewater systems, and developed noise pollution guidance in response to the increase in people working from home, as well as extended hours of operation for essential services and important projects. This guidance was used by DELWP and Local Government Victoria to shape policy and communications approaches more broadly.

Preventing harm to our community

In 2020–21, EPA continued work on several cleanups of high-risk sites, including Broderick Road at Lara, which is due for completion in mid-2022.

About 200 tonnes of hazardous waste was removed from an illegal chemical waste dump at Lemon Springs in Victoria's Wimmera region as part of a remediation project that started in March.

Early this year, EPA launched a Fire Prevention Program to respond to the high risk of fires at waste and resource recovery facilities.

This program resulted in more than 360 inspections across 200 sites since January, with our officers addressing hazards and unsafe practices such as oversized and poorly separated waste stockpiles, as well as a lack of fire prevention and firefighting controls.

In June, we launched a Regional Sensor Pilot Project to report on the levels of fine particles less than 2.5 micrometres in diameter ($PM_{2.5}$) in the air from sources such as smoke in an additional 49 regional Victorian towns.

This rollout complemented the 41 existing monitoring sites across Melbourne, Geelong and the Latrobe Valley, as well as the Victoria State Emergency Service community smoke monitoring program and EPA's incident air monitoring capacity.

Responding to harm

Throughout the year, EPA responded to 104 emergency incidents (almost double the number of incidents in 2019–20) and 14 major incidents, including crisis management and compliance support for Victoria's pandemic response, fires at waste and recycling sites, and wastewater treatment plant pollution.

Following Victoria's bushfires in 2019–20, work continued to safely remove and dispose of waste materials in Gippsland and the state's northeast region.

EPA was also part of a working group established to achieve consistency across states and territories in air quality categories and messaging by the Commonwealth Government's Environmental Health Standing Committee.

Preparation for 1 July

With the 1 July introduction of Victoria's new environment protection laws, EPA engaged extensively with Victorian industry and business through reference groups and online webinars.

As part of our Business Support Model, we launched a Small Business Program pilot to educate small to medium-sized businesses on their obligations under our new laws.

04 Chief Executive Officer's report continued

This program was developed with the support of the Victorian Automobile Chamber of Commerce and the Drycleaning Institute of Australia and included participation by 75 dry-cleaning, automotive repair and maintenance and body repair businesses.

To support compliance, onboarding for a new GPS-enabled waste tracking system, Waste Tracker, commenced in May. As of 1 July, more than 500 businesses had registered, including more than 80 per cent of high-volume users.

This year also saw the development of a new digital notifications tool that enables EPA to triage notifications of contaminated land and focus our regulatory efforts based on risk of harm.

Under the new laws, anyone in management or control of contaminated land is required to minimise risks of harm to human health and the environment so far as reasonably practicable and to notify EPA if land is contaminated in certain circumstances.

A key priority for EPA was also building the regulatory capability of our people, with 92 per cent of our authorised officers completing a learning and development program in the lead-up to 1 July. This program combined face-to-face and virtual classroom sessions, coaching with mentors, webinars, digital learning, workplace-based practice and assessment.

Thank you

I would like to acknowledge our former Chief Executive Officer, Dr Cathy Wilkinson, who left EPA in early January 2021, and thank her for her leadership and contribution to the organisation. I look forward to building on her work and commitment to Victoria's environment and community.

Thank you to our board members for their invaluable guidance and support during a challenging year. Going forward, a key goal for EPA's Governing Board and executive management is delivering our roles and responsibilities under the new Environment Protection Act, implementing our operating model planned for the first quarter of 2021–22, and achieving our aspiration of being a world-class regulator in protecting Victorian communities and the environment from the impacts of pollution and waste.

Finally, my thanks to EPA's people for their resilience and unwavering commitment to our work during a year of tremendous change to the lives of all Victorians.

I look forward to the year ahead as we continue to adapt to new ways of working, embrace opportunities and deliver services that meet the needs of our community and environment in a rapidly changing and evolving world.

Lee Miezis
Chief Executive Officer
Environment Protection Authority Victoria

1 November 2021

05 How EPA works

EPA is an independent statutory authority. The principal environmental legislation in Victoria we operated under during 2020–21 was the *Environment Protection Act 1970*. This Act defines EPA's powers, duties and functions, and provides a framework for the prevention and control of air, land and water pollution, industrial noise and waste.

During this financial year there were two other relevant environment protection acts: the *Environment Protection Act 2017*, which sets out our governance structure and objectives, and the *Environment Protection Amendment Act 2018*, which introduces many key reforms to Victoria's environment protection legislation. From 1 July 2021, the 1970 Act was repealed and the EPA now operates under the 2017 Act (as amended by the 2018 Act).

EPA engages and works with community and industry across Victoria. We have regional offices in Bendigo, Dandenong, Geelong, Preston, Sunshine, Traralgon and Wangaratta. EPA's Centre for Applied Sciences is located in Macleod. Our central office is located at 200 Victoria Street, Carlton.

The responsible Minister for the 2020–21 reporting period was the Hon. Lily D'Ambrosio MP, Minister for Energy, Environment and Climate Change and Minister for Solar Homes.

EPA works closely with portfolio partners — Department of Environment, Land, Water and Planning and Sustainability Victoria — to develop environment protection policy and legislation and deliver programs that support protection of the environment.

EPA also works closely with local government and other Victorian Government departments and regulators to achieve better environmental and health outcomes and ensure better long-term economic development. These include WorkSafe Victoria, the Department of Health (formerly the Department of Health and Human Services) and emergency services.

06 Our response to the pandemic

EPA staff actively supported our internal Agency Command team and whole-of-government response to the pandemic which included:

- Providing regular intelligence summaries about coronavirus impacts on EPA's regulatory landscape
- Identifying sites of concern and adapting the risk assessment approach to include coronavirus-specific risk attributes
- Providing a quarterly waste crime report on high-risk waste sites
- Providing targeted communications (fact sheets and posters) for aged care waste management and wastewater authorities.

During 2020–21, working from home was the default option for our workforce. Initiatives were implemented to support the physical and mental health of our people as they continued to deliver our regulatory services.

This image was taken in accordance with relevant public health measures at the time.

CLINICAL WASTE

Clinical waste increased significantly in 2020–21 across workplaces, aged care centres and hospitals, leading to risks of stockpiling and mismanagement and the potential for illegal waste disposal. This followed the declaration of a State of Emergency in Victoria on 16 March 2020 in response to the pandemic.

As Victoria's environmental regulator, EPA's oversight of clinical waste treatment and disposal facilities, and secondary storage sites increased markedly.

We expedited emergency approvals and permit requests to enable more transport and storage capacity for clinical waste waiting for treatment and disposal and developed new conditions under section 30A of our legislation to support onsite volume reporting.

Through industry engagement we found that many aged care facilities were taking a conservative approach to categorising waste and disposing food waste and small furniture items as clinical waste.

Workplaces without cases were also eager to dispose of masks, gloves and other personal protective equipment.

As a result, EPA developed new guidance to support better decision making around what constitutes clinical waste and personal protective equipment disposal in workplaces. *Coronavirus (COVID-19): Disposing clinical waste* was used by aged care facilities, disability services, workplaces with confirmed coronavirus cases, community-based health services and any other services related to the coronavirus health response. *Coronavirus (COVID-19): Disposing of PPE at home and in the workplace* was used by households and workplaces using personal protective equipment and workplaces undergoing a deep clean.

We also participated in webinars for health care, aged care and disability services and participated in waste sector meetings facilitated by the Minister Energy, Environment and Climate Change.

What we delivered

- A rapid deployment of additional authorised transport and storage capacity for clinical waste, including:
  - 39 additional transport vehicles
  - Storage for an additional 215 tonnes and 35 shipping containers (equating to about 1,000 cubic metres)
  - Increased capacity for safe treatment and disposal
  - Interstate waste movement approvals
- Heightened regulatory oversight, including inspections and monitoring
- Improved reporting requirements for emergency approvals
- Additional guidance for industry and the community about clinical waste management and temporary storage applications
- Delivery of online training on waste management for aged care and disability facilities
- Updated web pages and social media content with advice for generators, transporters and treaters of clinical waste
- Direct advice to clinical waste transporters and treaters.

We have continued to collaborate with the Department of Environment, Land, Water and Planning and other agencies to inform the State Government's broader oversight of clinical waste issues.

Waste management achievements

39 additional waste transport vehicles

30 applications to enable emergency waste management (transport, storage and disposal/treatment)

Clinical waste storage for an additional **215** tonnes plus **35 shipping containers**

07 2020–21 performance

EPA's work is guided by our organisational strategy, *Our environment, Our health.*

2020–21 was the fourth year of the strategy's implementation. Our annual plan sets out our delivery priorities according to our five key goals:

1. Prevent harm
2. Equip community and business
3. Be an influential authority
4. Respond to harm
5. Organisational excellence

This section of the annual report summarises EPA's performance against our annual plan.

GOAL 1 Prevent harm

We prevent harm from pollution and waste by leveraging good environmental performance across community, business and government.

Outcome 1.1

Regulatory effort delivers greatest preventative effect, informed by science and intelligence.

Works approval and statutory approval applications

Over the past year, EPA provided 22 works approvals. Of these, six were complex assessments (one of which was ultimately withdrawn) involving Great Southern Waste, Chunxing, GB Energy, Longwarry Saleyard, Camperdown Compost and AGL Crib Point. There were 52 works approval exemptions, where it was determined that a works approval was not required.

Works approvals allow individuals and businesses to conduct works or make changes to their premises that may pose some risk to the environment. They can be for building construction, installing new plant equipment, or changing infrastructure, discharge or emission limits, or work processes.

In many cases, proposals received for works approvals are significantly improved through the application process, with applicants required to clearly demonstrate how they will achieve regulatory standards. Section 20B of the E*nvironment Protection Act 1970* allows us to invite all or any interested parties to a conference to assist in a just resolution of any matter. This year, we completed several section 20B online conferences to consider the views and concerns of communities and stakeholders in relation to upcoming proposals. They enable us to explain the works approval application and assessment process, and the current status of a proposal. Participants can also ask questions and hear about issues raised in submissions.

Section 30A is an overriding provision of the Act. It allows EPA to authorise discharges, emissions, storage, treatment, disposal and handling of waste in emergencies and other temporary situations that would otherwise be an offence under the Act. This year there were 81 section 30A emergency decisions, many of which related to coronavirus medical waste, an avian flu outbreak and flooding events.

In a Supreme Court determination relating to Melbourne Regional Landfill, the court supported EPA's approach in assessing applications for works approvals, including application of the State Environment Protection Policy (Air Quality Management). It also supported EPA's risk assessment in the absence of odour modelling or adequate odour modelling to inform the works approval process using field odour assessment techniques.

This year, EPA received three environment management plans for approval under the Environment Protection (Management of Tunnel Boring Machine Spoil) Regulations 2020.

Three companies (Hi-Quality Quarry Products, Western Soil Treatment and Cleanaway Operations) submitted the plans as part of a tender process, run by the joint venture building the West Gate Tunnel Project, to identify where tunnel boring machine spoil from the project would be taken.

The plans were reviewed and approved on the basis EPA was satisfied they met strict conditions designed to protect human health and the environment. The approvals were dependent on additional detailed information being provided to EPA about the construction methods and quality control measures.

Following legal action lodged against the approval of the Western Soil Treatment environment management plan and out of an abundance of caution, EPA determined it would be appropriate to void the original approvals and require all three companies to resubmit applications incorporating the additional information relating to construction methods and quality control measures. All three companies submitted new plans and EPA again reviewed and approved them on the basis they met the strict conditions.

While EPA is not responsible for the ultimate decision on where tunnel boring machine spoil from the project will be taken, we will closely monitor compliance with the approved

environment plans and hold any site receiving spoil from the West Gate Tunnel Project to account.

We have also played a key role in assessing spoil management plans for the North East Link Project, ensuring that in situ classification of spoil material was scientifically justified and considered an appropriate list of potential contaminants. EPA has used the knowledge gained through this process to advise on similar aspects for Suburban Rail Loop and Melbourne Airport Rail projects.

TRACKING REPORTABLE PRIORITY WASTE WITH WASTE TRACKER

This year, EPA prepared industry for the introduction of our new GPS-enabled waste tracking system, Waste Tracker. This system allows us to track hazardous waste movements in real time and will enable early intervention and action by EPA and stakeholders.

The new environmental laws will demand stricter reporting about hazardous waste transport to protect Victorians and the environment from harm due to mismanagement and illegal behaviour. They will raise the bar for hazardous waste management. Producers, accredited consigners, transporters, drivers and receivers of reportable priority waste will be required to use Waste Tracker to complete transactions.

EPA prepared the waste industry for the introduction of our new GPS-enabled waste tracking system — Waste Tracker — through webinars, online resources and direct engagement activities.

Reportable priority waste is generally hazardous and carries the highest levels of controls because it poses the greatest risk to the community and the environment. Anyone who handles reportable priority waste will need to advise EPA every time it changes hands.

Waste Tracker can be accessed via our EPA portal and the Waste Tracker mobile app. The portal opened in May so that waste producers, transporters and receivers could log in and start onboarding their drivers and staff ahead of 1 July. We also released several guides that articulated the steps required to perform transactions, such as creating a waste record.

Building on previous engagement to support businesses to prepare for the introduction of the new system, EPA held a Waste Tracker webinar for 600 industry members in February.

We also engaged directly with Victoria's peak industry bodies, the Victorian Waste Management Association, the Waste Management and Resource Recovery Association, and Australian Industry Group, further supporting industry to register a Waste Tracker account in preparation for the system's commencement.

As of 1 July, more than 500 businesses — or 80 per cent of the businesses that represent 80 per cent of waste movements — had been fully onboarded to use the Waste Tracker tool. More than 2,000 new waste records were created, assigned and received via Waste Tracker during the first three days of July.

BROOKLYN INDUSTRIAL PRECINCT

Efforts to improve air quality for the Brooklyn community in Melbourne's western suburbs were boosted in 2020–21 with a project focused on dust emissions from material recycling and container storage activities in the Brooklyn Industrial Precinct.

Within this triangle-shaped precinct, bordered by Kororoit Creek and Geelong and Somerville roads, are more than 60 industries, including quarrying, former landfill, abattoirs, material recycling, tallow producers, container storage and a variety of small businesses from light industrial to retail and manufacturing.

EPA has 12 active remedial notices addressing dust emissions with an estimated total cost of compliance of about $12.5 million. These notices related to the installation of controls to prevent:

- Dust from onsite traffic by sealing hard stands
- Dust from materials-handling activities
- Mud tracking out onto public roads.

In 2020–21, the daily standard for PM_{10} (particles less than 10 micrometres in diameter) was achieved more frequently than in any other year. This improvement is thought to be due to a combination of above-average rainfall and increased regulatory action.

Under the new Act, EPA will continue to work with all stakeholders to improve air quality for the Brooklyn community. Future activities will include communications and engagement to support duty holders to understand and comply with the new laws, while maintaining a strong regulatory presence leveraging EPA's new powers to drive improvements.

Hobsons Bay Council passed a motion to develop a Brooklyn Air Quality Advocacy Plan, bringing together all parties responsible to address the issues that have impacted this community for so long.

Dust from truck movements on unsealed roadways at a Brooklyn container storage site.

FIRE PREVENTION PROGRAM INCREASES DUTY HOLDER AWARENESS AND COMPLIANCE

Since July 2017, EPA has conducted more than 1,300 inspections at high-risk resource recovery sites.

The Fire Prevention Program, established in January 2021, builds on this successful work program and responds to the high risk of fires at waste and resource recovery facilities. Since it was launched, the Fire Prevention Program has:

- Conducted 352 inspections across 213 sites
- Issued 149 notices to ensure operators are complying with waste management rules, reducing fire risk, and protecting our environment and communities from harm
- Served 20 official warnings and 12 penalty infringement notices
- Started 11 comprehensive investigations
- Issued 70 sanction referrals.

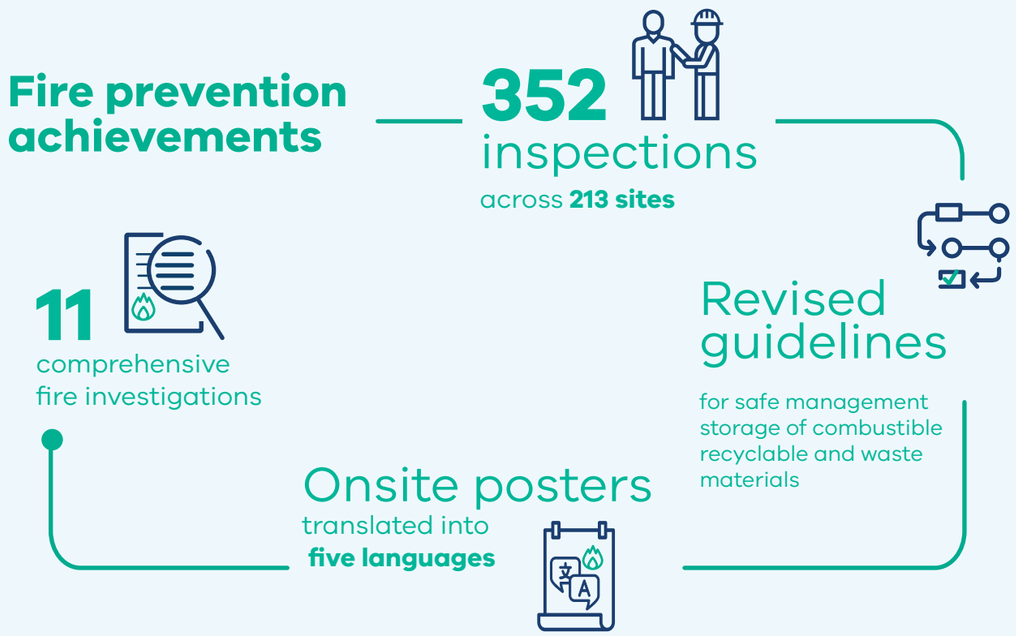
Industry has been put on notice that EPA has zero tolerance for deliberate non-compliance and unsafe waste management practices.

The Fire Prevention Program initially focused on the metal recycling sector, because of serious fires at these types of facilities early this year. In March, it was extended to a wider group of high-risk facilities.

Jointly delivered by EPA and the Department of Environment, Land, Water and Planning, this is a prevention-based program to reduce the number and severity of fires by addressing their root cause. To do this, EPA:

- Works with industry, fire agencies and co-regulators to improve understanding of fire risk and the controls required to prevent fires
- Updates guidance to reflect the changing legislative settings and includes fire prevention principles
- Publishes materials (including posters in multiple languages and website resources) and conducts proactive industry engagement
- Delivers a significant program of proactive site inspections
- Focuses on enforcement and action where practices are unsafe.

EPA also worked with the Department of Environment, Land, Water and Planning, Fire Rescue Victoria, independent fire prevention specialists and fire management professionals to review the causes of previous fires at waste and resource recovery sites and design future fire prevention initiatives.



Chemical waste and recyclable materials

EPA coordinates statewide compliance and enforcement programs, targeting unsafe waste management practices in the chemical waste and recyclable materials sector.

We coordinated our response to complex sites and entities to help them improve their performance. This included strategy development, tasking and coordination, technical leadership, delivering compliance and enforcement activities, and monitoring and evaluation of the overall effectiveness of interventions. We also responded to significant sector issues such as the sudden departure of two major e-waste recyclers from the national market.

EPA also provided technical support for the development of new permission requirements and guidelines such as the Combustible Recyclable Waste Material Guideline and the Battery Storage and Handling Guideline.

Outcome 1.2

Regulatory effort supports good performance, creates a level playing field and encourages continuous improvement.

New regulations for the new laws

On 16 December 2020, proposed final versions of the Environment Protection Regulations and Environmental Reference Standard were released on EPA's website. This gave industry, business, government and the community six months to become familiar with the subordinate legislation before its commencement alongside the new Act on 1 July 2021.

At the same time, the *Environment Protection regulations and standards: Response to public comment report* was published by the Victorian Government. This responded to the key issues raised in more than 317 submissions received by EPA in 2019 on the draft subordinate legislation.

Across the first half of 2021, EPA published information to support industry and the community to better understand the subordinate legislation, including web content, frequently asked questions, EPA staff guidance and external presentations. A webinar about the new laws was held in February and received 10,189 views on our YouTube channel by 30 June.

Licensed Operator Risk Assessment

EPA successfully ran our Licensed Operator Risk Assessment in April. This initiative is the driving force behind EPA's Strategic Licence Compliance Assessment Program, ensuring all sites that hold an EPA licence are inspected based on an annual assessment of the potential risk they pose to human health and the environment. It provides a consistent and transparent approach to prioritise our planned licence compliance inspections based on the risk of each site and may include:

- Intensive pig and poultry farming
- Waste treatment and storage
- Paper, food and drink manufacturing
- Waste incineration activities
- Landfills
- Printing
- Production and processing of metals and steels
- Cement and lime activities.

Landfill levies audit

Every year, EPA receives quarterly and annual landfill levy statements from licensed landfills that receive waste. In 2020–21 we validated the levy statements of all 51 landfills that receive waste. We also completed detailed assessments of all five annual recycling rebate claims and conducted 10 comprehensive audits selected on an intelligence-informed risk basis to ensure a representative coverage of facilities. Underpaid waste levies of $80,862 were identified at three landfills and collected during this levy audit cycle.

As part of the Victorian Government's Recycling Victoria policy, a review of the landfill levy audit program was completed by December 2020. The review involved an evaluation of current guidance and procedures, assessment of recent legislative cases, consideration of additional powers available under the Environment Protection Act, a comparison with interstate levy programs and consultation with Victorian stakeholders. In all, 23 recommendations for program redesign were made, including additional guidance documents and data requirements for duty holders which will provide greater oversight of material movements at landfills. EPA will continue strong enforcement action against businesses that avoid appropriate waste levy payments.

Outcome 1.3

Increased participation by business and community in preventing and managing environmental risk.

Support for business

Under the Business Support Model, EPA has developed:

- A self-assessment tool for small businesses — available in 11 languages — which helps businesses understand whether their activities that may potentially cause harm to the environment and human health are being adequately managed
- Sector guides — for seven key industries (waste and recycling, mining and quarrying, retail, construction, agriculture, manufacturing and local government) — that provide:
  - An overview of legal obligations under the Environment Protection Act, starting with the general environmental duty that applies under the new laws
  - Information about Environment Protection Regulations 2021 that may apply to industrial activities
  - Information about managing risks, including examples of how this can be done using a four-step process
  - A list of common hazards in the sector
- The Small Business Program pilot that offers free expert advice to eligible businesses about managing risks
- Sector-specific guidance, such as the sector guides *Local government — guide to preventing harm to people and the environment* and *Construction — guide to preventing harm to people and the environment*, which have received positive feedback from external stakeholders.

More than 130 EPA publications were produced or updated during 2020–21, providing information and guidance about the new legislation and ensuring all information was consistent with it to help with stakeholder and community readiness.

Small Business Bus

In April, EPA joined Victoria's Small Business Bus, talking to business owners and members of the public about EPA-related matters. It was a great opportunity to explain EPA's new legislation, with our people on hand to answer questions about how the new Act will affect small business owners and explain the EPA approvals process and how the general environmental duty will interact with their business operations.

Operated by Small Business Victoria, the bus visited Melbourne and regional Victoria as a travelling office offering friendly, professional assistance and expert advice.

EPA toured with the bus to various council areas including Cowes, Leongatha and Traralgon, as well as Yarra City, Darebin City, Whittlesea City, Greater Geelong and Hume, Surf Coast, Brimbank and Greater Shepparton, and returning to Darebin and Yarra. Locations were promoted via EPA Twitter, with a full schedule also available online.

Community litter reports

Be the solution

As Victorians flocked to camping grounds and enjoyed the great outdoors last summer, EPA launched a new campaign to encourage the community to be the solution and report litter and pollution.

Be the solution aimed to increase community confidence to minimise the impact of litter on the environment and public health. Victorians were encouraged to report littering from a vehicle via our website or the 24-hour hotline. Littering is against the law, with fines for individuals of up to $363 for a small piece of litter and $727 for a lit cigarette or burning litter. Nearly 60 per cent of all litter from vehicles consists of cigarette butts or packaging. These pollute Victoria's roadsides and waterways, and butts can be a serious fire hazard. As a result of the campaign, EPA received 11,007 reports and issued 8,431 infringements.

EPA also strengthened links with local councils by providing them with a range of communications materials to help them enforce the law against litterers.

Litter enforcement officers

EPA has an important and ongoing relationship with the Litter Enforcement Officer Network which supports joint regulators of the Environment Protection Act, especially local government and Parks Victoria.

Now a program of Keep Victoria Beautiful, network membership consists mainly of litter enforcement officers from local government, Parks Victoria, State Government and community groups.

EPA'S BUSINESS SUPPORT MODEL

In 2020–21, EPA implemented a Business Support Model to help educate businesses about their obligations under Victoria's new environment protection laws. This initiative focused on small to medium-sized enterprises and had three main elements: a small business self-assessment tool, industry-specific guides, and the Small Business Program pilot.

EPA published the small business self-assessment tool on 31 January 2020, and it was translated into multiple languages in September to increase its accessibility.

26 languages
Industry guidance translations

In October 2020, we published seven guides for the following sectors: waste and recycling, mining and quarrying, retail, construction, agriculture, manufacturing and local government.

EPA's Senior Industry Guidance Officer said that the guides were developed with support from members of EPA's Industry Reference Groups. 'Working with our industry reference group members was a great way to ensure that the guides meet the needs of the industry. Feedback was positive, affirming them as a useful resource.'

In June 2021, EPA updated the sector guides to include relevant information from the Environment Protection Regulations 2021. The guides now include tailored information on the waste and contaminated land duties, the permissions framework and the new noise framework. The sector guides will also be supported by posters that highlight common hazards in specific industries.

In collaboration with the Victorian Automobile Chamber of Commerce and the Drycleaning Institute of Australia, the Small Business Program pilot was established to offer free expert advice to individual businesses about managing risks.

The pilot began in November 2020 with 75 eligible dry-cleaning, automotive repair and maintenance, and body repair businesses applying to participate. A survey of participants at the commencement of the program found that only 6 per cent had very good awareness of the new environmental laws.

EPA engaged a consultancy to deliver personalised visits to each business from February 2021, which will continue throughout 2021 and into 2022. EPA's Program Manager said early feedback on the program was positive. 'Businesses reported that they feel confident in their understanding of the new environment protection laws following their visit and would recommend the program to others.'

Sector guides
for construction, manufacturing, waste and recycling, mining and quarrying, agriculture, retail and local government

75 participating businesses
EPA's Small Business Program pilot

Early findings from the program included a high percentage of sites with acceptable or good risk management leadership. When asked if there were any parts of the first consultant visit that went well, responses included:

- Great overall explanation and understanding of obligations.
- Friendly and not intimidating. Confident of our actions required going forward.
- Consultant was well prepared, listened and observed and didn't come with a 'one solution for all' approach.

This year, EPA worked with network members on the development of the new *Regulating litter and other waste: toolkit* which explains the new litter and waste laws, and powers of litter authorities and litter enforcement officers.

EPA subject matter experts presented at four of the network's meetings throughout the year, explaining the new laws and answering questions. Online platforms enabled between 40 and 60 network members to attend each meeting.

Supported by EPA, the network developed an online training course for litter enforcement officers about the new laws. The Regulating Litter and Other Waste training course assists those authorised under the *Environment Protection Act 1970* to transition to the *Environment Protection Act 2017* and to understand its provisions in relation to litter.

At a members meeting on 2 June 2021, the network provided free scenario-based training to help officers transition to the new Act.

Outcome 1.4

Provision of early advice to influence land use planning decisions.

Our response to referrals

EPA continues to provide planning authorities with timely advice to prevent harm to human health and the environment from conflicting land use (buffer) issues, including in relation to planning amendments and applications, and major projects.

We responded to 830 planning referrals, 41 *Environment Protection and Biodiversity Conservation Act* referrals and 11 environment effects statement referrals.

In addition to advising local councils on a range of projects, EPA also provided advice to key planning agencies such as the Department of Environment, Land, Water and Planning, the Victorian Planning Authority, the Victorian Civil and Administrative Tribunal, Planning Panels Victoria, ministerial advisory committees, and inquiry and advisory committees.

Our advice has resulted in amendments across a variety of projects, including:

- Working in partnership with Invest Victoria and Brimbank City Council to apply appropriate planning controls at the former Sunshine Harvester site to reduce the impact of legacy contamination from past uses, as well as early advice to Brimbank City Council at the former Sunshine landfill site alerting landowners to the presence of potentially contaminated land
- Technical advice in relation to potential legacy contamination at the site of the Cairnlea residential development project — formerly used by the Commonwealth Government for the Albion Explosives Factory — as well as advice in relation to separation distances from nearby industries as part of a submitted noise assessment
- Advice to Hepburn Shire Council in relation to amendments to the Hepburn Planning Scheme to restrict further development of buildings for accommodation and a subdivision within 500 metres of the Daylesford Material Recovery Facility — sited on a former landfill — to protect the facility and community from harm.

Land use and development

We ensure issues are understood and advice is provided effectively to influence major project environment effects statement decisions and prevent harm. An important element of our role is to provide advice for major projects (including transport infrastructure and energy) and earth resources industry projects through the process. EPA input is important because these activities present significant environmental risks that can impact generations. This year, we contributed to 16 environment effects statements relating to six mining and resource, seven energy, one transport infrastructure, and two miscellaneous projects.

EPA is on the Technical Reference Group for a variety of projects, including Suburban Rail Loop, Avonbank, Wimmera and Fingerboards Mineral Sands projects and Western Victoria Transmission Line. Environment effects statements completed this year were Crib Point and Golden Beach.

We also provided ongoing support and advice to major transport infrastructure projects outside the formal environment effect statement process as required. This included expert advice for major transport infrastructure projects such as Suburban Rail Loop, West Gate Tunnel, North East Link, Metro Tunnel, Melbourne Airport Rail, Mordialloc Bypass and the Level Crossing Removal projects. We provided support on the new legislation, early works approval, spoil management and environment management plans. Of note was the approval of environment management plans from three sites that were seeking to be selected by the West Gate Tunnel Project to manage tunnel boring machine spoil generated by the project.

GOAL 2 Equip community and business

We support Victorians to understand the condition of their environment and we work to ensure shared responsibility is accepted and understood by community and business.

Outcome 2.1

Timely, accessible information on the condition of our environment and expert advice on the human health impacts of pollution and waste.

Real-time air quality information with AirWatch

EPA monitors Victoria's air quality and provides continuous reporting to the public via AirWatch, which shows the level of pollutants in the air at sites throughout the state.

EPA's AirWatch platform uses one set of air quality categories and health messaging for all pollutants. This provides end users with hourly $PM_{2.5}$ concentrations and up to 48 hours of data in an easy-to-understand format, supplying Victorians with information to protect their health in real time.

In addition to general health advice about all pollutants, a mobile-friendly display ensures AirWatch is widely accessible.

In 2020–21, more than 97 per cent of daily air quality forecasts on AirWatch were delivered by 5.30 pm.

During the pandemic we continued the maintenance and management of both the EPA ambient air quality network and the Latrobe Valley co-design network to ensure the availability of air monitoring data to the community via AirWatch. We led the review of standards set for ozone, nitrogen dioxide and sulfur dioxide to establish the National Environment Protection (Ambient Air Quality) Measure. The review accounts for evidence of the health effects of these pollutants and will be considered for adoption as reference standards in Victoria following the commencement of the new legislation on 1 July.

We continued to collaborate with CSIRO and the Bureau of Meteorology to deliver modelled data that provides a better statewide overview of our air quality. Daily forecasts at nine weather districts are used to provide information during emergency incidents and help us provide tailored information to the community when air quality becomes hazardous to health.

AirWatch adopts national one-hour $PM_{2.5}$ categories

Australia's 2019–20 bushfire season highlighted the variation in $PM_{2.5}$ pollution categories, management, and messaging use by different jurisdictions. Throughout 2020, a working group established by the Environmental Health Standing Committee focused on achieving national consistency for air quality categories and messaging.

In addition to Victoria and Tasmania, all states have now committed to display hourly concentrations on their websites. Providing early notification of worsening air quality is essential as it enables the community to take timely and preventative action.

International award for 2020 bushfire service

In September 2020, EPA's website and AirWatch page won an international award (Asia–Pacific Japan) for delivering real-time health messaging to the community during the 2019–20 bushfires.

The Sitecore Experience Award for EPA, in conjunction with Deloitte Digital (Australia), was in the Most Impactful Human Connections in a Changing World category.

The fully rebuilt website and mobile-friendly AirWatch platform saw EPA replace our existing air quality index this year with one-hour $PM_{2.5}$ averages, delivering vital forecasts and health warnings to Victorians in real time.

EPA adapted an existing air quality index and developed a cloud-based platform to feed timely air quality information into the new website.

During the bushfires, Victorians were able to access air quality conditions in their local area, four-day forecasts and links to health advice for vulnerable groups, including children, people over 65, pregnant women and those with pre-existing medical conditions.

Feedback from the public was positive, with the new website supporting significant increases in user

traffic. Our previous record for traffic on the site was 97 users per minute, but during the peak of the bushfire season the EPA website and AirWatch were handling nearly 5,000 users per minute.

Bushfire submission highlights AirWatch

Victoria was recognised as the only state with easy-to-understand air quality reporting through AirWatch.

The Centre for Air pollution, energy and health Research made a submission to the Bushfire Royal Commission's *Issues Paper: Health arrangements in natural disasters*. Among its recommendations were to standardise air quality reporting, including real-time (minimum of hourly) data, and a visual dashboard display consolidated to one website.

We adapted AirWatch to replace our existing air quality index with one-hour $PM_{2.5}$ averages. A new mobile-friendly AirWatch provided Victorians with important health messages during the 2019–20 bushfire season, offering general advice on all pollutants.

According to the centre's submission, Victoria met all criterion for hourly and concentrated data of $PM_{2.5}$, offered health advice on pollutants, and provided data that was easy to understand for a general audience.

Regional Sensor Pilot Project

EPA has rolled out a major initiative to monitor and report on air quality in regional Victoria.

The Regional Sensor Pilot Project expanded our existing network to monitor and publicly report on the levels of fine particles ($PM_{2.5}$) in the air from sources such as smoke in an additional 49 regional Victorian towns.

Hourly air quality categories from each sensor, indicating the level of smoke and other fine particles in the town, was available through EPA's AirWatch website from June this year.

The rollout complements the 41 existing monitoring sites across Melbourne, Geelong and the Latrobe Valley, as well as the Victoria State Emergency Service community smoke monitoring program and EPA's incident air monitoring capacity.

Most of the new sensors are located at Victoria State Emergency Service sites, building on an existing relationship established through the community smoke monitoring initiative. Sensors are also at some Country Fire Authority sites, councils and educational institutions.

Water quality at Victorian beaches

The Beach Report and Yarra Watch programs help the community make informed decisions about swimming and other recreational water-based activities during summer. They are conducted at 36 beaches in Victoria's Port Phillip Bay and four sites on the Yarra River.

In 2020–21, these sampling programs showed that water at the Bay and Yarra River sites was safe for swimming 91 and 66 per cent of the time, respectively. There was an increase in the number of 'poor' water quality forecasts issued this season, which was expected with the La Niña climate pattern of above-average rainfall, especially in summer. Dredging in the bay near Werribee also meant an increase in poor water quality forecasts.

Between December 2020 and March 2021, EPA provided twice-daily water quality forecasts to the community.

We also provided water quality alerts throughout the year when we detected an issue affecting a waterway in the Greater Melbourne, Mornington Peninsula, Geelong or Bellarine areas. The information in these alerts is used by the community to better understand potential risks from exposure and support their decision making.

Monitoring our water

This year EPA's Marine Fixed Sites Network conducted monthly sampling in Port Phillip Bay, Western Port and the Gippsland Lakes, with eight sampling trips in each of the three embayments. We also acquired a new vessel, the Corinella, to sample Western Port Bay, inland waters and on-water emergency events, and expanded our marine monitoring network to cover Lake Reeve, which is one of the new State Environment Protection Policy (Waters) segments.

EPA continued to work closely with co-regulators, Melbourne Water and Agriculture Victoria, to improve water quality in the middle Yarra catchment. The collaboration follows work published by EPA in 2019 showing a range of agricultural pesticides in the water, which pose a risk to aquatic ecosystems and may affect Melbourne's drinking water supply in the future. The discussions will support future work to explore what role the new general environmental duty can play in a co-regulatory solution to help land managers implement better practices on farms.

WORLD METEOROLOGICAL ORGANIZATION GLOBAL ATMOSPHERIC WATCH

Air pollution in Victoria and other parts of the world has been impacted by changes in human activity due to the pandemic.

