



# Chairman's Report

This year saw the environment take the global stage like no other time in history.

Victoria felt the heat, suffering the ongoing effects of drought, another round of severe summer bushfires and extreme flooding. Our day-to-day actions are having an impact on the environment. We are all using resources faster than the earth can re-generate them and we need to understand how to live in a climate changed future.

This presents EPA with a challenge, to ensure the protection, care and improvement of the environment as it faces these new threats. It also presents an opportunity, because by addressing these “big picture” sustainability issues we will achieve great environmental outcomes and lasting value in our economy.

As a modern regulator, we must harness the power of business and the economy to help drive environmental outcomes into the future. We will continue to demonstrate that what is good for the environment is also good for business and our economy.

Regulatory work will always be our hallmark, but emissions control alone will not deliver the environmental outcomes that are needed. So we will focus our efforts and continue to be innovative in regulation to ensure the most efficient outcomes from this work.

We will implement licensing reform that provides administrative savings for business, while achieving significant improvements for the environment by reducing greenhouse gas emissions and increasing resource efficiency.

The EPA team achieved a lot this year responding to a major groundwater contamination incident in Newport and ongoing pollution impacts on our iconic Yarra River. When the bushfires hit, we provided the community with information about air quality and advice, agreed with the Health Regulator, about protecting their health.

We built our understanding of the challenges that our partners face going carbon neutral by completing that journey ourselves. We shared this experience through the newly formed Carbon Innovators Network, and I appreciate the feedback that we have received about our process and look forward to continued discussion about carbon management.

Our Industry Greenhouse Program concluded this year, exceeding our expectations for the environmental and economic benefits it achieved. We're hoping to build on this success into the future with further resource efficiency programs. Such programs have the ability to deliver economic and environmental gains through savings in the use of energy and water, and reducing the generation of waste and greenhouse gas emissions.

The Government this year made the most significant changes in 30 years to the way “hazardous waste” is managed in this State. The changes introduce significant cost incentives to reduce all hazardous wastes being disposed to landfill. EPA has also worked to implement the new hazard-based waste categorisation framework and to ban some items from landfill that can be recovered or recycled. This, along with increased disposal costs, will drive industry to improve processes to eliminate the generation of this waste, or will support recovery and recycling industries.

Our team delivered some great environmental outcomes this year. I thank them for their continued hard work and achievements. I would also like to thank the members of the Environment Protection Board, who again provided me with valuable advice and support.

We have set a clear path and can achieve great things for our Victorian and global community; we acknowledge the support of our partners who work with us to these ends.



# Table of Contents

## What Our Team Say

## 2006-2007 Highlights

### What we do

Pages 2 to 5

The most important thing I do is assist industry to voluntarily reduce their environmental footprint

**Cameron Brown**  
Business Sustainability Unit

Monitoring fires on all fronts  
Bushfire air monitoring (EI, R)  
Eel deaths investigation (EI, R, E)  
Ecosystem protection: watching over our waterways (EI, R)  
Landfills (EI)  
Tullamarine landfill to close (EI, R)  
Landfill levy online (EI, R)  
Reporting greenhouse gas emissions (E)  
Taking out the trash  
The Newport pipeline leak (EI)  
Geelong breathing easy (EI)  
The community calling (EI)

### How we do it

Pages 6 to 9

Our people have a great deal of technical and scientific knowledge. Bringing together information from very diverse areas of our business helps us to be the modern regulator that we are - and it keeps me on my toes!

**Jennifer Batagol**  
Office of the Chairman

The Parched State  
Bendigo water recycling project (RE, EI)  
Assessing and approving permanent recycled water schemes (RE, EI)  
Dual pipe water schemes: Hunt Club and Sandhurst estates (RE, EI)  
Advice for short-term drought relief (RE, EI, E)  
Information on alternative water supplies (RE, EI)  
Water wise: the trickle down effect  
Yarra River focus: keeping the city's lifeblood flowing (EI, R)  
The not-so-good oil: mystery oil spill (EI, R)  
Catching the culprits: case study (EI, R)  
Forensic chemistry: the key to finding the source  
Green Stars: Our own environmental watchdogs (RE, R)  
Diesel spill results in prosecution (EI, R)  
Community Engagement Improvement Strategy (R)

## What Our Team Say

## 2006-2007 Highlights

### Tomorrow...

Pages 10 to 13

We continue to refine our role and actions so we meet the challenges of the day, delivering services in a coordinated way

**Clare Moran**  
Life Cycle Unit

EPA showing the way (RE, E, R)  
New partnerships with business (R, E)  
Water retailer turns green champion (RE, E)  
Leading the way  
Pilkington Sustainability Covenant: reflecting the future (RE, E)  
Laws that work for our future  
Environment and Resource Efficiency Plans (RE, E)  
Painting the big picture  
The new *Environment Protection (Scheduled Premises and Exemptions) Regulations 2007* (EI)  
Changes to the *Environment Protection (Prescribed Waste) Regulations 1998* (E, RE, EI)  
Licensing reform (EI, E)  
Increased levies for prescribed industrial waste (E, RE, EI)  
Other changes to regulations, notices and partnerships

### Who we are

Pages 14 to 16

You get swept up in this feeling that you are really doing something, that you're part of something bigger that's worthwhile

**Elinda Pak**  
Organisational Development Unit

Manner of establishment  
Minister  
Chairman and executive positions  
The Environment Protection Board  
EPA Audit Committee  
Executive committees  
EPA organisational chart

All of our highlights contributed to our efforts to achieve our objectives to: Increase resource efficiency (RE); Reduce emissions impacts (EI); Enhance our reputation (R); and Benefit the economy (E).

...we must harness the power of business and the economy to help drive environmental outcomes.

**Mick Bourke,**  
Chairman, EPA



## Our Vision

The Victorian community living sustainably

## Our Purpose

Protect, care for and improve our environment

## Our Values

Collaboration  
Innovation  
Integrity  
Respect

## Our Objectives

Increase resource efficiency  
Reduce emission impacts  
Enhance our reputation  
Benefit the economy

EPA Victoria is a world leader in the protection, care and improvement of our environment.

## What we do

- We are a leading voice on sustainability issues
- We work with leaders to improve their resource efficiency and business profitability
- We continue to protect the environment

## How we do it

- We collect and analyse data and deliver accurate, scientific information
- We employ passionate people and actively seek business partners
- We examine how we work so we can provide better outcomes for Victoria

## Tomorrow...

- We will continue to identify new ways for Victorians to use fewer resources and reduce waste to help the environment, boost productivity and save resources and money
- We will ensure that our science is relevant and useful for the future
- We will continue being carbon neutral and will work with our partners to encourage and support them to manage their impacts

# What we do

## Monitoring fires on all fronts



EPA published daily internet updates about visibility, particles in the air and health risks.

