

New South Wales Environment Protection Authority Regulatory Assurance Statement 2016–17

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NSW Environment Protection Authority Regulatory Assurance Statement 2016–17

To provide assurance that the NSW Environment Protection Authority is achieving its purpose, the EPA's independent Board reports on the agency's performance each year.

Purpose

The NSW Environment Protection Authority (EPA) protects the community and environment of NSW. Each year the EPA's independent Board prepares a Regulatory Assurance Statement to examine:

- the success of the EPA in reducing risks to human health and preventing degradation of the environment
- the level of environment protection provided by the EPA in comparison with other Australian jurisdictions
- the performance and impact of the industries the EPA regulates in reducing risks to human health and preventing degradation of the environment
- recommendations for improving both the EPA's performance and the performance of the industries it regulates.

Introduction

In carrying out its role of protecting the community and the environment of NSW, the EPA aims to:

- be the leader in protecting the air, waterways, land and health of the NSW community for the future
- partner with communities, government and business to reduce impacts on the environment
- be a protector, holding people and organisations to account through the licensing, monitoring and regulation of their interactions with the environment.

This statement assesses the EPA's performance by reporting on its management of key environmental issues in comparison with other jurisdictions, its regulatory framework and the results of internal and external reviews. Key environmental issues addressed in 2016–17 included the management of legacy contamination, air pollution, forestry harvesting, littering and waste disposal. The EPA has proactively responded to these issues by working with community, government and business stakeholders and through major initiatives and management strategies to protect people and the environment.

Everyone has an important role to play in protecting our environment. The EPA builds community awareness and works with individuals, businesses and organisations to inspire behavioural change.

The EPA prosecutes the worst offences against the environment and this was a record year. In 2016–17, the EPA completed 103 prosecutions with financial penalties totalling \$2,448,445, entered into enforceable undertakings worth \$122,000, and negotiated 111 pollution reduction programs. This was in addition to \$5,217,520 of fines imposed from

penalty notices for environmental infringements issued by the EPA and other state and local government agencies.

1. Reducing risks to human health

The EPA is focused on protecting human health and the Board noted the agency's progress through its major programs in 2016–17 which aimed to reduce exposure pathways from legacy contaminants, such as chemicals, asbestos and lead, and on air quality with programs to address air pollution, woodsmoke and petrol vapours.

Protecting the community from legacy contamination

PFAS contamination

Health consequences

The family of chemicals known as per- and poly-fluorinated alkyl substances, commonly called 'PFAS', have been used in many industrial and household products because of their fire-retardant properties. These chemicals are highly persistent, accumulate over time and are potentially toxic to humans and the environment.

Management strategies

Since February 2016, the EPA has worked to identify sites in NSW where the past use of PFAS, such as firefighting foam, may have resulted in site contamination. The EPA is delivering a strong \$8-million statewide PFAS program as well as spending an additional \$10 million from the NSW Government to address PFAS contamination from the RAAF Base Williamstown near Newcastle.

Williamstown contamination

From the 1970s to the 2000s, the Department of Defence frequently trained with and tested its firefighting systems at the RAAF Base Williamstown near Newcastle, using a water-like foam that was film-forming and contained a range of PFAS compounds. Offsite migration of PFAS has now affected an area of up to 50 square kilometres, with tests confirming contamination of groundwater, surface water, soils, vegetation, fish and seafood.

The EPA informed the Williamstown community of the contamination in September 2015 after receiving a draft report from the Department of Defence. Since then, the EPA has been leading the NSW Government's response to the contamination at Williamstown which includes drawing on expertise from:

- the NSW Chief Scientist and Engineer
- NSW Health
- Department of Primary Industries
- NSW Food Authority
- Hunter Water
- Department of Premier and Cabinet
- independent toxicology and hydrology experts.

Guided by the Williamstown Contamination Expert Panel, and as a precautionary measure, the EPA advised the community against consuming water and locally grown food based on best available, site-specific investigations. This included advice against using groundwater, bore water and surface water for drinking or cooking and avoiding consumption of home-grown or home-slaughtered produce, with seafood remaining safe to eat. Hunter Water has a reticulation program for providing safe water supply to residents in, and adjacent to, the

investigation area. Upgrade of these services is critical to reducing the community's potential exposure to contaminated water.

PFAS statewide investigation program

Following the Williamstown contamination, the EPA commenced a program to investigate the historical legacy of PFAS use in NSW. The program is focusing on sites where, in the past, PFAS chemicals may have been used in large quantities, including airports, firefighting training facilities and some industrial sites. The program identifies exposure pathways that may increase people's contact with the chemicals, such as the use of bore water and surface water and fishing sites.