EPA scientists investigated data from EPA's air monitoring network, along with changes in traffic volumes, during the lockdowns and found that concentrations of air pollutants such as fine particles ($PM_{2.5}$) and oxides of nitrogen decreased, while others such as ozone increased. As restrictions changed and winter approached, some of these changes were impacted by decreasing temperatures and increased wood heater use. This demonstrated the complexity of air pollution in Victoria and its many sources. The investigation was published in the March 2021 edition of the Clean Air Society of Australia and New Zealand Clean Air Journal and presented at the 25th International Clean Air and Environment Conference in May 2021. The work showed the impact that we can have on air pollution by changing the way we work and travel, and the opportunity ahead to reduce air pollution and improve air quality for all Victorians.

This investigation resulted in the opportunity to collaborate with nearly 100 other researchers around the world on a joint World Meteorological Organization Global Atmospheric Watch paper led by Professor Ranjeet S Sokhi. This is being split into an observation paper and a modelling paper.

The observation paper analysed data from more than 500 monitoring stations from 63 cities across the globe and has been submitted to an international journal for consideration.

The second paper on modelling the observed changes in air pollution because of public health measures in different cities is currently being written, with EPA's senior modeller leading this work in Australia. The modelling results show good agreement with observed pollutant concentration changes before, during and after restrictions.

This important work illustrates implications on future policy development for transport and other activities causing air pollution in Melbourne and Victoria.

EPA scientists have been investigating the impact on air quality of changes in movement due to the pandemic.

Following two years as part of a joint government and industry working group, we have reviewed, updated and combined the most widely used of Victoria's existing recycled water guidelines into the *Victorian guideline for water recycling*. We also continued to support the implementation of Melbourne Water's *Healthy Waterways Strategy 2018-2028* which sets a long-term vision for managing the health of rivers, wetlands and estuaries in the Port Phillip and Westernport region, to protect and improve their value to the community.

We have updated the *Guideline for environmental management — Rapid bioassessment methodology for rivers and streams*, and the *Guidelines for environmental risk assessment of wastewater discharges to waterways*.

EPA worked with the Department of Environment, Land, Water and Planning, VicWater and Victorian water authorities to examine emerging contaminants in recycled water. A total of 30 wastewater treatment plants were sampled using a combination of spot and passive samplers from April to June. The collected data will be used to conduct an extensive risk assessment, will improve our knowledge about emerging contaminants and guide management of recycled water under the general environmental duty.

Water quality monitoring has continued via the Ships of Opportunity program aboard the Spirit of Tasmania ferry. This data feed helped to monitor a high-risk algal bloom (*Herterosigma akashi*) that occurred this summer in Port Phillip Bay.

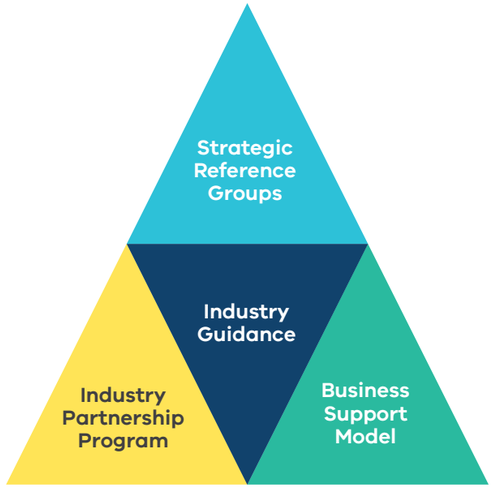
Outcome 2.2

Provide clear advice and guidance that supports compliance with environmental obligations.

EPA's Industry Readiness Framework includes our Business Support Model, Industry Partnership Program and industry reference groups, as well as the development of industry guidance.

The framework's aims are to:

- Support duty holders understand their regulatory obligations and accept their environmental protection responsibilities
- Embed knowledge of best practice risk management across industry and businesses
- Encourage industry to share a commitment to an environmental protection culture.



The Industry Readiness Framework

The key deliverables of the framework include:

- Sub-sector and hazard-specific prevention-based guidance and information
- Industry-delivered introductory/general environmental duty obligations training in partnership with appropriate industry bodies (known as the Industry Partnership Program)
- Ongoing effective industry reference groups
- The Business Support Model which provides advice to duty holders — specifically small to medium business — and includes:
  - Small Business Program pilot, a pilot program with tailored advice provided by dedicated independent consultants through in-person visits
  - Sector guides — tailored information on the new laws and how they apply to seven different sectors.

EPA held four cycles of reference group online meetings during the past year. This amounted to 33 meetings over 10 months (late August 2020 to late June 2021).

They included six sector-based reference groups, the government reference group and community reference group with all meetings held quarterly.

The CEO-level strategic advisory group met twice: in December 2020 with the release of the proposed final subordinate legislation, and again in June 2021, just prior to the commencement of the new legislation.

We engaged with more than 3,000 organisations through our strategic reference groups and across small business, manufacturing, construction, infrastructure, agriculture, major industries, water and waste/recycling, community and government partners.

This year, EPA produced 26 guidance materials to help businesses comply with the new laws and create positive behaviour change, where industry proactively manages its risks.

In collaboration with stakeholders, our prevention-first guidance supported business to understand:

- Foundational concepts and duties: for example, videos explaining the risk management process, guidance on the waste duties from the perspective of businesses who produce, and understanding contaminated land obligations
- Sector-specific guidance: for example, the seven sector guides (construction, manufacturing, waste and recycling, mining and quarrying, agriculture, retail, and local government), and revisions to *Management and storage of combustible recyclable and waste materials — guideline, and the Civil construction, building and demolition guide*
- Hazard-specific guidance: for example, web content on noise and dust, and coronavirus guidance on disposal of personal protective equipment and clinical waste.

In addition, we published information on the concept of 'reasonably practicable'. This builds on EPA's dedicated web page to help duty holders understand how to decide what is reasonably practicable when meeting their duty to eliminate or minimise risks considering six interrelated factors:

1. Eliminate first — can the risk be eliminated?
2. Likelihood — what's the chance harm will occur?
3. Degree — how severe could the harm be to human health or the environment?
4. Knowledge about the risks — what do duty holders know, or what can they find out, about the risks their activities pose?
5. Availability and suitability — what technology, processes or equipment are available to control the risk?
6. Cost — how much does the control cost to put in place compared to how effective it would be in reducing risk?

Each of these factors is supported by an example to demonstrate the type of consideration required.

The guide can help businesses identify which of their activities could cause harm and outlines a simple four-step process to help manage risks. It also includes information about future legal obligations, starting with the general environmental duty and EPA's approach to compliance and enforcement.

Guidance on how to dispose of coronavirus clinical waste and personal protective equipment at home and in the workplace were the most downloaded publications from the EPA website in October 2020. Feedback was received from the aged care sector, noting a positive response to the guidance and the distribution through their networks.

Industry Partnership Program

EPA collaborated with industry and accepted proposals for the Industry Partnership Program, with partner applications finalised in May. In March 2020 EPA launched the program, which is administered by EPA and run by industry partners. It provides training for small and medium-sized businesses on Victoria's new environment protection laws.

The program includes a set of e-learning modules for businesses to work through, which provide a foundational understanding of the laws and what industries need to consider in achieving compliance. It has provided 17 industry partners — industry associations across several sectors — with funding and training materials to roll out the e-learning modules in a way that will assist them to engage most effectively with the content.

Initial partner training began in June and will continue until September 2021.

Officers for the Protection of the Local Environment Pilot Program

Since September 2017, Officers for the Protection of the Local Environment have worked in local councils across Victoria to provide environmental monitoring and assessment, and teach business and the community about environmental concerns. In May, the Victorian Government announced the program will be funded for a further four years.

These officers are EPA staff based in 11 metropolitan and 12 regional councils. They assist industry, business and community find, prevent and resolve environmental issues and help them

to understand how to comply with the new Act and its general environmental duty. They add to the work councils already do in environment and public health protection and provide timely compliance and enforcement responses for smaller local pollution reports such as those relating to litter, noise, odour and dust.

These roles strengthen the relationship between EPA and councils, resulting in faster responses to smaller-scale pollution, increased accountability, and better outcomes for community, industry and government. These officers complement the work EPA does to reduce pollution and waste at larger, more complex sites, where we continue to manage compliance, enforcement and action to prevent pollution.

Support for major infrastructure projects

In 2020–21, EPA worked with the Major Transport Infrastructure Authority to familiarise significant infrastructure projects with Victoria's new environment protection laws. Key achievements included:

- A Compliance Code for Victoria's eight Big Build Projects in liaison with the Department of Environment, Land, Water and Planning, providing practical guidance about contaminated land management and their obligations around unreasonable noise
- Co-development of risk-based subordinate legislation for the management and disposal of tunnel boring machine spoil
- Updating and clarifying multiple pieces of EPA guidance to ensure infrastructure projects were clear on environmental obligations
- Assessing existing waste classifications and issuing more than 50 designations to provide greater clarity for the infrastructure sector under the framework.

NEW LAWS WEBINARS

EPA held a series of webinars for industry, community and our local government partners to prepare Victorians for the commencement of new environment protection laws. They began in September 2020 with a session hosted by the Municipal Association of Victoria with attendees from all 79 councils.

From early 2021, EPA prepared stakeholders for the proposed final subordinate legislation and supporting regulatory duties, including the new waste framework and our GPS-enabled Waste Tracker system, duties for the agricultural sector, and empowering local governments as joint regulators.

EPA responded to more than 200 questions in our February webinar on the proposed final Regulations and Environment Reference Standard, which were published on our website and grouped according to themes such as waste, contaminated land and the new requirements for licences, permits and registrations.

The session also covered what our compliance and enforcement will look like after 1 July and the industry guidance available.

EPA's webinar series received a combined audience of more than 6,600 people. All sessions are published on our website split into chapters, which to date have attracted more than 13,000 views.

Outcome 2.3

Community engagement in environmental management and decision making.

Community engagement with EPA decisions

Section 20B conferences, as described in section 20B of the *Environment Protection Act 1970*, provide the opportunity for EPA to consider the views and concerns of our community in relation to upcoming proposals. They allow EPA to explain the works approval application, assessment process and current status of proposals, while participants can ask questions and hear about issues raised in submissions. A report is produced by an independent facilitator at the end of each conference, which our assessors use to help inform whether any amendments to the works approval are required.

There were 22 Section 20B works approval conferences in the 2020–21 financial year. All had question and answer sessions on their Engage Victoria pages in lieu of face-to-face sessions. EPA requested further information from some applicants following an independent assessment process, such as technical studies and/or amendments to their application to address issues raised at the conference.

Engaging the community to participate in Section 20B conferences included their promotion via EPA's website and invitations sent directly to those who had made a written submission and/or registered their interest.

Educating Victorians through science

The theme for National Science Week 2020, Australia's annual celebration of science and technology, was 'Deep Blue: innovations for the future of our oceans', and it embraced the innovative technologies, capabilities and skills needed to achieve economic, environmental and social sustainability for our oceans. It also featured the Blue Economy Cooperative Research Centre, which brings together expertise in the seafood, marine renewable energy and offshore marine engineering sectors to deliver innovative solutions that will transform the way we use our oceans.

In celebrating Science Week, EPA teamed up with the Department of Jobs, Precincts and Regions to launch a new series of six podcasts hosted by our Chief Environmental Scientist and Victoria's Lead Scientist. Titled *Science in Government: then, now, and what next?*, the series profiled a variety of science professionals working within the Victorian Government — what they studied, what roles they have now and what scientific developments they look forward to in the future. The initiative featured representatives from EPA, the Department of Health, the Arthur Rylah Institute, Fire Services Victoria, Museums Victoria and the Geological Survey of Victoria.

In February, EPA partnered with the Commissioner for Environmental Sustainability, Victoria's Lead Scientist, Department of Jobs, Precincts and Regions, Inspiring Victoria and In2science to host Victoria's celebration of the International Day of Women and Girls in Science. The Commissioner participated as a panellist alongside our Lead Scientist. The free event was streamed live to Victorian schools to inspire young people to explore careers in science, technology, engineering, medicine and mathematics, and was attended virtually by several classes across Victoria. The session was also recorded and made available online. EPA's social media also featured profiles of three of our leading female scientists with expertise in data and analytics, noise and epidemiology.

Citizen science

EPA has developed and implemented a *Citizen Science Plan 2020–23* to support the delivery of a multiyear study into the significance of air pollution and its sources. Building a two-way working relationship between EPA and community generates new knowledge, empowers the community, increases scientific literacy and builds community capability to understand and respond to local environmental pollution issues. It also helps to identify data gaps in EPA's understanding of particulate matter and future monitoring priorities.

We presented our Citizen Science Program and links with environmental protection at the virtual conference, *CitSci Helvetia 2021 – Connecting Citizen Science*, in Switzerland. We were commended for our recent Environmental Science Seminar Series of the same topic which was well attended by conference delegates based in Europe.

The following citizen science initiatives have been implemented in accordance with our *Citizen Science Plan 2020–23*.

ENVIRONMENTAL SCIENCE SEMINAR SERIES

Our Environmental Science Seminar Series provided an opportunity for community, industry and business to learn about environmental science topics impacting Victorians.

The series of free seminars was launched in 2017 by our Chief Environmental Scientist, Dr Andrea Hinwood. Presented by leading scientific experts, they delivered on EPA's Applied Science Strategy 2018–23 by developing community access to scientific information and advice.

EPA's free environmental science seminars were delivered online in 2020–21.

Four online public seminars were delivered throughout 2020–21:

1. **Sound-thinking for a quieter environment**
   with guest speaker, Mrs Marion Burgess, acoustics researcher at the University of New South Wales, exploring the main types of noise pollution in our urban areas and how we can use science to help to minimise or manage their impacts
2. **Using citizen science to understand the environment**
   with guest speaker, Dr Erin Rodger, Chair of the Australian Citizen Science Association, which explored citizen science projects and how working together improves our understanding of the environment
3. **Improving urban water quality**
   with guest speakers Associate Professor Chris Walsh, Professor Tim Fletcher and Dr Stephanie Lavau of the Melbourne Sustainable Society Institute, providing a forum to discuss the future of urban stormwater management, including innovative water technologies and the importance of community engagement in the management of stormwater
4. **How climate change affects environmental public health**
   with guest speakers Dr Angie Bone, Deputy Chief Health Officer (Environment), Department of Health and Mr Matthew Riley, Director of Climate and Atmospheric Science, the New South Wales Department of Planning, Industry and Environment, discussing the direct and indirect health effects of a changing climate and actions we can all take to reduce these impacts.

The Drain Detectives

With assistance from the Port Phillip Bay Fund, we delivered a citizen science project to monitor stormwater drains in Port Phillip Bay. This Drain Detectives project identified a source of human faecal contamination, and we continue to work with our council partner and the local water corporation to eliminate this source of pollution.

Port Melbourne shipping emissions

Port Melbourne residents had registered concerns about emissions from ships using Station Pier, including the two Spirit of Tasmania ferries and cruise ships.

An effective working relationship was established with local community group, the Beacon Cove Neighbourhood Association. Through a co-design process, the community identified its preference for the type and location of sensors, and EPA collaborated with the community about project design. As a result, six PurpleAir sensors were deployed in Port Melbourne to measure $PM_{2.5}$. An additional sensor had already been purchased and installed by an active community member.

The sensors were tested and activated, and data was available in real time on PurpleAir's international platform. Citizen scientists have reported on the correlation between air quality and shipping patterns.

Inner Melbourne air monitoring

EPA continued to build our understanding of air quality in Melbourne. This year, we funded a study in the inner Melbourne suburbs of Port Melbourne, Yarraville, Newport and Kensington to determine the sources of pollution by contributors to poor air quality such as freight, shipping and industry. We worked closely with community to identify gaps in our understanding of particulate matter or particle pollution — the mixture of tiny solid particles and liquid droplets found in the air. Samples were collected every three days, with analysis by our collaborating laboratories, CSIRO and GNS Science.

We also worked with Fire Rescue Victoria to locate a DustTrak at its site in Melbourne which measures aerosol contaminants such as dust, smoke, fumes and mists and will support co-location of air quality monitoring equipment and enhance our capability.

Bendigo air quality

New particle air monitoring equipment was installed in Bendigo in partnership with La Trobe University. This equipment monitors $PM_{2.5}$, the main pollutant of interest from emissions from wood heaters and planned and unplanned burns. It will provide ambient air monitoring for Victoria's northwest region for at least 12 months, with data available on the EPA AirWatch website.

As part of this initiative, a network of additional portable $PM_{2.5}$ sensors have been designed by EPA and built in-house using 3D printing, making them extremely cost-effective. They can easily be dismantled by students and citizen scientists for examination. These sensors will be installed by citizen scientists from August 2021, in partnership with the City of Greater Bendigo and La Trobe University. Various community groups will take part and co-design, co-monitor and co-interpret the data from the sensor network. This work complements our other AirWatch sites, our State Emergency Services' emergency air monitoring program and emergency air monitors.

Yarra Ranges community-led action plan for smoke

In the cooler months, EPA receives complaints about woodfire heater smoke that affects the air quality in Melbourne and regional centres. We conducted a study in the Yarra Ranges to improve community knowledge about the health impacts from smoke and encourage shared responsibility for the management of smoke-generating activity in the local community. The pilot findings provided the means to adopt a scalable approach with the potential to expand citizen science activity throughout Victoria.

Teams across EPA have collaborated to develop a woodfire heater campaign comprising information on smoke and health in the form of web pages, videos, fact sheets and social media. The campaign was modelled on the approach used by EPA Tasmania and is an outcome of the Yarra Ranges citizen science project.

Outcome 2.4

Clear role definition within joint and peer regulators and established strategic partnerships.

Preparing councils and other joint regulators for new laws

Under the new laws, EPA has empowered our joint regulators to maintain compliance and enforce the law through new delegated powers and functions. While the scope of their regulatory powers is consistent with the *Environment Protection Act 1970*, local governments will apply the general environmental duty to regulate residential construction noise and onsite wastewater management systems (including septic systems). Local government will also regulate litter and waste.

Our work to support joint regulators is focused on building their capability and confidence. We developed one guide and three new operational toolkits, as well as 10 new notice templates. New local government web pages reflect their joint regulator role and house these new resources.

We also presented a webinar to explain these resources. This local government joint regulator webinar, held on 5 May, had more than 500 attendees and responded to more than 100 questions.

A webinar about the new litter and waste laws was also held for 150 Parks Victoria officers in June.

Litter toolkit supports compliance and enforcement

At the end of 2020, EPA released *Regulating litter and other waste: toolkit* in readiness for transition to the new laws on 1 July. This important resource was designed to help litter authorities, particularly councils, and litter enforcement officers investigate illegal dumping and other waste.

The toolkit explains the role of litter authorities such as Parks Victoria and VicRoads, and litter enforcement officers appointed by EPA and local councils under the new Act. It outlines their powers and the regulatory tools available to them under the Act and the proposed Environment Protection Regulations.

To support EPA's preventative focus, the toolkit also provides strategies to reduce littering and illegal dumping and examples of how enforcement works alongside these strategies.

This resource is part of EPA's transformation and supports our compliance and enforcement partners to maximise the tools available under the new legislation.

Aboriginal Inclusion Action Plan

EPA's *Aboriginal Inclusion Action Plan (2019–2022)* defines a pathway to incorporate Victoria's First Peoples and their culture as part of EPA's way of working. It provides an organisational plan to build and strengthen EPA's regulatory approach and commitment to provide a respectful and inclusive working environment for current and future Aboriginal and Torres Strait Islander employees.

The *Aboriginal Inclusion Action Plan* has four pillars of work:

1. Building cultural awareness and capability
2. Engagement and building relationships with Traditional Owners
3. Inclusion with EPA's regulatory work
4. Inclusion within EPA's workforce.

Key achievements in 2020–21 included:

- Commencing an organisation-wide Cultural Awareness and Safety Training program co-designed and delivered by the Victorian Aboriginal Community Controlled Health Organisation
- Establishing a designated Aboriginal Engagement Adviser role to help us develop relationships with Aboriginal communities and Traditional Owner corporations
- Strengthening EPA's engagement and relationships with Aboriginal communities and Traditional Owner corporations through On Country training and strategic engagement to understand aspirations for Country and opportunities for collaboration.

GOAL 3 Be an influential authority

We are a trusted source of advice on Victoria's environment and influential in working with others to address complex problems resulting from pollution and waste.

Outcome 3.1

Applied expertise that shapes the monitoring, identification and reporting of environmental and human health risk and subsequent responses.

Research and development

The Australian Research Centre Linkage Program promotes national and international research partnerships between researchers and business, industry, community organisations and other publicly funded research agencies. EPA has been a partner on several projects such as:

- Research into new techniques to determine toxicity of emerging contaminants
- A national snapshot of emerging contaminants in wastewater
- The development of new passive samplers to support per- and polyfluorinated alkyl substance assessment
- *Future Water: Advancing water pollution emissions modelling in cities of the future*, working with Monash University, the University of New South Wales, Melbourne Water and the City of Knox to study the sources of pollution in urban catchments, the development and application of new sensors and the integration of the data into an urban planning tool
- The National Environmental Science Program phase 2 Sustainable Communities and Waste Hub expression of interest on harmful impacts of chemicals and materials embedded in plastics and textiles and their potential release on re-use
- How emerging contaminants in agricultural systems, introduced by wastewater re-use and biosolid application to land, can affect soil and plant health and ultimately crop productivity
- Nutrient management and reduction modelling in the Lake Wellington catchment
- Diagnosing river health using invertebrate traits and DNA barcodes.

To support the Victorian Government's Recycling Victoria policy, EPA is contributing to a new $18 million Industrial Transformation Research Hub for Transformation of Reclaimed Waste Resources to Engineered Materials and Solutions for a Circular Economy.

The hub will be led by RMIT University and focus on 10 challenging waste streams: textile waste, biomass, tyres, glass, paper and cardboard, construction and demolition waste, fly ash, plastics, biochar, and timber. EPA will provide advisory services to the hub partners about current policy on waste management, as well as guidance where needed in the research program.

The project provides the opportunity for EPA to partner with state, national and international stakeholders to address key waste challenges for Australia. It is a significant collaborative opportunity that will ensure government investment in waste technologies is targeted and efficient.

Additional research and development projects undertaken this year included:

- An E.coli and enterococci detection method
- Microplastics and phthalates
- Passive samplers and networked sensors in urban stormwater
- Australian Research Council — Airborne ultrafine particles in Australian cities
- Australian Research Council — Improved monitoring of aquatic pollutants in national water resources
- Industrial Transformation Training Centres — Green Chemistry Biosolids
- Behaviour works: Graduate Research Industry Partnership PhD Program
- Investigating regional levels of arsenic in former gold mining areas to inform regulatory decision making — Case study of Victoria's Central Goldfields
- Identification of biomarkers for liver stress in cattle

- Ongoing measurement and analysis of environmental noise in Melbourne with the Australian Catholic University, due for completion by the end of 2021.

Power stations licence review

In late 2017, EPA began a licence review process for three brown coal-fired power stations as part of our regular licence review program. The power stations — AGL Loy Yang, IPM Loy Yang and Energy Australia Yallourn — are all located in Gippsland.

Following extensive community consultation resulting in 493 submissions, EPA's assessment report was released in March this year.

Licence conditions aim to protect the local environment and provide greater transparency. We made changes to all three licences regarding air emissions and wastewater and changed Energy Australia and AGL's licences to require rehabilitation plans for their ash landfills and dust controls. There are also additional conditions for the three sites:

- Limits for mercury, fine particles ($PM_{2.5}$) and coarse particles (PM_{10}) have been added to each licence.
- Air discharge limits for most parameters on each licence have been reduced.
- To ensure licence non-compliances are dealt with in a transparent and timely manner, all three power stations are required to continuously monitor air emissions and share the data with the community through their company website.
- Energy Australia is required to install a continuous emissions monitoring system to monitor oxides of nitrogen and sulfur dioxide in real time (AGL and IPM Loy Yang already had this capability).
- Exemption hours for startups and shutdowns for AGL and IPM have been aligned to a maximum of 88 hours per year and now include exceedance of mass emission rates for consistency across the three licences. AGL has 600 hours (reduced from 1,200 hours) because of the frequency of its startups and shutdowns due to its age.
- To inform any additional action that may be required, class three indicators — extremely hazardous substances that are carcinogenic, mutagenic, teratogenic, highly toxic or highly persistent and which may threaten the beneficial uses of the air environment — are to be monitored under licence.
- The three licence holders must continually assess the practicability of upgrading key air emission control technologies at their plants.
- Wastewater discharge limits for most parameters on each licence have been added so that they are consistent with the Environment Protection Amendment Act.

The *Climate Change Act 2017* has a long-term target of net zero greenhouse gas emissions by 2050. In issuing these licences, EPA has acted in accordance with current policy and regulation.

EPA's Specialist Applied Scientist (Water) observes samples from wireless sensors deployed to monitor pollutants in the Merlynston Creek catchment.
This image was taken in accordance with relevant public health measures at the time.

This project enabled EPA to take quicker action to control flows, provide alerts if required and find the source of pollution.

PASSIVE SAMPLERS AND NETWORKED SENSORS IN URBAN STORMWATER

In 2020–21, EPA trialled new wireless sensors and passive samplers in the Merlynston Creek catchment to detect stormwater pollutants leaking into the waterway. This catchment was chosen because of its history of poor water quality associated with several industrial fires, including SKM (2017) and Campbellfield Industrial Services (2019).

Currently, water quality sampling based on laboratory analysis requires field staff to collect water from a single point in time. EPA also receives pollution reports from the community. These new technologies use real-time sensors to track concentrations of pollutants (including ammonia, copper and hydrocarbons) to identify trends, potential sources and environmental risks. They also reduce risks to staff and enable responsive actions based on real-time pollution sensors monitoring 24/7 and rapid whole-of-catchment assessment using passive samplers.

Water quality sensors were compared to laboratory analysis of water samples, which showed the sensors provided reliable measurements. Technology trials were delivered with support from the School of Chemistry at the University of Melbourne and Bio2Lab.

Wireless sensors were deployed for one year (March 2020 to March 2021) and showed repeated pollution events with daily fluctuations and weekly patterns. Wireless alarms alerted EPA to high concentrations. Spikes in pollution often occurred on Friday afternoon, suggesting washdowns at work sites. The patterns allowed EPA to plan investigations based on recurring pollution trends, resulting in enforcement action.

Passive samplers showed major sources of pollution (hotspots) across the catchment. The network of sensors was deployed close to these hotspots to monitor pollutant concentrations.

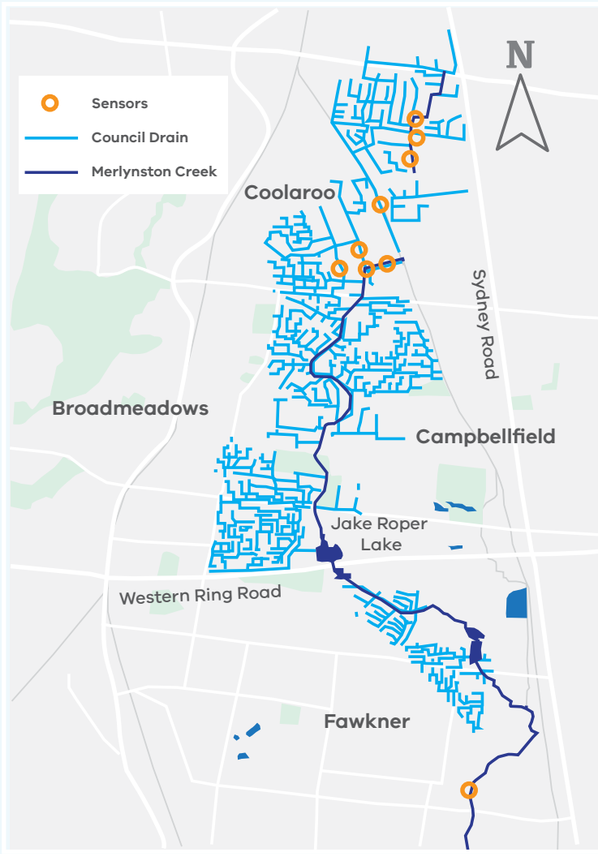
This project enabled EPA to take quicker action to control flows, provide alerts if required and find the source of pollution. Monitoring data informed strategic inspections — targeting inspections for when pollution was likely to occur. The sensors were used as part of the monitoring following the MRI (Australia) Pty Ltd fire at its Sydney Road, Campbellfield premises in 2020.

The project leader, an EPA scientist, says the project enabled EPA to look at new and innovative ways to rapidly detect and respond to pollution to improve water quality. This will help improve water quality by reducing pollution from stormwater.

These sensors and samplers enabled EPA to quickly respond and trace pollutants to their source, thereby reducing contaminants from flowing downstream. EPA continues to innovate using new technologies as part of future research and development.

Merlynston Creek Sensors

Nine sensors were deployed to monitor pollutants across nine sites near the Merlynston Creek catchment in Melbourne's north. More than 70 passive samplers were also deployed across 12 sites.



Outcome 3.2

Leadership in partnering with others to address complex pollution and waste challenges.

Climate change impacts

EPA is developing external guidance for industry to help it understand risk and identify controls to manage greenhouse gas emissions. We are planning to release a draft for public consultation in early 2022, with the final version published later that year.

Our climate change activities included:

- Environmental Science Seminar Series events
- An EPA pledge to reduce emissions from our own operations
- Delivering guidance
- Considering climate change in works approval and licensing decisions
- Considering climate change when recommending new or amended state policies.

As an organisation, EPA has implemented an accommodation strategy to:

- Introduce better energy-efficient facilities at North Geelong and Dandenong
- Maintain compliance and maintenance building works through coronavirus restrictions to ensure energy efficiency at all EPA facilities
- Turn off and/or minimise use of non-essential electrical equipment during the pandemic
- Commission external waste audits to identify and understand resource consumption and greenhouse gas emissions from EPA's office-based operations.

Waste determinations

EPA is delivering the Reducing Regulatory Barriers project as part of the Recycling Victoria policy. The project's objectives are to support duty holders in waste and resource recovery by providing regulatory certainty or removing regulatory barriers. As part of this project, we have:

- Successfully delivered four waste determinations for processed organics, livestock manure and effluent, fill material and aggregates
- Delivered two guides to help duty holders understand how to comply with the determinations.

Delivery of these instruments was a collaborative effort, with input from key government bodies such as the Major Transport Infrastructure Authority, Department of Environment, Land, Water and Planning and Sustainability Victoria, as well as industry organisations such as the Australian Organics Recycling Association and the Victorian Farmers Federation. Engagement work involved publishing a discussion paper on the Engage Victoria website, presentations including live question and answer sessions to more than 600 stakeholders over six events, and many direct consultations. We have built strong partnerships through this project, which has received positive feedback from industry.

Recycling and spoil management

EPA completed a literature review of technologies and processes associated with wastes that may cause harm to human health and the environment when applied incorrectly. The review was done as part of Recycling Victoria's Recycling Markets Acceleration package, which is just one of a suite of actions to support Victorian businesses to transition to a circular economy. Recommendations from this work will inform the direction of the project with a view to unlocking the benefits in the safe use of waste materials.

EPA has provided technical support to the North East Link Project during the environment effect statement process through to environmental performance requirements phases in relation to spoil management and ensuring land and groundwater protection. We assessed investigation reports proposing in situ sampling and classifications, characterisation and categorisation of spoil (contaminants such as metals, organic and inorganic substances, per- and polyfluorinated alkyl substances, asbestos, and waste acid sulfate soil and rock/potential acid sulfate soil and rock) through multiple lines of evidence. This in situ approach is applicable particularly to the tunnel sections and it is novel in that there are no existing guidelines to cover this type of approach. This work is ongoing as further sections of the North East Link Project are addressed.

Agriculture

EPA has worked with Agriculture Victoria and the Victorian Farmers Federation to resolve barriers to using manures and effluent as a valuable resource on farms. The livestock manure and effluent determination was delivered as a response to feedback from the agriculture sector concerned about additional requirements associated with the waste framework. A determination allows the use of manures and effluent without the need for any waste-related permissions, acknowledging the value of manures and effluent when used as a soil amendment.

Using tyres on farms as a way of managing the storage of silage was brought into focus by the new laws. Tyre volumes are presented in equivalent passenger units (EPUs), which is based on the typical mass of material in a passenger motor vehicle tyre. EPA continues to work with the agricultural sector to find fit-for-purpose regulatory solutions for farms requiring over 5,000 EPUs onsite. We have partnered with United Dairy Victoria, Dairy Australia and the Country Fire Authority to examine the risks of managing large volumes of tyres and to identify ongoing practical solutions to prevent fires taking hold in tyre storage areas.

Waste crime prevention

As part of our zero-tolerance approach to waste crime, we continued to detect, prevent and respond to illegal activities. To do this, we partnered with WorkSafe, Victoria Police, emergency services agencies, local government and other regulators.

EPA conducted a significant recruitment drive to provide expert capability in forensic accounting, surveillance and specialist large-scale investigation. Specialist law enforcement resources and skills are used to plan, conduct and prosecute large-scale waste crime investigations across the state. We have also introduced an incident response framework that supports the detection and investigation of suspected waste crime, containment of the environmental impacts of illegal waste disposal, and a visible demonstration of our ongoing commitment to swift and decisive enforcement action where we find deliberate and criminal non-compliance.

Intelligence sharing by authorities is crucial in disrupting waste crime. This year we have improved sharing arrangements across regulatory and emergency management agencies by:

- Collaborating with the Department of Environment, Land, Water and Planning and co-regulators to establish a joint government agency waste intelligence network to be hosted by EPA from July 2021
- Supporting the Coordinated Prevention Response Framework in the risk assessment and management of high-risk sites, as well as sharing and analysing intelligence via the co-regulatory Waste Intelligence Working Group and the Chemical Waste and Recyclable Materials Interagency Operations Team.

Outcome: 3.3

Strong collaboration with other regulators to remain at the forefront of regulatory practice.

Best practice environmental regulation

During the past year, we continued our work with the Australasian Environmental Law Enforcement and Regulators Network which is focused on solving shared environmental issues across jurisdictions. EPA was the Secretariat until this function was passed to the Commonwealth in March 2021.

In October 2020, the network's workplan was developed with three specific outcomes:

1. Productive contribution to the executive and steering committees
2. Effective sharing of EPA's regulatory work with working groups and Community of Practice
3. Systematic management of EPA's lead agency obligations.

Key highlights during the past financial year:

- An environmental Indigenous inclusion working group was established in late 2020 to focus on identifying best practice guidance in key areas across environmental regulators of the network
- Continued progress on the development of a database of environmental prosecutions to be made available to all members on the network's website. This tool will help regulators easily access prosecution details and outcomes to help inform their regulatory actions and strategies

- An EPA webinar series was shared on the network's website, in newsletters and other channels, advertising upcoming webinars on the new Act and information about Waste Tracker. This has expanded our audience to other environmental regulators across Australasia
- EPA representatives engaged with their counterparts in other jurisdictions through working groups to share their knowledge and expertise
- EPA representatives of the network's community and engagement working group presented to EPA South Australia in February to share expertise on the organisation's industry reference groups approach, works approval engagement and other engagement strategies.

The Portfolio Coordination Group

EPA participates in the Portfolio Coordination Group with the Department of Environment, Land, Water and Planning, Sustainability Victoria, Major Transport Infrastructure Authority and the Metropolitan Waste Resource and Recovery Group to deliver *Recycling Victoria: A new economy*, the Victorian Government's circular economy policy and 10-year action plan. EPA produced some important initiatives across several key actions, including:

- Action 6.1 Landfill levy reform
- Action 6.2 Illegal waste disposal program — expanded the program to prevent dumping from large-scale industry
- Action 6.3 Landfill levy auditing — completed a review of the landfill program
- Action 8.2 Recycling markets acceleration package — delivered four waste and resource recovery determinations
- Action 10.4 High-risk sites management — continued implementation of the Coordinated Prevention and Response Framework for high-risk waste sites.

EPA also plays an active role in providing expert advice and support to inform other vital initiatives. Through our ongoing commitment, we have:

- Assisted in implementing the Victorian Government's commitment to ban the sale of plastic bags (Action 3.1)
- Supported further action on plastic pollution, including providing expert advice on banning single-use plastics (Action 3.2)
- Provided expert legal, scientific and policy advice to influence and support the development of the Waste Act and Waste Authority (Action 7.1) and the Waste to Energy Framework (Action 9.1)
- Worked with Department of Environment, Land, Water and Planning to develop important high-risk (asbestos) and hazardous waste policies and plans (actions 10.1 and 10.2).

By working collaboratively across government, EPA will continue to play a significant role in shaping Recycling Victoria's policy outcomes and delivery.

Outcome: 3.4

Enhanced environmental public health capability that gives community confidence.