**Dave Gooding**  
Team Leader  
Air Monitoring Operations  
Air Quality Studies Unit

**As the effects of climate change accelerate, Victorians are preparing themselves for longer and more severe bushfire seasons. Last December residents in the Gippsland region faced that disturbing reality for themselves, when fierce fires swept through their part of the State.**

EPA's involvement was multifaceted. In the thick of it were people like Elizabeth Radcliffe, EPA's Gippsland regional manager.

"It was a challenging time," she says. "A number of my staff were directly affected by the fires, one seriously. Their properties were under threat."

But, personal worries aside, it was Liz's job to keep the general public informed as to the extent of the danger.

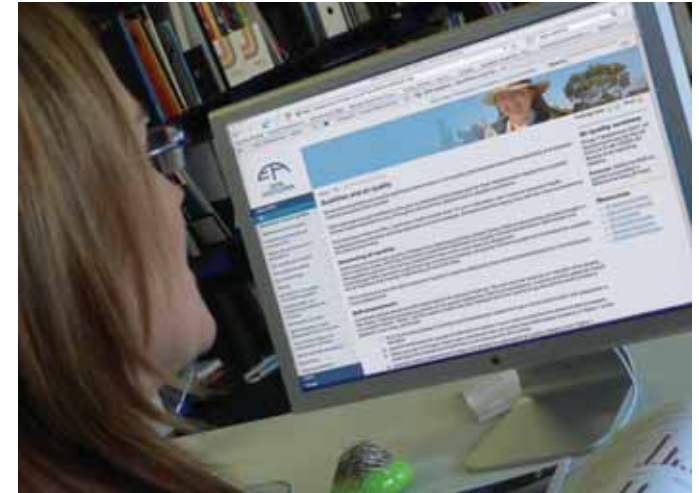
To do this she relied on EPA staff like Dave Gooding, the team leader of air monitoring operations from EPA's Air Quality Studies Unit in Macleod.

EPA has four mobile air monitoring stations. "We set one up in Wangaratta to give an idea of particle levels in the township," says Dave. "We were concerned about the health of everyone breathing in that smoke."

Although these areas were not near the actual fires, the area was heavily affected by smoke and EPA published daily internet updates about visibility, particles in the air and health risks.

"For example if people had cardiovascular disease or were asthmatic we said, 'Stay indoors, don't do any strenuous activity,'" he explains.

Most interesting for Dave was revisiting the area after the crisis was over. "All of a sudden we could see clearly. It was like 'Oh look, there's a big sports oval next door to the car park.' We hadn't even been able to see next door!" he recalls. "I don't really know how people in Wangaratta actually coped – because we were glad to get out of there after a couple of days. To continuously put up with that would have been monumental."



## Bushfire air monitoring

Climate change in Australia is predicted to lead to an increase in the frequency and severity of bushfires. In 2006-2007, in response to the widespread impact of bushfires, EPA increased monitoring to better understand one of the most significant side effects of bushfires – reduced air quality.

Adding to the regular monitoring sites in Melbourne, Geelong and the Latrobe Valley, this year EPA set up temporary bases in Wangaratta, Bairnsdale and Macleod, enabling us to provide more detailed information about the effects of bushfires in north-east Victoria and Gippsland in particular.

By doing so, we were able to:

- publish advice about bushfires and air quality on our website
- work with the Department of Sustainability and Environment and the Bureau of Meteorology to supply daily smoke impact predictions to the media
- partner with the Department of Human Services to give advice on how people could reduce the impacts of smoke on their health.

## Eel deaths investigation

It is not only farmers and rural communities who suffer the effects of prolonged drought. Following extensive investigations by EPA over the last three years, it is now clear that drought is the principal cause behind the deaths of large numbers of short-finned eel and fish in lakes of the Western District over the last decade.

Many water bodies across Victoria have been affected by similar deaths, but the lakes in the Western District have been particularly prone to these events.

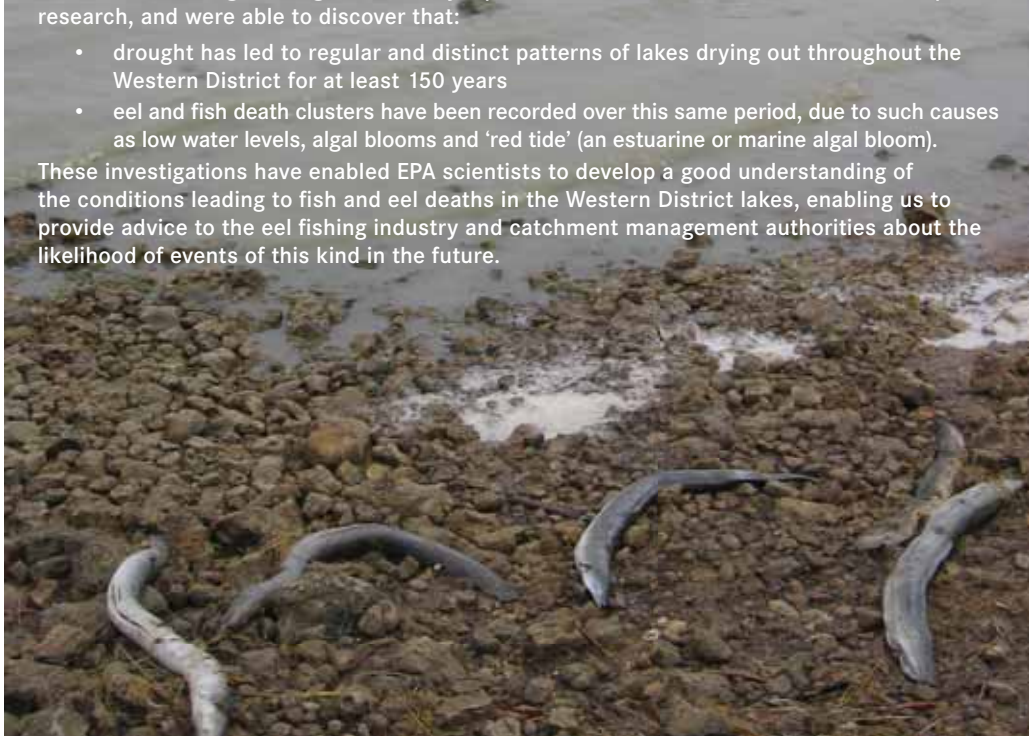
Working with the Eel Death Investigation Reference Group (representatives from government departments, industry and academia), EPA ruled out many other potential causes such as overpopulation, organic contaminants and metal toxicity.

On the other hand, rises in salinity, high temperatures and increased alkalinity – all factors influenced by drought – appear to have been related to the deaths.

We knew that scientific research could only tell us so much - that we needed social and historical knowledge through community input. So we added anecdotal evidence to empirical research, and were able to discover that:

- drought has led to regular and distinct patterns of lakes drying out throughout the Western District for at least 150 years
- eel and fish death clusters have been recorded over this same period, due to such causes as low water levels, algal blooms and 'red tide' (an estuarine or marine algal bloom).