The EPA provided precautionary advice on safe levels of exposure, based on a review of Food Standards Australia and New Zealand (FSANZ) health guideline values released in April 2017. To ensure greater public safety, the EPA adopted lower guideline values for exposure to PFAS than those in previous guidelines.

Using a precautionary approach, the EPA is accelerating assessment of 28 priority sites where firefighting foam was used extensively. Other sites where PFAS has also been detected include sewage treatment plants, major hazardous facilities, power stations, metal plating facilities, road tunnels and bulk-fuel storage facilities.

What are other jurisdictions doing?

The NSW EPA has led the way nationally in many aspects of the response to PFAS contamination. The EPA is working collaboratively with other Heads of EPA (HEPA) jurisdictions to develop a national PFAS Management Plan to be provided to the Meeting of Environment Ministers by the end of 2017.

Forward plans

The EPA will continue to work collaboratively with HEPA and with the national taskforce to develop a national management plan and framework.

Legacy asbestos

Health consequences

When asbestos fibres are breathed in, they may remain deep within the lungs, causing inflammation, scarring and some more serious asbestos-related diseases.

Management strategies

Between the 1950s and 1970s, Australia's largest asbestos manufacturer, James Hardie, disposed of bonded asbestos building waste at multiple sites around western Sydney, largely in the City of Parramatta. Other local government areas that may have been affected included Cumberland Council, Liverpool City, Fairfield City and Wingecaribee Shire.

The former Department of Environment, Climate Change and Water undertook an assessment of James Hardie asbestos waste disposal sites in 2010 and provided recommendations to councils on cleaning up this legacy waste.

Between August 2016 and April 2017, during investigations by of Parramatta City Council, friable asbestos was identified in the backyards of several houses in Granville. The EPA is a member of the Heads of Asbestos Coordination Authorities (HACA) and, under the auspices of HACA, is leading a full reassessment of these and other areas identified in 2010 to determine whether friable asbestos is present. This reassessment includes sampling the soil of potentially affected residential properties.

What are other jurisdictions doing?

Other Australian jurisdictions have also experienced specific issues with legacy asbestos contamination in 2016–17, including South Australia and Victoria.

Forward plans

On a broader scale, the EPA is working to better identify the barriers and drivers around asbestos management and disposal. This includes financial, economic and behavioural analysis which is expected to result in a range of policy, program and regulatory recommendations. Proposed initiatives will make it easier and cheaper for residents to dispose of household quantities of asbestos generated during renovations and will also help deter commercial operators from doing the wrong thing with larger quantities of asbestos, generally as part of construction and demolition works.

The EPA has overseen the development of a multi-agency Asbestos Awareness Training Program, which will assist in the implementation of the NSW Asbestos Blueprint. The program aims to increase the awareness of asbestos in emergency situations and empower participants to assess and minimise the risks of asbestos to emergency response personnel as well as the community. The EPA will provide the training to staff across a number of agencies from late 2017.

Lead from industry

Health consequences

While people of all ages may be harmed by exposure to lead, the risks are greatest for pregnant women, infants and children five years and younger. Lead can harm many organs and bodily functions with elevated blood-lead levels giving rise to such harmful effects as anaemia, kidney problems and neurological or developmental effects, particularly in children.

Management strategies

NSW lead awareness campaign

The EPA is developing its lead awareness campaign and building on current strategies and actions arising from existing lead management responses in Broken Hill, Newcastle and Port Kembla. These initiatives include a series of lead awareness fact sheets, developed in consultation with the Lead Education and Abatement Design Group, as part of a statewide lead awareness campaign. The lead initiatives were released in May 2016 and are available on the EPA's website. They have also been promoted through local councils, childcare centres and major hardware stores across NSW.

More recently, the EPA has committed \$300,000 to a targeted lead awareness campaign with a specific focus on raising awareness about lead safety among home renovators and gardening enthusiasts.

Broken Hill Environmental Lead Program

The Broken Hill Environmental Lead Program commenced in 2015 in response to elevated blood-lead levels in children under the age of five in areas near mining activity. The program focuses on stakeholder engagement, education, lead remediation, research and monitoring.

Since its commencement, the program has achieved substantial outcomes with remediation of public spaces such as playgrounds and in homes where children were identified as having elevated lead levels, as well as a program of prenatal home assessments to identify any potential need for remediation.