Our community's health

In 2020–21 we completed several projects and activities to ensure our environmental health tracking network is evidence-based and provides lasting value to EPA by collecting, integrating, analysing and interpreting data to prevent and monitor health impacts from environmental conditions. The environmental health tracking network's objective is to relate environmental exposure and health at a population scale for presentation, early warning, response and engagement.

The network will add scalable and additional functionality (such as real-time data and community engagement application) based on priorities and user feedback. The first phase of the environmental health tracking network is expected to be operational by the end of 2022.

EPA continued to deliver the emerging contaminants ambient assessment program. This provides data on the concentration, magnitude and spatial extent of environmental (water, soil and dust) concentrations of the determined list of emerging contaminants across Victoria. This program provides evidence to inform regulatory actions for these emerging contaminants based on the understanding of their presence in the Victorian environment and their potential for community exposure.

Ongoing collaboration between EPA's environmental public health function and the Australian Catholic University has addressed current gaps in knowledge, including:

- Evaluation of a residential intervention to reduce exposures to smoke events resulting from planned burns
- Measurement and analysis of environmental noise in Melbourne
- Development of a high spatial resolution ultrafine particle and black carbon map of Melbourne.

Noise

In 2020–21, EPA received 5,322 noise reports, double the number made in 2019–20.

This year we addressed noise issues and promoted better consideration of noise and the associated risk of harm to human health and the environment by:

- Providing support to regional operations and the Officers for the Protection of the Local Environment program with advice on noise investigations and complaints, and coordinating sound-measuring equipment and maintenance services
- Providing noise expert advice on key projects including the North East Link, Suburban Rail Loop, Western Outer Ring Main Project, the Western Victoria Transmission Network Project, mining projects such as Fingerboards Mineral Sands Mine and planning referrals.

We analysed 75 noise assessments and provided technical expert advice in response to an additional 180 advice requests.

EPA worked with Music Victoria to support community and the music industry to make best use of the outdoors during the 2020 summer. Through the collaboration, EPA created new guidance for outdoor music events in line with the Victorian Government's outdoor activation policy, which supported and encouraged live music outdoors. The guidance helped businesses with modified operations to open under COVIDSafe measures. In conjunction with the Australian Acoustic Society, we participated in a noise study about the impacts of coronavirus on the acoustic environment.

Several noise-focused guides were published in preparation for the new legislation, including noise technical guidance, residential equipment assessment, low frequency noise, and measuring and analysing industry noise and music noise. We also collaborated on the *Regulating Residential Noise: Local government toolkit*, and a series of nine industry guidance documents to reduce the risk of harm from noise. These documents helped us prepare industry and stakeholders for the general environmental duty.

We have also updated the tool used for calculating zoning levels for setting noise limits in urban areas. This update replaced an internal ArcGIS tool and migrated it to a web mapping application that ensures it is more reliable and easier to use. After an internal testing period it is anticipated that this tool will be publicly available in 2021–22.

EPA worked with other agencies as part of an Urban Air Mobility Steering Committee to assess the feasibility of a network of electric or hybrid fuel flying vehicles to provide and enable rapid and reliable urban transportation for passengers and baggage or cargo. As an emerging noise pollution issue, EPA's engagement in the early stages of this program has identified preventative regulatory activities and ways to minimise harm to the environment and human health.

Wind farms

Under Victoria's new environment protection laws, EPA is responsible for regulation of wind farm turbine noise to minimise risks of harm to human health and the environment.

This year, the Department of Environment, Land, Water and Planning led engagement with wind energy companies, councils and stakeholders to seek feedback on the best way to deliver clear and consistent regulation of wind turbine noise in Victoria. Draft regulations setting out responsibilities for industry and EPA were provided for public comment in January 2021.

Sixty-five submissions were received from community, industry and local government. Feedback was also provided through an industry reference group including the Clean Energy Council and a selection of wind energy operators in Victoria. Issues raised through this consultation were reflected in a series of amendments to the Environment Protection Regulations, which came into effect on 1 August 2021.

The new regulations set clear expectations for industry on noise limits and protections for local communities, and establish monitoring, auditing and reporting requirements to support clarity and confidence for both industry and community. To avoid overlap and support EPA's new role as primary regulator of wind farm noise, the *Public Health and Wellbeing Act 2008* was amended to remove wind farm turbine noise from consideration under the nuisance provisions of that Act.

This removed council responsibility to investigate nuisance from wind farm turbine noise. In addition, the Department of Environment, Land, Water and Planning is considering removing duplication of noise conditions in wind farm planning permits.

Addressing odour

EPA's odour expertise has been pivotal to inform several regulatory decisions, including the following Victorian Civil and Administrative Tribunal determinations:

- Aquaculture Facility, Associated Buildings and Works, Bolwarra: The Victorian Civil and Administrative Tribunal found that the environmental and biodiversity risks were appropriately assessed, and risks of harm or adverse impact were minimised to the extent practicable. EPA's expert advice was critical in assessing appropriate engineering and design requirements and relevant management plans in the works approval conditions

In 2020–21 we received more than 5,100 odour complaints and consequently brought actions against numerous duty holders for odour incidents.

- Argus Tallow and Advanced Composting Technologies Australia: Advice regarding the human health impacts of odour underpinned the delivery of a pollution abatement notice and preparation of legal correspondence. This led the Victorian Civil and Administrative Tribunal to uphold an EPA notice requiring Argus Tallow to manage all odour emissions at its site. This advice was also key to upholding the rejection of a works approval application for a composting technique applied by the company. The Victorian Civil and Administrative Tribunal upheld EPA's decision to refuse the application as an unacceptable risk to the environment and human health.

In 2020–21 we received more than 5,100 odour complaints and consequently brought actions against numerous duty holders for odour incidents. We also saw a decrease in odour complaints from the Brooklyn Industrial Precinct. This process highlights EPA's commitment to listening to, and working with, stakeholders and the community to reduce odour and keep place accountability where it belongs.

INTEGRATING THE NEW ENVIRONMENT PROTECTION ACT FRAMEWORK INTO OUR PLANNING SYSTEM

EPA has continued to work with the Department of Environment, Land, Water and Planning to update the Victorian land use planning system in preparation for the new Environment Protection Act. These updates implement the new environment protection framework in the Victoria Planning Provisions and all planning schemes and include updated requirements for the management of potentially contaminated land within the planning system.

A key document used by local government planners and developers, Planning Practice Note 30, has been revised to make it consistent with the Act. This practice note helps planners to understand the new legislative framework relating to contaminated land and provides guidance on applying the provisions to assess a planning scheme amendment or planning permit application.

Planning Practice Note 30 has undergone a significant review and consultation process, incorporating feedback and advice sought through consultation across EPA, public engagement and independent external review by the authors of the 2005 Planning Practice Note 30, and legal review by the Victorian Government Solicitor's Office. This document will continue to be a valuable resource for planners when dealing with contaminated land.

In addition to this update, new content on the Department of Environment, Land, Water and Planning website has been developed to provide information on environment protection in the planning system. The site includes accessible information on how to consider human health and environment protection in planning decisions, including links to related planning system information (for example, buffers and land use compatibility) and links to relevant guidance and documentation on the EPA website. It will be a key resource for local government planners, developers, consultants and the community to support improved planning outcomes.

EPA has also developed planning guidance for high-risk industries as identified by local government planners. Each guidance document includes:

- Information on the risks to human health and the environment from the specified land use
- Guidance related to buffers and industry-specific environmental management controls
- Direct links to relevant EPA guidance materials and information
- Clarity around EPA's role, and statutory role in land use planning (as aligned with the Land Use Planning and the Environment Protection Act Policy 2021)
- Guidance on what councils could request to assist in either the assessment or ongoing management of planning permit applications.

The development of additional online resources and targeted new guidance will ensure that EPA standards and guidance are easily understood by planners and can be applied in the planning and environment framework.

The changes to the planning system will provide greater certainty and help simplify and streamline planning approvals, while ensuring that planners have a strengthened planning system that better aligns with and integrates the new environment protection framework with land use planning.

Together, the new changes and information will support planners in making more informed planning decisions that better protect the environment, amenity and human health.

EPA helped update the planning system in line with Victoria's new environment protection laws, including consideration of buffers and land use compatibility.

GOAL 4 Respond to harm

We hold polluters to account and work with our partners to respond to pollution and emergency incidents and legacy contamination to minimise harm to Victoria's environment and people.

Outcome 4.1

Timely and proportionate consequences for those that do the wrong thing.

Compliance and enforcement

This year, improved data analytics capability, following mandated electronic waste transport certificates for prescribed industrial waste movements, has helped us to identify and respond to detected non-compliance.

EPA introduced a number of prioritisation, monitoring and detection tools including:

- A tool to efficiently compare prescribed industrial waste tracking and levy information for specific duty holders to identify inconsistencies
- A data analytics platform to help investigations by improving visibility and connection between waste tracking, and vehicle permit and licence information
- Analysis tools that use waste transport certificate information, vehicle permits, licence conditions and consignment authorisations to identify potential non-compliant producers, transporters and waste receivers
- A Waste Transport Certificate Data Quality Report, in line with the Victorian Government's Digital Transformation Strategy
- Tools to identify waste management practices and gaps in the quality use of waste transport certificates, with an initial focus on those that were overdue
- Specialist waste industry monitoring tools used for activities such as targeted monitoring of clinical waste movement during coronavirus cases.

To help us identify and address waste sites that may affect communities, EPA also delivered a quarterly waste horizon scan and enhanced high-risk sites register that ranks waste locations based on a broad range of risk factors including cleanup costs and the size of the potentially affected population.

A team of intelligence specialists was established to improve EPA's capability to detect, prevent and disrupt waste crime, including forensic accounting, data analysis and surveillance. We based the development of illegal phoenixing and illegal dumping detection profiles on Australian Taxation Office data combined with EPA and co-regulator data.

We also used Victorian Building Authority data to spatially map construction demolition sites to predict illegal dumping operations. Geospatial mapping of illegal waste disposal and predictive modelling informs future program priorities, design and targets.

Under our Fire Prevention Program, compliance and enforcement activity has used data analytics and intelligence to prioritise waste and recycling facility inspections.

We continued to implement strong enforcement action under the Act to prevent fires at waste sites throughout the state. EPA inspected more than 200 waste and recovery sites as part of a targeted prevention campaign. Within these inspections, EPA found evidence of non-compliance with environmental regulations in some way. Since January, EPA officers conducted more than 360 Fire Prevention Program inspections across more than 200 sites, resulting in 149 remedial notices and more than 70 compliance issues referred for further investigation. Examples of hazards and unsafe practices at some sites included oversized and poorly separated stockpiles of waste, as well as a lack of fire prevention and firefighting controls.

The Illegal Waste Disposal Program

EPA has continued to investigate the incidence of waste crime, inclusive of illegal waste disposal from large-scale industry.

We have a multi-disciplinary team with specialist capabilities to prevent, detect, investigate and disrupt those deliberately operating outside the law — including forensic accounting, surveillance, law enforcement, specialist large-scale investigation and legal expertise.

EPA is conducting 16 proactive investigations into suspected serious waste crimes. We have laid 14 charges against an individual under the Act following a comprehensive investigation into the storage of industrial waste and asbestos at a premises at Garfield in West Gippsland.

Operation Hydrogen was a taskforce formed in early 2019 to manage and coordinate EPA's response to the impacts following the Tottenham industrial fire, the chemical waste fire at Thornycroft Street in Campbellfield, and the discovery of approximately 19 million litres of chemical waste illegally stored in warehouses in the northern suburbs of Melbourne and western Victoria. The taskforce ensured the delivery of safe and appropriate sampling for hazardous chemical waste and underpinned evidence for EPA regulatory action and legal proceedings.

High-risk and hazardous waste sites

The Coordinated Prevention and Response Framework establishes and documents an agreed approach across relevant agencies for the management of high-risk waste sites. Since its commencement, 38 sites have been assessed and placed on the High-Risk Waste Sites Register. Through several Interagency Operations Team cleanups, implementation of the framework and multi-agency collaboration, there are currently seven sites listed on the register. Thirty-one sites were made safer through coordinated regulation or intervention by government agencies.

EPA is the lead agency for six of the seven sites listed on the register, including three of the four funded site cleanup projects and three coordinated interventions that are focused on de-risking the sites through multi-agency regulation. The coordinated interventions have achieved improved risk controls at these sites and consequence plans have been developed between agencies ensuring the community is kept safe.

EPA charges lead to rehabilitation project

In March 2021, Coliban Water was ordered to pay $150,000 towards a rehabilitation project following an EPA investigation that found the water authority had discharged treated wastewater into the Campaspe River.

Coliban Water is licensed by EPA to discharge treated wastewater from the Kyneton Water Reclamation Plant, on Redesdale Road, into the Campaspe River downstream of the township, and for onsite and offsite wastewater re-use irrigation. However, from 7 to 13 June 2019, Coliban Water discharged secondary treated (class C) wastewater when there was no flow in the Campaspe River, in breach of its licence condition.

In December 2020, Coliban Water pleaded guilty to charges relating to pollution of waters, environmental hazard and contravention of its licence. The court agreed to adjourn the matter until 2 March 2021 to allow EPA to complete an evaluation process consistent with the Inspiring Environmental Solutions Guidelines which allow for court-ordered community projects to be funded. On 2 March, the magistrate found that, taking prior offences into account, Coliban Water should contribute to EPA's proposed program under the Environment Protection Act.

The rehabilitation project will focus on the ecosystem of Snipes Creek, a tributary of the Campaspe River. The court recorded convictions on all charges. Coliban Water was also placed on a two-year bond and required to pay EPA's costs of $10,000.

EPA continues to fight for justice for local communities in court and seek ways to repair environmental damage.

Outcome: 4.2

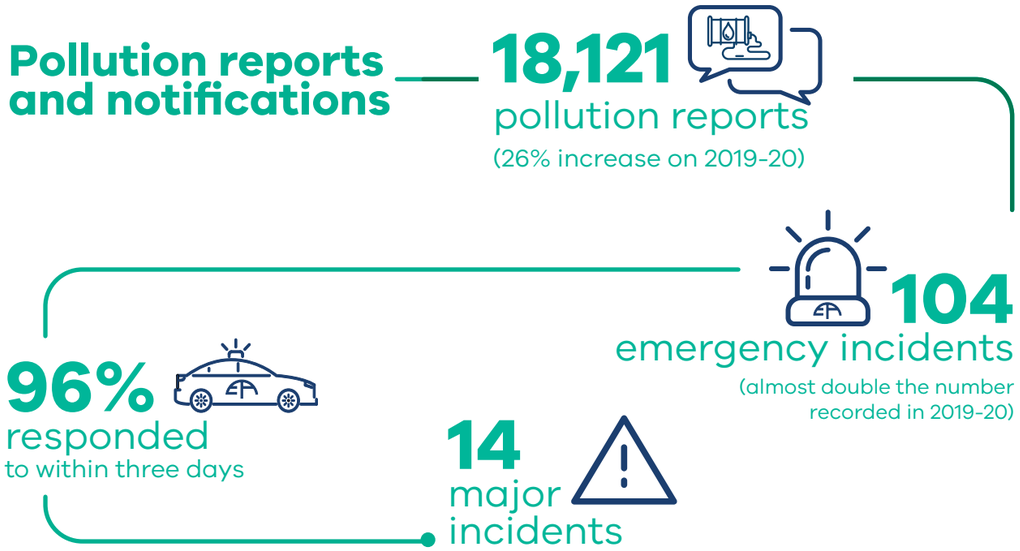
High quality and timely risk-based responses to reports of pollution incidents.

Pollution reports and notifications

EPA plays an important role in responding to pollution reports from the community. We also support Victoria's emergency management response by providing expert advice about pollution and waste impacts to other government agencies during major incidents.

In 2020–21, we provided crisis and compliance support in response to the pandemic, fires at waste and recycling industries, a maritime pollution incident involving a sunken tug with about 900 litres of diesel on board, and wastewater treatment plant pollution.

We also responded to the severe storms and floods that affected parts of metropolitan Melbourne and regional Victoria in June 2021, supporting water corporations, the Department of Environment, Land, Water and Planning, Earth Resources Regulation, catchment management



authorities and Bushfire Recovery Victoria in response and recovery. We provided subsequent flooding and technical advice when the Victorian Government declared an energy emergency to allow Energy Australia to urgently divert the Morwell River away from the Yallourn coal mine so it could repair a protective wall at risk of collapse. Energy Australia stopped production in much of the mine, limiting generation at the neighbouring Yallourn power plant to just one of its four units to conserve coal.

Robust intelligence and data analytics

This year, EPA has simplified intelligence sharing with our Environment Protection Officers to support more informed and timely regulatory responses. We can now provide spatial data to assess compliance remotely and accurately before officers attend a site. We have also developed a methodology for collecting structured information from site inspections to inform more rigorous site risk models. This is one of many potential improvements expected to be delivered thanks to our enhanced data and intelligence capabilities.

We have led work to develop VicMapR, which provides simplified access to all publicly available Victorian Government spatial data. Rated as the most efficient way to import spatial data for both visualisation and analysis, this is a clear example of how we have enhanced data, information and knowledge to develop new and innovative ways for our stakeholders to engage in protecting the environment and human health.

Contaminated land

Victoria's environment protection laws work alongside the *Planning and Environment Act 1987*. Any land marked for sensitive use, including residential uses and with a high risk of contamination, must be assessed and cleaned up. The new legislation strengthens EPA's approach to managing contaminated land and groundwater.

We have completed the Contaminated Land Assessment of Risk Appetite tool which imports duty holder data, calculates risk scores (based on risk of harm to human health and the environment) and produces a report for follow-up assessments. Based on the tool's risk score, contaminated land notifications are prioritised for a detailed follow-up assessment by contaminated land specialists who recommend regulatory intervention if required. The risk calculation includes individual scores against all reported contaminants for land, water, groundwater and vapour impacts. It is the most complex, automated risk assessment tool we have.

EPA has provided additional support to duty holders transitioning to the new contaminated land duties through the Facilitating Innovative Remediation Solutions program. This interagency government initiative aims to support innovation in contaminated land management including cost-effective per- and polyfluorinated alkyl substances remediation and treatment technologies to unlock contaminated land in Victoria and support major infrastructure projects. It also improves regulatory processes and provides advice for remediation and management of contaminated land. The program began in early 2021 and is scheduled to conclude by July 2022.

Kealba landfill hotspot

From 1 July, EPA will regulate the Kealba landfill under the new laws set out in the Environment Protection Act.

An EPA review of air quality, odour monitoring and pollution reports indicated that odour levels from the landfill were causing community concern.

Fifteen kilometres north-west from Melbourne, the Kealba landfill is operated by Barro Group Pty Ltd which is licensed to accept solid inert waste such as concrete, bricks, dry timber, plasterboard, carpet, plastic, glass, metals, bitumen and shredded tyres.

EPA had identified landfill hotspots, likely to be a result of oxygen combusting with old, decomposing waste, causing odour. EPA requested the Barro Group develop a contingency plan to reduce odours during the 2020 Christmas holiday period and the company decided to voluntarily suspend any incoming waste until the hotspots could be resolved.

We issued five notices requiring the company to investigate and rectify the problem, monitor air quality and keep the local community informed. We also issued two sanctions including an official warning and a fine for inadequate waste covering at the end of the day's operations.

After a clean up notice was issued to the company in March, we refused a request to extend this notice's timeframe and the May deadline was missed. Another notice was served on the company in June requiring it to show cause by 16 July as to why its licence to operate should not be suspended. At that time, EPA will determine further action.

We continued to work with Fire Rescue Victoria, WorkSafe and Brimbank City Council to consider advice on any additional measures that could be taken to extinguish the hotspots quickly and minimise odours during the process.

The current clean up notice remains in force, and we regulate this site with regular proactive compliance inspections, odour surveys, and enforcement where needed.

Outcome: 4.3

Technical advice on pollution and waste that makes a significant contribution to Victoria's emergency management system.

Emergency planning and incident response

EPA's timely advice for high consequence events, such as waste and industrial fires, has improved with our incident environmental monitoring capability. EPA sourced a custom vehicle which has been fitted with new rapid and mobile monitoring tools, and specialised scientific instruments. Incident environmental monitoring allows EPA to provide advice about pollution, waste and human health impacts for decision makers and community during incidents. It has been activated for more than 10 emergency deployments as well as pollution and planned responses since its introduction in July 2020.

EPA supported Fire Rescue Victoria's response to a fire at a recycling facility in Altona North with information about possible environmental impacts. We used two incident air monitors to record real-time air quality impacts from $PM_{2.5}$, advised on how to contain fire water at the site and installed a roving SmokeTrack to provide additional details about possible smoke movements. The incident also saw EPA's new science response officer undertake water sampling and analysis to support advice about fire water and impacts on a local lake.

EPA attended to two fires during October: one in Tottenham and another in Brunswick. In both cases, we assisted Fire Rescue Victoria to contain the blazes. EPA also assisted Fire Rescue Victoria to prevent harm from a truck fire on the Eastern Freeway in Melbourne.

With the help of equipment known as EXO sondes, which use telemetry and solar panels, our science response officers monitored the impacts of firefighting water and foam, as well as debris such as ash running off into nearby Koonung Creek. Introduced in 2020 as part of our incident environment monitoring capability, the EXO sondes relay in situ monitoring data, representing water quality, every five minutes via mobile network telemetry, enabling our experts to review and respond to environmental impacts in real time.

This capability is now available seven days a week, with the support of nine rostered science response officers from across EPA who were trained during coronavirus restrictions.

We also helped at a Fire Rescue Victoria response to a fire at a battery facility in Campbellfield and provided advice about possible environmental impacts to air, water and health. We assessed smoke impact on air quality and the impacts of fire water run-off. EPA was commended for its response to the incident.

A recent outbreak of High Pathogenic Avian Influenza (bird flu) saw EPA play a key role in a multi-agency containment response. We supported our regional offices, Agriculture Victoria and the Chief Veterinary Officer with disposal options and emergency approvals.

EPA also played an important role in supporting the safe removal and disposal of waste materials caused by 2019–20 summer fires throughout Gippsland and north-east Victoria. This cleanup marks a significant milestone in effort, logistics and collaboration between staff across multiple agencies, contractors and duty holders. EPA continued to support broader responses to the Bushfire Royal Commission and improvements in air quality messaging and standards through the Environmental Health Standing Committee and the Heads of EPA.

We have updated several emergency plans including:

- State maritime emergencies
- Biosecurity
- Site-specific consequence management plans
- New nationally consistent air quality categories and updates to multi-agency doctrine (interagency smoke standards and monitoring procedures).

Outcome: 4.4

Timely identification and management of legacy contamination that ensures land is efficiently returned to safe and useful purpose.

Support the transition to Victoria's new contaminated land scheme

New contaminated land duties require anyone managing or controlling contaminated land to minimise risks of harm to human health and the environment so far as is reasonably practicable, and to notify EPA if land has been contaminated in certain circumstances.

EPA has:

- Developed three publications and updated web content to assist duty holders to understand and meet their new obligations, and to provide information to the community and business on the new contaminated land duties
- Developed a process to enable those managing or controlling contaminated land to notify EPA, in accordance with their new duty to notify
- Used the opportunity provided by the duty to notify of contaminated land to collect data on the extent and type of contamination across the state, to better inform a strategic approach to managing contamination in Victoria
- Developed a digital contaminated land assessment triage tool, Contaminated Land Assessment of Risk Appetite, to help us focus our attention on contaminated land notifications based on the risk of harm.

We continued to play a key role in the development of the Preliminary Risk Screen Assessment, producing draft guidelines using information from a pilot program and additional internal and external consultation. EPA also worked with the Department of Environment, Land, Water and Planning on updates to the Victorian planning scheme to support the introduction of the assessment.

The Environmental Audit Program

EPA held its annual auditors conference in late June. Presenting the new legislation and guidance to the auditor network to enable transition into the new legislation, the online program was held in short 90-minute sessions over three days.

Under the Act, EPA appoints environmental auditors and oversees their conduct. They provide an important role visiting sites and assessing any potential environmental impacts from contaminated land, waste or pollution. Their independent environmental site reports include advice on ways to improve processes and reduce pollution.

It is an auditor's responsibility to make sure their audits are independent and of a high quality. EPA provides guidelines on auditor conduct and the environmental audit system and can issue penalties or revoke an auditor's appointment based on their conduct.

High-risk sites

Cleanup at Broderick Road, Lara, continues

In April 2019, EPA began a project to cleanup an estimated 286,000 cubic metres of waste which had been stockpiled at 300–400 Broderick Road in Lara. The site's previous operator had allowed waste to grow to these dangerous levels resulting in an unacceptable risk to the local community, environment and emergency services in the event of a fire.

EPA's role at Broderick Road has been to reduce the risk of fire, cleanup the site and make it safe, and to dispose of the waste materials at properly licensed facilities. More than 133,000 cubic metres — or 40 per cent of the original volume — of waste has been removed since the cleanup started. We are working with the City of Greater Geelong, Fire Rescue Victoria, Victoria Police, WorkSafe and the Department of Health to conduct the works.

About 192,000 cubic metres of material remains, spread across one large stockpile. Since March, sampling of this remaining stockpile, the largest at the start of the cleanup project, has shown a mix of construction and demolition waste that was contaminated with small pieces of non-friable asbestos and unsuitable for recycling.

A qualified, licensed asbestos removalist is transporting most of the material offsite to licensed landfills, in line with strict WorkSafe controls. Air quality is monitored during removal works at all fence boundaries, with additional monitoring onsite. And the site is monitored by security around the clock.

Works are continually assessed and managed to control any dust and we work closely with the contractor to monitor all site controls. An independent environmental consultant and occupational hygienist oversee all onsite controls and sampling. The cleanup is on track to be completed by mid-2022.

Bradbury Industrial Services site, Campbellfield

EPA commenced a site cleanup at a solvent waste treatment facility at 16–18 Thornycroft Street in Campbellfield in August 2020 to ensure no further offsite harm could come to the local environment or the community. Operated by Bradbury Industrial Services Pty Ltd since 2014, a large industrial fire occurred at the site in April 2019.

Works have been underway since late March and phase 1 of the cleanup is nearing completion.

The site is expected to be fully cleared above ground by mid-July, with all waste transported to an appropriately licensed facility for disposal.

Planning for phase 2 is underway and includes subsequent assessment and remediation of contamination posing risks to human health and the environment. An estimated 5,000 cubic metres of burned chemical waste, an unstable office structure and building materials such as sludge, concrete and steel, remain on the site.

CHEMICAL WASTE DUMP SITE AT LEMON SPRINGS

EPA has continued remediation work throughout 2020–21 at an illegal chemical waste dump on a 1,400-acre property at Lemon Springs, 15 kilometres from Kaniva in Victoria's Wimmera region.

We have been investigating the site since July 2018, after it was referred to us by Victoria Police. An estimated 8,000 cubic metres of solid and liquid waste was buried on the property.

We began stage 1 in December 2019 when the duty holder failed to meet clean up notice requirements. EPA's Lemon Springs Program Manager said, 'The first stage involved a partial excavation of three bigger underground dump locations enabling EPA to understand the type and volume of waste likely to be buried at the site. In addition to extensive manual investigation, drone inspections using ground penetrating radar and on-ground inspections revealed up to 30 areas of interest on the property.'

West Wimmera Shire Council was contracted to construct two internal access roads, essential to support heavy vehicle and machinery movement during remediation and improve ease of vehicle movements in and around the site.

In January this year, EPA appointed a principal contractor to carry out the remaining remedial works, which started in March. Temporary fencing and motion-sensing and thermal cameras were installed, together with a waste triage location which served as the key operational area for processing and removing waste from the site.

EPA CEO Lee Miezis (right) visited the Lemon Springs illegal waste dump in late April following the commencement of excavation and removal of around 200 tonnes of hazardous waste.

This image was taken in accordance with relevant public health measures at the time.

Excavation commenced in April, and since then about 200 tonnes of hazardous waste has been removed from the site to licensed facilities in Victoria and South Australia. The cleanup process has been extremely complex with incompatible waste types buried together and a large percentage of the waste being compromised. 'It is a slow process uncovering and removing the waste from the ground, but safety is our main priority. The contractors are spending long days in hazmat suits working meticulously to remove the waste and process it for transport,' the Lemon Springs Program Manager said.

'In addition to our onsite intervention, we have continued to keep the community informed of our progress, and I am pleased to report that feedback has been positive, with many people strongly appreciating both the work completed so far and works still to occur.'

Kaniva cleanup project

165 Inspections

260 Drone surveillance flights

380 Tonnes of hazardous waste removed from site

4,000m³ Contaminated soil identified

GOAL 5 Organisational excellence

As an organisation, EPA commits to delivering on its goals by enabling a high-performance culture that values our people and supports them with fit-for-purpose systems and expertise.

Outcome 5.1

Service delivery that reflects community, business and government expectations.

High-Risk Site Coordination Committee

Effective regulatory oversight of high-risk and hazardous waste sites requires a concerted cross-agency and risk-based approach. In 2020–21, EPA worked with the Department of Environment, Land, Water and Planning, emergency management agencies and co-regulators to progress the implementation of the Coordinated Prevention and Response Framework. This framework has already delivered improved environmental, public health and regulatory outcomes, including the cleanup of 13 chemical waste warehouses in the northern suburbs of Melbourne. EPA chairs the High-Risk Waste Site Coordination Committee.

Regulating chemical waste

In April 2019, an independent review initiated by EPA's Governing Board made a range of recommendations to improve our systems, processes and capabilities in relation to our regulation of chemical waste.

In 2020–21, we delivered several initiatives, including:

- Reviewing and updating procedures to align with new environment protection laws and introducing a new digital customer relationship management system
- Reviewing regulatory activities associated with high-risk waste reports as part of an ongoing Regulatory Assurance Program
- Delivering compliance and enforcement programs targeting waste crime and illegal waste transport and storage
- Introducing Waste Tracker which enables us to monitor waste handling around Victoria in real time and detect unusual activity
- Training officers in the use of new compliance and enforcement powers.

Outcome: 5.2

Good governance.

Authorised officer complaints

EPA's authorised officer complaints management policy provides a channel for industry or members of the public to make a complaint if they believe there is an issue about an officer's conduct.

We expect our authorised officers to carry out their work with professionalism and impartiality. Complaints relating to improper conduct are dealt with promptly, independently and fairly.

This year, we received one complaint. After a thorough investigation, it was determined that this complaint was not substantiated.

Outcome: 5.3

Implement business systems and processes that continuously improve to support delivery.

See the case study over the page.

Outcome: 5.4

Promote staff safety, health, wellbeing and development.

Workforce capability for new legislation

A regulatory learning and development program of 47 modules was delivered to train and appoint authorised officers under the new Act. One hundred and forty-nine officers, 92 per cent, completed the program through face-to-face or virtual classroom sessions, coaching with mentors, webinars, digital learning, workplace-based practice and assessment.

A regulatory learning and development program of 29 modules was delivered in the same way to assessing officers in permissions, with 18 people (72 per cent) completing the program. In addition, virtual classroom sessions and learning materials were developed and delivered to our people who

use new systems including Dynamics, Technology One and Waste Tracker. More than 73 per cent of our people completed an introductory digital module.

New policies, procedures, processes and guidelines were delivered to ensure transparent and predictable regulatory responses.

An inclusive and responsive culture

In 2020–21, EPA focused on building a work culture where people feel happy, healthy, safe, professionally challenged and included. We established action plans as a result of our staff surveys, invested in training for mental health first aid officers and created a new People & Culture Hub to provide employees with a central location for all queries and support mechanisms.

We measured our progress via staff surveys, including the Victorian Public Sector Standards Commission People Matter Survey, and internally managed and monitored quarterly Culture Pulse Surveys to measure specific issues over time and make improvements.

EPA continued to introduce new and innovative ways to build on our feedback culture. This year we launched a feedback and recognition module in the human capital management platform, improved our performance management and goals module to facilitate annual performance reviews, and recorded regular feedback and performance discussions with easy-to-use online forms.

We have enhanced our system, *my*EPA, to create efficiencies in business processes and help compliance through standard, well-defined rules built into the system and its workflows. These enhancements have also enabled seamless connections between several digital systems to improve our service for our stakeholders and the community as well as the employee experience at EPA.

Diversity and Inclusion Strategy

EPA recognises that a diverse workforce enables us to learn from each other, better reflect the community we serve and find new ways of doing things for the people of Victoria. Throughout the year, we have continued to implement our targeted action plans for gender, Aboriginal, cultural and linguistic diversity, disability and Pride inclusion, many of which have involved a review of existing practices, policies and support available for our people.

A key focus for 2020–21 was to increase the visibility of EPA's efforts around inclusion, and its active promotion through a range of events, workshops and development programs via storytelling and sharing. We are reviewing our 2018–2020 strategy to report on accomplishments and reset priorities for the future. A significant focus of this review is dedicated to our updated *Aboriginal Inclusion Action Plan* and the obligations presented by the *Gender Equality Act 2020* that came into effect early in 2021.

REGULATORY ASSURANCE AND IMPROVEMENT

Following an independent audit into chemical waste management and subsequent recommendations, the EPA Regulatory Assurance and Improvement Unit was set up in March 2020 to improve the quality of our regulatory activities.

Its initial focus has been managing pollution incidents for their entire life cycle, including finding and communicating improvements and working in partnership with operational stakeholders to embed any required changes.

More than 1,000 quality reviews have been conducted, together with additional assurance activities to support continual improvement of our regulatory approach and decision making. These quality reviews have demonstrated a significant improvement to pollution incident management. Several enhancements have been implemented, including:

- Guidance to support consistent decision making about risk assessment of pollution reports and triage of response
- The introduction of a proforma waste pollution report to ensure relevant information from pollution reporters is captured to facilitate proportionate triage and response
- Stakeholder engagement and supporting improvements to effectively close out pollution incident investigations, including decision-making processes
- Updates to triage and responses to standard operating procedures, and development of the Environment Protection Incident Management System framework. This includes development of a waste crime incident response framework within it to support form and function changes associated with the Recycling Victoria policy
- Enhancements to support the implementation of the Environment Protection Act, including system enhancements and the introduction of a new customer relationship management system
- Continued development of EPA's approach to regulatory assurance and improvement.

EPA monitors water, creeks and rivers for fire water run-off.
This image was taken in accordance with relevant public health measures at the time.

LEARNING AND DEVELOPMENT

To help our people prepare for the transition to new laws on 1 July 2021, and to enable them to support our stakeholders and the community, EPA developed a blended learning approach to cater for different learning styles and support remote working requirements. Our learning activities were mostly delivered electronically or virtually due to pandemic restrictions.

Because of the ever-changing working environment faced by all businesses due to the pandemic, learning delivery modes included written materials, videos and pre-recorded webinars, animations, face-to-face learning sessions, interactive hands-on coaching sessions, informal workplace practice and app-based learning.

More than 500 (about 73 per cent) of our people completed a Dynamics Overview e-learning module. This new customer relationship management platform gives us a clearer view of our interactions with stakeholders. It enables our compliance and enforcement efforts to be data-driven and intelligence-led so we can target our efforts at preventing activities that are harmful and illegal.

Our people in the field undertook Dynamics Technology learning sessions with quick reference guides to support them to accurately record their activities. A dedicated sandbox learning environment, where learners directly interact with the system and processes without the intrusion of monitoring or assessment, together with further focused sessions with experts, supported practical learning and application.

More than 140 leaders — about 70 per cent — across all levels of EPA completed the Leading People Through Change course. This program equipped them with tools, techniques and frameworks to support their teams through our transformation as well as during recent times of change and uncertainty.

A total of 92 per cent of all new authorised officers completed their required regulatory learning, workplace practice and assessment, and were ready for appointment on 1 July. Authorised officers also completed refresher learning with a focus on embedding key concepts covered in more than 40 learning modules.

Our assessing officers undertook their required regulatory learning, workplace practice and assessment. This consisted of 11 digital learning modules, seven classroom sessions, three fact sheets and a structured workbook to support their workplace practice and assessment.

We developed a new knowledge management system to provide our people with a central repository of information on EPA's new laws and supported engagement with all our stakeholders.

More than 180 quick reference guides were developed to help our people navigate new systems, including Waste Tracker, Dynamics and location-based services, as well as transition guidance.

140+
EPA people leaders trained in Leading People through Change

500+
staff trained in new customer relationship management platform

92%
of EPA authorised officers ready for appointment

EPA's authorised officers completed their regulatory learning and development in readiness for the new laws from 1 July.
This image was taken in accordance with relevant public health measures at the time.

Pollution reports, performance targets and deliverables

This section provides key regulatory statistical information and performance data on State Budget Paper measures and Recycling Victoria expectations. In 2020–21, EPA received more than 18,000 pollution reports from the community. We also received reports related to emergencies and pollution notifications from businesses.