These investigations have enabled EPA scientists to develop a good understanding of the conditions leading to fish and eel deaths in the Western District lakes, enabling us to provide advice to the eel fishing industry and catchment management authorities about the likelihood of events of this kind in the future.



## Ecosystem protection: watching over our waterways

**Local communities are increasing their recreational use of the Yarra and Maribyrnong rivers, and are keen to know whether it is safe to eat fish caught in the estuaries or conduct water activities, such as boating. The Rivers, and in particular their estuaries, have a history of industrial activity and impact.**

This year the findings of an environmental audit of the lower Maribyrnong River, lower Yarra River and Stony Creek Backwash were made available, and we complemented this work with a fish study assessing their suitability for consumption.

**The audit found that the river was safe for enjoying leisure activities, and the fish study found that fish caught from the estuaries could be eaten.**

The audit findings were that:

- Levels of arsenic and other heavy metals in the river water do not pose an environmental risk.
- Levels of heavy metals in river sediments are typical of those at the bottom of a highly urbanised catchment.
- There may be a localised impact from groundwater and sediment contamination near the river bank that still needs to be assessed and addressed.

- The Stony Creek Backwash sediment is contaminated with levels of hydrocarbons and metals that could pose a risk to the ecosystem, including birds.

EPA is working with companies along the river, through individual notices and ongoing clean up works, to deal with localised impacts. EPA is also working with Parks Victoria to further investigate sediment contamination in Stony Creek Backwash.

The fish study focused on the fish in the estuarine areas and their suitability for consumption. Again, the results provided good news for local fishermen with the study showing that the fish were safe to eat.

It found that polychlorinated biphenyls (PCBs) were present, but at levels below the published food standards, while amounts of contaminants such as mercury, arsenic and hydrocarbons were well below relevant guidelines.

EPA worked closely with the Department of Human Services to provide advice to the community, particularly recreational fishers, with help from an expert panel.

Information on the safe consumption of fish is available from the Department of Human Services website: [http://www.health.vic.gov.au/environment/water/rec\\_water\\_fishing.htm](http://www.health.vic.gov.au/environment/water/rec_water_fishing.htm)

The benefits of eating fish greatly outweigh the risks. The risks can be reduced by making sensible choices about the type and amount of fish you eat.

Extract from  
*'Should I eat the fish I catch?'*  
produced  
by the Department  
of Human Services

# More of what we do

## Landfills

EPA plays an important role in the regulation of landfills. While landfills are the least preferred waste management option, they are still needed for the safe management of waste that is not recycled or reused. As a result, the location, management and rehabilitation of landfills require a high level of attention.

### Tullamarine landfill to close

The Tullamarine landfill must close by mid-2010 after a decision by EPA to refuse expansion of the site. This is the first time EPA has ever put a closure date into a licence.

After receiving a works approval application to upgrade containment systems at the site and increase the amount of waste accepted, EPA conducted extensive community consultation and technical assessment (including international peer review) before making its decision. EPA received 87 submissions from the community and government agencies in relation to the works approval application.

Factors contributing to EPA's decision were the age of the site and the lack of confidence in the site's ability to meet future requirements of waste management. As a result, the landfill, operated by Transpacific Cleanaway, cannot receive prescribed industrial waste from October 2009.

The site must cease to operate as a landfill by 1 June 2010.

The landfill will be subject to further ongoing requirements to manage contaminated leachate following its closure. EPA approved the upgrade, but did not permit an increase in the amount of waste accepted.

With the Tullamarine landfill ceasing to accept these wastes, the SITA Australia Pty Ltd operated Lyndhurst landfill will remain the main facility for receiving them.

### Landfill levy online

EPA has introduced an online system for lodging landfill levy statements. This new, streamlined system is aimed at reducing the processing time and costs for landfill operators.



## Reporting greenhouse gas emissions

Public greenhouse gas emissions reporting is an important first step toward greater accountability and transparency in managing these emissions. It is also a fundamental prerequisite for an emissions trading scheme. Over the past three years, EPA has been working with a number of federal and state government departments to secure mandatory public greenhouse gas emissions reporting on a consistent national basis.

The 'National Pollutant Inventory National Environment Protection Measure' was amended in June 2007 to include greenhouse gas reporting, to drive business certainty that reporting would be required from 1 July 2008. This was to provide an interim measure to a possible Commonwealth system, which was in discussion but without clear timeframes.

This decision was ultimately vital to ensuring the Commonwealth Government moved earlier than they would have otherwise to implement reporting, which they did through the introduction of the *National Greenhouse and Energy Reporting Bill 2007* to Federal Parliament in August 2007.

EPA's pilot program was instrumental in providing the content of the National Environment Protection Measure proposal.

## Taking out the trash

**The disposal of hazardous waste and the management of landfills are controversial issues. "The challenge lies in understanding the different waste streams and ensuring there's a system to manage the hazards in line with community expectations" says Mel Barker, the manager of EPA's Waste Management Unit.**

It's just as well that Mel enjoys a challenge. I think my job is terrific because the Waste Management Unit picks up a whole raft of complex issues," she says.

The latest attention-grabbers are the new regulations on plastic bags. "This is an example where everyone has an opinion because we all go to the supermarket and

use them." A few years ago state government ministers around Australia agreed to phase out lightweight plastic shopping bags by the end of 2008. Recent amendments to the *Environment Protection Act 1970* (see page 13 for more) give the Victorian Environment Minister and EPA new powers that will drastically reduce the number of bags being used. "We use around 1.1 billion bags annually in this State, so if we are going to make the 2008 target then our unit is going to be very busy over the next 12 months," Mel says.

Mel's unit is currently managing the process of implementing increased levies for hazardous waste to make disposal more expensive and to encourage reductions in the amount of hazardous waste produced. EPA will reinvest money raised from the

levies into industries that employ new technologies or upgrade infrastructure that generates less waste. According to Mel the ideal outcome is cleaner production and more reuse and recycling technologies in the state.

"It's an exciting time and we've certainly got industry's attention at the moment," she says. "A lot of companies are working with us and discovering, to their surprise, that they're finding resources in their waste stream that could be reused and salvaged.

"So by changing their processes they can make money out of their waste and send smaller quantities of less hazardous materials to landfill".

"It's the ultimate win-win situation," she says.

## The Newport pipeline leak

**In early December 2006, EPA was alerted to petroleum odours around Challis Street in Newport.**

Investigations, carried out by EPA, the State's emergency services, Mobil and Shell, involved sampling stormwater and sending underground cameras to check out the local pipes. Investigations found hydrocarbons in the stormwater and petrol leaking from a joint seal beneath Champion Road. While Victoria Police set up a Co-ordination Centre, affected stormwater drains were flushed clean and EPA joined forces with Hobsons Bay City Council, Shell and Mobil to examine the other underground pipelines in the area. Mobil subsequently found that one of their underground petroleum pipelines was leaking. EPA directed Mobil to remove fuel-contaminated stormwater and groundwater, and conduct ongoing vapour monitoring.