In October 2016, LeadSmart Broken Hill was launched to raise awareness about the lead issue in the mining city. This included a television campaign and the use of social and other media, brochures, fact sheets and posters, recipes and educational tools.

Monitoring children's blood-lead levels enables those with high results to be included in programs to assess sources and pathways of lead exposure within their homes. Results in 2016–17 show that the program has successfully improved community outreach with a 5% increase in the number of children presenting for testing and a decrease in the number of children with blood-lead levels over recommended exposure thresholds. LeadSmart surveys show an increase in community awareness of the lead issue, including tips on how to reduce exposure.

Pasminco lead smelter legacy

A legacy of the many years of operation of the Pasminco smelter near Lake Macquarie was the lead contamination detected at the site and on about 2000 properties in the surrounding suburbs of Boolaroo, Argenton and Speers Point. Following the company's entry into voluntary administration in 2001, the EPA declared the Pasminco site to be significantly contaminated under the *Contaminated Land Management Act 1997* and issued a management order to the administrator to clean up the site. While the EPA was successful in having the smelter site remediated under the management order and some off-site work done under the Lead Abatement Strategy, the administrator was not legally responsible for off-site work.

In 2014, the EPA established and chaired the Pasminco Lead Expert Working Group to review the effectiveness of the Lead Abatement Strategy and other remediation activities relating to widespread urban lead contamination from the former smelter. The working group consisted of representatives from the EPA, NSW Health, Lake Macquarie City Council, an EPA-accredited auditor and two academics. The EPA also established the Lake Macquarie Lead Community Reference Group to provide a link between communities in the northern Lake Macquarie region and the working group.

In December 2016, the working group delivered its report to the EPA, *Managing Residual Lead Contamination in North Lake Macquarie*, which recommended a range of initiatives including:

- planning and development requirements specific to contamination management and reducing the long-term risk posed by lead contamination in North Lake Macquarie
- establishment and operation of a statewide Lead Strategy Group which would, among other things, handle lead inquiries from the public and investigate referrals which are not captured by the EPA's regulatory framework.

Port Kembla heavy metal contamination

Heavy metal contamination, including lead, is present in roof dust and soils around the Port Kembla area. Sources of lead contamination have included the Port Kembla industrial complex, motor vehicle (leaded petrol) emissions and lead-based paints. A working group comprising the EPA, NSW Health and Wollongong City Council has been meeting regularly to help prepare information and guide actions to manage lead contamination in the Wollongong and Port Kembla areas.

The EPA has kept the local working group informed of current lead management strategies and actions that have included a range of information products on lead and lead management developed with the Lead Education and Abatement Design Group as part of the NSW-wide lead awareness campaign.

What are other jurisdictions doing?

The LeadSmart project has been able to use learnings from the Port Pirie Targeted Lead Abatement Program in South Australia. The literature review for the Pasminco Lead Expert Working Group's report, *Managing Residual Lead Contamination in North Lake Macquarie*, involved the EPA commissioning the University of Queensland to investigate best practices to manage lead and associated human exposure, including in the United States and Canada. The literature review informed the recommendations of the Lead Expert Working Group.

Forward plans

The LeadSmart program continues to undertake further projects to remediate lead-contaminated public land as prioritised through a risk assessment matrix developed by the program. The results of face-to-face surveys with the community will be used to guide the development of the next stage of the program.

The EPA is working with the Lake Macquarie Lead Community Reference Group and other agencies to implement the recommendations of the Pasminco Lead Expert Working Group.

The Port Kembla Working Group has recently received funding for the EPA to engage an independent expert to review published environmental literature on heavy metal contamination in Wollongong–Port Kembla and measures to manage human exposure and prevent health risks. This report is intended to provide an evidence base to guide future decision-making and identify any gaps in current knowledge.

Air quality

Air pollutants

Health consequences

Air pollutants can affect the health of people with existing respiratory and cardiovascular problems and increase the risk of chronic respiratory and cardiovascular disease.

Management strategies

The EPA and Office of Environment and Heritage are leading the development of a 10-year Clean Air for NSW Strategy on behalf of the government. The strategy is being developed with input from the Government's Interagency Air Quality Taskforce. Clean Air for NSW will set the framework for improving NSW air quality over the next decade by presenting a set of effective, feasible actions that will target the issues of greatest health concern and ensure the greatest health gains.

From October 2016 to January 2017, the EPA released the *Clean Air for NSW Consultation Paper* for public comment. The paper outlined the Government's proposed approach and a list of potential actions to meet its goal of improving air quality across NSW over the next 10 years. The EPA received 133 separate stakeholder submissions and over 1100 campaign emails on the proposed actions in Clean Air for NSW.