Table 7.1: Total pollution reports

	2020–21	2019–20	2018–19	2017–18	2016–17	2015–16	2014–15
Pollution reports from community	18,121	13,354	11,539	13,244	10,577	9,201	9,376
Emergency reports	204	163	199	168	195	246	342
Business notifications[1]	1,691	1,751	1,833	1,880	647	1,565	1,454
TOTAL	**20,016**	**15,268**	**13,571**	**15,292**	**11,419**	**11,012**	**11,172**

Note:
1. Self-reported by businesses.

Table 7.2: Total pollution reports by environmental segment

ENVIRONMENTAL SEGMENT	NOTES	2020–21	2019–20	YEAR ON YEAR VARIANCE
Dust	1	849	658	29%
Noise	1	5,404	2,593	108%
Odour	2	5,101	4,589	11%
Smoke	1	1,513	947	60%
Waste	1	2,929	2,563	14%
Water		2,322	2,177	7%

Notes:
1. Increase in dust, noise, smoke and waste reports has been predominately attributed to increase in Victorians working from home during the pandemic.
2. Increase in odour reports is predominately attributed to infrastructure works projects.

Table 7.3: Total pollution reports by region

	GIPPS-LAND	NORTH EAST	NORTH METRO	WRN METRO	SRN METRO	SOUTH WEST	NORTH WEST	NOT ASSIGNED[1]	GRAND TOTAL
Dust	64	47	198	148	161	68	90	73	849
Noise	119	264	1,272	1,302	1,329	337	276	505	5,404
Odour	183	227	633	2,133	1,048	500	246	131	5,101
Smoke	83	166	308	204	288	188	93	183	1,513
Waste	149	160	640	484	663	293	235	305	2,929
Water	142	100	749	331	501	245	101	153	2,322
Other / Not Assigned[2]	76	51	41	118	225	95	40	7	653
Emergency Report	14	17	48	47	36	16	18	8	204
Business Notification	189	96	111	165	226	174	66	14	1,041
Grand Total	**1,019**	**1,128**	**4,000**	**4,932**	**4,477**	**1,916**	**1,165**	**1,379**	**20,016**

Notes:
1. As at 30 June 2021, 1,379 reports were not assigned to a region.
2. As at 30 June 2021, 653 reports were not assigned to a specific pollution segment.

Table 7.4: Compliance, enforcement and assessment activities*

ACTIVITY	NOTES	2020–21	2019–20	2018–19	2017–18	2016–17	2015–16
INDUSTRY PROGRAMS							
Inspections	1	2,595	2,882	2,782	2,263	1,843	1,985
Pollution abatement notices		487	505	467	392	273	267
Clean up notices		282	231	196	180	153	188
Minor works pollution abatement notices		96	72	68	60	53	59
Prosecutions completed		22	29	23	22	11	12
Official warnings		167	165	150	109	99	121
Infringement notices		71	58	82	81	109	59
Environmental audits completed		205	210	207	173	194	239
Works approvals issued		19	16	21	17	18	26
Applications exempt from the need for approval		51	38	32	33	23	38
Licences amended/transferred		49	79	79	83	64	82
Planning referrals advised on	2	779	929	1,020	807	757	798
VEHICLE PROGRAMS							
Noisy vehicle notice	3	1152	466	892	1,676	966	955
Smoky vehicle advisory letters	5	559	1,007	1,154	1,617	1,744	2,015
Infringement notices	4	543	30	338	64	12	45
Official warnings		9	7	40	14	12	11
LITTER PROGRAMS							
Infringement notices	6	8,501	13,637	13,236	12,165	12,984	15,141

* Prior years' numbers may have changed due to better data becoming available.

Notes:
1. The decrease in finalised inspections in financial year 2020–21 compared with 2019–20 is primarily due to the impact of the pandemic. Total planning referral numbers are driven by external referral processes.
2. Increase is attributed to process improvements implemented to assess and issue notices.
3. The surge is attributed to increasing the use of infringement notices to address offences such as failing to provide a certificate of compliance with noise vehicle standards. Roadside operations were not conducted this year due to the pandemic.
4. The decline is attributed to a delay of the program due to the pandemic and reprioritisation of resources from the processing of smoky vehicle reports to the Waste Transport Program.
5. The number of infringement notices issued relies on the number of reports received from the community.
6. The number of reports from the community decreased due to the pandemic resulting in fewer incidents of litter from vehicles and fewer reporters on the road.

Table 7.5: Budget Paper No. 3 service delivery

MEASURES	NOTES	2020–21 TARGET	2020–21 ACTUAL
QUANTITATIVE MEASURES			
Inspections that test compliance of licensed premises whose operations may represent a significant risk to the environment and human health	1	250–300	336
Events that engage business and community in environment protection	2	25–35	59
Activities that support business to comply with environmental obligations	3	25–30	348
Environment condition notifications provided to Victorians via digital channels		900–100	1,037
QUALITATIVE MEASURES			
EPA prosecutions are determined/selected using a risk-based approach, focused on environmental outcomes and are successful	4	70%	86%
Environmental audits are reviewed to ensure compliance with statutory requirements and guidelines	5	90%	100%
Remedial notices are complied with by their due date or escalated in line with EPA's Compliance and Enforcement policy	6	90%	94%
TIMELINESS MEASURES			
Pollution reporters requesting follow-up by EPA receive contact within three working days	7	85%	96%
Works approvals and licences completed within required statutory timelines	8	96%	90%
EPA provides technical advice to lead agencies within agreed timelines during emergency incidents	9	90%	95%
Output cost ($ million)		272.7	273.1

Notes:

1. Performance is above the target due to EPA prioritising inspections in the second half of the financial year 2020–21. Pandemic impacts necessitated an alteration to the compliance inspection program to address increased risk. The first quarter was targeted at licensed duty holders across all five tiers of risk, meaning a higher number of inspections than scheduled were conducted. The following quarters were running on a more standard approach, but the early high numbers resulted in EPA performing above target.
2. Performance is above target due to high levels of engagement with industry, government and community stakeholders to ensure readiness for the Environment Protection Act 2017, commencing 1 July 2021. The 2020–21 target was not amended as per advice from Department of Treasury and Finance to retain 2019–20 targets for 2020–21.
3. Performance is above target due to high levels of engagement with industry, government and community stakeholders to ensure readiness for the Act, commencing 1 July 2021. The 2020–21 target was not amended as per advice from Department of Treasury and Finance to retain 2019–20 targets for 2020–21.
4. Performance is above target due to EPA prosecutors achieving successful outcomes. The number of completed prosecutions is less than normal due to the pandemic affecting the courts' timetabling. This is the third year of EPA using a revised risk-based approach to prosecutions and enforcement. While the new approach began in 2018–19, the timing for resolution of cases can lag by months or years.
5. Performance is above target due to the prioritisation of resources to conduct administrative reviews of environmental audits on time.
6. Performance is above target due to continued improvements in the quality of remedial notices, and the timeliness of final compliance assessments, which have been an ongoing focus to ensure the integrity of EPA remedial notices.
7. Performance is above target due to investment in process improvements in line with customer expectations.
8. Performance is below the target due to significantly higher volumes of complex matters than prior years, and the need to focus on preparations for the new Act and regulations (internal training, development of new systems and processes, support to duty holders, etc.). The transition to the new Act and regulations requires a significant capability shift as well as a need to provide higher levels of support to duty holders relating to future and transitional permissions.
9. Performance is above target due to EPA prioritising emergency incident responses and ensuring appropriate capacity and procedures are in place.

Table 7.6: Recycling Victoria Statement of Expectation 2020–21

PROGRAM	OUTCOMES	TARGET	RESULT
Illegal waste disposal	Reduced environmental impact or harm from mismanagement of waste through stockpiling for long periods or illegal disposal of waste.	Establish the compliance team by 2020–21. Business-as-usual compliance operations in place by 2021–22.	On track
Landfill levy auditing	Landfill levies collected in accordance with legislation.	By 2020–21 the landfill levy audit program commences, with business-as-usual audit operations in place by 2021–22.	On track
Recycling Markets Acceleration package	Victorian businesses increase use of recycled materials in ways that support: • Strong domestic markets for recovered materials • Innovation for advanced manufacturing and construction sectors.	By 2020–21 regulatory and policy barriers identified; commence development of regulatory tools.	On track
Addressing waste crime	Reduce risk of harm to the environment and the community through effective preventative detection of, and enforcement against, waste crimes.	By 2020–21 establish Waste Crime Prevention Inspectorate and begin monitoring, compliance and enforcement action.	Completed
High-risk sites management	Safe management of high-risk and hazardous wastes.	By 2019–20 a High-Risk Recovery Team established.	Completed

08 Financial performance summary

Overview of financial performance

EPA's comprehensive result for the period including other economic flows was a surplus of $0.17 million. Total income increased during the year, primarily associated with the recognition of additional funding and associated expenditure for multiple contaminated waste site cleanup works. Furthermore, additional planned expenditure has been incurred for the continued delivery of 'Bringing our Environment Protection Authority into the modern era' initiative, in preparation for the *Environment Protection Act 2017* commencing on 1 July 2021.

Table 8.1: EPA five-year financial summary ($'000)

	2020–21	2019–20	2018–19	2017–18	2016–17
Total income from transactions	218,250	186,641	176,727	135,505	101,399
Total expenses from transactions	(217,054)	(217,090)	(177,150)	(111,286)	(92,010)
Net result from transactions	1,196	(30,499)	(423)	24,219	9,389
Net result for the period	170	(35,722)	(255)	22,077	3,656
Net cash flow from operating activities	10,238	(17,534)	13,373	14,160	24,787
Total assets	255,787	240,762	243,832	208,261	186,751
Total liabilities	114,089	99,234	67,906	32,080	32,647
Net assets	141,698	141,528	175,926	176,181	154,104

Financial performance review

Total income from transactions was $218.2 million, representing a $31.6 million increase (16.9 per cent) from the previous year. The increase is primarily due to increased municipal and industrial funding to support contaminated waste site cleanup works. Grants from departments have also slightly increased which offsets a reduction in grants due to the final year of reform asset funding in line with the 'Bringing our Environment Protection Authority into the modern era' initiative.

Total expenses from transactions were $217.1 million, in line with the previous year. The delivery and execution of the 'Bringing our Environment Protection Authority into the modern era' initiative has resulted in increased employee expenses offset by reduced depreciation and amortisation and other operating expenses.

Cash flows

The net cash inflow from operating activities of $10.2 million is the result of the increased receivables from government to support the cleanup works on the multiple contaminated sites.

The net cash inflow used in investing activity of $27.4 million includes the recognition of a withdrawal of investments and transfer to cash.

Financial position – balance sheet

Total assets increased by $15 million and total liabilities increased by $14.8 million compared to the previous financial year. The movement in assets includes an increase of receivables for funding from government for waste site remediation works of multiple contaminated sites. The increase in total liabilities is driven by the corresponding provision of waste site remediation works of multiple contaminated sites and a small increase in employee-related provisions and payables.

Capital projects/asset investment programs

Nil reports are required as EPA did not complete any projects funded by the State Budget above the Total Estimated Investment threshold of $10 million.

EPA continues to invest in asset programs that align with its strategic goals, including utilisation of the reform asset funding received as part of the 'Bringing our Environment Protection Authority into the modern era' initiative.

Subsequent events

EPA had no material events that occurred after 30 June 2021.

09 Organisational structure and governance arrangements

Governing Board and advisory committees

Governing Board

The Governing Board is responsible for the governance, strategic direction and oversight of EPA. The Environment Protection Act 2017, which came into effect 1 July 2018, established EPA as a statutory authority and legislates the role of the Governing Board, Chief Executive Officer and Chief Environmental Scientist. The role of the chair of the EPA Governing Board is to appoint the Chief Executive Officer, set the standards and the strategic direction for EPA, liaise with stakeholders and monitor the organisation's performance.

At 30 June 2021, the Governing Board members were:

- Professor Kate Auty — Chair
- Greg Tweedly — Deputy Chair
- Monique Conheady
- Graeme Ford
- Professor Joan Ozanne-Smith AO
- Dr Ross Pilling
- Kay Rundle.

Professor Rebekah Brown resigned from the Governing Board effective 31 December 2020.

Professor Kate Auty, EPA Chair

On 1 July 2020, Professor Kate Auty commenced as the chair of EPA. Professor Auty brings to this role significant experience in the fields of public sector governance and administration, law, regulation and the environment.

A former Victorian Commissioner for Environmental Sustainability and ACT Commissioner for Sustainability and the Environment, Professor Auty's expertise, leadership, insight and skills ensures strong leadership and governance of EPA during this period of transition and major reform. Before taking up her role in the ACT she held advisory roles in big data collaborative research initiatives as both the chair of National Electronic Collaborative Tools and Research advisory committee and a member of the advisory committee of the Australian Urban Research Infrastructure Network. Professor Auty is an honorary Professorial Fellow at the University of Melbourne and a Director of the Urban Climate Change Research Network Oceania Hub.

Prior to assuming roles in the environmental sector Professor Auty held appointments as a judicial officer having been appointed a magistrate, coroner and mining warden in the Western Australian goldfields and Western Desert (2004–2009) and as the regional coordinating magistrate, coroner and Koori Court magistrate in north-east Victoria (1999–2004). Her board positions have included chair of the Banksia Foundation P/L, co-opted director with the Business Council for Sustainable Development Australia P/L and director with the Macpherson Smith Rural Foundation P/L.

Greg Tweedly, EPA Deputy Chair

Mr Greg Tweedly has more than 20 years' experience in regulation, governance, risk, audit and finance.

As Chief Executive Officer of WorkSafe Victoria for almost 10 years, Mr Tweedly was responsible for the regulation of workplace safety in Victoria. During his time as Chief Executive Officer, WorkSafe recorded the safest year on record and reduced premiums in seven out of nine years. He also oversaw the implementation of the WorkHealth Initiative — a five-year program to offer and deliver health checks for Victorian workers.

Mr Tweedly is currently a non-executive director of Melbourne Health, chair of Dorsavi Ltd and chair of the Personal Injury Education Foundation.

He has a Bachelor of Commerce from the University of Melbourne, is a qualified accountant (CPA), a graduate of the Australian Institute of Company Directors and an alumnus of the Stanford Executive Program and Harvard Leadership Program.

Professor Joan Ozanne-Smith AO

Emeritus Professor Joan Ozanne-Smith AO is the Head of Injury Prevention Research at the Department of Forensic Medicine at Monash University. In 2016, she was appointed Officer of the Order of Australia (AO) in the Australia Day Honours list for her distinguished service to public health in the areas of accident and injury prevention, forensic medicine and higher education as an academic.

Professor Ozanne-Smith is currently a non-executive director of the Australian China Alumni Association and has previously been a member of the Victorian Civil and Administrative Tribunal.

She has qualifications in medicine, public health and sociology, a research doctorate in injury epidemiology and is a Fellow of the Australasian Faculty of Public Health Medicine. Professor Ozanne-Smith conducts interdisciplinary research and develops epidemiological data systems in Australia and internationally. She has co-edited several World Health Organization global reports.

Graeme Ford

Mr Graeme Ford is the Chief Executive Officer of the Game Management Authority. He has more than 20 years' experience advocating for rural and regional communities, having been the Chief Executive Officer of the Victorian Farmers Federation. For the past 20 years Graeme has engaged with various government regulatory bodies on the design of regulatory regimes affecting the agricultural sector. He has held director roles with the Melbourne International Flower and Garden Show and FarmConnect — a not-for-profit company providing charitable support to the agriculture sector.

Mr Ford has a Master in Business Administration from the University of Ballarat, a Master of Applied Science from the University of Western Sydney and a Graduate Diploma of Rural Resource Management from La Trobe University. He is a graduate of the General Management Program of the Harvard Business School.

Dr Ross Pilling

Dr Ross Pilling is currently a non-executive director of Note Printing Australia Ltd and Kotzur Pty Ltd, non-executive chair of Jupiter Ionics Pty Ltd, chair of Swinburne University's Industry Research Advisory Committee and an executive mentor on the faculty of Merryck & Company.

Dr Pilling's senior executive career with leading multinational companies BASF and BOC included General Manager and Managing Director roles in Asia, Australia and Europe. He was formerly the Deputy National President of the Australian Industry Group, and a longstanding board member of the Plastics and Chemicals Industry Association. He brings an international, multicultural perspective to leadership and extensive experience of startups, post-merger integrations and business transformations.

He was awarded an Honorary Doctor of Engineering by Swinburne University of Technology in 2016. He is a Fellow of the Australian Academy of Technology and Engineering and of the Australian Institute of Company Directors, has a Master of Science from Cranfield Institute of Technology (UK) and a Bachelor of Engineering with Honours from the University of Liverpool (UK).

Monique Conheady

Ms Monique Conheady is the chair commissioner at Commercial Passenger Vehicles Victoria, deputy chair of the Victorian Responsible Gambling Foundation, a co-founder, director and deputy chair of DC Power Co and independent chair of JET Charge Pty Ltd. Previously, she was co-founder and Chief Executive Officer of Flexicar and held senior management roles at Hertz Australia after it purchased Flexicar.

Ms Conheady holds a Bachelor of Civil/Environmental Engineering (Honours) and a Bachelor of Arts (Human Geography) from the University of Melbourne. She is a graduate of the Australian Institute of Company Directors and a Fellow of the Centre for Sustainability Leadership.

Kay Rundle

Ms Kay Rundle commenced on the Governing Board in October 2020. She is the Director and an executive coach at Kay Rundle and Associates, chair of the Public Transport Ombudsman and chair of Western Leisure Services.

Ms Rundle is an experienced Chief Executive Officer with over 15 years' experience leading three local government organisations (Maribyrnong, Greater Geelong and Port Phillip).

She holds a Bachelor of Social Work from the Phillip Institute of Technology, a Master of Business from the Royal Melbourne Institute of Technology and Executive Coaching Level I, II and III from the Institute of Executive Coaching and Leadership. Ms Rundle is also a graduate of the Australian Institute of Company Directors and won a SACS Executive Leadership Award in 2006.

Professor Rebekah Brown

Professor Rebekah Brown is the Deputy Vice-Chancellor (Research) and Senior Vice-President at Monash University. Prior to this she was Senior Vice-Provost and Vice-Provost (Research). Professor Brown is also a director of the RISE (Revitalising Informal Settlements and their Environments) Program, focused on Southeast Asia and the Pacific, which is funded by the Wellcome Trust.

Previously, Professor Brown was the Director of the Monash Sustainable Development Institute at Monash University.

She holds a Bachelor of Civil Engineering (Honours) from Monash University and a PhD in Environmental Studies from the University of New South Wales.

Professor Brown resigned from the Governing Board effective 31 December 2020.

Attendance at Governing Board meetings in 2020–21

There were Governing Board meetings held in July, August, September, October, November and December 2020 and in February, March, April, May and June 2021. Table 9.1 records members' attendance.

Table 9.1: Governing Board meeting attendance

BOARD MEMBER	MEETINGS ELIGIBLE TO ATTEND	MEETINGS ATTENDED
Professor Kate Auty	11	11
Greg Tweedly	11	11
Professor Joan Ozanne-Smith	11	11
Graeme Ford	11	11
Professor Rebekah Brown	6	5
Dr Ross Pilling	11	11
Monique Conheady	11	11
Kay Rundle	7	7

Advisory committees

EPA's Governing Board has two subcommittees: Risk and Audit Committee, and Science, Engineering and Health Committee.

Risk and Audit Committee

EPA has a Risk and Audit Committee and internal audit function to meet legislative requirements and support the chair and Chief Executive Officer to fulfil their obligations under the Financial Management Act 1994. The Risk and Audit Committee reports directly to the EPA Governing Board.

The members of the Risk and Audit Committee as at 30 June 2021 were:

- Rob Hogarth (Independent Chair)
- Greg Tweedly
- Dr Ross Pilling
- Graeme Ford.

Mr Tam Vu (independent member) resigned effective 22 March 2021.

The role of the Risk and Audit Committee is to provide independent, risk-based, objective views and advice in its oversight and management of:

- Financial reporting
- Internal and external audit
- Risk management systems and practices
- The compliance and control environment
- EPA's transformation program.

Science, Engineering and Health Committee

The Science, Engineering and Health Committee's purpose is to support the Governing Board in its role of overseeing the implementation of EPA's strategic plans with respect to maintaining and growing its scientific excellence and supporting EPA's role in protecting human health and the environment by reducing the harmful effects of pollution and waste.

The independent members of the Science, Engineering and Health Committee as at 30 June 2021 were:

- Professor Kate Auty (Chair and Governing Board Chair)
- Professor Joan Ozanne-Smith (Governing Board member)
- Dr Angie Bone, Deputy Chief Health Officer (Environment) for Dr Brett Sutton, Chief Health Officer
- Professor Peter Breen
- Professor Robert Vertessy
- Professor Sandra Kentish
- Professor Veena Sahajwalla
- Professor John Warner (strategic adviser).

Professor Rebekah Brown (chair) resigned effective 31 December 2020.

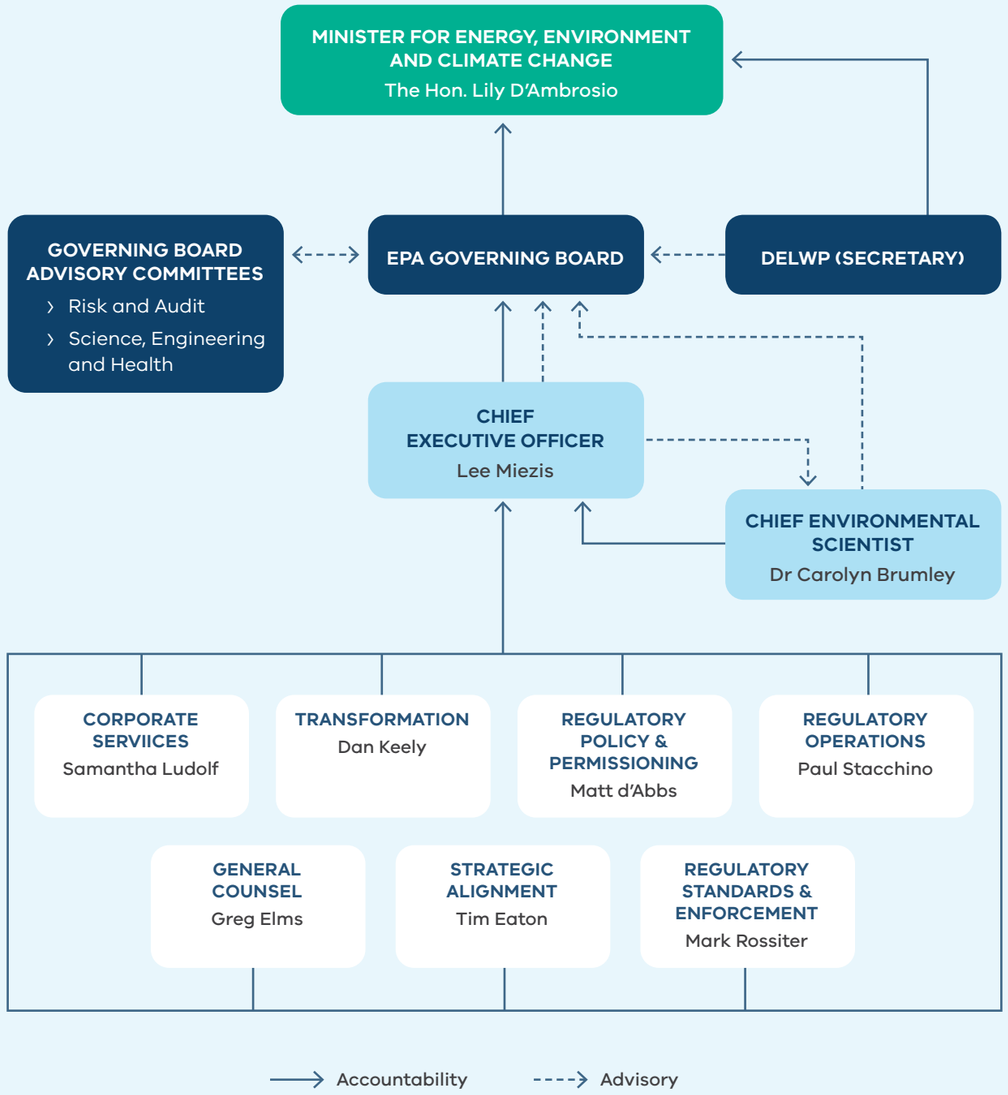
The Governing Board, Chief Executive Officer and Chief Environmental Scientist have standing invitations to attend Science, Engineering and Health Committee meetings.

09 Organisational structure and governance arrangements continued

Organisational structure

EPA comprises seven divisions reporting to the Chief Executive Officer. This structure is designed to optimise our move through transformation towards a new operating model, supporting our shift to a more prevention-based regulation approach, underpinned by our new legislation.

EPA'S ORGANISATIONAL STRUCTURE AS AT 30 JUNE 2021



Executive Leadership Team

Dr Cathy Wilkinson

Chief Executive Officer
(3 September 2018 to 3 January 2021)

Dr Cathy Wilkinson became Chief Executive Officer of EPA in September 2018.

Between 2006 and 2013, she was based in Sweden where she consulted to governments across Europe and led projects with the Arctic Council, Rockefeller Foundation and the African Centre for Cities. Following her return to Australia in early 2013, Dr Wilkinson worked as an executive director with the Victorian Government, first leading major integrated urban water management reform and then regulatory, policy and applied science reforms with EPA.

After stepping down from her role at EPA, Dr Wilkinson was appointed an Adjunct Associate Professor with Monash University at the Monash Sustainable Development Institute.

Lee Miezis

Chief Executive Officer

Mr Lee Miezis was appointed Chief Executive Officer in May 2021 after joining EPA as interim Chief Executive Officer in February 2021.

He was inaugural Chief Executive Officer of Bushfire Recovery Victoria and former Deputy Secretary at the Department of Environment, Land, Water and Planning.

Mr Miezis holds a Master of Business Administration and a Bachelor of Forest Science (Honours).

Dr Andrea Hinwood

Chief Environmental Scientist
(May 2017 to February 2021)

Dr Andrea Hinwood is an environmental scientist with specialist expertise in environmental exposures and human health. Dr Hinwood was appointed to the position of Chief Environmental Scientist at EPA in May 2017.

Dr Hinwood is a former Associate Professor at Edith Cowan University, deputy chair of the Environmental Protection Authority of Western Australia, and a sessional member of the State Administrative Tribunal of Western Australia. Her PhD is in environmental epidemiology from Monash University and her Masters in Applied Chemistry is from RMIT University.

Dr Hinwood left EPA in February 2021 to take up the role of Chief Scientist with the United Nations Environment Programme.

Dr Carolyn Brumley

Acting Chief Environmental Scientist Applied Science Division

In February 2021, Dr Carolyn Brumley was appointed acting Chief Environmental Scientist following the resignation of Dr Andrea Hinwood.

Dr Brumley has more than 20 years' experience in the assessment of hazards that chemicals can present to human health and the environment and previously worked at Golder as a Principal Risk Assessor/Contaminated Land Specialist, as a Technical Director — Ecological Risk Assessment at AECOM, as Environmental Scientist and Toxicologist for EPA Victoria, and as an Aquatic Toxicologist at Scion.

She has a Bachelor of Science (Honours) Physiology from Monash University and a PhD, Environmental Toxicology from RMIT University.

09 Organisational structure and governance arrangements continued

Dr Simone Warner

Acting Executive Director Applied Science Division

In February 2021 Dr Simone Warner was appointed acting Executive Director Applied Sciences Division following the resignation of Dr Andrea Hinwood.

Dr Warner has over 30 years' experience across agricultural, microbiological and environmental science. Prior to EPA she was the Research Director, Microbial Sciences, Pests and Diseases at the Department of Economic Development, Jobs, Transport and Resources.

She has a PhD in Molecular Virology from the University of Melbourne, a Bachelor of Science Biotechnology (Distinction) from RMIT University, a Post Graduate Diploma in Agricultural Science from La Trobe University, a Diploma in Business Administration and Management from Swinburne University of Technology, and is a graduate of the Australian Institute of Company Directors.

Matt d'Abbs

Acting Executive Director Regulatory Policy and Permissioning

Mr Matt d'Abbs acted as Executive Director Regulatory Capability, Engagement & Legal from July 2020 to January 2021 and as Executive Director Regulatory Policy & Permissioning from March to July 2021.

He joined EPA in 2018 as Director Regulatory Approach and Capability. Prior to this, he worked at Transport Safety Victoria as Director Strategy, Policy & Corporate Services and General Counsel, Director Policy & Legal and previously as Senior Policy and Legal Adviser for the Department of Transport. Before entering the public service, he spent 15 years in offshore commercial fishing and maritime tourism.

Mr d'Abbs has a Bachelor of Laws and Bachelor of Arts from La Trobe University and an Executive Master of Public Administration from the University of Melbourne through the Australia and New Zealand School of Government.

Mark Rossiter

Executive Director Regulatory Standards and Enforcement

Mr Mark Rossiter has been with EPA since late 2019. Prior to joining EPA, Mr Rossiter was Executive Director Operations and Chief Corporate Officer at the Victorian Building Authority, Manager Stakeholder Strategy and Manager Air Navigation Service Strategy at Airservices Australia, Head of Safety at Jetstar Airways, Manager Safety Oversight at the Civil Aviation Safety Authority, and Human Factors Specialist at Qantas.

He has a Senior Executive Master of Business Administration, Business/Commerce from the Melbourne Business School.

Paul Stacchino

Executive Director Regulatory Operations

Mr Paul Stacchino joined EPA in 2018. Prior to EPA, he was Chief Officer at the Metropolitan Fire Brigade and General Manager at the Country Fire Authority.

Mr Stacchino has a Diploma of Firefighting Management, a Graduate Certificate of Applied Management from Charles Sturt University, an MBA from Federation University, and Advanced Diplomas in Public Safety (Emergency Management and Community Safety) from the Australian School of Emergency Management.

Tim Eaton

Executive Director Strategic Alignment

Mr Tim Eaton joined EPA in 2010. Prior to that, Mr Eaton was General Manager Safety and Environment at the National Transport Commission.

He has a Bachelor of Social Science, Politics, from RMIT University and a Master of Environmental Law from the Australian National University.

Craig Mutton

Executive Director Strategy and Transformation

Craig Mutton joined EPA in late 2018 and was responsible for the successful design and delivery of EPA's comprehensive whole-of-organisation transformation agenda, leading best practice business planning and performance reporting to ensure delivery of EPA's organisational strategy, *Our Environment, Our Health*.

He has a Master of Business Administration from the Melbourne Business School, a Master of Project Management from RMIT University and a Bachelor of Computer Science from Monash University.

Mr Mutton resigned from EPA in March 2021.

Dan Keely

Acting Executive Director Transformation

Dan Keely joined EPA in 2008. In March 2021, he was appointed to the role of Executive Director Transformation, following the resignation of Craig Mutton.

Mr Keely has bachelor degrees in law and media studies from Murdoch University, and a Postgraduate Diploma in Legal Practice from Monash University.

Greg Elms

General Counsel

Mr Greg Elms commenced in the role of General Counsel at EPA in 2019. Prior to joining EPA, Mr Elms spent 16 years at Victoria Police in general duties, criminal investigations, as a prosecutor and discipline adviser. Following that, he worked for eight years at the Victorian Government Solicitor's Office providing specialist advice and advocacy to a broad range of government regulatory clients both directly and as a team leader. He then returned to Victoria Police for two years in the role of Principal Legal Adviser.

Mr Elms has a Bachelor of Laws from the University of New England and a Graduate Diploma of Legal Practice from the College of Law.

Samantha Ludolf

Executive Director Corporate Services

Ms Samantha Ludolf joined EPA in December 2020.

She was previously Deputy Chief Executive Officer — Strategy & Operations at Walter and Eliza Hall Institute of Medical Research; Executive Officer, Ambulance, Emergency and Trauma, Department of Health, Victoria; Executive Officer, Victorian Civil and Administrative Tribunal, Department of Justice and Regulation; Acting Chief Executive Officer, Supreme Court of Victoria; Deputy Chief Executive Officer, Supreme Court of Victoria.

Ms Ludolf has a Bachelor of Arts (Honours) Commerce and Marketing from the University of Lincoln; Post Graduate Certificate, Business Leadership from RMIT University; an Executive Fellowship from the Australian and New Zealand School of Government; a Master of Enterprise from the University of Melbourne; and a Diploma from the Australian Institute of Company Directors.

10 Occupational health and safety

Policies, systems, and processes

EPA's safety vision is a safe and healthy workplace that promotes a safety-first culture and is committed to eliminating work-related injuries and illnesses. The key controls supporting our vision are:

- Creating a positive and supportive safety culture
- Reducing risk in the workplace by implementing robust risk management
- Maintaining an effective safety management system
- Enhancing leadership, capability, accountability and influence.

This year was the third year of the EPA Health, Safety and Wellbeing Strategy. The Strategic Plan enables EPA to deliver on Goal 5 of the plan — staff safety, health, wellbeing, and development. A key outcome this year was the implementation, in October 2020, of the new Health, Safety and Wellbeing software system that is fully integrated with the *my*EPA human resources system. This new software system provides:

- Full online and mobile smart phone functionality
- Significantly improved incident reporting and investigation workflow process
- Fully integrated corrective action workflow.

A vital element of the Strategic Plan has been maintaining AS NZS 4801: 2001 certification of EPA's Occupational Health and Safety Management System. This year EPA successfully transitioned to ISO 45001:2018 certification following a triennial certification audit in February 2021. The audit confirmed that the EPA safety management system is effective and compliant overall with the requirements of ISO 45001:2018.

During the year EPA continued with a range of programs to improve the health and safety of our people, particularly with the pandemic, including ergonomic assessments, work from home guidance and support to enable all staff to continue to work safely. EPA also maintained nine COVIDSafe-specific Safe Work Instructions for external inspections and return-to-office planning and preparation. With most people working from home several online virtual OHS training modules were developed and available through the *my*EPA Learning Management System. The year also saw the implementation of a HealthyMe app, a simple and interactive platform to access digital health and wellbeing resources for all staff and their family members during this time. There was also a review of key OHS policies and procedures, introduction of online compliance activities, safety-related inspections, and further enhancement of the health and safety intranet site to improve access to information.

Annual health and wellbeing events, such as ride to work, were acknowledged in offices occupied and R U OK? Day through online virtual get-togethers. The annual flu vaccination program was changed to an online voucher system which enabled staff to receive the vaccination at their local chemist. Several of the smaller regional offices organised an office-based flu vaccination option.

All EPA OHS policies and procedures are consistent with the *Occupational Health and Safety Act 2004*, Occupational Health and Safety Regulations 2017 and the *Workplace Injury Rehabilitation and Compensation Act 2013*. The Victorian Public Service Enterprise Agreement 2020 covers the formal agreement with the Community and Public Sector Union about issues and obligations for OHS.

Incident management

EPA had 77 incidents reported, with 47 resulting in injury or impact to an individual. This included slips, trips, fall injuries, sprains and strains, and equipment or vehicle and psychosocial injuries. As was the case in the previous year, there was a reduction in incidents reported this year compared to previous years. The pandemic resulted in a reduction in EPA external activities, which led to a reduction in the number of incident reports made.

In 2020–21, 73 per cent of the total reported incidents related to fieldwork. Employees attending environmental incidents, responding to pollution and emergency reports, and entering a wide variety of non-EPA facilities and workplaces represent the most significant identified risk for employees. EPA continued to focus on managing these risks through an annual review of our risk register, refresher training, promoting the job safety analysis and dynamic risk assessment process, identifying appropriate equipment, and supporting the commitment of employees to their safety and safe work practices.

EPA offers employees, and their immediate family, access to an Employee Assistance Program which provides confidential, professional counselling for personal or work-related issues. In 2020–21, 292 sessions were conducted by Employee Assistance Program providers with 55 per cent of the issues raised being mental health and workplace stress. The pandemic continued to impact staff and was the initial contact reason for 10 per cent of all contacts. The year continued to see a significant increase in usage. There were 25 psychological incidents reported which accounted for 32 per cent of all OHS incidents reported in 2020–21.

There were three accepted WorkCover claims for 2020–21 and three lost time injuries. Two WorkCover claims were standard claims with one a stress claim injury and one a hand sprain injury, both resulting in lost time. A third minor claim for a knee sprain also resulted in lost time.