EPA monitored the air quality in the residential area around Market and Challis Streets. **We detected petrol compounds such as benzene, toluene and xylene, but at less than one percent of the acceptable levels for human health. Since December, ongoing monitoring has shown that Mobil has significantly reduced the vapours.**

The leak resulted in significant contamination of groundwater in the area. Clean-up will be extensive and is likely to continue over several years. These works are being directed through a clean up notice issued by EPA.

## Geelong breathing easy

Refineries and cars are the main contributors of petroleum pollutants, such as benzene, toluene and xylene. Some Geelong residents have expressed concerns about emissions from Shell's refinery in Corio causing poor air quality and health risks. For this reason EPA has conducted extensive monitoring of the air quality in Corio since 2003. We have required Shell to undertake additional monitoring and reduce emissions of these pollutants.

This year EPA released further results of the studies of the air quality in the Corio area. The monitoring showed that the air quality was good and comparable with Melbourne's. There has also been a reduction in benzene levels since 2003, which remain within established safe levels.

Shell's EPA licence requires further reductions in emissions including: installing internal floating roof covers to reduce volatile organic compounds and benzene emissions. Other improvements required by the licence and recently implemented include diverting stormwater for treatment, which significantly decreases oil contaminants, before discharging to Corio Bay.



Source: Shell Geelong Refinery

EPA has conducted extensive monitoring of the air quality in Corio since 2003.

The monitoring has shown that the air quality is comparable with Melbourne's.

Paul Torre  
Environmental Chemistry Unit



8,248  
pollution  
reports in  
2006-07

Pollution Watchline

## The community calling

**Every year, EPA responds to thousands of calls from members of the public. This year, our Pollution Watchline received 8,248 pollution reports.**

More than 1100 of these calls came from Coldstream and Lilydale residents complaining of strong odours from the composting operations of Australian Native Landscapes (ANL) on Maroondah Highway in Coldstream. Residents' described the smell as 'a wet dead thing' and a 'strong composting odour'.

EPA verified the source of the odour and served a notice on ANL requiring them to improve the management of compost

and the technology used. EPA also worked with ANL and the Shire of Yarra Ranges to establish a stakeholder reference group involving local residents in the development of a plan of actions to eliminate the odours.

Recently, as part of the negotiated plan, ANL began removing 20,000 tonnes of old, composted waste from the site. The majority of improvements at the site are required to be completed by 1 October 2007.

# How we do it

## The Parched State

In the current climate of drought and water restrictions, many Victorians have made significant efforts to save and conserve the State's precious drinking water. Greater use of recycled water is a key part of the plan to secure Victoria's water supplies.

EPA has helped government provide guidance on the safe and sustainable use of alternative water sources. Many alternative sources, such as stormwater, industrial process water, treated sewage, grey water and even rainwater, have risks associated with their use. They are not clean forms like our potable (drinking) water, and so need particular management and sometimes treatment before they can be safely used. In many cases they are suitable only for particular uses.

Our role is to ensure that anyone who wants to use alternative sources of water understands the treatment and management requirements for that water and any restriction on its use. These pages give some examples.



## Bendigo water recycling project

Like many rural towns, this year Bendigo faced some of the State's toughest water restrictions. The local water retailer, Coliban Water, identified reuse opportunities for wastewater from its Epsom wastewater treatment plant, which traditionally has flowed into Bendigo Creek. EPA helped identify the appropriate treatment quality suitable for the proposed uses, including urban (Bendigo parks and gardens) and rural (agricultural irrigation).

EPA helped Coliban Water develop a community engagement plan so local residents had input into the proposed scheme and were aware of what the scheme would look like. We also assessed and provided works approval for upgrading works, and authorised a Regional Environment Improvement Plan for public recycled water uses and a Health and Environmental Management Plan. Recycled water could then be supplied to urban Bendigo and rural users to rejuvenate Bendigo's parks and gardens and to maintain essential rural activities.

## Assessing and approving permanent recycled water schemes

The most talked about alternative water supply in Victoria is recycled water derived from treated sewage. EPA supports and regulates the use of recycled water for certain uses and, in recent years, has further developed guidelines to enable such water to be supplied to homes and industry for a wider range of purposes, including toilet flushing and garden watering.

## Dual pipe water schemes: Hunt Club and Sandhurst estates

New guidelines have been developed for residential developments that have a dedicated recycled water supply piped to homes, in addition to drinking water. These types of recycled water schemes are known as 'dual pipe schemes', as there are two water supply pipes rather than one.



Before recycled water can be supplied to such developments, EPA must approve a Health and Environment Management Plan. This plan addresses health and environmental risks and details the physical and management controls in place to ensure recycled water is used correctly and sustainably. It also deals with plumbing requirements, allowed uses, community consultation, education, communication, and emergency response or incident procedures. This year, EPA approved the first two Health and Environment Management Plans for dual pipe developments in Melbourne's south-east. South East Water Limited, which operates the schemes, is now able to supply recycled water to new homes at the Hunt Club and Sandhurst estates.

Of all water consumed in the home,  
about 40% is used  
in the bathroom and toilet.

[www.savewater.com.au](http://www.savewater.com.au)

## Some definitions:

An **aquifer** is an underground layer of water-bearing permeable rock, or consolidated materials (gravel, sand, silt or clay) from which groundwater can be usefully extracted using a water well.

**Managed aquifer recharge** is the process of intentionally injecting or infiltrating water into an aquifer and then extracting the water for use at a later date.

**Industrial water** is produced from processes at industrial or commercial premises and includes all water-borne waste except sewage. (For example, wash down waters from cleaning equipment.)

**Stormwater** is rainwater that runs off roofs, roads and other surfaces to our creeks and waterways.



## Advice for short-term drought relief

EPA released a revised information bulletin to help water businesses develop drought-relief management frameworks. The bulletin published in December 2006, *Supply of Reclaimed Water for Drought Relief*, specifically offers guidance on the use of recycled water for short-term drought relief.

Under these temporary management arrangements, particular classes of recycled water can be used for a wider range of uses that would not otherwise be permitted, such as dust suppression on road works, agricultural irrigation, and watering community parks, gardens and ovals.

A number of drought-relief management frameworks were developed and successfully implemented across the State during the 2006-07 summer.

## Information on alternative water supplies

**EPA provided input to several publications aimed at helping Victorians conserve drinking water, especially with the use of alternative water supplies.**

In one such project, EPA and the Department of Human Services (DHS), together with the Department of Sustainability and Environment (DSE), produced discussion papers resulting from their joint review of the public health and environment framework for alternative urban water supplies.