As part of the consultation process, the EPA held a Clean Air Summit on 27 June 2017 with over 300 stakeholders from across community, industry, academia, government, environmental groups and local government attending. Improving NSW air quality was discussed at the summit under the major themes of air quality and health, air quality monitoring, the clean air metric, woodsmoke, hazard reduction burning, transport and land-use planning, industry best practice and innovation. Actions under the Clean Air for NSW Strategy will generally relate back to these themes.

What are other jurisdictions doing?

The NSW EPA led moves to vary the *National Environment Protection (Ambient Air Quality) Measure* in February 2016 that saw Australia adopt some of the strictest air quality reporting standards for particles in the world. These included for fine particles (PM_{2.5}) as well as coarse particles (PM₁₀) with an annual average standard of 25 micrograms per cubic metre set. The national standards for fine particles are more health-protective than World Health Organization Guidelines and the most stringent in the world. A national review of ambient air pollutant reporting standards for ozone, nitrogen dioxide and sulfur dioxide is underway, led by Victoria.

Since January 2016, the Commonwealth Government, rather than NSW, has been responsible for regulating the fuel used by cruise ships in Sydney Harbour. However, in response to concerns about air quality by residents living near the White Bay Cruise Terminal, the EPA brokered a voluntary agreement from the cruise shipping industry to continue to use low-sulfur fuel in cruise ships at berth as previously required by NSW regulations. The EPA's investigations over this period showed good rates of compliance.

In December 2016, the Australian Maritime Safety Authority announced future new requirements for cruise ships to use low-sulfur fuel while at berth in Sydney Harbour.

Future plans

The finalised Clean Air for NSW Strategy is currently scheduled for Government consideration in early 2018.

Woodsmoke

Health consequences

Woodsmoke contains noxious gases (including carbon monoxide, oxides of nitrogen and a range of organic compounds, some of which are toxic or carcinogenic) as well as fine particles, which can go deep into the lungs.

Management strategies

The Clean Air Regulation requires all new woodheaters offered for sale in NSW to meet the national woodheater standards of 55% efficiency and maximum emissions of 2.5 grams of particles per kilogram of wood burnt. From 1 September 2019, more stringent standards of 50% efficiency and 1.5 grams of particles per kilogram of wood will apply. The EPA undertook a compliance audit program of woodheater retailers and manufacturers in NSW between April and June 2017 to ensure that new appliances offered for sale were complying with the new national standards adopted in 2016.

The EPA completed 30 audits of businesses representing all major manufacturers and distributors and wholesalers of woodheaters in NSW, as well as retailers in NSW metro and main NSW regions. A total of 389 appliances were audited covering over 70% of all woodheater brands and models sold in NSW. Audit results indicated that, while most of the heaters currently sold in NSW are certified as complying with the new emission and efficiency standards, there were issues relating to the permanence and visibility of some labelling and the absence of advice to 'burn only hardwood'. The EPA is working closely with the Australian Home Heating Association to address these issues.

The EPA is undertaking a precautionary advocacy in its approach to woodsmoke which aims to make people more aware and to motivate them to take action on woodsmoke by raising their awareness about its harm and providing guidance on how to minimise smoke from their heaters. The EPA has developed a package of educational materials to communicate the message that there is no such thing as 'good smoke'.

The EPA has provided funding to Singleton and Muswellbrook local councils where there is a high use of wood-burning stoves to undertake education, woodheater replacement and enforcement programs in 2015–16 and 2016–17.

What are other jurisdictions doing?

Other Australian jurisdictions (the ACT and South Australia) have either adopted or are in the process of adopting the national wood heater emission and efficiency standards. They are also developing educational resources to raise awareness about the impacts of woodsmoke and better operation of wood heaters.

Future plans

Based on recommendations of social research undertaken by the EPA in the Upper Hunter, the EPA has developed a new package of educational materials to raise awareness about woodsmoke impacts on people's health and the environment and will trial this package in two Upper Hunter regional centres, Singleton and Muswellbrook, in 2017.

Petrol vapours

Health consequences

Petrol vapours emitted from service stations contain volatile organic compounds which contribute to the impacts of ground-level ozone or photochemical smog. Smog is associated with chronic health impacts, such as respiratory illnesses and asthma. Volatile organic compounds also contain air toxics, including benzene, toluene and xylene, which are known carcinogens. Leaking underground petroleum storage is a source of soil, groundwater and surface water contamination.