Performance against OHS management measures

Table 10.1: Performance against OHS management measures

MEASURE	KEY PERFORMANCE INDICATOR	NOTES	2020–21	2019–20	2018–19	2017–18
Incidents	No. of incidents	1	77	140	188	163
	Rate per 100 FTE	3	10.27	19.66	28.54	27.26
	Injury rate		1.42	2.29	3.88	2.63
	LTI (lost time injury)		3	1	2	1
	LTIFR (lost time injury frequency rate)	4	2.60	0.71	1.92	0.83
Claims	No. of standard claims	2	2	2	1	0
	Rate per 100 FTE	3	2.66	0.28	0.15	0
	No. of lost time claims		2	1	1	0
	Rate per 100 FTE	3	2.66	0.14	0.15	0
	No. of claims exceeding 13 weeks		1	1	0	0
	Rate per 100 FTE	3	0.13	0.14	0	0
Fatalities	Fatality claims		0	0	0	0
Claim costs	Average cost per standard claim	2	$41,524	$43,945	$35,538	$0
Return to work	Percentage of claims with Return to Work (RTW) Plan < 30 days		100%	100%	100%	n/a
Management commitment	Evidence of OHS policy statement, OHS objectives, regular reporting to senior management of OHS, and OHS plans (signed by CEO or equivalent)		100%	100%	100%	100%
	Evidence of OHS criteria(s) in purchasing guidelines (including goods, services, and personnel)		Completed	Completed	Completed	Completed
Consultation and participation	Evidence of agreed structure of designated workgroups (DWGs), health and safety representatives (HSRs), and issue resolution procedures (IPRs)		Completed	Completed	Completed	Completed
	Compliance with agreed structure on DWGs, HSRs, and IRPs		Completed	Completed	Completed	Completed
	Number of quarterly OHS Committee meetings		7	6	4	4

10 Occupational health and safety continued

MEASURE	KEY PERFORMANCE INDICATOR	NOTES	2020–21	2019–20	2018–19	2017–18
Risk management	Percentage of internal audits/workplace inspections completed as planned		80%	75%	85%	80%
	Percentage of reported incidents investigated		100%	100%	100%	100%
	No. of ISO 45001:2018 external audit non- conformances		4	3	1	4
	Percentage of ISO 45001:2018 external audit non-conformances actioned		100%	100%	100%	100%
	Percentage of issues identified and actioned arising from:					
	Internal audits		100%	100%	100 %	100 %
	HSR provisional improvement notices		0	0	0	0
	WorkSafe Victoria notices		0	0	0	0
Training	Percentage of managers and staff who have received OHS training:					
	Induction		100%	100%	100%	100%
	Management training		60%	20%	55%	80%
	Contractors, temps and visitors		100%	100%	75%	80%
	Percentage of HSRs trained:					
	Acceptance of role		75%	90%	80%	75%
	Retraining (refresher)		30%	30%	30%	30%
	Reporting of incidents and injuries		100%	100%	100%	50%

Notes:

1. Incident data sourced from EPA's internal system, *my*EPA, as of 30 June 2021.
2. Data sourced from the Victorian WorkCover Authority as of 30 June 2021.
3. Based on a monthly average full-time staff equivalent (FTE) of 749.7 for 2020–21.
4. Rolling 12-month average.

Table 10.2: EPA premium performance rate

	NOTES	2020–21	2019–20	2018–19	2017–18
Performance rate	1	0.41%	0.44%	0.39%	0.35%

Note:

1. Data sourced from the Victorian WorkCover Authority as of 30 June 2021. Data has been revised to accurately reflect premium performance for the year.

Employment and conduct principles

EPA is committed to applying best practice principles when appointing and retaining our people. Processes reflect and conform to section 8 of the *Public Administration Act 2004* ensuring decisions are based on merit, fairness, equity and freedom from discrimination.

11 Workforce data

Values and employment principles

EPA's organisational values are Excellence, Partnership, and Accountability which reflect the Victorian Public Sector values and expectations outlined in the Code of Conduct. All new employees and those returning from extended leave throughout the year were onboarded with a series of development modules to build awareness and understanding of these values and employment principles.

EPA is committed to enabling a culture of performance and accountability. All policies and procedures are routinely reviewed to ensure alignment with the public sector employment standards under the *Public Administration Act 2004*, and to ensure that our practices value diversity while creating a safe and healthy workplace for our people.

All employees are employed by the *Victorian Public Service Enterprise Agreement 2020*, except for executives who hold individual employment contracts under the *Public Administration Act 2004*. Employees have been correctly classified in workforce data collections.

Comparative workforce data

The following table discloses the headcount and full-time staff equivalent (FTE) of all active public service employees of EPA, employed in the last full pay period in June of the current reporting period, and in the last full pay period in June of the previous reporting period (2020).

Table 11.1: Details of employment levels in June 2020 and June 2021

	2020–21							2019–20						
	ALL EMPLOYEES		ONGOING			FIXED-TERM & CASUAL EMPLOYEES		ALL EMPLOYEES		ONGOING			FIXED-TERM & CASUAL EMPLOYEES	
	Number (headcount)	FTE	Full-time (headcount)	Part-time (headcount)	FTE	Number (headcount)	FTE	Number (headcount)	FTE	Full-time (headcount)	Part-time (headcount)	FTE	Number (headcount)	FTE
GENDER														
Men	365	359.1	272	16	283.4	77	75.7	344	337.0	246	19	259.2	79	77.8
Women	420	389.6	229	87	289.8	104	99.8	406	375.3	209	91	273.4	106	101.9
Self-described	1	1.0	1	0	1.0	0	0.0	2	2.0	0	0	0	2	2.0
AGE														
15–24	6	5.8	1	0	1.0	5	4.8	9	8.6	4	0	4.0	5	4.6
25–34	197	191.4	123	11	130.2	63	61.3	197	192.5	120	12	128.0	65	64.5
35–44	286	267.9	169	52	205.2	65	62.7	283	264.2	156	53	192.3	74	71.9
45–54	200	191.6	142	26	160.8	32	30.8	176	166.1	116	32	139.7	28	26.4
55–64	82	79.3	58	10	65.4	14	13.9	75	71.4	50	11	58.1	14	13.3
65+	15	13.6	9	4	11.6	2	2.0	12	11.4	9	2	10.4	1	1.0

Continued overleaf

Table 11.1: Details of employment levels in June 2020 and June 2021 continued

	2020–21							2019–20						
	ALL EMPLOYEES		ONGOING			FIXED-TERM & CASUAL EMPLOYEES		ALL EMPLOYEES		ONGOING			FIXED-TERM & CASUAL EMPLOYEES	
	Number (headcount)	FTE	Full-time (headcount)	Part-time (headcount)	FTE	Number (headcount)	FTE	Number (headcount)	FTE	Full-time (headcount)	Part-time (headcount)	FTE	Number (headcount)	FTE
VPS 1–6 GRADES														
VPS Grade 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VPS Grade 2	3	3.0	0	0	0.0	3	3.0	0	0	0	0	0	0	0
VPS Grade 3	136	129.8	80	17	92.3	39	37.6	144	138.2	81	17	93.2	46	45.0
VPS Grade 4	244	232.4	157	27	174.0	60	58.3	231	219.3	145	27	161.8	59	57.5
VPS Grade 5	268	255.2	171	41	200.8	56	54.5	258	244.0	149	43	180.4	66	63.6
VPS Grade 6	112	106.2	72	18	85.1	22	21.1	95	88.8	57	22	73.2	16	15.6
SENIOR EMPLOYEES														
STS	3	3.0	2	0	2.0	1	1.0	2	1.9	1	1	1.9	0	0
PS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sra	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Executives	20	20.0	20	0	20.0	0	0	22	22.0	22	0	22.0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total employees	**786**	**749.7**	**502**	**103**	**574.2**	**181**	**175.5**	**752**	**714.3**	**455**	**110**	**532.5**	**187**	**181.7**

Notes:

1. FTE means 'full-time staff equivalent', FTE figures may not sum to the total due to rounding.
2. Staff on leave without pay or absent on secondment, external contractors/consultants, and temporary staff employed by employment agencies are excluded.
3. All figures reflect employment levels as at 30 June each year.

Table 11.2: Annualised total salary, by $20,000 bands, for executives and other senior non-executive staff

INCOME BAND (SALARY)	EXECUTIVES	STS	PS	SMA	SRA	OTHER
< $160,000						
$160,000–$179,999	2	1				
$180,000–$199,000	5	1				
$200,000–$219,999	7	1				
$220,000–$239,999						
$240,000–$259,999	1					
$260,000–$279,999	3					
$280,000–$299,999	1					
$300,000–$319,999						
$320,000–$339,999						
$340,000–$359,999						
$360,000–$379,999						
$380,000–$399,999						
$400,000–$419,999	1					
Total	**20**	**3**	**0**	**0**	**0**	**0**

Note:

1. The salaries reported above are for the full financial year, at a 1-FTE rate, and exclude superannuation.

Diversity and Inclusion Plan

EPA is committed to building a supportive and inclusive culture where everyone is valued for their unique qualities, ideas and perspectives. During 2020–21, we focused on increasing the visibility of our efforts around inclusion and more actively promoting inclusion through a range of events, workshops and development programs through storytelling and sharing. We are reviewing our 2018–2020 strategy to report on accomplishments and reset priorities for the future. A large focus of this is dedicated to our updated Aboriginal Inclusion Action Plan and the obligations presented by the *Gender Equality Act 2020*.

Throughout the year, we have continued to implement our targeted action plans for gender, Aboriginal, cultural and linguistic diversity, disability and Pride inclusion, many of which have involved a review of existing practices, policies and support available for our people.

11 Workforce data
continued

Compliance with the *Disability Act 2006*

The *Disability Act 2006* reaffirms and strengthens the rights of people with a disability. In 2020-21, EPA continued to deliver actions associated with our Disability Inclusion Action Plan to remove barriers from gaining and maintaining employment and preventing full engagement with EPA's services and facilities. The action plan is consistent with the government's framework for enabling people with a disability to participate and contribute to the social, economic and civic life of their community (*Absolutely everyone: state disability plan 2017–2020*).

Milestones for the year included:

- continuations of reviews of facilities design for EPA worksite locations to ensure they are accessible
- further reviews to our processes to address barriers for those with disabilities in applying for EPA roles
- refresher training for accredited EPA employees in Mental Health First Aid together with the continuation of a peer support network to support employees
- building awareness through a series of video dialogues with people living with a disability
- recognition of events such as World Sight Day and Mental Health Month.

Executive officer data

An executive officer is defined as a person employed as a public service body head or other executive under Part 3, Division 5 of the *Public Administration Act 2004*. All figures in the following tables reflect employment levels at the last full pay period in June of the current and corresponding previous reporting year.

Table 11.3: Total number of executives by gender

	ALL		MEN		WOMEN		SELF-DESCRIBED		VACANCIES
CLASSIFICATION	NO.	VAR	NO.	VAR	NO.	VAR	NO.	VAR	NO.
EO-1	1	0	1	1	0	-1	0	0	0
EO-2	5	-2	4	-2	1	0	0	0	0
EO-3	14	0	7	0	7	0	0	0	0
Total	**20**	**-2**	**12**	**-1**	**8**	**-1**	**0**	**0**	**0**

Notes:

1. Executive total includes Accountable Officer (CEO).
2. One EO-2 is currently on secondment to Department of Families, Fairness and Housing paid by EPA, being reimbursed by invoice.

Table 11.4: Reconciliation of executive numbers

		2021	2020
	Executives with remuneration more than $100,000	25	24
Add	Vacancies (See Table 11.3)	0	1
	Executives with total remuneration below $100,000	0	0
	Accountable Officer (CEO)	1	1
Less	Separations	-6	-3
	Total executive numbers at 30 June	**20**	**23**

12 Other disclosures

Local Jobs First: Victorian Industry Participation Policy Act 2003

The *Local Jobs First: Victorian Industry Participation Policy Act 2003*, introduced in August 2018, brings together the Victorian Industry Participation Policy and Major Project Skills Guarantee policy which were previously administered separately. Departments and other public sector bodies are required to apply the Local Jobs First policy in all projects valued at $3 million (including GST) or more in metropolitan Melbourne for statewide projects, or $1 million (including GST) or more for projects in regional Victoria.

These guidelines will continue to apply to applicable projects where contracts have been entered prior to 15 August 2018.

During 2020–21, EPA's Kaniva Remediation Project valued at $19.7 million was applicable to the Local Jobs First policy where a Local Industry Development Plan was completed by the successful supplier following a Request for Tender.

The outcomes expected from the implementation of the Local Jobs First policy to this project where information was provided are as follows:

- 99.7 per cent local content commitment was made
- 24.3 annualised employee equivalent jobs were committed, including the creation of 5.4 new jobs and the retention of 19.43 existing jobs
- 1.08 positions for trainees were committed.

During 2020–21, EPA's Thornycroft Remediation Project valued at $6 million was applicable to the Local Jobs First policy where a Local Industry Development Plan was completed by the successful supplier following a Request for Tender.

The outcomes expected from the implementation of the Local Jobs First policy to this project where information was provided are as follows:

- 100 per cent local content commitment was made
- 16.05 annualised employee equivalent jobs were committed, including the creation of 2.5 new jobs and the retention of 13.5 existing jobs
- 2.6 positions for trainees were committed, including the creation of 1.3 new traineeships.

Social Procurement Framework

EPA implemented its Social Procurement Framework in October 2020 through the launch of a revised Procurement and Contract Management policy.

All EPA market templates contain the mandatory 5 per cent social procurement weighting and procurement templates that enable staff to consider:

- Approaching Aboriginal suppliers or suppliers with Aboriginal content
- Asking suppliers to provide details of their commitment to social procurement during the market approach phase. This could include:
  - Details of their workforce including the number or portion of Aboriginal workers, women, people with disability, etc.
  - Copies of any policies covering an inclusive workplace, with particular regard to gender inclusiveness, opportunities for people with disability and the disadvantaged and workplace harm minimisation
  - Details of any environmental policies
  - Any accreditations or standards achieved which would support the workplace's commitment to the Social Procurement Framework.

Government advertising expenditure

EPA's expenditure in the 2020–21 reporting period on government campaign expenditure did not exceed $100,000.

Consultancy expenditure

Details of consultancies (valued at $10,000 or greater)

In 2020–21, there were 22 consultancies where the total fees payable to the consultants were $10,000 or greater. The total expenditure incurred during 2020–21 in relation to these consultancies was $976,689.50 (excluding GST). Details of individual consultancies are outlined in Table 12.1 and are made available on EPA's website through the publication of our annual reports.

Table 12.1: Details of consultancies (valued at $10,000 or greater)

SUPPLIER	PURPOSE OF CONSULTANCY	DATE PAID	TOTAL APPROVED PROJECT FEE (EXCL. GST)	EXPENDITURE 2020–21 (EXCL. GST)	FUTURE EXPENDITURE (EXCL. GST)
2m Consulting Pty Ltd	EPA Latrobe Valley Facility — Business case development	14/09/2020	15,000.00	15,000.00	–
Arcadis Australia Pacific Pty Ltd	Review and redesign of the Waste Levy Program	24/06/2021	90,909.09	68,075.19	22,833.90
Australian Catholic University Ltd	Report of data collection results of Development of high spatial resolution ultrafine particles and black carbon map	31/03/2021	45,454.55	13,636.36	–
Australian Catholic University Ltd	Evaluation of a residential intervention to reduce exposures to smoke from planned burns	30/06/2021	109,090.9	109,090.90	–
Australian Catholic University Ltd	Measurement and analysis of environmental noise in Melbourne	30/06/2020	45,454.55	18,181.81	27,272.74
Deloitte Touche Tohmatsu	Comprehensive regulatory impact statement	20/01/2021	95,360.00	90,592.72	4,767.27
Environmental Risk Sciences	Review of the scientific literature on potential health effects in local communities associated with air emissions from Waste to Energy facilities	1/03/2021	27,000.00	26,000.00	–
Greencap Pty Ltd	Small Business Program pilot	20/07/2021	186,363.64	21,545.44	164,818.20
Hover Uav P/L	Provision of an evaluation of EPA's Remotely Piloted-Aircraft Capability	29/06/2020	12,160.00	12,160.00	–
Ernst & Young Pty Ltd	Greenhouse gas (GHG) inventory and management plan	10/09/2020	78,422.73	22,024.54	–

Continued overleaf

Table 12.1: Details of consultancies (valued at $10,000 or greater) continued

SUPPLIER	PURPOSE OF CONSULTANCY	DATE PAID	TOTAL APPROVED PROJECT FEE (EXCL. GST)	EXPENDITURE 2020–21 (EXCL. GST)	FUTURE EXPENDITURE (EXCL. GST)
Ernst & Young Pty Ltd	Reserve Management Policy Review	26/08/2020	55,000.00	25,000.00	4,000.00
First Person Cosulting P/L	Officers for the Protection of the Local Environment pilot evaluation	13/07/2021	34,927.27	17,072.73	–
Global Lead Technologies Pty Ltd	Evaluation Recommendation Report — Storm Waste Remediation	3/03/2021	36,300.00	36,300.00	–
Grosvenor Performance Group	Development of an evaluation framework for WCU and high-risk sites	24/06/2021	38,725.00	38,725.00	–
Landell Corporation Pty Ltd	Digital Transformation Value Review	2/06/2021	75,400.00	22,181.25	3,168.75
Mosaic Lab	Scoping review of EPA Code of Practice — Onsite wastewater management	16/03/2021	29,727.27	27,980.00	1,747.27
R 4 Risk Pty Ltd	Fire Safety Assessment	17/02/2021	44,826.75	44,826.75	–
Risklogic Pty Ltd	Incident Management System Functional Manuals (services)	30/06/2020	16038.65	16,038.65	–
Rm Consulting Group P/L	Review and drafting of Publication 168 — Wastewater Irrigation	16/06/2021	109,924.91	37,202.66	72,722.25
Vanguard Solutions Pty Ltd	Environmental review for the FSRU facility in Crib Point	6/05/2021	57,700.00	49,435.00	8,265.00
Pitcher Partners Consulting P/L	Independent evaluation of Broderick Rd, Lara commercial model	15/04/2021	30,591.00	30,591.00	–
Vitae Partners Pty Ltd	Transformation Strategic Review	09/04/2021	590,890.45	235,029.50	355,860.95

Details of consultancies under $10,000

In 2020–21 there was one consultant engaged where the total fee payable to the individual consultancy was less than $10,000. The total expenditure incurred during 2020–21 in relation to this consultancy was $8,937.50 excluding GST.

Disclosure of major contracts

EPA did not enter into any major contracts during 2020–21.

Information and communication technology expenditure

For the 2020–21 reporting period, EPA had a total information and communication technology (ICT) expenditure of $39.7 million, with the details shown in Table 12.2.

Table 12.2: Disclosure of ICT expenditure

($ MILLIONS)

BUSINESS AS USUAL (BAU) ICT EXPENDITURE	NON BUSINESS AS USUAL (NON BAU) ICT EXPENDITURE		
Total	Total = operational expenditure and capital expenditure	Operational expenditure	Capital expenditure
$ 18.5	$21.2	$ 8.7	$12.5

ICT expenditure refers to EPA's costs in providing business enabling ICT services. It comprises business-as-usual (BAU) ICT expenditure and non-business-as-usual (non-BAU) ICT expenditure. BAU ICT expenditure is ICT expenditure which primarily relates to ongoing activities to operate and maintain the current ICT capability. Non-BAU ICT expenditure relates to the delivery of ICT projects primarily associated with the 'Bringing our Environment Protection Authority into the modern era' initiative.

The non-BAU ICT expenditure includes work in progress amounts of $1.3 million for activities associated with EPA's digital transformation program.

Competitive Neutrality Policy Victoria

Under the National Competition Policy, the guiding legislative principle is that legislation, including future legislative proposals, should not restrict competition unless it can be demonstrated that:

- The benefits of the restriction to the community as a whole outweighs the costs
- The objectives of the legislation can only be achieved by restricting competition.

EPA continues to comply with the requirements of the Competitive Neutrality Policy Victoria.

Competitive neutrality requires government businesses to ensure where services compete, or potentially compete, with the private sector, that any advantages arising solely from their ownership be recovered if they are not in the public interest.

Freedom of Information

The *Freedom of Information Act 1982* allows the public a right of access to documents held by EPA. The purpose of the Act is to extend, as far as possible, the right of the community to access information held by government departments, local councils, ministers and other bodies subject to the Act.

Any person has a right to apply for access to documents held by EPA. This includes documents created by EPA or that have been given to us by an external organisation or individual. The meaning of documents under the Act is broad and may include maps, films, microfiche, photographs, computer printouts, computer discs, tape recordings and videotapes. Information about the type of material produced by EPA is available on our website under Part II Information Statement.

The Act allows EPA to refuse access, either fully or partially, to certain documents or information if an exemption under the Act applies. Examples of documents to which access might be refused include cabinet documents, some internal working documents, law enforcement documents, documents covered by legal professional privilege (such as legal advice), personal information about other people and information provided to EPA in confidence.

The Act requires EPA to give a decision on a request no later than 30 days from the day the request is received. However, when a consultation is required under the Act in relation to documents relevant to a request, EPA may take up to 45 days to make its decision. Alternatively, with agreement from the applicant, EPA may extend the time for deciding a request by periods of up to 30 days.

The applicant's agreement to extension may be given any number of times.

An applicant who is not satisfied by a decision of EPA has the right to seek a review by the Office of the Victorian Information Commissioner within 28 days of receiving it.

Making a request

Section 17 of the Act sets out the requirements for making a Freedom of Information request. Applicants must make requests in writing (unless they are incapable of doing so), and clearly identify the documents to which they seek access. There is also an application fee of $30.10 payable before a request will be processed. Access charges will also be payable in relation to most requests. However, EPA may waive the application fee if an applicant can demonstrate hardship and, in some circumstances, access charges are not payable or will be waived.

Requests can be submitted by email or by post to the EPA's Freedom of Information Officer. To lodge a request by email, the address is **foi@epa.vic.gov.au**. To lodge a request by post, the address is:

EPA Victoria
Freedom of Information Officer
GPO Box 4395
Melbourne VIC 3001

Freedom of Information statistics/timeliness

During 2020–21, EPA received 126 applications. Of these requests, four were from Members of Parliament, eight were from the media, and the remainder were from the general public.

EPA made 80 Freedom of Information decisions during the 12 months ending 30 June 2021.

Seventeen decisions were made within the statutory 30-day time period; 13 decisions within 30 to 45 days; 14 decisions within 46 to 90 days; and 36 decisions in greater than 90 days. Of the 80 access decisions made, 34 were made after mandatory extensions had been applied or agreed upon by the applicant. The average time taken to finalise requests in 2020–21 was 88 days. Temporary extra resourcing has been provided to process requests while a long-term solution is being finalised.

During 2020–21, eight requests were the subject of a complaint and four decisions were the subject of a review by the Office of the Victorian Information Commissioner. Thirteen decisions made by EPA during 2020–21 became the subject of a review application to the Victorian Civil and Administrative Tribunal, whether made by an applicant or a third party to a decision on a request.

Further information

Further information about making a request to EPA can be at **https://www.epa.vic.gov.au/about-epa/laws/legislation-regulations-and-policies/freedom-of-information**.

Further information about the operation and scope of the Act can be obtained at **https://ovic.vic.gov.au**.

Compliance with the *Building Act 1993*

EPA does not own or control buildings. However, we comply with the building and maintenance provision of the *Building Act 1993* to the extent that we are responsible as a tenant in leased premises.

Compliance with the Public Interest Disclosures Act 2012

The *Public Interest Disclosures Act 2012* enables people to make a disclosure about corrupt or improper conduct by public officers and public bodies. The Act provides protection to people who make disclosures in accordance with the Act and establishes a system for the matters disclosed to be investigated and for rectifying action to be taken. EPA is a public body for the purpose of the Act.

A public interest disclosure is a complaint of corrupt or improper conduct or detrimental action by a public officer or a public body.

EPA does not tolerate improper conduct by employees or taking reprisals against those who come forward to disclose such conduct. We are committed to ensuring transparency and accountability in our administrative and management practices, and support making 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.

EPA 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 legally possible. .

Reporting procedures

Public interest disclosures about EPA or its board members, officers or employees can be made by contacting the Independent Broad-Based Anti-Corruption Commission (details below).

EPA is not able to receive public interest disclosures.

EPA has established procedures for the protection of persons from detrimental action in reprisal for making a public interest disclosure about EPA, its board members, officers or employees. The Public Interest Disclosures Policy and procedure, which outline the system for reporting disclosures of improper conduct or detrimental action by EPA or any of our employees and/or officers, is available on our website.

Independent Broad-Based Anti-Corruption Commission Victoria

Address: Level 1, North Tower, 459 Collins Street, Melbourne Victoria 3000.

Mail: IBAC, GPO Box 24234, Melbourne VIC 3001

Website: **www.ibac.vic.gov.au**

Phone: 1300 735 135

Office-based environmental impacts

EPA's Environment Management System has been established to reduce our impact on the environment. The system is supplemented by a staff-run working group, Green Stars, which delivers initiatives to improve environmental sustainability across all EPA work environments through initiatives and influencing behaviour change for ongoing change. For example, during 2020–21, the group promoted Plastic Free July, Sustainable House Day and International Composting Awareness Week.

Due to the pandemic, approximately 95 per cent of our people continued working from home for the full year. This shift has resulted in a decrease across a number of environmental indicators reported in the sections below on top of the year-on-year variability by EPA.

EPA's greenhouse gas inventory has been prepared using the National Greenhouse Accounts Factors updated by the Australian Government's Department of Environment in October 2020 and management-derived methods where appropriate emissions calculation methods and factors were not available. Impacts on the environment attributable to staff working from home, such as energy and water consumption and waste generation, were estimated to provide a more holistic account on EPA's total impact. A detailed description of the methodologies and conversion factors applied can be found in EPA's Greenhouse Gas Inventory Management Plan 2020–21. The inventory covers data from all EPA offices, air monitoring stations, small monitoring sites and staff input.

A summary of the number of offices, air monitoring stations, small monitoring stations and staff as well as office floor area is presented in Table 12.3. Changes from 2019–20 include moving into the leased offices in Sunshine and Preston at the start of the financial year.

Table 12.3: Full-time equivalent, offices, monitoring stations and sensors

INDICATOR	2020–21	2019–20	2018–19
Total full-time equivalent employees (FTE)	750	714	676
Total office area (m^2)	14,250	12,668	11,717
Number of offices	9	7	8
Number of air monitoring stations	17	17	17
Small monitoring sites[1]	25	19	18

Note:
1. Small monitoring sites include small footprint sites, sensor sites and camera sites.

Energy

Electricity consumption also includes a portion of Green Power, which represents electricity consumed from renewable energy sources. Table 12.4 presents EPA's energy consumption performance for the 2020–21, 2019–20 and 2018–19 financial years. Data for electricity and natural gas consumption was obtained from invoices provided by EPA's energy retailers. Where data was not available, consumption was estimated using daily consumption rates from information that was available.

Total energy usage increased in 2020–21 due to a multitude of factors. In addition to there being two additional offices in 2020–21, offices were being powered for the full year to cater for staff that chose to work from the office throughout the year. Comparatively, there were only nine months of office energy usage in 2019–20 as employees were working from home from 30 March 2020. Further, there was an update to the calculation methodology for remote working as there have been more accurate publications to represent remote working emissions compared to the limited emissions publications available at the end of 2019–20.

EPA continues to implement energy reduction initiatives throughout our offices and has retained our high energy performance at our head office, North Geelong and Dandenong with energy ratings of 5.5 stars for the base building, 6 stars and 5 stars, respectively.

Table 12.4: Energy use

INDICATOR	2020–21	2019–20	2018–19
E.1 Total energy usage segmented by primary source (MJ)	20,615,182	18,517,666	21,154,108
Electricity (MJ) – excluding Green Power	5,443,850	5,312,181	5,813,250
Natural gas (MJ)	15,001,256	14,759,850	15,083,401
Green Power (MJ)	170,076	282,859	257,458
E.2 Greenhouse gas emissions associated with energy use, segmented by primary source and offsets (tCO_2e)	2,494	2,369	2,725
Electricity (tCO_2e) – excluding Green Power	1,648	1,653	1,889
Natural gas (tCO_2e)	833	818	836
E.3 Percentage of electricity purchased as green power	3.12%	5.32%	4.43%
E.4 Units of energy used per FTE (MJ/FTE)	27,487	25,924	31,293
E.5 Units of energy used per unit of office area (MJ/m^2)	1,447	1,462	1,805

Note:
1. 2019–20 data for natural gas was restated to amend an error in calculations. Natural gas usage (MJ) was restated from 12,922,626 to 14,759,850 and natural gas emissions (tCO2e) was restated from 716 to 818.

Energy targets

EPA's energy use target for 2020–21 was carried over from 2018–19. EPA's energy target for 2020–21 was an energy intensity target for electricity use expressed in megajoules per square-metre of floor area (MJ/m^2).

Table 12.5 presents EPA's performance against its energy intensity target for 2020–21 showing that the target was met. EPA is currently reviewing targets for future reporting periods.

Table 12.5: Current performance against Sustainability Plan targets for energy use

MEASURE	2020–21 TARGET	2020–21 ACTUAL
Energy use (electricity) per m^2 per year	550 MJ	382 MJ

Waste and recycling

EPA's primary source of waste was from staff working remotely. The waste generated by our people is assumed to be separated into landfill, co-mingled recycling and compost (organics recycling). Table 12.6 presents EPA's waste and recycling performance for 2020–21, 2019–20 and 2018–19 financial years. Data for waste and recycling was obtained from waste audits conducted by EPA.

EPA's total waste and waste per full-time equivalent employee decreased again in 2020–21 due to the ongoing impacts of the pandemic. Large decreases occurred for categories such as e-waste and other recycling, paper and cardboard and secure documents as it is unlikely staff would print documents or dispose of e-waste working from home. Although the kilograms of waste decreased from the previous year, the proportion of waste that contributes to higher emissions grew. This increase is due to less waste being recycled (4 per cent) and greater quantities going to landfill, causing the emissions to grow slightly over last year.

Table 12.6: Waste and recycling

INDICATOR	2020–21	2019–20	2018–19
Ws 1. Total units of waste disposed of by destination (kg/yr)	14,552	17,177	23,194
Landfill (kg)[1]	4,662	4,801	5,646
Co-mingled recycling (kg)	3,872	4,098	6,693
E-waste and other recycling (kg)	15	235	352
Paper and card (kg)	42	633	805
Secure documents (kg)	78	1,182	2,708
Organics (kg)	5,883	6,227	6,990
Ws 2. Units of waste disposed of per FTE by destinations (kg/FTE)	19.40	24.05	34.31
Landfill (kg)	6.22	6.72	8.35
Co-mingled recycling (kg)	5.16	5.74	9.90
E-waste and other recycling (kg)	0.02	0.33	0.52
Paper and card (kg)	0.06	0.89	1.19
Secure documents (kg)	0.10	1.66	4.01
Organics (kg)	7.84	8.72	10.34
Ws 3. Recycling rate (percentage of total waste)[2]	68%	72%	76%
Ws 4. Greenhouse gas emissions associated with waste disposal (tCO_2e)	7.29	6.94	7.92

Notes:

1. Waste to landfill includes cardboard, compostable material, non-recyclable material, paper, paper towels and contamination in recycling.
2. Recycled waste includes co-mingled recycling, e-waste and other recycling, paper and card, secure documents and organics.

Waste targets

EPA's waste target for 2020–21 was carried over from 2018–19. EPA's waste target for 2020–21 was a waste intensity target expressed as the quantity of waste generated per full-time equivalent employee.

Table 12.7 presents EPA's performance against its waste intensity target showing that the target has been met. EPA is currently reviewing targets for future reporting periods.

Table 12.7: Current performance against Sustainability Plan targets for waste

MEASURE	2020–21 TARGET	2020–21 ACTUAL
Waste generated per FTE per year (kg)	60 kg	19 kg

Paper

EPA uses paper primarily for office printing. Table 12.8 shows our paper consumption performance for the past three financial years. Data for paper was obtained from EPA's expenditure report provided by our office paper supplier.

EPA has several initiatives in place to reduce paper consumption. 'Follow-Me Printing' requires staff to confirm print jobs with their identification cards prior to the execution of the print job and aims to improve both printing management and security. All of EPA's printers are environmentally efficient models with print reporting and management software installed for improved information on usage and cost allocation by business unit. All EPA staff have been provided with Microsoft Surface tablets, to encourage greater digital, rather than paper-based, consumption of information. Following this, various functional areas of the business started a move to paperless processing prior to the pandemic.

The decrease in paper use in 2020–21 can be attributed to the majority of our people working from home during the year. For staff who did work from the office, when in line with Victorian Government public health measures, EPA's targeted initiatives to reduce paper consumption in the office continued to drive improvements as reflected by the higher proportion of recycled content in paper.

Table 12.8: Paper use

INDICATOR	2020–21	2019–20	2018–19
P1. Total units of A4 equivalent copy pa-per used (reams)	465	2,205	3,041
P2. Units of A4 equivalent copy pa-per used per FTE (reams/FTE)	0.6	3.1	4.5
P3. 75–100% recycled content	98.28%	95.2%	100.0%
P3. 50–74% recycled content	0.0%	0.0%	0.0%
P3. 0–49% recycled content	1.7%	4.8%	0.00%

Paper use targets

EPA's paper use target for 2020–21 was carried over from 2018–19. EPA's paper consumption target for 2020–21 was a paper consumption intensity target expressed as the number of reams of paper consumed per full-time equivalent employee. Table 12.9 presents EPA's performance against its paper consumption intensity target showing that the target was met. EPA is currently reviewing targets for future reporting periods.

Table 12.9: Current performance against Sustainability Plan targets for paper

MEASURE	2020–21 TARGET	2020–21 ACTUAL
Reams of A4-equivalent paper used per FTE per year	5.00	0.62

Water

EPA's water use includes water consumed across all office facilities. Table 12.10 presents EPA's water use performance for the last three financial years. The data is based on water meter readings at all metropolitan and regional offices. Where data was not available, consumption was estimated using daily consumption rates obtained from information that was available.

Overall, EPA saw a decrease in absolute water consumption and in office water consumed per full-time equivalent employee.

Table 12.10: Water use (office facilities only)

INDICATOR	2020–21	2019–20	2018–19
W1. Total water consumption (kilolitres)	5,314	6,405	7,305
W2. Units of office water used per FTE (kilolitres/FTE)	7.09	8.97	10.81
W3. Units of office water used per office area (kilolitres/m^2)	0.37	0.51	0.62

Water use targets

EPA's water use target for 2020–21 was carried over from 2018–19. EPA's water target for 2020–21 was a water use intensity target expressed as the number of kilolitres consumed per square-metre of floor area (kL/m^2).

Table 12.11 presents EPA's performance against its water use intensity target showing the target was not met, despite making progress in 2020–21. EPA is currently reviewing targets for future reporting periods.

Table 12.11: Current performance against Sustainability Plan targets for water

MEASURE	2020–21 TARGET	2020–21 ACTUAL
Water use per year (kL/m2)	0.28	0.37

Transport

EPA's transport footprint includes vehicles, air travel and staff commuting. Table 12.12 shows EPA's energy consumption and greenhouse gas emissions performance for the 2020–21, 2019–20 and 2018–19 financial years. Data for EPA's vehicle fleet and flights was obtained from fuel card and other internal reports. Staff commuting data is generally obtained from a yearly travel survey, however, due to the pandemic, the 2018–19 survey was re-used and extrapolated across all EPA staff.

EPA encourages staff members to use public transport for official work whenever possible. EPA's video conferencing facilities have greatly reduced the need for staff to travel to other offices. A greater percentage of staff commuting to the head office in the CBD use more sustainable forms of transport than in the greater Melbourne and regional offices where the transport infrastructure is not as established or accessible.

Travel was restricted for the full year with most vehicles not in use, driving an overall expected decrease in vehicle fleet energy consumption, kilometres travelled, air travel and emissions.

Table 12.12: Transport

INDICATOR	2020–21	2019–20	2018–19
T1. Total energy consumption by fleet vehicles (MJ)	5,135,068	3,056,138	3,879,170
Diesel	1,965,664	862,783	988,188
LPG	–	–	–
ULP	2,849,634	2,020,426	2,492,221
Hybrid	319,770	172,929	398,760
T2. Total distance travelled by fleet vehicles (km)	1,433,194	1,032,379	1,214,377
Diesel	456,920	248,661	306,437
LPG	–	–	–
ULP	840,540	683,764	721,429
Hybrid	135,734	99,954	186,511
T3. Total greenhouse gas emissions from fleet vehicles (tCO_2-e)	394	232	308
Diesel	145	64	73
LPG	–	–	–
ULP	226	156	206
Hybrid	23	12	28
T3. Greenhouse gas emissions from fleet vehicles per 1,000km (tCO_2-e)	0.27	0.23	0.25
Diesel	0.32	0.26	0.24
LPG	–	–	–
ULP	0.27	0.23	0.29
Hybrid	0.17	0.12	0.15
T4. Total distance travelled by aeroplane (km)	3,669	260,729	414,085
T5. Percentage of employees using sustainable[1] modes of transport to get to and from work or working from home	70%	70%	70%
CBD (%)[2]	86%	86%	86%
Metro (%)	73%	73%	73%
Regional (%)	48%	48%	48%

Note:
1. Sustainable transport is defined here as public transport, cycling, walking, carpooling, electric or hybrid vehicles.