The two discussion papers made recommendations for regulatory frameworks for the safe and sustainable use of industrial water and managed aquifer recharge schemes.

With DSE and DHS, EPA also released a brochure for homeowners covering reuse of rainwater.

We are currently developing other educational materials on the use of rainwater at commercial, industrial and multi-residential sites; grey-water reuse around the home; stormwater reuse; industrial water reuse; and the use of managed aquifer recharge.

## Water wise: the trickle down effect

As our dams go down and the water restrictions go up, Victorians can be forgiven for confusion about the current state of water legislation. Stephen Lansdell is the man who can keep us all up to speed, especially when it comes to information on reusing water and issues surrounding treated sewage, stormwater and grey water.

"People are calling for advice really," he says. "Some people are calling just to check whether they need EPA approval or to check that it's going to be okay for them to use the source of water for different uses."

This year, Steve was part of a team working on an alternative water sources project, which he loved.

"It was about looking at the various alternative water sources and understanding any potential risks associated with their use, and then having a good think about the level of intervention that was needed to enable the use of each source while being protective of human health, as well as the environment," he says.

The outcome of his project is that there probably won't be stringent legislation to manage the use of alternative water sources, but guidelines to help consumers use the resource in a sustainable and safe way.

"We've thought hard about the framework and have gone into a lot of detail," says Steve. "People do need to understand the risks associated with using alternatives to tap water and hopefully our suite of guidance documents will make it a lot easier for people to supplement tap water in a safe and sustainable way."



# More of how we do it

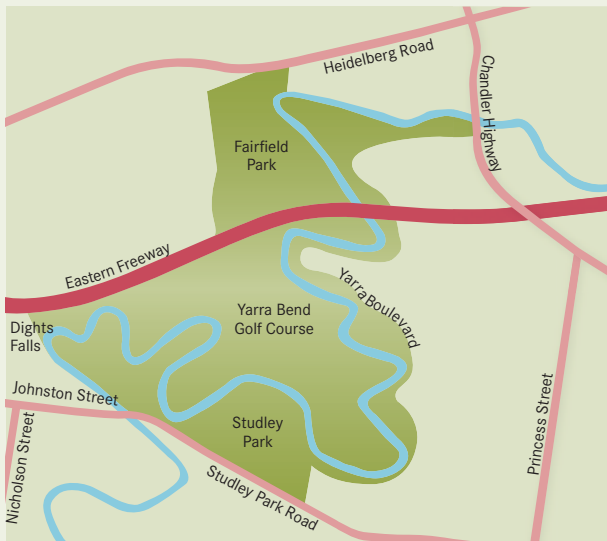
## Yarra River focus: keeping the city's life blood flowing

Running through the very heart of Melbourne, the Yarra River remains a major focus of interest for EPA. An ongoing aspect of our work is targeting pollution loads to the Yarra that are transported by its tributaries (like Merri Creek). In one exercise this year we joined Moreland City Council and Melbourne Water targeting businesses in the Coburg area and part of the Merlynston Creek catchment. Over 100 small and medium businesses were inspected; with up to 20 given written advice about improving their practices. Over 30 had enforcement action taken against them, such as being issued with a pollution abatement notice.

### The not-so-good oil: mystery oil spill on the Yarra

We are continuing our investigation of an oil sheen that covered several kilometres of the Yarra in June 2007, stretching from the Chandler Highway to Abbotsford. Here our main focus was to contain the oil and minimise any potential harm to the environment and river users. We worked with Melbourne Water to install an absorbent boom upstream of Dights Falls, and issued a warning to river users to avoid contact with the sheen.

Recently we have been working with Amcor Packaging Australasia's paper mill in Alphington to identify the source of the spill.



It is a challenge for EPA to determine the source of spills and we appreciate any assistance we get from the public.

**Bruce Dawson**  
Executive Director  
Regional Services



## Catching the culprits: case study

Williamstown Bay and River Cruises was successfully prosecuted as a result of investigations after a community pollution report.

The company was found to be responsible for an oil slick discovered in the Yarra downstream from Southbank. The prosecution led to a court order requiring regular auditing of the company by a marine engineer to prevent any future bilge water contamination.



### Merri-Moomba pollution solution project

This project aims to revegetate creek banks in the Moomba Park section of Merri Creek. It is being implemented in conjunction with a school and local community education plan on stormwater pollution.



### Forensic chemistry: the key to finding the source

Often a key to finding the source of a spill is EPA's forensic chemistry capacity – by fingerprinting oils and other materials we are often able to match them with samples from a source, giving us the evidence we need to take action.

We achieved National Association of Testing Authorities accreditation for this work, which gives us independent verification that, when it comes to analysing petroleum spillages in the environment, our methodology is sound.

EPA's Environmental Chemistry staff developed the methodology and, following external peer review, received the accreditation.



### Our own environmental watchdogs

An Environmental Management System (EMS) is used to identify, manage and reduce an organisation's impact on the environment. The members of our internal environment committee who oversee our EMS are known as the Green Stars. These volunteers monitor the impact of our various operations and activities on the environment and drive our carbon neutral strategy and other resource efficiency programs.

This year, the Green Stars helped us reduce our water use by 30 per cent compared to the previous year. This was achieved through a range of initiatives, including installing water-efficient showerheads and flow restrictors on taps; putting in a rainwater tank at our Dandenong office; and by improving water efficiency at the cogeneration plant that provides air conditioning and hot water to the Centre for Environmental Science at Macleod.

### Diesel spill results in prosecution

About 8000 litres of diesel entered the stormwater system and travelled to a man-made wetland after problems during repair work at an Optus Networks depot. The problems arose when contractors were replacing a back-up generator at the Campbellfield depot in 2004. The leaked diesel travelled 1.5km through the stormwater system to a retarding basin. EPA was among several authorities responding to the emergency, with Melbourne Water undertaking the clean-up.

The subsequent investigation revealed a range of shortcomings in operations, procedures and training at the companies that contributed to the incident: Optus Networks and Exhaust Control Industries. EPA prosecuted the companies, resulting in a court order requiring them to pay \$45,000 (\$30,000 Optus Networks, \$15,000 Exhaust Control Industries) to the Merri Creek Management Committee. This money is to be used to revegetate the creek's banks as part of the Merri-Moomba Pollution Solution Project.

In addition, EPA required the installation of bunding (a structure that, if a spill occurs, acts as a collection point and prevents the spill running off-site), spill alarms and better procedures and training for contractors.

## Community Engagement Improvement Strategy

EPA staff are well aware that every interaction with a member of the public is an opportunity to advocate for the environment, learn about community expectations, and tap into a wealth of knowledge, that can help us in our work. Therefore, this year EPA developed a Community Engagement Improvement Strategy 2007–2010 as a guide for staff based on EPA core values and how to put these into practise. The strategy aims to:

- embed community engagement as core business
- establish a shared culture and common approach to engagement
- clarify the behaviours we need to demonstrate in all aspects of our work
- identify and prioritise our requirements for ensuring EPA has the capabilities and systems required to effectively engage
- ensure we learn from each other's community engagement experiences
- ensure an integrated approach to engagement that allows the best use and application of our resources.