Management strategies

Ongoing monitoring by the EPA helps to ensure operators in the fuel industry are complying with regulations associated with the management of underground fuel storages. The EPA provides local councils with tools to assess the risk of fuel storage to human health and the environment and evaluate environmental liabilities that current and planned operations may pose for land uses.

In 2016–17, the EPA inspected 45 service stations, depots and other fuel-handling and dispensing sites across four local government areas in northern NSW. Compliance levels were found to be lower at non-metropolitan sites, averaging 60%. However, after inspection and follow-up advice, compliance for large sites improved to over 80%. Small sites (comprising off-highway retail service stations and general stores) are lagging due to the high costs of refurbishment. In such cases, the EPA provides advice on risk management strategies to operators.

Mandatory vapour recovery equipment at service stations can help prevent vapours from leaking into the air. The EPA has implemented a staged approach to managing greater vapour recovery at service stations. Initially this was aimed at the installation of vapour recovery control equipment which captures displaced vapours from storage tanks when tankers deliver fuel to service stations. The second stage focused on capturing displaced vapours at the petrol bowser while motorists refuel.

After implementing these stages, the EPA transitioned regulatory responsibility for vapour recovery to local councils in January 2017 under the Protection of the Environment Operations (Clean Air) Regulation 2010.

What are other jurisdictions doing?

NSW is the first environment protection agency in Australia to mandate vapour recovery when petrol is delivered by tankers to service stations and at the petrol bowser. Other states are using local government planning approvals to mandate vapour recovery at the bowser.

Future plans

Regulatory responsibility for the Protection of the Environment Operations (Underground Petroleum Storage System) Regulation 2014 will be transferred to councils in September 2019. To facilitate this, the EPA is actively involved with training and knowledge transfer through development of a comprehensive and up-to-date body of guidance for use by regulators and the industry. The EPA is also working with industry to ensure a greater level of awareness of the environmental risks and commercial liabilities associated with poor practice.

2. Reducing environmental degradation

Improving the sustainability of native forestry

Environmental consequences

Unrestricted harvesting of native forests can impact soils, water, threatened plants and animals.

Management strategies

In 2016–17, the EPA developed and published a series of koala and threatened ecological community maps, a first for Australia. The maps will provide more certainty when monitoring forestry industry performance and identifying environmentally sensitive locations. The EPA has worked with industry to establish a Memorandum of Understanding with the Forestry Corporation of NSW for immediate implementation of the threatened ecological community mapping.

The EPA provided a significant contribution into the Natural Resource Commission's independent review of the Coastal Integrated Forestry Operations Approval (IFOA). The EPA has been involved in the legal drafting of the draft Coastal IFOA, supported the Coastal IFOA public consultation process and worked with Parliamentary Counsel in the preparation of new integrated native forestry legislation.

The EPA assessed the compliance of all high-risk private and crown native forestry operations with code and licence conditions and found that most of these met the requirements for protecting soils, water and threatened plants and animals. The EPA requested follow-up actions by the Forestry Corporation and private landholders to deal with non-compliant aspects of some operations, including poor selection and protection of habitat trees during logging and inadequate drainage on roads and snigging tracks.

The EPA conducted upfront risk assessments on planned or active logging operations, assigning a level of risk by weighing environmental, public interest and past operator performance criteria. Through this process, the EPA risk-assessed 300 native forestry operations, with 14 categorised as high-risk and needing greater regulatory scrutiny.

What are other jurisdictions doing?

The NSW EPA is the only environment protection agency in Australia that regulates forestry. In other states, native forestry operations are regulated by industry agencies and, in the case of Tasmania, an independent statutory body – the Forest Practices Authority. The mapping of koala habitat and threatened species ecological communities is a first for Australia.

Future plans

The NSW Government remains on track to have a new native forestry regulatory framework in place by 2019.

Reducing litter, illegal dumping and waste

Litter

Environmental consequences

Litter pollutes ecosystems, waterways and built environments. Container litter makes up 44% of all litter in the state and costs more than \$180 million to manage and clean up. Plastic litter in marine environments ends up in the seafood consumed by the community through the ingestion of microplastics by sea life.

Management strategies

The volume of litter in NSW is currently on track to achieve the Premier's Priority of a 40% reduction by 2020. There has been a 19% reduction in litter volume from the baseline year of 2013–14 and an 18% reduction in the number of littered items. The target is ambitious and will require continued momentum and effort to achieve.

There has been a significant take-up by the community of the Report to EPA system about littering from vehicles. This has been driven by the *Hey Tosser!* statewide litter campaign which asks people to 'report a tosser'.