Transport targets

EPA's transport targets for 2020–21 were carried over from 2018–19. EPA's transport target for 2020–21 included:

- A target to increase vehicle fleet fuel efficiency, expressed as emissions generated per kilometre travelled, against a 2013–14 baseline
- A target to increase the percentage of employees using sustainable modes of transport to travel to work, or work from home, against a 2013–14 baseline of 74 per cent.

Table 12.13 shows EPA's performance against these two targets. The increase in fuel efficiency of the vehicle fleet has not been met due to increased vehicle usage during the year, while the increase in sustainable transport is the same as 2018–19 due to reusing the same travel survey. EPA is currently reviewing its targets for future reporting periods.

Table 12.13: Current performance against Sustainability Plan targets for transport

MEASURE	2020–21 TARGET	2020–21 ACTUAL
Increase in fuel efficiency of vehicle fleet (kg CO_2e/km)	10%	-2%
Increase in use of sustainable transport for work purposes	10%	-5%

Greenhouse gas emissions

Table 12.14 summarises EPA's greenhouse gas emissions for the last three financial years. EPA voluntarily purchases carbon offsets to achieve net zero emissions each year.

EPA's total greenhouse gas emissions for 2020–21 was 3,086 tCO_2-e. This represents a 4 per cent decrease in greenhouse gas emissions from 2019–20.

Table 12.14: Greenhouse gas emissions

INDICATOR	2020–21	2019–20	2018–19
G1. Total greenhouse gas emissions associated with energy use (tCO_2e)	2,495	2,472[2]	2,727
G2. Total greenhouse gas emissions associated with vehicle fleet (tCO_2e)	371	220	279
G3. Total greenhouse gas emissions associated with air travel (tCO_2e)	1	42	71
G4. Total greenhouse gas emissions associated with waste disposal (tCO_2e)	7	7	8
G5. Total emissions from other sources (tCO_2e)[1]	212	469	532
G6. Greenhouse gas emissions offsets purchased (tCO_2e)	3,200	3,300	3,800

Notes:

1. Greenhouse gas emissions from other sources include vehicle refrigeration, building refrigeration and air conditioning, taxi use, public transport use, boat fuel, printing and publications, catering, couriers, commuting, reticulated water and paper use.
2. 2019–20 G1 indicator was restated from 2,371 to 2,472 due to error in calculations.

Greenhouse gas emissions targets

EPA's greenhouse gas emissions target for 2020–21 was carried over from 2018–19. The target was an emissions reduction target set from EPA's 2009–10 emissions baseline.

Table 12.15 presents EPA's performance against its greenhouse gas emissions target showing that the target has been exceeded. EPA is currently reviewing targets for future reporting periods.

Table 12.15: Current performance against Sustainability Plan targets for greenhouse gas

MEASURE	2020–21 TARGET	2020–21 ACTUAL
Reduction in greenhouse gas emissions	15%	36%

Greener Procurement

EPA applies social procurement criteria to all procurements with a fixed weighting of 5 per cent to all potential suppliers. Our goal is to purchase 100 per cent recycled paper for all our offices.

We minimise our environmental impact by applying sustainability criteria to the purchase of stationery, cleaning, paper, catering and venue hire. We use ecologically sustainable design guidelines for new buildings or office fitouts. Examples of how we have incorporated environmental procurement decisions include:

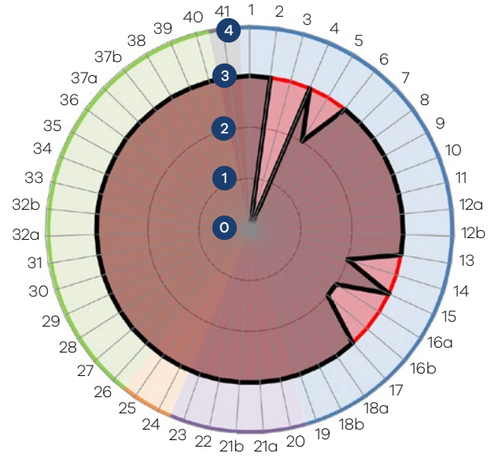
- 95 per cent of EPA's office paper was 100 per cent recycled
- 100 per cent of computer screens are LCD
- 100 per cent of printers, multi-functional devices and photocopiers, including portable printers that enable onsite printing of inspection reports, have duplex capacity and print-on-demand functionality
- All procurements more than $30,000 include a mandatory weighted criterion for environmental management, seeking responses from suppliers that detail their environmental management practices and processes.

Procurement

EPA provides technical and authoritative advisory services to all business areas within the organisation to cover the full cycle of a commercial transaction from procurement planning through to contract execution and management. We seek responses from environmentally responsible suppliers who follow sustainable procurement practices when testing the market.

Asset Management Accountability Framework maturity assessment

The following sections summarise EPA's assessment of maturity against the requirements of the Asset Management Accountability Framework. EPA's target maturity rating is 'competence', meaning systems and processes fully in place, consistently applied and systematically meeting the Asset Management Accountability Framework requirement, including a continuous improvement process to expand system performance above Asset Management Accountability Framework minimum requirements.



3.0 Target 2.91 Overall

Status	Scale	Compliance
Not Applicable	n/a	Not applicable
Innocence	0	Non-comply
Awareness	1	Non-comply
Developing	2	Non-comply
Competence	3	Comply
Optimising	4	Comply
Unassessed	U/A	Unassessed

Leadership and Accountability (requirements 1–19)

EPA has met its target maturity level under most requirements within this category. EPA has self-assessed as being still developing in the areas of monitoring asset performance and asset management system performance. There are no material non-compliance areas reported in this category. A plan is in place to improve our maturity rating in these areas.

Planning (requirements 20–23)

We have met the target maturity level in this category.

Acquisition (requirements 24 and 25)

We have met the target maturity level in this category.

Operation (requirements 26–40)

We have met the target maturity level in this category.

Disposal (requirement 41)

We have met the target maturity level in this category.

12 Other disclosures
continued

Other information available on request

Information listed in this section (as per the Financial Reporting Directive 22B of the *Financial Management Act 1994*) is held at EPA's head office in Melbourne, located at 200 Victoria Street, Carlton, and is available on request, subject to the *Freedom of Information Act 1982*:

- Details of shares held by a senior officer as nominee or held beneficially in a statutory authority or subsidiary
- Details of publications produced by EPA about us, and where they can be obtained
- Details of changes in prices, fees, charges, rates and levies charged by EPA
- Details of any major external reviews carried out in respect of the operation of EPA
- Details of major research and development activities
- Details of overseas visits, including a summary of the objectives and outcomes of each visit
- Details of major promotional, public relations and marketing activities by EPA to develop community awareness of EPA and our services
- Details of assessments and measures to improve occupational health and safety of employees not otherwise detailed in the report of operations
- A general statement on industrial relations within EPA, and details of time lost through industrial accidents and disputes
- A list of major committees sponsored by EPA, the purpose of each committee, and the extent to which the purposes have been achieved
- Details of all consultancies and contractors including consultants/contractors engaged, services provided, and expenditure committed for each engagement.

In addition, EPA confirms that:

- Declarations of pecuniary interests have been duly completed by all relevant officers of EPA.

Compliance with the DataVic Access Policy

Consistent with the DataVic Access Policy issued by the Victorian Government in 2012, the information included in this annual report will be available at **www.data.vic.gov.au** in machine readable format.

Environment Protection Authority (EPA) Victoria Financial Management Compliance Attestation Statement

I, Kate Auty, on behalf of the Responsible Body, certify that the Environment Protection Authority Victoria has no Material Compliance Deficiency with respect to the applicable Standing Directions under the *Financial Management Act 1994* and Instructions.

Kate Auty
Chair
Environment Protection Authority Victoria
Responsible Body

Melbourne
14 October 2021

13 Definitions

The following definitions explain scientific and technical terms used in this Annual Report.

Air quality: Air quality: The condition of the air described by the presence of air pollution or other contamination at a particular place and time. Air quality can be investigated by measuring levels of common pollutants such as ozone, carbon monoxide and small particles.

AirWatch: An interactive map that shows air quality information measured by EPA's air monitoring stations around Victoria. It is available at **www.epa.vic.gov.au**.

Carbon monoxide: A colourless and odourless gas that comes mainly from car exhausts. It is toxic to humans at concentrations above 35 parts per million (ppm).

Combustible recyclable and waste materials: Includes paper, cardboard, wood, plastic, rubber, textile, organic material, refuse derived fuel, specified electronic waste, metals, and other combustible material which is considered waste.

Cooperative Research Centre: The Australian Government's Cooperative Research Centre (CRC) Program supports Australian industries' ability to compete and produce by helping industry to partner with the research sector to solve industry-identified problems in two ways:

- CRC grants support medium to long-term industry-led collaborative research, for up to 10 years
- CRC Projects (CRC-P) grants support short-term, industry-led collaborative research, for up to three years

Duty holder: A person or business with responsibilities and duties to protect human health and the environment from pollution and waste.

Emerging contaminants: Chemicals released into the environment that may harm ecosystems or humans, but for which we may not yet have clear environmental standards. Examples include pesticides and industrial chemicals.

***Environment Protection Amendment Act 2017*:** The updated version of the Act, which includes a general environmental duty.

General environmental duty: This duty will apply under Victoria's new environment protection laws from 1 July 2021. It requires individuals and businesses engaging in activities involving a risk of harm to human health or the environment from pollution or waste to minimise those risks, so far as reasonably practicable. Refer to section 25 of the amended *Environment Protection Act 2017* for more details.

Nitrogen dioxide: A gas that is known to affect the throat and the lungs. In levels encountered in polluted air, people with respiratory problems, particularly infants, children and the elderly, may be affected. EPA monitors nitrogen dioxide in Victoria's air through AirWatch.

PM_{10}: Particles in the air with a diameter less than 10 micrometres. These particles can be a variety of shapes and sizes (up to 10 micrometres). They are small enough to get into the lungs and can cause health problems. Sources of these particles include combustion, crushing or grinding operations, pollen, road dust and sea salt. EPA monitors PM_{10} in Victoria's air through AirWatch.

$PM_{2.5}$: Particles in the air smaller than 2.5 micrometres in diameter. General sources of these particles include all types of combustion, including motor vehicles, power plant emissions and fires. Fine particles pose the greatest risk to human health, as their size means they can be breathed deep into the lungs. These particles are up to 30 times smaller than the width of a single human hair. EPA monitors $PM_{2.5}$ in Victoria's air through AirWatch.

Per- and polyfluorinated alkyl substances: A group of manufactured chemicals that have historically been used in firefighting foams and other industrial and consumer products for many decades.

Pollution abatement notices: Issued under section 31A of the *Environment Protection Act 1970*. They aim to prevent further occurrence of pollution or potential environmental risk through installation of risk controls and changes to onsite processes and practices.

13 Definitions continued

Post-closure pollution abatement notices: To ensure that risks are appropriately quantified and managed, owners of closed landfill sites are issued with pollution abatement notices that require the closed landfill to be managed so there are no unacceptable risks to the environment. These are referred to as post-closure pollution abatement notices.

Prescribed industrial waste: Waste that is potentially harmful to humans or the environment and has the properties set out in the Environment Protection (Industrial Waste Resource) Regulations 2009. Prescribed industrial waste can take different forms — solid, liquid or gaseous. Examples include waste paints and solvents, contaminated soil, waste oil and filter cake.

Reasonably practicable: Under the general environmental duty, the duty to minimise risks will apply so far as reasonably practicable. Section 6(2) of the *Environment Protection Act 2017* sets out the factors that will be relevant to determining what is reasonably practicable.

Sulfur dioxide: An irritant gas that attacks the throat and lungs. Its effect on health is increased by the presence of airborne particles. Prolonged exposure to sulfur dioxide can lead to increases in respiratory illnesses like chronic bronchitis. EPA monitors sulfur dioxide in Victoria's air through AirWatch.

Victorian Civil and Administrative Tribunal: Hears and decides civil and administrative legal cases in the State of Victoria.

Works approval: EPA receives and assesses applications to issue licences and works approvals. A works approval is required when the occupier of scheduled premises seeks to increase or alter the emissions or the types of wastes that their premises handle. The environment protection regulations indicate which industrial or commercial activities require an EPA works approval before they are built or modified, and then licensed by EPA to operate.

Waste transport certificates: A document required under regulations to track the movement of prescribed industrial waste from cradle to grave. Waste transport certificates enable information about the prescribed industrial waste to be passed on in the waste management chain including categorisation of the waste and who has had control of it.

14 Disclosure index

EPA's Annual Report is prepared in accordance with all relevant Victorian legislations and pronouncements. This index has been prepared to facilitate identification of the department's compliance with statutory disclosure requirements.

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14 Disclosure index continued

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15 Responsible body's declaration

The attached financial statements have been prepared in accordance with Direction 5.2 of the Standing Directions of the Assistant Treasurer under the *Financial Management Act 1994*, applicable Financial Reporting Directions, Australian Accounting Standards including interpretations, and other mandatory professional reporting requirements.

We further state that, in our opinion, the information set out in the comprehensive operating statement, balance sheet, statement of changes in equity, cash flow statement and accompanying notes, presents fairly the financial transactions during the year ended 30 June 2021 and financial position of the Authority at 30 June 2021.

At the time of signing, we are not aware of any circumstance which would render any particulars included in the financial statements to be misleading or inaccurate.

We authorise the attached financial statements for issue on 14 October 2021.

Professor Kate Auty
Chairperson
Environment Protection Authority

Melbourne
14 October 2021

Lee Miezis
Chief Executive Officer
Environment Protection Authority

Melbourne
14 October 2021

David Colliver
Interim Chief Financial Officer
Environment Protection Authority

Melbourne
14 October 2021

Independent Auditor's Report

Victorian Auditor-General's Office

To the Board of the Environment Protection Authority

Opinion

I have audited the financial report of the Environment Protection Authority (the authority) which comprises the:

- balance sheet as at 30 June 2021
- comprehensive operating statement for the year then ended
- statement of changes in equity for the year then ended
- cash flow statement for the year then ended
- notes to the financial statements, including significant accounting policies
- declaration in the financial statements.

In my opinion, the financial report presents fairly, in all material respects, the financial position of the authority as at 30 June 2021 and its financial performance and cash flows for the year then ended in accordance with the financial reporting requirements of Part 7 of the *Financial Management Act 1994* and applicable Australian Accounting Standards.

Basis for Opinion

I have conducted my audit in accordance with the *Audit Act 1994* which incorporates the Australian Auditing Standards. I further describe my responsibilities under that Act and those standards in the *Auditor's Responsibilities for the Audit of the Financial Report* section of my report.

My independence is established by the *Constitution Act 1975.* My staff and I are independent of the authority 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.

Board's responsibilities for the financial report

The Board of the authority 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 authority'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.

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

Auditor's responsibilities for the audit of the 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 authority'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 authority'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 authority 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.

MELBOURNE
19 October 2021

Paul Martin
as delegate for the Auditor-General of Victoria

17 How these financial statements are structured

Environment Protection Authority (the Authority) has pleasure in presenting its audited, general purpose financial statements for the financial year ended 30 June 2021, which provides users with information about the Authority's stewardship of resources entrusted to it. The 2020-21 financial year has seen the Authority continue an extensive transformation program, aligned with the Authority's organisational strategy; *Our environment, Our health*.

The general purpose financial statements are presented in the following structure:

FINANCIAL STATEMENTS

Comprehensive operating statement
Balance sheet
Statement of changes in equity
Cash flow statement

NOTES TO THE FINANCIAL STATEMENTS

1. **About this report**
   The basis on which the financial statements have been prepared and compliance with reporting regulations
2. **Funding delivery of our services and transformation initiatives**
   Revenue recognised in respect of grants and other income sources
3. **The cost of delivering services and transformation initiatives**
   Operating expenses of the Authority
4. **Financial information by output**
   Outputs and administered (non-controlled) items
5. **Key assets available to support service delivery and transformation initiatives**
   Infrastructure, plant and equipment, intangible assets and investments
6. **Other assets and liabilities**
   Working capital balances and other key assets and liabilities
7. **Financing our operations**
   Borrowings, cash flow information and leases
8. **Risks, contingencies and valuation judgements**
   Financial risk management, contingent assets and liabilities as well as fair value determination
9. **Other disclosures**

18 Comprehensive Operating Statement

For the financial year ended 30 June 2021

	NOTES	2021 ($ '000)	2020 ($ '000)
INCOME FROM TRANSACTIONS			
Grants from Departments	2.3	20,825	8,497
Municipal and Industrial Landfill levy distribution (i)	2.3	100,041	71,965
Prescribed Industrial Waste levy	2.1	48,046	44,881
Other revenue	2.2	6,932	12,159
Grants – reform output funding (ii)(iii)	2.4	41,706	40,989
Grants – reform asset funding (ii)(iii)	2.4	700	8,150
Total income from transactions		**218,250**	**186,641**
EXPENSES FROM TRANSACTIONS			
Employee expenses	3.1.1	(96,503)	(89,471)
Grant expenses	3.1.2	(200)	(967)
Depreciation and amortisation	5.1.1	(8,057)	(10,499)
Interest expense	7.1.2	(75)	(403)
Other operating expenses (i)	3.1.3	(112,219)	(115,750)
Total expenses from transactions		**(217,054)**	**(217,090)**
Net result from transactions		**1,196**	**(30,449)**
OTHER ECONOMIC FLOWS INCLUDED IN NET RESULT			
Net gain/(loss) on non-financial assets	9.7 (a)	66	17
Net gain/(loss) on statutory receivables	9.7 (b)	(1,240)	(1,485)
Net gain/(loss) on financial instruments	9.7 (c)	46	(3,496)
Other gains/(losses) from other economic flows	9.7 (d)	76	(309)
Total other economic flows included in net result		**(1,052)**	**(5,273)**
Net result		**144**	**(35,722)**
OTHER ECONOMIC FLOWS – OTHER COMPREHENSIVE INCOME			
Items that will not be reclassified to net result			
Changes in physical asset revaluation reserve		26	–
Comprehensive result		**170**	**(35,722)**

Notes:

(i) In 2020-21, the Authority recognised funding and increased its provision in relation to waste site remediation works of multiple contaminated sites. Refer Note 6.4.

(ii) In 2020-21, the Authority received additional Municipal and Industrial (M&I) Landfill levy distribution grants as part of the fifth year of the *'Bringing our Environment Protection Authority into the modern era'* initiative. This revenue includes funding for asset investment purposes which has been capitalised on the Authority's balance sheet.

(iii) This income stream currently expires in 2020-21 in line with the *'Bringing our Environment Protection Authority into the modern era'* initiative funding.

The accompanying notes form part of these financial statements.

19 Balance Sheet

As at 30 June 2021

	NOTES	2021 ($ '000)	2020 ($ '000)
ASSETS			
FINANCIAL ASSETS			
Cash and deposits	7.2	45,356	8,237
Investments	5.3	–	41,945
Receivables (i)	6.1	112,715	101,440
Total financial assets		**158,071**	**151,622**
NON-FINANCIAL ASSETS			
Non-financial physical assets classified as held-for-sale	9.5	57	–
Other non-financial assets	6.3	3,582	2,308
Property, plant and equipment	5.1	20,275	65,606
Intangible assets	5.2	73,802	21,226
Total non-financial assets		**97,716**	**89,140**
Total assets		**255,787**	**240,762**
LIABILITIES			
Payables	6.2	14,853	22,127
Borrowings – lease liabilities	7.1	2,382	2,154
Employee-related provisions	3.1.1(b)	20,713	19,599
Provisions (i)	6.4	76,141	55,354
Total liabilities		**114,089**	**99,234**
Net assets		**141,698**	**141,528**
EQUITY			
Accumulated surplus		134,248	134,104
Contributed capital		3,741	3,741
Physical asset revaluation surplus	9.6	3,709	3,683
Net worth		**141,698**	**141,528**

Note:

(i) The Authority recognised a receivable and an increase to its provision in relation to waste site remediation works of multiple contaminated sites. Refer Note 6.4.

The accompanying notes form part of these financial statements.

20 Statement of Changes in Equity

For the financial year ended 30 June 2021

	NOTES	PHYSICAL ASSET REVALUATION SURPLUS ($ '000)	ACCUMULATED SURPLUS ($ '000)	CONTRIBUTIONS BY OWNER ($ '000)	TOTAL ($ '000)
Balance at 30 June 2019		**3,683**	**168,882**	**3,361**	**175,926**
Change in accounting policy – AASB 16		–	944	–	944
Restated balance as at 1 July		3,683	169,826	3,361	176,870
Transfer to Contributed capital	2.5	–	–	380	380
Net result for year		–	(35,722)	–	(35,722)
Balance at 30 June 2020		**3,683**	**134,104**	**3,741**	**141,528**
Asset revaluation increment	5.1.2, 9.6	26	–	–	26
Net Result for Year		–	144	–	144
Balance at 30 June 2021		**3,709**	**134,248**	**3,741**	**141,698**

The accompanying notes form part of these financial statements.

21 Cash Flow Statement

For the financial year ended 30 June 2021

	NOTES	2021 ($ '000)	2020 ($ '000)
CASH FLOWS FROM OPERATING ACTIVITIES			
RECEIPTS			
Receipts from Government		155,495	109,450
Receipts from other entities		51,732	54,246
Goods and services tax recovered from the ATO (i)		10,963	13,973
Total receipts		**218,190**	**177,669**
PAYMENTS			
Payments of grants and other transfers		(200)	(967)
Payments to suppliers and employees		(207,677)	(193,833)
Interest and other costs of finance paid		(75)	(403)
Total payments		**(207,952)**	**(195,203)**
Net cash flows from/(used in) operating activities	7.2.1	**10,238**	**(17,534)**
CASH FLOWS FROM INVESTING ACTIVITIES			
Proceeds/(payment) for financial assets		41,946	41,497
Purchases of non-financial assets		(14,457)	(55,651)
Proceeds of sales of non-financial assets		(57)	-
Net cash flows from/(used in) investing activities		**27,432**	**(14,154)**
CASH FLOWS FROM FINANCING ACTIVITIES			
Repayment of leases		(525)	(490)
Asset revaluation		(26)	-
Owner's contribution from State		-	380
Net cash flows from/(used in) financing activities		**(551)**	**(110)**
Net increase/(decrease) in cash and cash deposits		**37,119**	**(31,798)**
Cash and cash deposits at beginning of the financial year		8,237	40,035
Cash and cash deposits at end of the financial year	7.2	**45,356**	**8,237**

Note:
(i) GST paid to the Australian Taxation Office (ATO) is presented on a net basis.

The accompanying notes form part of these financial statements.

22 Notes to the Financial Statements

For the financial year ended 30 June 2021

1. ABOUT THIS REPORT

The Authority is a wholly owned and controlled entity of the state of Victoria.

On 1 July 2018, the *Environment Protection Act 2017* became effective and transitioned the Authority from an Administrative Office of the Department of Environment, Land, Water and Planning (the Department) to an Independent Statutory Authority, operating under a new governance structure consisting of a Governing Board as the Responsible Body.

In April 2020, the Victorian Government announced the postponement of the *Environment Protection Act 2018* until 1 July 2021 which transformed Victoria's environment protection laws and the Authority. The new Act commenced on 1 July 2021.

Its principal address is: Environment Protection Authority Victoria
200 Victoria Street
Carlton VIC 3053

The financial statements include all the controlled activities of the Authority.

A description of the nature of the Authority's operations and its principal activities is included in the report of operations, which does not form part of these financial statements.

Basis of preparation

These financial statements are presented in Australian dollars and the historical cost convention is used unless a different measurement basis is specifically disclosed in the note associated with the item.

The accrual basis of accounting has been applied in the preparation of these financial statements whereby assets, liabilities, equity, income and expenses are recognised in the reporting period to which they relate, regardless of when cash is received or paid.

Judgements, estimates and assumptions are required to be made about financial information being presented. The significant judgements made in the preparation of these financial statements are disclosed in the notes where amounts affected by those judgements are disclosed. 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 (AASs) that have significant effects on the financial statements and estimates are disclosed in the notes under the heading: 'Significant judgement: Fair value measurement of assets and liabilities'.

All amounts in the financial statements have been rounded to the nearest $1,000 unless otherwise stated.

Compliance information

These general purpose financial statements have been prepared in accordance with the *Financial Management Act 1994* and applicable Australian Accounting Standards (AASs), including interpretations issued by the Australian Accounting Standards Board (AASB). In particular, they are presented in a manner consistent with the requirements of the *Whole of Government and General Government Sector Financial Reporting* (AASB 1049).

Where appropriate, those AASs paragraphs applicable to not-for-profit entities have been applied. Accounting policies selected and applied in these financial statements 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 general purpose financial statements have been prepared on a going-concern basis.

Impact of COVID-19 on the financial statements

The State of Victoria continued to deal with the impacts of the Coronavirus pandemic during the course of the year. The measures implemented included limitations on the operation of businesses in Victoria, including waste management contractors and the construction industry that generates commercial waste. The Authority has assessed that these restrictions are likely to have had a financial impact on its operations. The restrictions have resulted in the closure of businesses and further reductions in commercial activities, which may directly or indirectly impact on its operations.

The *Supporting Victorian Businesses On Our Road to COVID Normal* announcement on 13 September 2020 delayed the increase of landfill levies for Prescribed Industrial Waste from 1 January 2021 until 1 July 2021, resulting in a direct impact on The Authority's potential revenue.

As part of its response to the coronavirus pandemic the State government deferred the implementation of the new Environment Protection Act until July 2021, this deferral has resulted in additional costs for the Authority's 'Bringing our Environment Protection Authority into the modern era' initiative to support a delayed Go-Live.

2. FUNDING DELIVERY OF OUR SERVICES AND TRANSFORMATION INITIATIVES

Introduction

The Authority's purpose is to protect human health and the environment by reducing the harmful effects of pollution and waste.

The Authority derives the majority of its revenue from grants and reform funding received from the Department, Municipal and Industrial (M&I) Landfill levy distributions and Prescribed Industrial Waste (PIW) levy.

Other income comprises earnings on investments and litter fines.

In 2020-21, the Authority received additional M&I Landfill levy distribution grants as part of the fifth year of the '*Bringing our Environment Protection Authority into the modern era*' initiative.

Structure

2.1 Summary of income that funds the delivery of our services and transformation initiatives

	NOTES	2021 ($ '000)	2020 ($ '000)
Grants from the Department	2.3	20,825	8,497
M&I Landfill levy distribution from the Department (i)	2.3	100,041	71,965
Prescribed Industrial Waste levy		48,046	44,881
Other revenue	2.2	6,932	12,159
Grants – reform output funding	2.4	41,706	40,989
Grants – reform asset funding	2.4	700	8,150
Total income from transactions		**218,250**	**186,641**

Note:
(i) In 2020-21, the Authority recognised funding in relation to the remediation works of multiple contaminated sites.

The Authority has determined that all grant income is recognised as income of not-for-profit entities in accordance with AASB 1058, as it has been earned under arrangements that are either not enforceable and/or linked to sufficiently specific performance obligations.

Income from grants without any sufficiently specific performance obligations, or that are not enforceable, is recognised when the Authority has an unconditional right to receive cash which usually coincides with receipt of cash. On initial recognition of the asset, the Authority recognises any related contributions by owners, increases in liabilities, decreases in assets, and revenue in accordance with other Australian Accounting Standards.

All amounts of income over which the Authority does not have control are disclosed as administered income in the schedule of administered income (see Note 4.2).

2.1 Summary of income that funds the delivery of our services and transformation initiatives (continued)

The Authority has determined that landfill levies including the PIW levy are recognised as income of not-for-profit entities in accordance with AASB 1058. These amounts are recorded in the year the revenue was earned. Levies for which landfill operators have not yet submitted returns at the end of the financial year, are recorded as accrued revenue.

2.2 Other revenue

	2021 ($ '000)	2020 ($ '000)
Licence levy	385	369
Interest and holding gains from financial assets – non-public sector	1,127	4,638
Litter fines	3,273	4,724
Miscellaneous	1,752	2,044
Environment audit fees	395	384
Total other revenue	**6,932**	**12,159**

Interest income includes interest received on bank term deposits and other investments. Interest income is recognised using the effective interest method which allocates the interest over the relevant period.

Fines and regulatory fees are recognised when an invoice is issued, which establishes the entitlement to payment.

The Authority has determined that all other income is recognised as income of not-for-profit entities in accordance with AASB 1058.

2.3 Grants

	2021 ($ '000)	2020 ($ '000)
Grants from the Department	20,825	8,497
M&I Landfill levy distribution from the Department (i)	100,041	71,965
Total grants revenue	**120,866**	**80,462**

Note:

(i) In 2020-21, the Authority recognised funding and an increase to its provision in relation to waste site remediation work of multiple contaminated sites. Refer Note 6.4.

Grants can be received as general-purpose grants which refers to grants that are not subject to conditions regarding their use. Alternatively, they may be received as specific-purpose grants which are paid for a particular purpose and/or have conditions attached regarding their use.

2.4 Grants – reform funding

	2021 ($ '000)	2020 ($ '000)
Grants – reform output funding	41,706	40,989
Grants – reform asset funding	700	8,150
Total grants revenue – reform funding	**42,406**	**49,139**

In 2020-21, the Authority received additional M&I Landfill levy distribution grants as part of the fifth year of the '*Bringing our Environment Protection Authority into the modern era*' initiative. This revenue includes funding for asset investment purposes which has been capitalised on the Authority's balance sheet.

This income stream currently expires at the end of 2020-21 in line with the '*Bringing our Environment Protection Authority into the modern era*' initiative funding.

2.5 Contributions by owners

During the year, the Authority received $0 (30 June 2020: $380K) of contributed capital as a result of the transfer of operating leases to Department of Treasury and Finance. Grant funding of $0.7 million (30 June 2020: $8.15 million) was received for capital works on specific projects reflected in Note 2.4.

3. THE COST OF DELIVERING SERVICES AND TRANSFORMATION INITIATIVES

Introduction

This section provides an account of the expenses incurred by the Authority in delivering services, transformation initiatives and outputs. In Section 2, the revenue that enables the delivery of our services was disclosed and in Section 3, the cost associated with provision of services is recorded.

In 2020-21, the Authority continued the clean-up of a number of waste stockpiles in regional sites.

Structure

3.1 Expenses incurred in delivery of services and transformation initiatives

	NOTES	2021 ($ '000)	2020 ($ '000)
Employee expenses	3.1.1	96,503	89,471
Grant expenses	3.1.2	200	967
Other operating expenses (i)	3.1.3	112,219	115,750
Total expenses incurred in delivery of services and transformation initiatives		**208,922**	**206,188**

Note:
(i) In 2020-21 the Authority increased its provision associated with site remediation relating to multiple contaminated sites.

3.1.1 Employee benefits

3.1.1(a) Employee benefits – comprehensive operating statement

	2021 ($ '000)	2020 ($ '000)
Salary and wages, annual leave and long service leave	88,655	82,751
Post-employment benefits:		
Defined contribution superannuation expense	7,719	6,527
Defined benefit superannuation expense	129	193
Total employee expenses	**96,503**	**89,471**

Employee expenses include all costs related to employment (other than superannuation which is accounted for separately) including salaries, fringe benefits tax, leave entitlements, redundancy payments and WorkCover premiums.

The amount recognised in the comprehensive operating statement in relation to members of defined contribution and defined benefit superannuation plans is the employer contributions that are paid or payable to these plans during the reporting period.

3.1.1(a) Employee benefits – comprehensive operating statement (continued)

The Authority does not recognise any defined benefit liabilities because it has no legal or constructive obligation to pay future benefits relating to its employees. Instead, the Department of Treasury and Finance (DTF) discloses in its annual financial statements the net defined benefit cost related to the members of these plans as an administered liability (on behalf of the State as the sponsoring employer).

3.1.1(b) Employee benefits in the balance sheet

	2021 ($ '000)	2020 ($ '000)
CURRENT PROVISIONS		
Annual leave		
Unconditional and expected to be settled within 12 months	8,565	7,711
Long service leave		
Unconditional and expected to be settled within 12 months	475	465
Unconditional and expected to be settled after 12 months	5,486	5,492
Provisions for on-costs		
Unconditional and expected to be settled within 12 months	74	72
Unconditional and expected to be settled after 12 months	849	850
Total current provisions for employee benefits	**15,449**	**14,590**
NON-CURRENT PROVISIONS		
Conditional long service leave	4,559	4,338
On-costs	705	671
Total non-current provisions for employee benefits	**5,264**	**5,009**
Total provisions for employee benefits	**20,713**	**19,599**

Provision is made for benefits accruing to employees in respect of wages and salaries, annual leave and long service leave for services rendered to the reporting date and recorded as an expense during the period the services are delivered.

Reconciliation of movement in on cost provisions

	2021 ($ '000)
Opening balance as at 1 July 2020	**1,593**
Additional provisions recognised	789
Additions due to transfer in	(8)
Reduction arising from payments/other sacrifices of future economic benefits	–
Reduction resulting from re-measurement or settlement without cost	(894)
Unwind of discount and effect of changes in the discount rate	148
Closing balance as at 30 June 2021	**1,628**
Current	923
Non-current	705

3.1.1(b) Employee benefits in balance sheet (continued)

Wages, salaries and annual leave

Liabilities for wages and salaries, including non-monetary benefits and annual leave, are recognised in the provision for employee benefits as 'current liabilities', because the Authority does not have an unconditional right to defer settlement of these liabilities.

The liability for salaries and wages is recognised in the balance sheet at remuneration rates which are current at the reporting date. As the Authority expects the liabilities to be wholly settled within 12 months of reporting date, they are measured at undiscounted amounts.

The annual leave liability is classified as a current liability and measured at the undiscounted amount expected to be paid, as the Authority does not have an unconditional right to defer settlement of the liability for at least 12 months after the end of the reporting period.

No provision has been made for sick leave as all sick leave is non-vesting and it is not considered probable that the average sick leave taken in the future will be greater than the benefits accrued in the future. As sick leave is non-vesting, an expense is recognised in the Statement of Comprehensive Income as it is taken.

Employment on-costs such as payroll tax, workers compensation and superannuation are not employee benefits. They are disclosed separately as a component of the provision for employee benefits when the employment to which they relate has occurred.

Unconditional long service leave is disclosed as a current liability, even where the Authority does not expect to settle the liability within 12 months because it will not have the unconditional right to defer the settlement of the entitlement should an employee take leave within 12 months.

The components of these liabilities are measured at:

- undiscounted value – if the Authority expects to wholly settle within 12 months; or
- present value – if the Authority does not expect to wholly settle within 12 months.

Conditional long service leave is disclosed as a non-current liability. There is a conditional right to defer the settlement of the entitlement until the employee has completed the requisite years of service. This non-current long service liability is measured at present value.

Any gain or loss following revaluation of the present value of non-current Long Service Leave liability is recognised as a transaction, except to the extent that a gain or loss arises due to changes in the bond interest rates for which it is recognised as another economic flow in the net result.

3.1.1(c) Superannuation contributions – comprehensive operating statement

Employees of the Authority are entitled to receive superannuation benefits and the Authority contributes to both defined benefit and defined contribution plans. The defined benefit plans provide benefits based on years of service and final average salary.

The name, details and amounts expensed in relation to the major employee superannuation funds and contributions made by the Authority are as follows:

	2021 ($ '000)	2020 ($ '000)
DEFINED BENEFIT PLANS (i)		
Emergency Services and State Superannuation Fund (ESS)	129	193
Total defined benefit plans	**129**	**193**
DEFINED CONTRIBUTION PLANS		
VicSuper	3,930	3,372
Other	3,789	3,155
Total defined contribution plans	**7,719**	**6,527**
Total	**7,848**	**6,720**

Note:

(i) The basis for determining the level of contributions is determined by the various actuaries of the defined benefit superannuation plans.

3.1.2 Grant expenses

	2021 ($ '000)	2020 ($ '000)
Grants to Victorian Government entities outside portfolio	–	696
Grants to external organisations	200	271
Total grant expenses	**200**	**967**

Transactions in which the Authority provides goods, services, assets (or extinguishes a liability) or labour to another party without receiving approximately equal value in return are categorised as 'grant expenses'. Grants can either be operating or capital in nature.

Grants were paid as specific purpose grants which are paid for a particular purpose and/or have conditions attached regarding their use.

Grant expenses are recognised as an expense in the reporting period in which they are paid or payable.