# Tomorrow...

## EPA showing the way

**This year EPA made an even greater effort to lead by example, particularly in reducing carbon emissions and becoming carbon neutral. This is a natural direction for an organisation charged with environment protection. Experiencing the challenge of reducing greenhouse gases ourselves means we are better placed to offer practical support to businesses that come to us seeking advice.**

In order to work out exactly what our carbon footprint has been we developed a carbon inventory. We discovered that in 2005-06 our operations before green power and offset purchases resulted in 4509 tonnes of carbon dioxide equivalent (CO<sub>2</sub>-e) emissions.

The next step was to investigate ways of reducing these emissions or avoiding them altogether. We ran a 'turn off' campaign to raise awareness of the energy appliances use when in "standby" mode.

We replaced old computer screens with new LCD monitors. And we purchased additional green power and other offset products.

Having reduced and offset our emissions from electricity consumption, vehicles and other operations for 2005-06, we resolved to improve our carbon management approach every year and share what we do.

Our aims are to continue to find new ways to reduce our energy consumption, explain the challenges we faced and

the lessons learned, and seek feedback and suggestions for improvement.

Following a review of international best practices, we also developed Carbon Management Principles. The Carbon Management Principles reflect the approach EPA used to develop our carbon neutral strategy.

These principles give businesses a framework to approach the business risks presented by climate change in a logical way, and to ensure

improved environmental outcomes, achieve financial benefits, and build capacity to succeed in a low-carbon economy.

What we found while drafting the principles was that the concept of 'carbon neutral' is still not well defined and the market for green power and offset products is continually changing and updating.

“Experiencing the challenge of reducing greenhouse gases ourselves means we are better placed to offer practical support to businesses that come to us seeking advice.”

**Beth McLachlan**  
EMS Co-ordinator  
Lifecycle Unit

## New partnerships with business

In response to the ever-changing global approach to climate change issues, EPA has put another important strategy into place: in March 2007 we formed the Carbon Innovators Network. This provides a forum and network for business leaders and climate change experts to exchange information and help organisations strategically and practically address their carbon emissions, so that climate change can go from a business risk to a business opportunity.

Being a young network, it is still finding its feet, but already companies like Pilkington Glass and Origin Energy and organisations like the Plastics and Chemicals Industry Association (PACIA) have come on board. We are currently working to support Carbon Innovators Network members by developing methods of assisting all companies to calculate their own carbon inventories.

### Water retailer turns green champion

One of Melbourne's three retail water companies, City West Water, services the western and northern suburbs. This year, it entered into its second Sustainability Covenant with EPA. The focus for this new covenant is our shared priority of becoming carbon neutral. City West Water is also a founding member of the Carbon Innovators Network.



Source: City West Water

## Leading the way

With emission trading coming in the next few years and growing community concern around climate change, businesses are starting to understand that there are both risks and opportunities around managing carbon emissions.

Even with the best intentions, many companies find reducing their carbon emissions a daunting process. “One of the first things you discover when looking to go carbon neutral is that there’s a lot of hype out there; there are a lot of different protocols and a lot of different standards,” says EPA’s greenhouse policy officer, Kate Gavens. “It’s quite confusing.”

Kate should know. She was part of the team that developed EPA’s Carbon Management Principles, a way for business to maximise environment outcomes and business benefits in managing energy and greenhouse gas emissions. EPA used the framework to become carbon neutral itself. She now has more sympathy for companies wishing to do the same. “What we found was there were no clear overarching strategies around on how to go carbon neutral, so I can understand how others may feel overwhelmed,” she says.

In EPA’s case, the process started by collecting information. First they measured their greenhouse gas emissions and tracked their energy use. Once that groundwork

had been done, the Carbon Management Principles were used to set out objectives and processes for managing carbon emissions. “EPA GreenStars developed energy reductions targets, worked out how we can reduce or even avoid our direct emissions, then looked at how we could reduce use of energy and resources. Finally, for those things that couldn’t be changed, carbon credits were purchased to offset those residual emissions,” Kate says.

Today EPA is carbon neutral, something that makes Kate’s job easier. “When we talk to businesses about how we went carbon neutral it makes it seem like it’s achievable for them too,” she says. But the benefits aren’t only for those outside EPA. For Kate, it’s about working for a government body that is doing something positive. “I think a lot of people within EPA are very proud that we are carbon neutral and that we have taken a leadership role in managing carbon” she says. “I think a lot of people within EPA are very proud that we are carbon neutral and that we have taken such a leadership role in managing carbon,” she says.



I think a lot of people within EPA are very proud that we are carbon neutral and that we have taken a leadership role in managing carbon.

Kate Gavens  
Greenhouse Policy Officer  
Atmosphere and Noise Unit



## Pilkington Sustainability Covenant: reflecting the future

Over the past year EPA has co-signed a number of Sustainability Covenants. These are voluntary agreements that allow partners to share their experiences and develop new, creative ways of reducing their environmental impact and increasing the resource efficiency of their products and services.

One involved EPA, glassmakers Pilkington (Australia) Ltd, the Australian Industry Group and Sustainability Victoria pledging to produce, promote and facilitate the use of energy-efficient glass in Victoria, measure environmental, economic and social benefits of energy-efficient glass, continue to improve Pilkington’s on-site environmental management, and promote the benefits of a sustainable business model.

Pilkington has been making moves to expand its business, but in a sustainable fashion. The solution: production of an energy-efficient glass, which acts as an insulator, reflecting or absorbing heat.

Producing the new glass would entail greater energy use by Pilkington, but a lifecycle analysis undertaken by Pilkington with support from the covenant partners, showed this would be more than compensated for by the significant environmental benefits elsewhere – that is, in homes and buildings using the glass. In a typical house, a window lasting for 25 years would save up to 48 times the amount of energy used to make it.

It is EPA’s mission to support businesses moving to address environmental issues. Accordingly, we helped the company find the right partners for the project and assisted with their Government funding proposal.

# and the next day

## Laws that work for our future

Back when the *Environment Protection Act 1970* ('the Act') was passed, it was ground-breaking legislation. It established the EPA, then only the second environment protection authority in the world, and changed the way Victorians dealt with pollution, emissions and other environmental impacts.

Since it was introduced, the Act has undergone many changes and improvements. This year a number of major amendments were made by Parliament that will help EPA deliver for the environment in coming years.

In addition to changes to the Act, the *Environment Protection (Scheduled Premises and Exemptions) Regulations* and the *Environment Protection (Prescribed Waste) Regulations* also underwent significant change.