In 2016–17:

- Report to EPA received 11,244 new registrations from community members wanting to report littering from a vehicle, bringing the total to 24,389
- 14,634 littering reports were received from the community, an increase of 19.3% from the previous year's 12,247
- 10,000 fines were issued for this offence, up from 8617 in 2015–16.

In 2016–17, the EPA coordinated what is thought to be the largest ever statewide integrated litter education and enforcement campaign. For four weeks in March–April, *Hey Tosser!* advertising worth \$1.4 million appeared across the state. It reminded people to 'put it in the bin' and to 'report a tosser'. Four out of five adults in NSW now remember the campaign – a significantly high recall.

Over 40% of NSW councils, covering 60% of the NSW population, participated in the campaign through enforcement actions in their local areas. In other firsts, the EPA partnered with state agencies and leading businesses to significantly extend the reach of the *Hey Tosser!* campaign with McDonalds and Woolworths, as well as Transport for NSW, Service NSW and Roads and Maritime Services, spreading the message.

At the same time, the Minister for the Environment launched the first of 40 bottles with GPS trackers into waterways in NSW to let litter tell its own story of where it travels once it is in the environment. The bottles travelled a collective 280 kilometres over a month, generating over 200 media mentions, including radio, print and TV. A short video of the bottles' journeys can be seen on the EPA's YouTube channel.

By June 2017, the EPA had provided \$5.94 million to 157 local council and community litter prevention projects since the first grants were awarded in 2013–14. The average litter reduction achieved by councils for completed projects in local litter hotspots was 60%, as measured through the EPA's Local Litter Check.

The EPA is the lead agency for developing and implementing Return and Earn, the NSW container deposit scheme, which is a key initiative for the Government to meet the Premier's

Priority for litter. More than half of the collection points in the Return and Earn scheme will be automated using banks of two or four reverse-vending machines and with over 800 machines in total.

The EPA delivered key milestones for implementation of the scheme which included:

- putting in place the legislation to establish the scheme – the *Waste Avoidance and Resource Recovery (Container Deposit Scheme) Amendment Act 2016* commenced on 17 November 2016 and supporting regulations were made in March 2017
- establishing the Ministerial Advisory Committee to advise the Minister for the Environment on the scheme
- completing the process to select the Scheme Coordinator and the Network Operators to administer and operate the scheme by competitive tender by July 2017.

What are other jurisdictions doing?

South Australia has an existing container deposit scheme, although the extensive use of automation and container collection technology planned for NSW will be a first for Australia. Queensland has pledged to introduce a container deposit scheme in 2018, as has the ACT.

A system for community reporting of littering from vehicles is live in five other states: Queensland, Victoria, Western Australia, Tasmania and South Australia. South Australia's system came online in 2016–17.

Forward plans

Thirty-two litter prevention projects are underway with results to be reported in 2017–18. A total of \$2.5 million will be offered to councils for litter prevention grants in 2017–18 with another \$500,000 available for community litter prevention projects. In total, a further \$5.5 million is available to councils and community groups under the extension of the *Waste Less, Recycle More* initiative to 2021.

The *Hey Tosser!* campaign has been evaluated and is being reinvigorated for 2017–18, with the single largest splash to date, worth \$1.7 million, to go live for seven weeks in March–April 2018.

Return and Earn is on track to commence in December 2017 with statewide advertising beginning in early November.

Illegal dumping

Environmental and community consequences

The large-scale illegal dumping of waste can have significant impacts on local environments and communities. It imposes costs on residents, businesses, councils, public land managers and the NSW Government and also undermines legitimate waste recycling and disposal businesses by avoiding the costs of lawful processing and disposal of waste, including the waste levy, and so distorting the market.

Illegally dumped waste can contaminate and degrade land and plant and animal habitats, pollute waterways and pose a fire risk. Dumped waste can affect human health, especially where it contains chemicals or asbestos. Recyclable resources, such as white goods, tyres and green waste, are lost to dumping. Waste dumping lowers land values, undermines recycling businesses and is costly to clean up. Over 1 in 10 NSW councils advise that they spend \$500,000 or more on clean-up and enforcement activities associated with the problem.

The EPA's [research on illegal dumping](#) highlights that one-third of people surveyed admitted to illegal dumping in the past 12 months. While there is no typical dumper, it is not confined to one demographic and most people understand that dumping is illegal. It is a growing

problem with an extent that is hard to determine. The EPA has found, however, that large-scale illegal landfilling is usually done by complex, organised networks.