3.1.3 Other operating expenses

	2021 ($ '000)	2020 ($ '000)
Consultants and contracted services (i)	9,876	9,010
Agency costs	9,951	15,871
Shared services management fee	1,997	2,895
Occupancy and utilities	1,198	1,763
Supplies and services	26,465	20,434
Waste site remediation works (i)(ii)	62,310	63,341
OPERATING LEASE RENTAL EXPENSES		
Lease payments	422	2,436
Total other operating expenses	**112,219**	**115,750**

Notes:

(i) The Authority sourced external services to support the Transformation program to meet the new legislation as part of the 'Bringing our Environment Protection Authority into the modern era' initiative. Comparative figures for 2020 revised downwards by $10.7m to reflect contractual works associated with high risk sites as per the note below.

(ii) In 2020-21, the Authority recognised funding and increased its provision in relation to waste site remediation works of multiple contaminated sites. Refer Note 6.4. Comparative figures increased by $10.7m to reflect contractual works associated with high risk sites.

Other operating expenses generally represent the day-to-day running costs incurred in normal operations which are recognised as an expense in the reporting period in which they are incurred.

The following lease payments are recognised on a straight-line basis:

- Short-term leases – leases with a term less than 12 months.
- Low-value leases – leases with the underlying asset's fair value (when new, regardless of the age of the asset).

4. FINANCIAL INFORMATION BY OUTPUT

Introduction

The Authority's sole output as defined in the Victorian Government's *Budget Paper 3*, is Statutory Activities and Environment Protection.

Fines and regulatory fees: The Authority collects litter fines and PIW levies on its own behalf, but all other fines and regulatory fees are collected on behalf of the state.

Structure

4.1 Authority (controlled) outputs

4.2 Administered (non-controlled) items

Distinction between controlled and administered items

The distinction between controlled and administered items is based on whether the Authority has the ability to deploy the resources in question for its own benefit (controlled outputs) or whether it does so on behalf of the State (administered items). The Authority remains accountable for transactions involving administered items, but it does not recognise these items in its financial statements.

4.1 Authority (controlled) outputs

All financial activities associated with this output are reported in the comprehensive operating statement of the financial statements.

4.2 Administered (non-controlled) items

The Authority administers or manages other activities on behalf of the state. The transactions relating to these state activities are reported as administered items in this note. Administered transactions give rise to income, expenses, assets and liabilities and are determined on an accrual basis. Administered income includes taxes, fees and fines.

Administered assets include government income earned but yet to be collected. Administered liabilities include government expenses incurred but yet to be paid. The controlled Authority's financial statements and these administered items are consolidated into the financial statements of the state.

In respect to M&I Landfill levy, the Authority does not control the revenue and acts as an agent for the Department that recognises the revenue. Refer Note 9.3.

The Authority recognises amounts collected and payable to the Department as assets and liabilities determined on an accrual basis.

4.2 Administered (non-controlled) items (continued)

	2021 ($ '000)	2020 ($ '000)
ADMINISTERED INCOME FROM TRANSACTIONS		
Regulatory fees	16,218	15,834
Miscellaneous	206	183
Fines	839	318
User charges	306	268
Total administered income from transactions	**17,569**	**16,603**
Payments into the consolidated fund	(19,461)	(14,452)
Total administered expenses from transactions	**(19,461)**	**(14,452)**
Administered net result from transactions (net operating balance) for the year	**(1,892)**	**2,151**
Administered other economic flows included in administered net result		
Net gain/(loss) on receivables	(159)	(119)
Total administered other economic flows included in administered net result	**(159)**	**(119)**
Total administered comprehensive result for the year	**(2,051)**	**2,032**
ADMINISTERED FINANCIAL ASSETS		
Cash and deposits	30,500	29,600
Receivables	47,669	40,087
Accrued revenue	61,474	62,529
Total administered financial assets	**139,643**	**132,216**
Total administered assets	**139,643**	**132,216**
ADMINISTERED LIABILITIES		
Creditors and accruals (i)	138,256	128,785
Unearned income	14	8
Total administered liabilities	**138,270**	**128,793**
Total administered net assets	**1,373**	**3,423**

Note:
(i) M&I Landfill levies owing to the Department.

5. KEY ASSETS AVAILABLE TO SUPPORT SERVICE DELIVERY AND TRANSFORMATION INITIATIVES

Introduction

The Authority controls assets and other investments that are utilised in fulfilling its objectives and conducting its activities. They represent the resources that have been entrusted to the Authority to be utilised for service delivery.

Significant judgement: fair value measurements of non-financial physical assets

The determination of fair values of non-financial physical assets requires significant judgement to be applied (including methodologies and assumptions).

Changes in assumptions could have a material impact on the fair values of the assets being valued.

Structure

5.1 Property, plant and equipment: carrying amount (i)

	2021 ($ '000)	2020 ($ '000)
BUILDINGS LEASEHOLD IMPROVEMENTS		
At fair value – external valuation (ii)	14,110	13,193
Less: accumulated depreciation	(11,287)	(9,873)
At fair value	16,401	15,131
Less: accumulated depreciation	(11,010)	(8,975)
Total buildings leasehold improvements	**8,214**	**9,476**
PLANT AND EQUIPMENT		
At fair value (iii)	21,380	19,476
Less: accumulated depreciation	(14,488)	(13,541)
Total plant and equipment	**6,892**	**5,935**
WORK-IN-PROGRESS		
At cost (iv)	2,848	48,053
Total work-in-progress	**2,848**	**48,053**
RIGHT OF USE – MOTOR VEHICLES		
At fair value	3,488	3,060
Less: accumulated depreciation	(1,167)	(918)
Total right of use – motor vehicles	**2,321**	**2,142**
Net carrying amount of property, plant and equipment	**20,275**	**65,606**

5.1 Property, plant and equipment: carrying amount (i) (continued)

Notes:

(i) AASB 16 Leases has been applied for any new contracts entered into on or after 1 July 2019, the Authority considers whether a contract is, or contains a lease. A lease is defined as 'a contract, or part of a contract, that conveys the right to use an asset (the underlying asset) for a period of time in exchange for consideration'.

(ii) During the year, an independent valuation of the Authority's building leasehold assets at Macleod was performed by Napier & Blakeley, in accordance with instructions from the Valuer-General Victoria, to determine the fair value of building leasehold improvements. These assets were classified as Level 3 in the fair value hierarchy defined in AASB 13 Fair value measurement. The valuation assumptions included envisaging reconstruction to a modern equivalent standard and temporary protection of adjoining buildings where appropriate.

Any revaluation increment arising on the revaluation of an asset was credited to the appropriate class of the asset revaluation surplus. On revaluation, accumulated depreciation is restated proportionately with the change in the carrying amount of the asset and any change in the estimate of remaining useful life.

(iii) The Authority measures items of plant and equipment at cost on initial recognition as an asset. During the financial year, the Authority reviewed the fair value of plant and equipment, and it was determined that the fair value was not materially different to the depreciated replacement cost. Therefore, the depreciated replacement cost has been considered as fair value for plant and equipment as at 30 June 2021.

(iv) Work-in-progress relates to assets which are not yet completed or ready for use. These assets will be capitalised and commence depreciation upon commissioning. During 2020-21, the Authority continued its extensive digital transformation program and investment in facilities to improve its regional presence. A number of these projects have now come on-line and have been transferred from of the WIP account to their respective asset class.

Initial recognition: Items of property, plant and equipment, are measured initially at cost and subsequently revalued at fair value less accumulated depreciation and impairment. Where an asset is acquired for no or nominal cost, the cost is its fair value at the date of acquisition.

The cost of a leasehold improvement is capitalised as an asset and depreciated over the remaining term of the lease or the estimated useful life of the improvement, whichever is shorter.

Subsequent measurement: Property, plant and equipment are subsequently measured at fair value less accumulated depreciation and impairment. Fair value is determined with regard to the asset's highest and best use (considering legal or physical restrictions imposed on the asset, public announcements or commitments made in relation to the intended use of the asset).

The fair value of plant, equipment and vehicles is determined by reference to the asset's depreciated replacement cost. For plant, equipment and vehicles, existing depreciated historical cost is generally a reasonable proxy for depreciated replacement cost because of the short life of the assets concerned.

Refer to Note 8.3 for additional information on fair value determination of property, plant and equipment.

Impairment of property, plant and equipment: The recoverable amount of primarily non-cash generating assets of not-for-profit entities, which are typically specialised in nature and held for continuing use of their service capacity, is expected to be materially the same as fair value determined under *AASB 13 Fair value measurement*, with the consequence that AASB 136 does not apply to such assets that are regularly revalued.

5.1.1 Depreciation and amortisation

All buildings, plant and equipment and other non-financial physical assets that have a finite useful life, are depreciated. Depreciation is calculated on a straight-line basis, at rates that allocate the asset's value, less any estimated residual value, over its estimated useful life.

The following useful lives of assets are used in the calculation of depreciation for both current and prior years:

ASSET CLASS	USEFUL LIFE
Buildings leasehold improvements	4–25 years
Plant and equipment	1–20 years
Intangible assets	3–10 years
Right of use – motor vehicles	0–3 years

Where items of plant and equipment have significant and separately identifiable components which are subject to regular replacement, those components are assigned separate useful lives distinct from the item of plant and equipment to which they relate.

Leasehold improvements are depreciated over the period of the lease or estimated useful life, whichever is the shorter, using the straight-line method. The estimated useful lives, residual values and depreciation method are reviewed at the end of each annual reporting period.

In the event of the loss or destruction of an asset, the future economic benefits arising from the use of the asset will be written off and the asset replaced (unless a specific decision to the contrary has been made).

Charge for the period

	2021 ($ '000)	2020 ($ '000)
Building leasehold improvements	2,553	2,058
Right of use asset – accommodation (i)	–	1,815
Right of use asset – motor vehicles	573	488
Plant and equipment	1,736	1,510
Software (ii)	3,195	4,628
Total depreciation and amortisation	**8,057**	**10,499**

Notes:

(i) 2019/ 2020 comparative Includes amortisation costs for accommodation leases for the period up to 31 October 2019. Accommodation leases were transferred to the Department of Treasury and Finance on the 1 November 2019.

(ii) The Authority's customer relationship management system has now been fully depreciated (2020 $3.8 million) (Refer Note 5.2).

5.1.2 Reconciliation of movements in carrying values of property, plant and equipment

	BUILDINGS LEASEHOLD IMPROVEMENTS AT VALUATION AND FAIR VALUE ($ '000)	PLANT AND EQUIPMENT AT FAIR VALUE ($ '000)	MOTOR VEHICLES (ROU) AT FAIR VALUE ($ '000)	WORK-IN-PROGRESS ($ '000)	TOTAL ($ '000)
2021					
Opening balance	**9,476**	**5,935**	**2,142**	**48,053**	**65,606**
Additions	1,265	2,744	963	3,060	8,032
Disposals	–	(51)	(154)	–	(205)
Adjustment to asset revaluation reserve	26	–	–	–	26
Transfer to:					
Non-financial assets held for sale	–	–	(57)	–	(57)
Building lease improvements	–	–	–	(1,929)	(1,929)
Plant and equipment	–	–	–	(1,879)	(1,879)
Intangible assets	–	–	–	(44,457)	(44,457)
Depreciation	(2,553)	(1,736)	(573)	–	(4,862)
Closing balance	**8,214**	**6,892**	**2,321**	**2,848**	**20,275**
2020					
Opening balance	**7,412**	**5,394**	**2,233**	**20,417**	**35,456**
Additions	4,122	2,071	696	39,986	46,875
Disposals	–	(20)	(325)	–	(345)
Transfer to:					
Non-financial assets held for sale	–	–	26	–	26
Building lease improvements	–	–	–	–	–
Plant and equipment	–	–	–	(4,577)	(4,577)
Intangible assets	–	–	–	(7,773)	(7,773)
Depreciation	(2,058)	(1,510)	(488)	–	(4,056)
Closing balance	**9,476**	**5,935**	**2,142**	**48,053**	**65,606**

5.2 Intangible assets

	2021 ($ '000)	2020 ($ '000)
GROSS CARRYING AMOUNT AT COST		
Opening balance	**43,625**	**23,580**
Transfer from work-in-process(i)	44,457	7,773
Additions to software (i)	11,314	12,272
Closing balance	**99,396**	**43,625**
ACCUMULATED AMORTISATION		
Opening balance	**(22,399)**	**(17,771)**
Amortisation expense (ii)	(3,195)	(4,628)
Closing balance	**(25,594)**	**(22,399)**
Net book value at the end of the financial year	**73,802**	**21,226**

Notes:

(i) During the course of the year, the Authority continued its extensive digital transformation program. The majority of these projects came online as at 30 June with the completion of the digital transformation program.

(ii) Amortisation expense is included in the line item 'depreciation and amortisation expense' in the comprehensive operating statement.

Initial recognition

Intangible assets are measured at cost less accumulated amortisation and impairment. Capitalised software costs are amortised on a straight-line basis over their useful lives of one to 10 years for both current and prior years.

For software intangibles, when the recognition criteria in AASB 138 *Intangible assets* are met (this criteria includes the asset having a significant future economic benefit which is reliably measured and represents development costs), internally generated intangible assets are recognised and measured at cost less accumulated amortisation and impairment.

Subsequent measurement

Intangible assets with finite useful lives are carried at cost less accumulated amortisation and accumulated impairment losses. Costs incurred subsequent to initial acquisition are capitalised when it is expected that additional future economic benefits will flow to the Authority.

The amortisation period and the amortisation method for an intangible asset with a finite useful life are reviewed at least at the end of each annual reporting period.

Impairment of intangible assets

Intangible assets with finite useful lives are tested for impairment whenever an indication of impairment is identified.

Significant intangible assets

The Authority had previously capitalised the development of its SAP Customer Relationship Management System (SAP-CRM). The system has been completely amortised, reflecting a new customer relationship management platform commencing in July 2021, in line with the commencement of the *Environment Protection Amendment Act 2018*. This new platform is part of an extensive digital transformation program the Authority is currently undertaking.

5.3 Investments

	2021 ($ '000)	2020 ($ '000)
NON-CURRENT INVESTMENTS		
Managed investment fund (i)	–	41,945
Total non-current investments	**–**	**41,945**

Note:

(i) During the year, the Authority withdrew its managed investments which consisted of funds deposited with the Victorian Funds Management Corporation Capital Stable Fund. The total gains/losses on realising investments are disclosed in note 9.7 (c).

6. OTHER ASSETS AND LIABILITIES

Introduction

This section sets out those assets and liabilities that arose from the Authority's operations.

Structure

6.1 Receivables

	2021 ($ '000)	2020 ($ '000)
CONTRACTUAL		
Trade debtors	245	382
STATUTORY		
Amounts owing from the Public Account (i)	21,951	8,813
Fines and regulatory fees	9,954	10,963
Allowance for impairment loses of statutory receivables	(2,601)	(3,315)
Amounts owing from the Department (ii)	66,639	72,000
Accrued revenue – Environment Protection Fund (iii)	15,071	11,164
GST input tax credit recoverable	1,456	1,433
Total receivables	**112,715**	**101,440**

Notes:

(i) The amounts recognised from Victorian Government represent funding for all commitments incurred through the Environment Protection Fund and are drawn from the Public Account as the commitments fall due.

(ii) The amounts include the Government's funding commitment for the remediation works relating to multiple contaminated sites. Refer Note 6.4.

(iii) Accrued revenue comprises estimated PIW levies which remained unpaid at 30 June 2021.

Contractual receivables are classified as financial instruments and as 'financial assets at amortised costs'. They are initially recognised at fair value plus any directly attributable transaction costs. The Authority holds the contractual receivables with the objective to collect the contractual cash flows and therefore they are subsequently measured at amortised cost using the effective interest method, less any impairment.

Statutory receivables do not arise from contracts; however they are recognised and measured similarly to contractual receivables (except for impairment) but are not classified as financial instruments for disclosure purposes. The Authority applies AASB 9 for initial measurement of the statutory receivables and as a result statutory receivable are initially recognised at fair value plus any directly attributable transaction cost. Amounts recognised from the Victorian Government represent funding for all commitments incurred and are drawn from the Consolidated Fund as the commitments fall due.

6.2 Payables

	2021 ($ '000)	2020 ($ '000)
CURRENT PAYABLES		
Accounts payable	2,788	2,858
Accruals	10,100	14,670
Salaries and other employee entitlements	1,965	4,599
Total current payables	**14,853**	**22,127**

Payables include contractual amounts. Accounts payable represent liabilities for goods and services provided to the Authority prior to the end of the financial year that are unpaid. .

6.2.1 Maturity analysis of contractual payables

	CARRYING AMOUNTS ($ '000)	NOMINAL AMOUNT ($ '000)	MATURITY DATES ($ '000)				
			LESS THAN 1 MONTH	1–3 MONTHS	3 MONTHS – 1 YEAR	1–5 YEARS	5+ YEARS
2021							
Accounts payable	2,788	2,788	2,690	71	27	–	–
Accruals	10,100	10,100	10,100	–	–	–	–
Salaries and other employee entitlements	1,965	1,965	1,965	–	–	–	–
Total	**14,853**	**14,853**	**14,755**	**71**	**27**	**–**	**–**
2020							
Accounts payable	2,858	2,858	2,681	177	–	–	–
Accruals	14,670	14,670	14,670	–	–	–	–
Salaries and other employee entitlements	4,599	4,599	4,599	–	–	–	–
Total	**22,127**	**22,127**	**21,950**	**177**	–	–	**–**

Maturity analysis is presented using the contractual undiscounted cash flows.
The carrying amounts disclosed exclude statutory amounts (for example, GST payables).
The Authority intends to settle the above financial liabilities in line with its contractual obligations.

6.3 Other non-financial assets

	2021 ($ '000)	2020 ($ '000)
Prepayments	3,582	2,308
Total current other non-financial assets	**3,582**	**2,308**

Other non-financial assets include prepayments, which 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 financial accounting period.

6.4 Other provisions

	2021 ($ '000)	2020 ($ '000)
CURRENT PROVISIONS		
Waste site rehabilitation works (i)	72,376	53,074
Site remediation and disposal of chemical stockpile (i)	–	887
Total current provisions	**72,376**	**53,961**
NON-CURRENT PROVISIONS		
Site remediation and disposal of chemical stockpile (i)	2,300	–
Site restoration of leasehold improvement (ii)	1,465	1,393
Total non-current provisions	**3,765**	**1,393**
Total provisions	**76,141**	**55,354**

Notes:

(i) The Authority revised its provision on a previously recognised contaminated site, at the same time new provisions were created for a further two new contaminated sites.

(ii) The amounts disclosed are undiscounted amounts.

Other provisions are recognised when the Authority has a present obligation, the future sacrifice of economic benefits is probable, and the amount of the provision can be measured reliably. The amount recognised as a provision, is the best estimate of the consideration required to settle the present obligation at the reporting date, 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, using a discount rate that reflects the time value of money and risks specific to the provision.

Waste site rehabilitation works

During 2019, the Authority exercised its powers under the *Environment Protection Act 1970* to take over management of a waste stockpile at Lara after the previous operator let the waste grow to dangerous levels. The Authority entered into a three-year large stockpile contract to remediate the site in 2018-19. In the subsequent years, the Authority recognised a provision associated with the site remediation works. A further provision has been recognised in 2020-21 based on future costs expected to be incurred.

During 2020-21, the Authority exercised its powers under the *Environment Protection Act 1970* to take over management of two further sites at Lemon Springs and Thornycroft to undertake environmental remediation works. The Authority engaged principal contractors and commenced remediation works during the second half of 2020-21 at both of these sites.

As part of the recognition of the provision, a receivable is also recognised as per AASB 137 paragraph 53 as a cost reimbursement. The reimbursement is virtually certain as the Department of Environment, Land, Water and Planning has allocated funding for the rehabilitation works. Refer to note 8.1 for additional disclosure regarding this site rehabilitation and note 6.1 for the receivable which is included within the 'Amounts owing from the Department (ii)'.

Site remediation and disposal of chemical stockpile

The Authority holds chemical stockpiles from two legacy collection programs and is completing remediation works on a contaminated site. Details are as follows:

1) Chemicals from the ChemCollect program, a chemical collection program run from 1999 to 2002 under joint agreement between the Commonwealth and the Authority. The chemical disposal work has now been completed (2020: $0.37 million).

6.4 Other provisions (continued)

2) The Authority continued to hold a stockpile of dangerous goods (chemicals) collected as part of a rural chemical collection program, run by the former Melbourne Metropolitan Board of Works prior to 2002. The chemical disposal work has now been completed (2020: $0.24 million).

3) The Authority continued its work with a local council in relation to a remediation of a contaminated site. The remediation work has now been completed (2020: $0.26 million). Refer to contingent assets and liabilities (Note 8.1).

Site restoration of leasehold improvement

The provision for site restoration of leasehold improvement represents the present value of the future payments that the Authority is presently obligated to make in respect of make-good clauses under a non-cancellable operating lease agreement. The estimate will vary if the Authority exercises its option for a further term. The unexpired term of the lease is two years.

6.4.1 Reconciliation of movements in other provisions

	WASTE SITE REHABILITATION WORKS ($ '000)	SITE REMEDIATION AND DISPOSAL OF CHEMICAL STOCKPILE ($ '000)	SITE RESTORATION OF LEASEHOLD IMPROVEMENT ($ '000)	TOTAL ($ '000)
2021				
Opening balance	**53,074**	**887**	**1,393**	**55,354**
Additional provisions recognised (i)	54,598	–	–	54,598
Reduction arising from payments	(32,996)	(887)	–	(33,883)
Reduction resulting in re-measurement	–	–	–	–
Unwind of discount and effect of changes in the discount rate	–	–	72	72
Closing balance	**74,676**	**0**	**1,465**	**76,141**
2020				
Opening balance	**30,000**	**3,292**	**1,325**	**34,617**
Additional provisions recognised	42,063	–	–	42,063
Reduction arising from payments	(18,989)	(1,754)	–	(20,743)
Reduction resulting in re-measurement	–	(651)	–	(651)
Unwind of discount and effect of changes in the discount rate	–	–	68	68
Closing balance	**53,074**	**887**	**1,393**	**55,354**

Note:

(i) The Authority revised its provision on a previously recognised contaminated site, at the same time new provisions were created for a further two contaminated sites.

7. FINANCING OUR OPERATIONS

Introduction

This section provides information on the sources of finance utilised by the Authority during its operations, along with interest expenses (the cost of borrowings) and other information related to financing activities of the Authority.

This section includes disclosures of balances that are financial instruments (such as borrowings and cash balances). Notes 8.2 and 8.3 provide additional, specific financial instrument disclosures.

Structure

7.1 Borrowings

	2021 ($ '000)	2020 ($ '000)
CURRENT BORROWINGS		
Lease liabilities (i)	1,334	1,257
Total current borrowings	**1,334**	**1,257**
NON-CURRENT BORROWINGS		
Lease liabilities (i)	1,048	897
Total non-current borrowings	**1,048**	**897**
Total borrowings	**2,382**	**2,154**

Note:
(i) Secured by the assets leased. Leases are effectively secured as the rights of the leased assets revert to the lessor in the event of a default.

Borrowings refer to interest-bearing liabilities relating to leases and are classified as financial instruments. The measurement basis depends on whether the Authority has categorised its interest-bearing liabilities as either 'financial liabilities designated at fair value through net result', or financial liabilities at 'amortised cost'. The classification depends on the nature and purpose of the interest-bearing liabilities. The Authority determines the classification of its interest-bearing liabilities at initial recognition.

7.1.1 Maturity analysis of borrowings

	CARRYING AMOUNT ($ '000)	NOMINAL AMOUNT ($ '000)	MATURITY DATES ($ '000)				
			LESS THAN 1 MONTH	1–3 MONTHS	3 MONTHS – 1 YEAR	1–5 YEARS	5+ YEARS
2021							
Lease liabilities	2,382	2,448	665	168	540	1,075	–
Total	**2,382**	**2,448**	**665**	**168**	**540**	**1,075**	**–**
2020							
Lease liabilities	2,154	2,224	115	145	1,045	919	–
Total	**2,154**	**2,224**	**115**	**145**	**1,045**	**919**	**–**

7.1.2 Interest expense

	2021 ($ '000)	2020 ($ '000)
Interest on leases (i)	75	403
Total interest expense	**75**	**403**

Note:
(i) Interest expense is recognised in the period in which it is incurred. Costs incurred in connection with the borrowing of funds include interest component of lease repayments. Interest includes a component of accommodation lease expenses for the period 1 July to 31 October 2019. Accommodation leases were transferred to the Department of Treasury and Finance on 1 November 2019.

7.2 Cash flow information and balances

Cash and deposits recognised on the balance sheet comprise cash on hand and cash at bank, deposits at call and those highly liquid investments (with an original maturity of three months or less), which are held for the purpose of meeting short-term cash commitments rather than for investment purposes, and readily convertible to known amounts of cash with an insignificant risk of changes in value.

Due to the state of Victoria's investment policy and government funding arrangements, government departments (including the Authority) generally do not hold a large cash reserve in their bank accounts. Cash received by the Authority from the generation of revenue is generally paid into the state's bank account, known as the Public Account.

Similarly, any Authority expenditure, for the payment of goods and services to its trade creditors, is made via the Public Account. The process is such that, the Public Account would remit to the Authority the cash required for the amount drawn on the cheques. This remittance by the Public Account occurs upon the presentation of the cheques by the Authority's suppliers or creditors.

The Treasurer approved the establishment of the Central Banking System (CBS) in October 2018. The Standing Directions 2018 require the Authority to hold deposits in the CBS.

As at 30 June 2021, Deposits held with CBS had a floating interest rate of 0.40%.

	2021 ($ '000)	2020 ($ '000)
Cash on hand	11	13
Deposits held with Central Banking System	45,345	8,224
Balance as per cash flow statement	**45,356**	**8,237**

7.2.1 Reconciliation of net result to cash flow from operating activities

	2021 ($ '000)	2020 ($ '000)
Net result for the year	**144**	**(35,722)**
NON-CASH MOVEMENTS		
(Gain)/loss on sale or disposal of non-current assets	(66)	(17)
Depreciation and amortisation of non-current assets	8,057	10,499
Gain/(loss) on statutory receivables	1,240	1,485
Movement as a result of implementation of AASB 16	0	944
Asset revaluation Increment	26	0
MOVEMENTS IN ASSETS AND LIABILITIES		
(Increase)/decrease in receivables	(12,514)	(25,844)
(Increase)/decrease in other non-financial assets	(1,274)	(326)
(Increase)/decrease in payables	(7,276)	7,188
Increase/(decrease) in provisions	21,901	24,259
Net cash flows from operating activities	**10,238**	**(17,534)**

7.3 Trust account balances

The *Environment Protection (Amendment) Act 2006* introduced increased and differential levies on the disposal of PIW to landfill to reflect the level of hazard posed by the different categories of PIW. The Authority utilises the funds for its operational purposes.

7.4 Leases

A lease is a right to use an asset for an agreed period of time in exchange for payment. Leases are classified at their inception as either operating or leases based on the economic substance of the agreement so as to reflect the risks and rewards incidental to ownership.

Leases of property, plant and equipment are classified as leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership from the lessor to the lessee. All other leases are classified as operating leases.

7.4.1 Motor vehicle leases

Under DTF's vehicle leasing policy, vehicles leased after 1 February 2004 are subject to lease arrangements, where the Authority retains the risks and benefits incidental to ownership of these leased vehicles.

At the commencement of the lease term, leases are initially recognised as assets and liabilities at amounts equal to the fair value of the lease asset or, if lower, the present value of the minimum lease payment, each determined at the inception of the lease. The lease asset is depreciated over the shorter of the estimated useful life of the asset or the term of the lease.

Minimum lease payments are apportioned between reduction of the outstanding lease liability and periodic finance expense which is calculated using the interest rate implicit in the lease and charged directly to the comprehensive operating statement. Contingent rentals associated with leases are recognised as an expense in the period in which they are incurred.

7.4.1 Motor vehicle leases (continued)

LEASE LIABILITIES PAYABLE	NOTES	MINIMUM FUTURE LEASE PAYMENTS (i)		PRESENT VALUE OF MINIMUM FUTURE LEASE PAYMENTS	
		2021 ($ '000)	2020 ($ '000)	2021 ($ '000)	2020 ($ '000)
Not longer than one year		1,373	1,308	1,334	1,257
Longer than one year and not longer than five years		1,075	919	1,048	897
Minimum future lease payments		2,448	2,227	2,382	2,154
Less: future finance charges		(66)	(73)	–	–
Present value of minimum lease payments		**2,382**	**2,154**	**2,382**	**2,154**
Included in the financial statements as:					
Current borrowings lease liabilities	7.1	–	–	1,334	1,257
Non-current borrowings lease liabilities	7.1	–	–	1,048	897
Total borrowings lease liabilities		**–**	**–**	**2,382**	**2,154**

Note:
(i) Minimum future lease payments include the aggregate of all base payments and any guaranteed residual.

7.5 Commitments for expenditure

Commitments for future expenditure include operating and capital commitments arising from contracts. These commitments are recognised below at their nominal value and inclusive of GST. Where it is considered appropriate and provides additional relevant information to users, the net present values of significant individual projects are stated. These future expenditures cease to be disclosed as commitments once the related liabilities are recognised in the balance sheet.

7.5.1 Total commitments payable

The following commitments have not been recognised as liabilities in the financial statements:

	LESS THAN 1 YEAR ($ '000)	1-5 YEARS ($ '000)	5+ YEARS ($ '000)	TOTAL ($ '000)
2021				
Capital expenditure	1,296	748	–	2,044
Operating	3,901	9,804	–	13,705
Total Commitment (inclusive of GST)	5,197	10,552	–	15,749
Less GST recoverable	472	959	–	1,431
Total commitments (exclusive GST)	**4,725**	**9,593**	**–**	**14,318**
2020				
Capital expenditure	1,122	6,602	–	7,724
Operating	1,902	8,188	–	10,090
Total commitment (inclusive of GST)	3,024	14,790	–	17,814
Less GST recoverable	274	1,344	–	1,618
Total commitments (exclusive GST)	**2,750**	**13,446**	**–**	**16,196**

8. RISKS, CONTINGENCIES AND VALUATION JUDGEMENTS

Introduction

The Authority is exposed to risk from 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 sets out financial instrument specific information, (including exposures to financial risks) as well as those items that are contingent in nature or require a higher level of judgement to be applied, which for the Authority related mainly to fair value determination.

Structure

8.1 Contingent assets and contingent liabilities

Contingent assets and contingent liabilities are not recognised in the balance sheet but are disclosed and, if quantifiable, are measured at nominal value. Contingent assets and liabilities are presented inclusive of GST receivable or payable respectively.

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 Authority.

These are classified as either quantifiable, where potential economic benefit is known, or non-quantifiable.

There were no contingent assets for the Authority at 30 June 2021.

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 Authority; or
- 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; or
  - the amount of the obligations cannot be measured with sufficient reliability.

Contingent liabilities are also classified as either quantifiable or non-quantifiable.

The Authority has the following non-quantifiable contingent liabilities:

1) At 30 June 2021, the Authority has a number of civil litigation matters, for which the Authority may be liable for legal costs if unsuccessful. Due to the diversity of issues associated with these matters and the opportunity for new evidence to be adduced during the court process, it is not possible to reliably quantify the financial effect of litigation and it is therefore impractical to do so.
2) The Authority has recognised a liability for works related to multiple contaminated sites (Note 6.4). On completion of the works, the Authority may have a further unquantified obligation, dependent upon subsequent tests and community negotiation. Therefore, quantification of the financial effect, if any, cannot be reliably estimated and it is therefore impractical to do so.

8.2 Financial instruments

Introduction

The Authority is exposed to a number of financial risks including credit risk, liquidity risk, market risk (interest rate risk, foreign currency risk and equity price risk).

As a whole, the Authority's financial risk management program seeks to manage these risks and the associated volatility of its financial performance.

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 Authority'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 Authority classifies all of its financial assets based on the business model for managing the assets and the asset's contractual terms in accordance with AASB 9.

Categories of financial assets under AASB 9

Financial assets at amortised cost

Financial assets are measured at amortised costs if both of the following criteria are met and the assets are not designated as fair value through net result:

- the assets are held by the Authority to collect the contractual cash flow; and
- the assets' contractual terms give rise to cash flows that are solely payments of principal and interests.

These assets are initially recognised at fair value plus any directly attributable transaction costs and subsequently measured at amortised cost using the effective interest method less any impairment.

The Authority recognises the following assets in this category:

- cash and deposits; and
- receivables (excluding statutory receivables).

Financial assets at fair value through net result

Equity instruments that are held for trading as well as derivative instruments are classified as fair value through net result. Other financial assets are required to be measured at fair value through net result unless they are measured at amortised cost or fair value through other comprehensive income as explained above.

However, as an exception to those rules above, the Authority may, at initial recognition, irrevocably designate financial assets as measured at fair value through net result if doing so eliminates or significantly reduces a measurement or recognition inconsistency ('accounting mismatch') that would otherwise arise from measuring assets or liabilities or recognising the gains and losses on them on different bases.

Available-for-sale financial instrument assets are those designated as available-for-sale or not classified in any other category of financial instrument asset. Such assets are initially recognised at fair value. Subsequent to initial recognition, they are measured at fair value with gains and losses arising from changes in fair value, recognised in 'Other economic flows – other comprehensive income' until the investment is disposed. Movements resulting from impairment and foreign currency changes are recognised in the net result as other economic flows. On disposal, the cumulative gain or loss previously recognised in 'Other economic flows – other comprehensive income' is transferred to other economic flows in the net result. The Authority recognises investments in equities and managed investment schemes in this category.

8.2 Financial instruments (continued)

Financial assets and liabilities at fair value through net result are categorised as such at trade date, or if they are classified as held for trading or designated as such upon initial recognition. Financial instrument assets are designated at fair value through net result on the basis that the financial assets form part of a group of financial assets that are managed based on their fair values and have their performance evaluated in accordance with documented risk management and investment strategies. Financial instruments at fair value through net result are initially measured at fair value; attributable transaction costs are expensed as incurred. Subsequently, any changes in fair value are recognised in the net result as other economic flows unless the changes in fair value relate to changes in the Authority's own credit risk. In this case, the portion of the change attributable to changes in the Authority's own credit risk is recognised in other comprehensive income with no subsequent recycling to net result when the financial liability is derecognised. The Authority recognises some debt securities that are held for trading in this category and designated certain debt securities as fair value through net result in this category.

Categories of financial liabilities

Financial liabilities at amortised cost are initially recognised on the date they are originated. They are initially measured at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, these financial instruments are measured at amortised cost with any difference between the initial recognised amount and the redemption value being recognised in profit and loss over the period of the interest-bearing liability, using the effective interest rate method. The Authority recognises the following liabilities in this category:

- payables (excluding statutory payables); and
- borrowings (including lease liabilities).

Derecognition of financial assets: A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is derecognised when:

- the rights to receive cash flows from the asset have expired; or
- the Authority retains the right to receive cash flows from the asset, but has assumed an obligation to pay them in full without material delay to a third party under a 'pass through' arrangement; or
- the Authority has transferred its rights to receive cash flows from the asset and either:
  - has transferred substantially all the risks and rewards of the asset; or
  - has neither transferred nor retained substantially all the risks and rewards of the asset but has transferred control of the asset.

Where the Authority has neither transferred nor retained substantially all the risks and rewards or transferred control, the asset is recognised to the extent of the Authority's continuing involvement in the asset.

Derecognition of financial liabilities: A financial liability is derecognised when the obligation under the liability is discharged, cancelled or expires.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised as an 'other economic flow' in the comprehensive operating statement.

8.2.1 Financial risk management categorisation

The carrying amounts of the Authority's contractual financial assets and financial liabilities by category are in the table below.

	CATEGORY	NOTE	$ '000
2021			
CONTRACTUAL FINANCIAL ASSETS			
Cash and cash deposits	Cash and cash deposits	7.2	45,356
Investments in managed fund	Financial asset at fair value through profit and loss	8.3	0
Receivables	Contractual financial assets held to maturity	6.1	245
Total contractual financial assets (i)			**45,601**
CONTRACTUAL FINANCIAL LIABILITIES			
Payables	Financial liabilities at amortised cost	6.2	14,853
Lease liabilities	Financial liabilities at amortised cost	7.1	2,382
Total contractual financial liabilities (ii)			**17,235**
2020			
CONTRACTUAL FINANCIAL ASSETS			
Cash and cash deposits	Cash and cash deposits	7.2	8,237
Investments in managed fund	Financial asset at fair value through profit and loss	8.3	41,945
Receivables	Contractual financial assets held to maturity	6.1	382
Total contractual financial assets (i)			**50,564**
CONTRACTUAL FINANCIAL LIABILITIES			
Payables	Financial liabilities at amortised cost	6.2	22,127
Lease liabilities	Financial liabilities at amortised cost	7.1	2,154
Total contractual financial liabilities (ii)			**24,281**

Notes:
(i) The total amount of financial assets disclosed here excludes statutory receivables (that is, amounts owing from Victorian Government and GST input tax credit recoverable).
(ii) The total amount of financial liabilities disclosed here excludes statutory payables (that is, taxes payable).