### Environment and Resource Efficiency Plans

For three years, EPA Victoria has been actively working with businesses to save energy and reduce greenhouse gas emissions, through the Industry Greenhouse Program. Mandatory for all EPA licence holders, the program required large sites to undertake energy audits and implement actions with a three year payback. Smaller sites were also encouraged to identify excessive energy use and implement reductions.

By the end of 2007 the program will have achieved \$38.2 million savings in annual energy costs for participating businesses and reduced greenhouse gas emissions by 1.23 million tonnes of carbon dioxide equivalent per year.

The program's success led to one of the most significant changes to the Act – the power to establish an Environment and Resource Efficiency Plans (EREP) program.

Similar in design to the Industry Greenhouse Program, EREP will require the largest industrial and commercial users of energy and water to assess their use of resources and generation of waste. They will be required to develop and implement an action plan to improve the efficiency of environmental resource use and to reduce waste disposal and report on the implementation of the plan. The scheme now applies to all businesses that use a lot of water or energy, not just those licensed by EPA. Regulations to establish EREP are being developed now.

## Painting the big picture

**Robyn Leeson belongs to the school of thought that believes everything is connected – and that includes industrial sites, the use of resources and the health of the environment.**

Therefore, as the Environment and Resource Efficiency Plans (EREP) project manager, she is trying to get companies to look at the 'big picture', to make the links between savings, waste and the use of resources. "In business, every decision can have cascading effects on everything else and EREP really encourages businesses to actually look at what those connections are and how they influence each other and the environment," she says.

EREP is a new program, due to be introduced next year, which will require Victoria's largest energy and water consumers to develop and register a plan with EPA showing how they intend to reduce their resource consumption and waste production. "It takes a holistic approach, if you like," Robyn says. "EREP is about a business looking at energy, water and waste from multiple perspectives, tracking costs and working out more effective actions to reduce their resource consumption."

The companies will report annually on how they have fared with the plans and what they have done to implement changes. Robyn's unit will provide assistance and advice to industry on the quality of their plans, giving them pointers about what will work and what won't. EPA is also able to access government departments that could provide financial assistance, technical advice and support. "Our main role will be to liaise with companies and help them assess their use of energy, water and waste, help them put their plan together, and work out how their plans can deliver real cost-savings," she says. "That's the great bonus – by making continual improvements, companies are able to achieve greater efficiencies and save money, which can offset the costs of the new investments."

So, by making Robyn's 'big picture' connections between resource use, waste and financial savings, everybody wins – the companies involved and the environment.



## The new *Environment Protection (Scheduled Premises and Exemptions) Regulations 2007*

These regulations prescribe the kinds of premises that are subject to works approval and licensing by EPA. They reflect the changes to industry management practices that have occurred over the past decade, as businesses have become more aware of protecting the environment and minimising their impact on it. They also reflect the emergence of new industries posing a threat to the environment.

## Changes to the *Environment Protection (Prescribed Waste) Regulations 1998*

The changes took effect on 1 July 2007, so for this reporting period our focus was on:

- ensuring wide consultation for the draft regulations with waste generators, treatment facilities and landfills, and
- providing clarity on classifying hazardous waste, including contaminated soils, as either hazard category A (highest hazard), B or C (lowest hazard).

To read more on any of these changes, go to [www.epa.vic.gov.au](http://www.epa.vic.gov.au)

## Licensing reform

EPA has the ability to grant licences and works approvals to industrial and waste management facilities that have the potential for significant environmental impact. These are key tools for environment protection established by the Act.

This system has served Victoria well, but opportunities have been identified for improving its operation.

To coincide with the making of the new *Environment Protection (Scheduled Premises and Exemptions) Regulations 2007* two initiatives have been introduced to improve the operation of works approvals and licences

Firstly, EPA will have the capacity to amalgamate two or more licences for different premises held by the same licensee into a single corporate licence. Licence amalgamation will only be undertaken at the request of a licensee. The single corporate licence will streamline monitoring and management processes, and give businesses flexibility to invest in environmental improvements across their whole organisation in a more cost-efficient and effective way.

Secondly, uniform reporting requirements will allow licensees to report on compliance in a single statement submitted once a year. This will move away from the different reporting requirements previously required by individual licences.

These changes, which have come about through consultation with current licensees, are designed to be administratively easier and reduce the complexity of compliance.

“Our people want to work with businesses on the things that really make a difference - major change!

Keeping minimum requirements simple leaves lots of room for more change.

Terry A'Hearn  
Director  
Sustainable Development

”



## Increased levies for prescribed industrial waste

Prescribed industrial waste (commonly called “hazardous waste”) is produced from the manufacture of goods and services we use every day. It is generated by activities such as petroleum refining, chemicals manufacture, metals smelting and vehicle manufacturing.

Recent changes to the Act allow for the introduction of increased levies for the disposal of hazardous waste to landfill. Different levies will reflect the level of hazard posed by different classes of hazardous waste. These changes are intended to accelerate the drive towards waste avoidance, reuse and recycling and lend support to programs that help industry reduce waste disposal. Revenues from the levies will be reinvested in programs that help industry avoid the generation of hazardous waste and find safe reuse alternatives to disposal.

The following table shows the increase in levies that will occur.

Prescribed industrial waste disposed to landfill	Levy as at 1 July 2007 (\$/tonne)	Levy as at 1 July 2008 (\$/tonne)
Category A	Prohibited from disposal to landfill - levy does not apply	
Category B - includes wastes from manufacturing industries and contaminated soils	130	250
Category C - includes wastes that pose a low hazard from manufacturing industries and contaminated soils	50	70
Packaged waste asbestos - levy remains as previously scheduled to encourage safe handling and disposal of asbestos	30	30

Note: Prior to 1 July 2007 all prescribed industrial waste to landfill attracted a levy of \$26 per tonne.

## Other changes to regulations, notices and partnerships

Other changes strengthen the operation of the Act. These include:

- Pollution Abatement Notices (PANs) which can now be issued as a single PAN for multiple premises of the same business;
- The introduction of new voluntary agreements between companies and EPA, known as ‘enforceable undertakings’, will outline tasks companies will carry out to make amends for infringements to the Act;
- Clean up notices can now be issued to parent or controlling companies to accept responsibility for cleaning up pollution caused by a subsidiary organisation; and
- Amendments to the Act give the Minister for Environment the power to make future regulations banning the free provision of plastic bags.

# Who we are

## Manner of establishment

EPA Victoria is established under the *Environment Protection Act 1970*. The Act defines EPA Victoria's powers, duties and functions, and provides a framework for the prevention and control of pollution on land, in water and air, and industrial noise.

## Minister

EPA Victoria is an independent statutory authority. During the reporting period the responsible Minister for EPA was the Hon John Thwaites MP, Minister for Water, Environment and Climate Change (formerly Minister for Environment and Minister for Water).