Apart from the large-scale landfilling, the research found that most illegal dumping involves the improper disposal of household waste, such as furniture, mattresses, garden waste and used white goods, and that the waste is dumped on kerbsides and in bushland.

A wide range of potentially harmful products used in our homes require special collection and treatment and these can also be illegally dumped. These 'problem toxic wastes' include leftover or unwanted cleaning products, paint, pool and garden products, gas bottles, batteries, smoke detectors and oils.

Management strategies

Waste regulatory activity

The EPA conducted six enforcement campaigns targeting waste offences and illegal dumping this year. The campaigns focused on asbestos management, use of the WasteLocate tracking system and dust management. The EPA progressed 43 investigations with a view to prosecution into illegal dumping and waste-related offences. It completed 20 prosecutions for waste related offences, resulting in court-imposed financial penalties of about \$800,000. The EPA also issued 44 penalty notices, with fines of \$423,250, for land pollution and waste offences, including three specifically relating to asbestos and hazardous chemicals. A further 136 clean-up notices and 37 prevention notices were issued for a range of pollution incidents, including those involving waste.

The EPA has powers to install GPS devices on vehicles to track waste movements and deter illegal dumping with penalties of up to two years' jail for dumpers convicted within five years of a previous waste conviction and up to 18 months for those who knowingly provide false or misleading information about waste.

All licensed waste facilities must now have a weighbridge and are required to report on all the waste that enters and leaves the site through the online WasteLocate reporting portal which monitors the transport and management of [waste tyres](#) and [asbestos waste](#) within NSW.

Waste programs

In 2016–17, the Government's *Waste Less, Recycle More* initiative:

- implemented a statewide multi-faceted approach to combat illegal dumping, using the first NSW Illegal Dumping Strategy
- provided \$2.21 million in funding to support five Regional Illegal Dumping Squads, covering councils across western and inner-southern Sydney, the South Coast, ACT/NSW cross-border and the Hunter–Central Coast
- provided \$1.89 million to support local government, public land managers, charitable recyclers and local Aboriginal land councils to implement 34 projects to clean up, combat and prevent illegal dumping
- funded the online illegal dumping reporting tool RIDOnline, which allows 24-hour reporting of illegal dumping with more than 32,500 incidents notified by the community since its launch in September 2015 and over 950 registered users
- conducted social research to better understand illegal dumping behaviour and improve the targeting of campaigns to change behaviour.

Three rounds of the Aboriginal Land Clean-Up and Prevention Program for Aboriginal land councils has seen a total of \$750,544 awarded for 21 projects. Four rounds of the Clean-up and Prevention Program for public land managers have also been awarded, with a total of over \$5.4 million to fund 86 projects.

A total of \$56,000 in grant funding was recently awarded to charities through the Reducing Illegal Dumping on Charitable Recyclers Program to install infrastructure such as signage, surveillance and lighting to prevent ‘goodwill’ dumping of household items outside shops and donation bins. Signage for charity bins and shopfronts is also available to charities to prevent illegal dumping, with over 3000 sticker signs distributed so far.

The Community Recycling Centre (CRC) and Household Chemical CleanOut programs have continued to significantly improve the community’s access to appropriate disposal and recycling services with 3014 tonnes of potentially hazardous household waste collected in 2016–17, a 140% increase over the past five years.

This year 26 new CRCs opened, bringing the total in operation to 60 and a record 1167 tonnes of problem wastes collected, double the amount in 2015–16.

The Household Chemical CleanOut Program held 122 collection days and recycled and/or disposed of 1847 tonnes of problem waste.

What are other jurisdictions doing?

The NSW EPA’s penalty notice amounts for illegal dumping are now Australia’s highest, with fines of up to \$15,000 for corporations and \$7500 for individuals. The new laws, including a prison sentence of up to two years for repeat offenders, support this.

Forward plans

Extension of the *Waste Less, Recycle More* initiative for another four years will inject \$57 million into household problem waste programs, including \$3 million for Community Recycling Centre infrastructure grants in locations not currently served by a CRC.

Another \$4 million will go to Illegal dumping clean-up and engagement programs. The EPA, local councils and public land managers are being encouraged to adopt an integrated approach to combatting dumping, including a strong emphasis on community education, infrastructure and targeted enforcement. Public consultation on a draft NSW Illegal Dumping Strategy for 2017–20 occurred this year with finalisation expected in 2017–18.

In a further crackdown on illegal dumping, the EPA is developing a Waste Crime Taskforce with dedicated, experienced investigation and analytical staff to focus on more complex, significant and hazardous dumping activities.