8.2.2 Net holding gain/loss on financial instruments by category

	NET HOLDING GAIN/(LOSS) ($ '000)	TOTAL INTEREST INCOME/(EXPENSE) ($ '000)	TOTAL ($ '000)
2021			
Financial assets designated at fair value through net result	46	937	983
Total contractual financial assets	**46**	**937**	**983**
2020			
Financial assets designated at fair value through net result	(3,496)	4,124	628
Total contractual financial assets	**(3,496)**	**4,124**	**628**

The net holding gains or losses disclosed above are determined as follows:

› Financial assets and liabilities that are designated at fair value through net result, the net gain or loss is calculated by taking the movement in the fair value of the financial asset or liability.

8.2.3 Financial risk management objectives and policies

As a whole, the Authority's financial risk management program seeks to manage these risks and the associated volatility of its financial performance.

Details of the significant accounting policies and methods adopted, including the criteria for recognition, the basis of measurement, and the basis on which income and expenses are recognised, with respect to each class of financial asset, financial liability and equity instrument above are disclosed in Note 8.3 to the financial statements.

Credit risk

The Authority's exposure to credit risk arises from the potential default of counterparties on their contractual obligations resulting in financial loss to the Authority. The credit risk on financial assets of the Authority which have been recognised on the balance sheet, is generally the carrying amount, net of any provisions for doubtful debts.

Provision of impairment for contractual financial assets is recognised when there is objective evidence that the Authority will not be able to collect a receivable.

Contract financial assets are written off against the carrying amount when there is no reasonable expectation of recovery. Bad debt written off by mutual consent is classified as a transaction expense. Bad debt written off following a unilateral decision is recognised as other economic flows in the net result.

Credit quality of financial assets

	FINANCIAL INSTITUTION (TRIPLE-A CREDIT RATING) ($ '000)	GOVERNMENT AGENCIES (TRIPLE-A CREDIT RATING) ($ '000)	OTHER AGENCY (MIN. TRIPLE-B CREDIT RATING) ($ '000)	TOTAL ($ '000)
FINANCIAL ASSETS				
2021				
Cash and cash deposits	45,356	–	–	45,356
Investments	–	–	–	–
Receivables:				
Contractual	–	245	–	245
Statutory (net of impairment)	–	90,047	22,423	112,470
Total financial assets	**45,356**	**90,292**	**22,423**	**158,071**
2020				
Cash and cash deposits	8,237	–	–	8,237
Investments	–	41,945	–	41,945
Receivables:				
Contractual	–	382	–	382
Statutory (net of impairment)	–	82,246	18,812	101,058
Total financial assets	**8,237**	**124,573**	**18,812**	**151,622**

Liquidity risk

Liquidity risk arises when the Authority is unable to meet its financial obligations as they fall due. The Authority operates under the Government's fair payments policy of settling financial obligations within 30 days and in the event of a dispute, makes payments within 30 days from the date of resolution. It also continuously manages risk through monitoring future cash flows and maturities planning to ensure adequate holding of high-quality liquid assets.

The Authority's maximum exposure to liquidity risk is equivalent to the carrying amounts of financial liabilities. For disclosure of the contractual maturity analysis for the Authority's financial liabilities refer to Note 6.2.1.

Market risk

The Authority's exposures to market risk are primarily through interest rate and equity risks with insignificant exposure to foreign currency. Objectives, policies and processes used to manage each of these risks are disclosed in the paragraphs below.

8.2.3 Financial risk management objectives and policies (continued)

Equity risk

The Authority was exposed to equity price risk through its investment in the Victorian Funds Management Corporation's Capital Stable Fund. The fund manager, on behalf of the Authority, closely monitored performance and manages equity price risk through diversification of its investment portfolio. The Authority's sensitivity to equity is detailed in the Table 'Other price risk sensitivity'.

Equity price risk sensitivity

	CARRYING AMOUNT AS AT 30 JUNE	EQUITY PRICE	
		-15% MOVEMENT NET RESULT ($ '000)	+15% MOVEMENT NET RESULT ($ '000)
2021			
Contractual financial assets:			
Managed investments (i)	–	–	–
Total impact	**–**	**–**	**–**
2020			
Contractual financial assets:			
Managed investments (i)	41,945	(1,250)	1,250
Total impact	**41,945**	**(1,250)**	**1,250**

Note:

(i) During the year, the Authority withdrew its Managed investments deposited with the Victorian Funds Management Corporation in the Capital Stable Fund. The investment was classified as a non-current financial asset. The Fund invests in a combination of asset classes which include cash deposits, fixed-term deposits and equities which are subject to movements in equity prices. Investment held as at 30 June 2021 is $0 million (2020 $41.945 million). The Authority's exposure to equity risk is approximately 20 per cent of the Capital Stable Fund portfolio mix which equates to $0 million (2020 $8.4 million). Sensitivities to these movements are calculated as follows:
- 2021 No managed investments were held
- 2020: $8.38 million x -0.15 = -$1.25 million; and $8.38 million x 0.15 = $1.25 million

Foreign currency risk

The Authority is exposed to insignificant foreign currency risk through its payables relating to purchases of supplies and consumables from overseas. This is because of a limited amount of purchases denominated in foreign currencies and a short timeframe between commitment and settlement.

Interest rate risk

Exposure to interest rate risk is insignificant and might arise primarily through the Authority's variable rate cash deposits. The Authority's exposure is insignificant due to its policy to minimise risk by mainly undertaking fixed rate investments with relatively even maturity profiles which are managed by Treasury Corporation of Victoria.

8.2.3 Financial risk management objectives and policies (continued)

Interest rate exposure of contractual financial instruments

	WEIGHTED AVERAGE INTEREST RATE %	CARRYING AMOUNT ($ '000)	INTEREST RATE EXPOSURE		
			FIXED INTEREST RATE ($ '000)	VARIABLE INTEREST RATE ($ '000)	NON-INTEREST BEARING ($ '000)
2021					
FINANCIAL ASSETS					
Cash and cash deposits	0.40%	45,356	–	–	–
Receivables:					
Trade debtors		245	–	–	245
Total financial assets		**45,601**	**–**	**–**	**245**
FINANCIAL LIABILITIES					
Payables		14,853	–	–	14,853
Lease liabilities	3.10%	2,382	2,382	–	2,382
Total financial liabilities		**17,235**	**2,382**	**–**	**17,235**
2020					
FINANCIAL ASSETS					
Cash and cash deposits	0.50%	8,237	–	–	14
Receivables:					
Trade debtors		382	–	–	382
Total financial assets		**8,619**	**–**	**–**	**396**
FINANCIAL LIABILITIES					
Payables		22,127	**–**	**–**	22,127
Lease liabilities	3.24%	2,154	2,154	**–**	
Total financial liabilities		**24,281**	**2,154**	**–**	**22,127**

Sensitivity disclosure analysis and assumptions

Considering past performance, future expectations, economic forecasts and management's knowledge and experience of the financial markets, the Authority believes the following movements are 'reasonably possible' over the next 12 months:

› a movement of 25 basis points up and down (2020: 50 basis points up and down) in market interest rates (AUD) from year-end rates of .25per cent (2020: 0.05 per cent).

8.2.3 Financial risk management objectives and policies (continued)

Interest rate risk sensitivity

2021	CARRYING AMOUNT ($ '000)	INTEREST RATE RISK			
		-25 BASIS POINTS		+ 25 BASIS POINTS	
		NET RESULT ($ '000)	EQUITY ($ '000)	NET RESULT ($ '000)	EQUITY ($ '000)
CONTRACTUAL FINANCIAL ASSETS:					
Cash and cash deposits (i)	45,356	(113)	(113)	113	113
Receivables	245	–	–	–	–
CONTRACTUAL FINANCIAL LIABILITIES:					
Payables	14,853	–	–	–	–
Lease liabilities	2,382	–	–	–	–
Total impact	**62,836**	**(113)**	**(113)**	**113**	**113**
2020		**-50 BASIS POINTS**		**+ 50 BASIS POINTS**	
CONTRACTUAL FINANCIAL ASSETS:					
Cash and cash deposits (i)	8,237	(41)	(41)	41	41
Receivables	382	–	–	–	–
CONTRACTUAL FINANCIAL LIABILITIES:					
Payables	22,127	–	–	–	–
Lease liabilities	2,154	–	–	–	–
Total impact	**32,900**	**(41)**	**(41)**	**41**	**41**

Note:
(i) Sensitivities to these movements are calculated as follows:
- 2021: $45.356m x -0.0025= -$113,000 and $45.346m x +0.0025=$113,000
- 2020: $8.2 million x -0.005= -$41,000 and $8.2 million x +0.005= $41,000

8.3 Fair value determination

Significant judgement: Fair value measurement of assets and liabilities

Fair value determination requires judgement and the use of assumptions. This section discloses the most significant assumptions used in determining fair values for financial reporting purposes. Changes to assumptions could have a material impact on the results and financial position of the Authority.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The Authority determines the policies and procedures for determining fair values for both financial and non-financial assets and liabilities as required.

8.3 Fair value determination (continued)

Fair value hierarchy

In determining fair values, a number of inputs are used. To increase consistency and comparability in the financial statements, these inputs are categorised into three levels, also known as the fair value hierarchy. The levels are 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 fair value measurement is directly or indirectly observable.

› Level 3 – valuation techniques for which the lowest level input that is significant to fair value measurement is unobservable.

For the purpose of fair value disclosures, the Authority has determined classes of assets on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

The Authority determines whether transfers have occurred between levels in the hierarchy by reassessing categorisation (based on the lowest input that is significant to the fair value measurement as a whole) at the end of the reporting period.

How this section is structured

For those assets and liabilities for which fair value determination is determined, the following disclosures are provided:

› carrying amount and the fair value (which would be the same for those assets measured at fair value);

› which level of the fair value hierarchy was used to determine the fair value;

› in respect of those assets and liabilities subject to fair value determination using Level 3 inputs:
- a reconciliation of the movements in fair values from the beginning of the year to the end; and
- details of significant unobservable inputs used in the fair value determination.

This section is divided between disclosures in connection with fair value determination for financial instruments and non-financial physical assets.

Fair value determination: property, plant and equipment

	CARRYING AMOUNT	FAIR VALUE MEASUREMENT AT THE END OF THE REPORTING PERIOD USING:		
		LEVEL 1 ($ '000)	LEVEL 2 ($ '000)	LEVEL 3 ($ '000)
2021				
Building leasehold improvements	8,213	–	–	8,213
Plant and equipment	6,892	–	–	6,892
Leased motor vehicles	2,321	–	–	2,321
2020				
Building leasehold improvements	9,476	–	–	9,476
Plant and equipment	5,935	–	–	5,935
Leased motor vehicles	2,141	–	–	2,141

8.3 Fair value determination (continued)

Building leasehold improvements

Buildings are valued using current replacement cost method and therefore considered to be Level 3 in the fair value hierarchy. An updated valuation of land and buildings at the MacLeod site were undertaken at 30 June 2021 by independent valuers. The valuation of land and buildings is at fair value, being market value based on highest and best use permitted by relevant land planning provisions. Depreciation rates are reflective of expected lives.

Plant and equipment

Plant and equipment is held at fair value. When plant and equipment is specialised in use, such that it is rarely sold other than as part of a going concern, fair value is determined using current replacement cost method and therefore classified as Level 3 in the fair value hierarchy.

There were no changes in valuation techniques throughout the period 30 June 2020. For all assets measured at fair value, the current use is considered the highest and best use.

Leased motor vehicles

Leased motor vehicles are valued using current replacement cost method and therefore classified as Level 3 in the fair value hierarchy. The Authority acquires new vehicles and at times disposes of them before the end of their economic life. Depreciation rates set are reflective of expected utilisation of the vehicle.

Reconciliation of Level 3 fair value movements

	BUILDINGS LEASEHOLD IMPROVEMENTS ($ '000)	PLANT AND EQUIPMENT ($ '000)	LEASED MOTOR VEHICLES ($ '000)
2021			
Opening Balance	**9,476**	**5,935**	**2,141**
Purchases	1,264	2,744	964
Disposals	–	(51)	(154)
Revaluation Increment	26	–	–
Depreciation	(2,553)	(1,736)	(573)
Transfer assets held for sale			(57)
Closing balance	**8,213**	**6,892**	**2,321**
2020			
Opening Balance	**7,412**	**5,394**	**2,233**
Purchases	4,122	2,071	695
Disposals	–	(20)	(325)
Impairment loss charged to net result	–	–	–
Depreciation	(2,058)	(1,510)	(488)
Transfer assets held for sale	–	–	26
Closing balance	**9,476**	**5,935**	**2,141**

8.3 Fair value determination (continued)

Description of significant unobservable inputs to Level 3 valuations

2021	VALUATION TECHNIQUE	SIGNIFICANT UNOBSERVABLE INPUTS
Buildings leasehold improvements	Current replacement cost	Building costs Useful life of buildings
Plant and equipment	Current replacement cost	Cost per unit Useful life of plant and equipment
Leased motor vehicles	Current replacement cost	Cost per unit Useful life of vehicles

Significant unobservable inputs have remained unchanged.

On-balance sheet

The net fair value of cash, cash deposits and non-interest bearing monetary financial assets and financial liabilities of the Authority approximates their carrying amounts.

The fair value and net fair value of financial instruments assets and liabilities is determined as follows:

- Level 1 – the fair value of financial instruments with standard terms and conditions and traded in active liquid markets is determined with reference to quoted market prices.
- Level 2 – the fair value is determined using inputs other than quoted prices that are observable for the financial asset or liability, either directly or indirectly.
- Level 3 – the fair value in accordance with generally accepted pricing models based on discounted cash flow analysis using unobservable market inputs.

The Authority considers the carrying amount of financial assets and liabilities recorded in the financial statements to be a fair approximation of their fair value, because of the short-term nature of the financial instruments and the expectation that they will be paid in full.

Financial assets measured at fair value

	CARRYING AMOUNT	FAIR VALUE MEASUREMENT AT THE END OF THE REPORTING PERIOD USING:		
		LEVEL 1 ($ '000)	LEVEL 2 ($ '000)	LEVEL 3 ($ '000)
2021				
CONTRACTUAL FINANCIAL ASSETS				
Managed investments	–	–	–	–
Total	**–**	**–**	**–**	**–**
2020				
CONTRACTUAL FINANCIAL ASSETS				
Managed investments	41,945	–	41,945	–
Total	**41,945**	**–**	**41,945**	**–**

Note:

(i) During the course of the year, the Authority crystallised its managed investments with the Victorian Funds Management Corporation.

8.3 Fair value determination (continued)

There have been no transfers between levels during the period.

The fair value of the financial assets is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced liquidation sale.

Managed investment scheme

The Authority invests in a managed investment fund (Capital Stable Fund) with the Victorian Funds Management Corporation. In measuring fair value, the fund manager considers the valuation techniques and inputs used in valuing these funds as part of its due diligence prior to investment, to ensure they are reasonable and appropriate and therefore the net asset value (NAV) of the funds may be used as an input into measuring their fair value. In measuring this fair value, the NAV of the fund is adjusted, as necessary, to reflect restrictions and redemptions, future commitments and other specific factors of the fund.

Off-balance sheet

The Authority has accepted financial assurances (bank guarantees) that it may draw down on if required. These have a monetary face value which approximates their carrying value. The value of these financial assurances is $367.3 million (2020: $300.6 million). The Authority has potential financial liabilities which may arise from certain contingencies disclosed in Note 8.1.

9. OTHER DISCLOSURES

Introduction

This section includes additional material disclosures required by accounting standards, for the understanding of this financial report.

Structure

9.1 Responsible Persons

In accordance with the Ministerial Directions issued by the Assistant Treasurer under the *Financial Management Act 1994*, the following disclosures are made regarding Responsible Persons for the reporting period.

Names

The persons who held the positions of Minister, Responsible Body and Accountable Officer in the Authority are as follows:

Minister for Energy, Environment and Climate Change:

The Hon. Lily D'Ambrosio MP (1 July 2020 to 30 June 2021)
Chairperson Professor Kate Auty commenced on 1 July 2020

Responsible Body:

Governing Board comprised:

Kate Auty – Chairperson
(1 July 2020 to 30 June 2021)

Mr Greg Tweedly – Deputy Chairperson
(1 July 2020 to 30 June 2021)

Ms Monique Conheady
(1 July 2020 to 30 June 2021)

Mr Graeme Ford
(1 July 2020 to 30 June 2021)

Mr Ross Pilling
(1 July 2020 to 30 June 2021)

Professor Joan Ozanne-Smith AO
(1 July 2020 to 30 June 2021)

Professor Rebekah Brown
(1 July 2020 to 31 Dec 2020)

Ms Kay Rundle
(20 October 2020 to 30 June 2021)

9.1 Responsible Persons (continued)

Accountable Officer(s):

Dr Cathy Wilkinson – CEO
(3 September 2018 to 3 January 2021)

Tim Eaton – Acting CEO
(5 January 2021 to 7 February 2021)

Lee Miezis – Interim CEO
(8 February 2021 to 9 May 2021

Lee Miezis – CEO
(10 May to 30 June 2021)

On 1 July 2018, the *Environment Protection Act 2017* became effective and transitioned the Authority from an Administrative Office of the Department to an Independent Statutory Authority, operating under a new governance structure consisting of a Governing Board as the Responsible Body.

Remuneration

Remuneration received or receivable by the Accountable Officer's (Chief Executive Officer) in connection with the management of the Authority during the reporting period was in the range: $410,000-$420,000 (2020: $390,000-$400,000).

In February 2021, an interim CEO was appointed with this arrangement in place until May 2021, whereby he was appointed on an on-going basis.

Total remuneration received or due and receivable by the Governing Board from the Authority was in the range of $300,000-$310,000 (2020: $330,000-$340,000). The ranges of individual Governing Board member remuneration are outlined below.

REMUNERATION	2021	2020
$0 – $9,999 (i)	–	1
$10,000 – $19,999	–	–
$20,000 – $29,999	3	–
$30,000 – $39,999	4	4
$40,000 – $49,999	–	1
$50,000 – $59,999	–	–
$60,000 – $69,999	–	1
$70,000 – $79,999	1	1
$80,000 – $89,999	–	–
Total number of Board Members	**8**	**8**

Note:
(i) This includes the final payment at the start of the financial year for a board member who ceased on the board on 24 June 2019.

9.2 Remuneration of executives

The number of executive officers, other than the accountable officer, and their total remuneration during the reporting period are shown in the table below. Total annualised employee equivalents provide 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 Authority, or on behalf of the Authority, 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.

9.2 Remuneration of executives (continued)

Post-employment benefits include pensions and other retirement benefits paid or payable on a discrete basis when employment has ceased.

Other long-term benefits include long service leave, other long-service benefit or deferred compensation.

REMUNERATION	2021 ($ '000)	2020 ($ '000)
Salaries and other short-term employee benefits	4,406	4,129
Post-employment benefits	405	353
Other long-term employment benefits	90	110
Total remuneration	**4,901**	**4,592**
Total number of executives (i)	**20**	**20**
Total annualised employee equivalents (ii)	**19.62**	**19.67**

Notes:
(i) This includes six Executive Directors reporting directly to the Chief Executive Officer.
(ii) Annualised employee equivalent is based on paid working hours of 38 ordinary hours per week over the 52 weeks for a reporting period.

9.3 Related parties

The Authority is a wholly owned and controlled entity of the state of Victoria.

Related parties of the Authority include:

- all key management personnel and their close family members and personal business interests (controlled entities, joint ventures and estates they have significant influence over)
- all cabinet ministers and their close family members
- 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 of the Authority include members of the Governing Board, the Chief Executive Officer and members of the Executive Leadership Team.

REMUNERATION	2021 ($ '000)	2020 ($ '000)
Salaries and other short-term employee benefits	2,421	2,463
Post-employment benefits	198	187
Other long-term employment benefits	43	55
Total	**2,662**	**2,705**

Transactions with key management personnel and other related parties

Given the breadth and depth of Victorian Government activities, related parties transact with the Victorian public sector in a manner consistent with other members of the public, for example, stamp duty and other government fees and charges. Further employment of processes within the Victorian public sector occur on terms and conditions consistent with the *Public Administration Act 2004* and Codes of Conduct and Standards issued by the Victorian Public Sector Commission. Procurement processes occur on terms and conditions consistent with the Victorian Government Purchasing Board requirements.

Outside of normal citizen type transactions with the Authority, there were no related party transactions that involved key management personnel and their close family members that have been considered material for disclosure. No provision has been required, nor any expense recognised, for impairment of receivables from related parties.

9.3 Related parties (continued)

In this context, transactions are only disclosed when they are considered necessary to draw attention to the possibility that the Authority's financial position and net result may have been affected by the existence of related parties, and by transactions and outstanding balances, including commitments, with such parties.

Significant transactions with government-related parties

During the year, the Authority had the following Victorian government-related entity transactions in respect of its controlled outputs:

	2021 ($ '000)	2020 ($ '000)
RECEIPTS		
Amounts recognised as income in the comprehensive operating statement. Grants from the Department of Environment, Land, Water and Planning and reform funding for the operations of the Authority	154,727	129,602
Amounts transferred during the year and recognised as a capital contribution in the balance sheet	–	380
	154,727	**129,982**
PAYMENTS		
Specific purpose grants paid to Victorian Government entities	85	793
	85	**793**

The Authority administers or manages other activities on behalf of the state (Note 4.2). During the year, the Authority had the following administered transactions with government-related entities: $233.44 million (2019: $238.14 million) collected and passed onto the Department from M&I Landfill levy. In addition, the Authority made payments of $16.6 million (2019: $17.63 million) into the consolidated fund for other administered (non-controlled) items.

9.4 Remuneration of auditors

	2021 ($ '000)	2020 ($ '000)
VICTORIAN AUDITOR-GENERAL'S OFFICE		
Audit or review of the financial statements	60	60
Total remuneration of auditors	**60**	**60**

9.5 Non-financial assets classified as held-for-sale

	2021 ($ '000)	2020 ($ '000)
Leased vehicles held-for-sale (i) – opening balance	0	26
Assets identified for disposal during the year	57	–
Asset disposals	0	(26)
Total non-financial assets classified as held-for-sale	**57**	**–**

Note:
(i) Leased vehicles held-for-sale represent motor vehicles identified for immediate disposal in their current condition through the VicFleet disposal process. It is anticipated that these disposals will be completed within the next 12 months.

9.5 Non-financial assets classified as held-for-sale (continued)

Non-financial assets classified as held-for-sale are measured at the lower of the carrying amount and fair value less costs to sell and are not subject to depreciation.

Non-financial assets, disposal groups and related liabilities 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 sale is highly probable and the asset's sale is expected to be completed within 12 months from the date of classification.

9.6 Reserves

	2021 ($ '000)	2020 ($ '000)
PHYSICAL ASSET REVALUATION SURPLUS (i)		
Balance at beginning of financial year	3,683	3,683
Revaluation increment/(decrement)	26	–
Balance at end of financial year	**3,709**	**3,683**

Note:
(i) The physical assets revaluation surplus arises on the revaluation of building leasehold improvements.

9.7 Other economic flows included in net result

	2021 ($ '000)	2020 ($ '000)
(A) NET GAIN/(LOSS) ON NON-FINANCIAL ASSETS		
Net gain/(loss) on disposal of property, plant and equipment	66	17
Total net gain/(loss) on non-financial assets	**66**	**17**
(B) NET GAIN/(LOSS) ON STATUTORY RECEIVABLES		
Impairment of statutory receivables	(1,240)	(1,485)
Total net gain/(loss) on statutory receivables	**(1,240)**	**(1,485)**
(C) NET GAIN/(LOSS) ON FINANCIAL INSTRUMENTS		
Net gain/loss on financial instruments	46	(3,496)
Total net gain/(loss) on financial instruments	**46**	**(3,496)**
(D) OTHER GAINS/(LOSSES) FROM OTHER ECONOMIC FLOWS		
Net gain/(loss) arising from revaluation of long service leave liability (i)	148	(174)
Unwinding of provisions	(72)	(135)
Total other gains/(losses) from other economic flows	**76**	**(309)**

Note:
(i) Revaluation gain/(loss) due to changes in bond rate.

Other economic flows are changes in the volume or value of an asset or liability that do not result from transactions.

9.7 Other economic flows included in net result (continued)

Net gain/(loss) on non-financial assets and liabilities includes realised and unrealised gains and losses as follows:

Revaluation gains/(losses) of non-current physical assets

Non-current physical assets are measured at fair value on a cyclical basis, in accordance with the Financial Reporting Directions issued by the Assistant Treasurer. A full revaluation normally occurs every five years but may occur more frequently if fair value assessments indicate material changes in values. The majority of non-current assets held by the Authority are 'fit-out' leasehold improvements to buildings. The depreciated cost of leasehold improvements is an acceptable approximation of fair value.

Net revaluation increases (where the carrying amount of a class of assets is increased as a result of a revaluation) are recognised in other comprehensive income and accumulated in equity under the revaluation surplus, except that the net revaluation increase shall be recognised in the net result to the extent that it reverses a net revaluation decrease in respect of the same class of property, plant and equipment previously recognised as an expense (other economic flows) in the net result.

Net revaluation decreases are recognised immediately as expenses (other economic flows) in the net result, except that the net revaluation decrease shall be recognised in other comprehensive income to the extent that a credit balance exists in the revaluation surplus in respect of the same class of property, plant and equipment. The net revaluation decrease recognised in other comprehensive income reduces the amount accumulated in equity under revaluation surplus.

Revaluation increases and decreases relating to individual assets within a class of property, plant and equipment are offset against one another within that class but are not offset in respect of assets in different classes. Any revaluation surplus is not normally transferred to accumulated funds on derecognition of the relevant asset.

Disposal of non-financial assets

Any gain or loss on the sale of non-financial assets is recognised at the date that control of the asset is passed to the buyer and is determined after deducting from the proceeds, the carrying value of the asset at that time.

Other gains/(losses) from other economic flows

Includes the gains or losses from the revaluation of present value of the long service leave liability due to changes in the bond interest rates.

9.8 Subsequent events

The Authority had no material events that occurred after 30 June 2021.

9.9 Ex gratia expenses

The Authority wrote-off a number of litter fines during the course of the year in accordance with its Litter Fine Write-off Policy. The total amount of write-offs for the year was $1.95 million (2020: $1.23 million).

9.10 Australian Accounting Standards issued that are not yet effective

Issued but not yet effective Australian accounting and reporting pronouncements

Certain new Australian Accounting Standards have been published that are not mandatory for the 30 June 2021 reporting period. DTF assesses the impact of these new standards and advises the Authority of their applicability and early adoption where applicable.

The table below is provided to assist entities in updating their disclosure in relation to the Australian accounting standards that are issued but not yet effective for 2020-21 in accordance with paragraph 30 of AASB 108.

9.10 Australian Accounting Standards issued that are not yet effective (continued)

STANDARD/ INTERPRETATION	SUMMARY	APPLICABLE FOR ANNUAL REPORTING PERIODS BEGINNING ON	IMPACT ON THE AUTHORITY'S FINANCIAL STATEMENTS
AASB 17 *Insurance Contracts*	The new Australian standard seeks to eliminate inconsistencies and weaknesses in existing practices by providing a single principle based framework to account for all types of insurance contracts, including reissuance contract that an insurer holds. It also provides requirements for presentation and disclosure to enhance comparability between entities. AASB 2020-5 Amendments to Australian Accounting Standards – Insurance Contracts was issued in July 2020 with the intention to reduce the costs application and easing transition by deferring its effective date to annual periods beginning on or after 1 January 2023 instead of 1 January 2021. This standard currently does not apply to the not-for-profit public sector entities.	1 January 2023	The assessment has indicated that there will be no significant impact for the Authority.
AASB 2020-1 *Amendments to Australian Accounting Standards – Classification of Liabilities as Current or Non-Current*	This Standard amends AASB 101 to clarify requirements for the presentation of liabilities in the statement of financial position as current or non-current. A liability is classified as non-current if an entity has the right at the end of the reporting period to defer settlement of the liability for at least 12 months after the reporting period. The meaning of settlement of a liability is also clarified. AASB 2020-6 Amendments to Australian Accounting Standards – Classification of Liabilities as Current or Non-current – Deferral of Effective Date was issued in August 2020 and defers the effective date to annual reporting periods beginning on or after 1 January 2023 instead of 1 January 2022, with earlier application permitted.	1 January 2023	The standard is not expected to have a significant impact on the Authority.

9.10 Australian Accounting Standards issued that are not yet effective (continued)

STANDARD/ INTERPRETATION	SUMMARY	APPLICABLE FOR ANNUAL REPORTING PERIODS BEGINNING ON	IMPACT ON THE AUTHORITY'S FINANCIAL STATEMENTS
AASB 2021-3 *Amendments to Australian Accounting Standards – Covid-19-Related Rent Concessions beyond 30 June 2021*	This Standard amends AASB 16 to extend by one year the application period of the practical expedient added to AASB 16 by AASB 2020-4 Amendments to Australian Accounting Standards – Covid-19-Related Rent Concessions. The practical expedient permits lessees not to assess whether rent concessions that occur as a direct consequence of the COVID-19 pandemic and meet specified conditions are lease modifications and, instead, to account for those rent concessions as if they were not lease modifications (e.g. account for as variable lease payment instead). This standard extends the practical expedient to rent concessions that reduce only lease payments originally due on or before 30 June 2022, provided the other conditions for applying the practical expedient are met.	1 April 2021	The standard is not expected to have a significant impact on the Authority.

In addition to the new standards and amendments above, the AASB has issued a list of other amending standards that are not effective for the 2020-21 reporting period (as listed below). In general, these amending standards include editorial and reference changes that are expected to have insignificant impacts on public sector reporting.

- AASB 2020-2 *Amendments to Australian Accounting Standards – Removal of Special Purpose Financial Statements for Certain For-Profit Private Sector Entities.*
- AASB 1060 *General Purpose Financial Statements – Simplified Disclosures for For-Profit and Not-for-Profit Tier 2 Entities (Appendix C).*
- AASB 2020-3 *Amendments to Australian Accounting Standards – Annual Improvements 2018-2020 and Other Amendments.*
- AASB 2020-7 *Amendments to Australian Accounting Standards – Covid-19-Rent Related Concessions: Tier 2 Disclosures.*
- AASB 2020-8 *Amendments to Australian Accounting Standards – Interest Rate Benchmark Reform – Phase 2.*
- AASB 2020-9 *Amendments to Australian Accounting Standards – Tier 2 Disclosures: Interest Rate Benchmark Reform (Phase 2) and Other Amendments.*
- AASB 2021-1 *Amendments to Australian Accounting Standards – Transition to Tier 2: Simplified Disclosures for Not-for-Profit Entities.*
- AASB 2021-2 *Amendments to Australian Accounting Standards – Disclosure of Accounting Policies and Definitions of Accounting Estimates.*

9.11 Glossary of technical terms

The following is a summary of the major technical terms used in this report:

Comprehensive result: Total comprehensive result is the change in equity for the period other than changes arising from transactions with owners. It is the aggregate of net result and other non-owner changes in equity.

Commitments: Commitments include those operating, capital and other outsourcing commitments arising from non-cancellable contractual or statutory sources.

Depreciation: Depreciation is an expense that arises from the consumption through wear or time of a produced physical or intangible asset. This expense is classified as a 'transaction' and so reduces the 'net result from transactions'.

Employee benefits expenses: Employee benefits expenses include all costs related to employment including wages and salaries, leave entitlements, redundancy payments and superannuation contributions.

Financial asset: A financial asset is any asset that is:

(a) cash;

(b) an equity instrument of another entity;

(c) a contractual or statutory right:

  (i) to receive cash or another financial asset from another entity; or

  (ii) to exchange financial assets or financial liabilities with another entity under conditions that are potentially favourable to the entity; or

(d) a contract that will or may be settled in the entity's own equity instruments and is:

  (i) a non-derivative for which the entity is or may be obliged to receive a variable number of the entity's own equity instruments; or

  (ii) a derivative that will or may be settled other than by the exchange of a fixed amount of cash or another financial asset for a fixed number of the entity's own equity instruments.

Financial instrument: A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. Financial assets or liabilities that are not contractual (such as statutory receivables or payables that arise as a result of statutory requirements imposed by governments) are not financial instruments.

Financial liability: A financial liability is any liability that is:

(a) a contractual or statutory obligation:

  (i) to deliver cash or another financial asset to another entity; or

  (ii) to exchange financial assets or financial liabilities with another entity under conditions that are potentially unfavourable to the entity.

Financial statements: A complete set of financial statements comprises:

(a) a comprehensive operating statement for the period.

(b) a balance sheet as at the end of the period.

(c) a statement of changes in equity for the period.

(d) a statement of cash flow for the period.

(e) notes, comprising a summary of significant accounting policies and other explanatory information.

(f) comparative information in respect of the preceding period as specified in paragraphs 38 of AASB 101 *Presentation of financial statements*.

(g) a balance sheet as at the beginning of the preceding period when an entity applies an accounting policy retrospectively or makes a retrospective restatement of items in its financial statement, or when it reclassifies items in its financial statements in accordance with paragraph 41 of AASB 101.

9.11 Glossary of technical terms (continued)

Grants and other transfers: Transactions in which one unit provides goods, services, assets (or extinguishes a liability) or labour to another unit without receiving approximately equal value in return. Grants can either be operating or capital in nature.

While grants to governments may result in the provision of some goods or services to the transferor, they do not give the transferor a claim to receive directly benefits of approximately equal value. For this reason, grants are referred to by the AASB as involuntary transfers and are termed non-reciprocal transfers.

Receipt and sacrifice of approximately equal value may occur, but only by coincidence. For example, governments are not obliged to provide commensurate benefits, in the form of goods or services, to particular taxpayers in return for their taxes.

Grants can be paid as general-purpose grants which refer to grants that are not subject to conditions regarding their use. Alternatively, they may be paid as specific purpose grants which are paid for a particular purpose and/or have conditions attached regarding their use.

Intangible assets: Intangible assets represent identifiable non-monetary assets without physical substance.

Interest expense: Costs incurred in connection with the borrowing of funds include interest on bank overdrafts and short-term and long-term borrowings, amortisation of discounts or premiums relating to borrowings, interest component of lease repayments, and the increase in financial liabilities and non-employee provisions due to the unwinding of discounts to reflect the passage of time.

Interest income: Interest income includes unwinding over time of discounts on financial assets and interest received on bank term deposits and other investments.

Leases: Leases are rights conveyed in a contract, or part of a contract, the right to use an asset (the underlying asset) for a period of time in exchange for consideration.

Net result: Net result is a measure of financial performance of the operations for the period. It is the net result of items of revenue, gains and expenses (including losses) recognised for the period, excluding those that are classified as other non-owner changes in equity.

Net result from transactions (net operating balance): Net result from transactions or net operating balance is a key fiscal aggregate and is income from transactions minus expenses from transactions. It is a summary measure of the ongoing sustainability of operations. It excludes gains and losses resulting from changes in price levels and other changes in the volume of assets. It is the component of the change in net worth that is due to transactions and can be attributed directly to government policies.

Non-financial assets: Non-financial assets are all assets that are not 'financial assets'. It may include land, buildings infrastructure, plant and equipment and intangible assets.

Other economic flows: Other economic flows are changes in the volume or value of an asset or liability that do not result from transactions. These include gains and losses from disposals, revaluations and impairments of non-current physical and intangible assets; actuarial gains and losses arising from defined benefit superannuation plans; fair value changes of financial instruments and agricultural assets; and depletion of natural assets (non-produced) from their use or removal. In simple terms, other economic flows are changes arising from market re-measurements.

Payables: Includes short and long-term trade debt, trade creditors, grants and interest payable.

9.12 Glossary of technical terms (continued)

Receivables: Includes amounts owing from short- and long-term trade credit, accounts receivable, accrued investment income, grants, taxes and interest receivable.

Sales of goods and services: Refers to revenue from the direct provision of goods and services and includes fees and charges for services rendered, sales of goods and services, fees from regulatory services and work done as an agent for private enterprises. User charges include revenue from the sale of goods and services revenue.

Supplies and services: Supplies and services generally represent cost of goods sold and the day-to-day running costs, including maintenance costs, incurred in the normal operations of the Authority.

Transactions: Transactions are those economic flows that are considered to arise as a result of policy decisions, usually an interaction between two entities by mutual agreement. They also include flows within an entity such as depreciation where the owner is simultaneously acting as the owner of the depreciating asset and as the consumer of the service provided by the asset. Taxation is regarded as mutually agreed interactions between the government and taxpayers.

Transactions can be in kind (for example, assets provided/given free of charge or for nominal consideration) or where the final consideration is cash. In simple terms, transactions arise from the policy decisions of the government

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1300 372 842 (1300 EPA VIC)
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