## Chairman and executive positions

During 2006-07 EPA's Executive Management Team comprised the Chairman (also CEO) and five directors. All directors occupy executive contract positions.

During 2006-07 the position of Executive Director Environmental Science was renamed Director Science and Technology.

## The Environment Protection Board

The Environment Protection Board is established under section 8 of the *Environment Protection Act 1970*.

The Board provides advice to the Minister and the Chairman on EPA administration, policies, strategic direction and corporate planning, and on national and international trends in environment protection. The role of the Board is strictly to maintain an overview of the administration and policies of the organisation. It has no direct management responsibility and plays no regulatory role.

The *Environment Protection Act 1970* provides for appointment of three Board members by the Governor-in-Council. These appointments are made on the recommendation of the Minister.

All Board members are independent, non-executive directors, appointed on a part-time basis for up to three years and are eligible for reappointment.

The Board members for the reporting period were: Bob Welsh (President), Mike Hill and Barbara McLure.

**Bob Welsh**, EPA Board President, is Chief Executive of VicSuper Pty Ltd, inaugural Chairperson of Sustainability Victoria and founding Chairperson of the Investor Group on Climate Change, Australia/New Zealand.

**Mike Hill** has two decades of close involvement with the local government sector, especially in the areas of sustainability, resource recovery, community development, consultation and engagement. He was Mayor of the former City of Brunswick and

first Mayor of Moreland City Council in 1996. Mike chairs the Victorian Local Sustainability Committee for the Environment Minister, ECO-Buy Limited, a small organisation advancing environmental procurement practice in Victoria and also the Moreland Energy Foundation.

**Barbara McLure** runs her own consulting business and works at Victoria University as Manager Regional Development. Before establishing her consulting business early in 2005, she was the Executive Director of the Western Melbourne Regional Economic Development Organisation for seven years. Passionate about the west, its people, its businesses and its capabilities, she has a strong focus on the intangibles – networks leading to relationships and information and data leading to knowledge.

EPA Board members are remunerated in accordance with the Government's guidelines for the Appointment and Remuneration of Part-time, Non-executive Directors of Statutory Bodies and Advisory Committees.

Remuneration during the reporting period was:

Board President	\$11,000
Board members	\$8,800

Five Board meetings were held between 1 July 2006 and 30 June 2007. Board member attendance at meetings is tabled below.

Board member	Attendance
Bob Welsh	5 of 5
Mike Hill	5 of 5
Barbara McLure	5 of 5



The Hon John Thwaites MP, Minister for Water, Environment and Climate Change



From left: Bob Welsh, Mike Hill and Barbara McLure

## EPA Audit Committee

The EPA Audit Committee assists EPA in maintaining good governance, including the conduct of its responsibilities for financial reporting, management of risk, maintaining a reliable system of internal controls, monitoring organisational performance and facilitating the organisation's continued ethical development.

The committee reports to the Chairman and comprises:

<b>Hugh Parkes</b>	Independent member and committee chair
<b>Megan Boston</b>	Independent member
<b>Barbara McLure</b>	Independent member
<b>Mark Payton</b>	Solicitor, EPA Victoria (internal member)

Four Audit Committee meetings were held between 1 July 2006 and 30 June 2007. Committee member attendance at meetings is tabled below.

<b>Audit Committee member</b>	<b>Attendance</b>
Hugh Parkes	4 of 4
Megan Boston	4 of 4
Barbara McLure	4 of 4
Mark Payton	4 of 4

## Executive committees

A number of EPA executive committees review and provide corporate direction on a range of issues.

The Authority Committee deals with statutory decisions such as works approvals, licences, Neighbourhood Environment Improvement Plans and Sustainability Covenants. It also decides when to prosecute entities for breaches of the *Environment Protection Act 1970*.

The People and Performance Committee addresses strategic human resource issues.

The Occupational Health and Safety Committee concentrates on strategic issues relating to health and safety matters.

The Information Management and Technology Committee provides strategic and business direction ensuring sound management of EPA's information technology assets.

The Finance Committee is concerned with EPA's financial position, as well as compliance and performance.

The Executive Management Committee's focus is the strategic direction of EPA.

The Information Management and Technology Committee provides strategic and business direction ensuring sound management of EPA's information technology assets.



The role of the Environment Protection Board is to help as a sounding board for EPA in its development of strategic direction.

**Bob Welsh**  
President Environment Protection Board



## EPA organisation chart

Minister for Environment

Environment Protection Board (Advisory)  
**President Bob Welsh, Mike Hill, Barbara McLure**

Chairman/CEO  
 and Director,  
 Waste and Water and Catchment  
**Mick Bourke**

Office of the Chairman

Solicitor

The CEO is responsible for the overall strategic direction and management of EPA. The executive, the Office of the Chairman and EPA's Solicitor support him. In the statutory role of Chairman, the position is responsible for administering the relevant provisions of the *Environment Protection Act 1970* and is advised by the Environment Protection Board. The role of Director Waste and Water and Catchment, assumed during 2006–07, is responsible for strategic direction and corporate overview of EPA water and waste programs.

Director  
 Sustainable Development  
**Terry A'Hearn**

The Sustainable Development Directorate provides overall direction for legislative development, business partnership programs and community support programs. The directorate involves working with partners, including business, other government organisations and the broader Victorian community, towards developing a sustainable Victorian environment.

Director  
 National Program  
**Chris Bell**

The Director National Program has national responsibilities including chairing the review of Australia's National Ambient Air Quality Standards and the preparation of National Water Recycling Guidelines.

Executive Director  
 Regional Services  
**Bruce Dawson**

The Regional Services Directorate has an operational focus, with specialist support in program implementation, emergency response and information systems. Regional Services plays a key role in the assessment of industry development proposals and the investigation of pollution incidents. The directorate prepares pollution clean-up strategies and provides stakeholder advice on environment protection and resource efficiency.

Director  
 Corporate Services  
**Lea Saddington**

The Corporate Services Directorate provides support for EPA business structures and processes to underpin decision making. This directorate includes financial management, information technology, marketing and information, facilities services, human resources and organisational development.

Director  
 Science and Technology  
**Stuart McConnell**

The Science and Technology Directorate provides scientific information to support EPA's decision making, investigative and strategy functions. The directorate is responsible for a range of monitoring networks assessing the condition of Victoria's air, marine and freshwater systems. The directorate is also responsible for the strategic direction and corporate overview of EPA air, noise and greenhouse programs.



**EPA VICTORIA 2007 Annual Report**  
There's a new way



This report is also available on the CD attached.

The CD contains the Annual Report, Financial Statements and Appendices saved as PDF documents.

If the CD is missing, or to obtain additional copies, please contact:

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Southbank, VIC. 3006

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\*The British thermal unit (BTU or Btu) is a unit of energy used globally in the power, steam generation and heating and air conditioning industries. Although it is in common use in these industries, in scientific use it has been replaced by the SI unit of energy, the joule (J).

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