Interstate transport of waste

Environmental consequences

The EPA estimates that 830,000 tonnes of waste was transported from NSW to Queensland for disposal in 2016-17, believed to be about 5–7% of the total waste generated in NSW that period and seen as a cost-saving measure by some operators.

Management strategies

The EPA is leading the largest transformation of waste management in Australia with the investment of \$802 million over nine years under the *Waste Less, Recycle More* initiative. This investment is building local capacity to manage waste, increase recycling and reduce the unnecessary transportation of waste for disposal.

To complement this investment, the government is introducing regulatory changes to provide better tools to regulate the waste industry.

The changes include amendments to waste regulations to improve practices and the recovery of recyclable materials at licensed facilities. *Waste Less, Recycle More* aims to support the diversion of 75% of waste from landfill, increase recycling, reduce litter and combat illegal dumping.

Investment under *Waste Less, Recycle More* supports the local recycling and resource recovery industry but the Board notes that transport of waste to other states, such as Queensland, can undermine the viability of the responsible waste industries in NSW.

What are other jurisdictions doing?

While waste has always moved between the states and territories, there has been a dramatic increase over the past five years in its transport from Sydney to south-east Queensland (mainly in the form of construction waste and soils). The removal by the Queensland Government of its waste levy in 2012 led to an immediate drop in that state's recycling rate which has not recovered and encouraged large amounts of NSW waste to be moved to Queensland's levy-free landfills.

The interstate transport of waste is not just a NSW problem. The Australian Constitution requires that trade between the states must be absolutely free. The EPA understands that there are also substantial waste movements between:

- the ACT and NSW
- Victoria and Queensland
- Victoria and South Australia.

Forward plans

A national or cross-jurisdictional approach is necessary to ensure consistent management of waste across state and territory boundaries while promoting the recovery of materials and reducing waste sent to landfill.

South Australia is chairing a Heads of Environment Protection Authorities (HEPA) subcommittee called the National Waste Working Group, which is considering an array of matters to improve waste management across the country. Approaches include producing energy from waste, an interjurisdictional waste staff exchange program, as well as nationally consistent recycling terminology and data, beneficial application of waste to land, waste levies and waste transportation and disposal.

HEPA is aiming to identify options to be put before the national meeting of Environment Ministers in December 2017.

Waste stockpiling

Environmental consequences

The EPA regulates NSW waste facilities that recycle, process and store waste materials, including paper, plastic, cardboard, tyres and scrap metal. These facilities pose potential fire risks as they store large quantities of flammable material. Waste facility fires can have significant impacts on human health and the environment with air pollution from black smoke and small air particles affecting local communities and vulnerable people with respiratory conditions. These impacts may last for significant periods as waste facility fires are challenging to fight and extinguish.

Management strategies

To reduce risks, waste facilities that store more than 1000 tonnes of waste or process more than 6000 tonnes per year within the areas of Sydney and the Illawarra, Hunter and North Coast are required to hold an environment protection licence.

The EPA imposes strict licence conditions to regulate waste quantities and their height and storage. All licensees are required to have a Pollution Incident Response Management Plan to deal with potential incidents, including fires.

Facilities that pose a higher fire risk also need to have in place specific fire management plans and firefighting equipment. Waste tyre facilities are required to store waste tyres in accordance with the NSW Fire and Rescue guideline for the bulk storage of rubber tyres.

The EPA actively regulates waste facilities through regular inspections to ensure compliance with licence conditions. In addition to licensing, the waste levy framework penalises facilities which exceed the licensed authorised amounts or do not process waste materials within a 12-month period. These provisions are in place to provide incentives to manage the quantity of waste material stored.

What are other jurisdictions doing?

The NSW EPA, along with South Australia, has strong fines for stockpiling potentially flammable materials. A fire at the Coolaroo SKM Recycling facility in Victoria in 2017, which forced residents to evacuate homes and had a severe impact on air quality, has highlighted the risks associated with stockpiling plastic, cardboard and paper. Recycling industry representatives noted that similar fires would not occur in NSW or South Australia, where companies face stiff fines for stockpiling potentially flammable materials.

Forward plans

The EPA will undertake further targeted inspections with NSW Fire and Rescue of sites that pose a high risk of fire due to the storage of combustible waste materials and take strong regulatory action to minimise the risks.

3. Industry performance

Environment protection licensees

The EPA's environment protection licensees have continued to report a high level of compliance over the past several years with 99.53% of licence conditions met and 99.6% of licences assessed under the risk-based licensing framework.

The EPA carries out regular inspections to assess whether industries are complying with their licences. In addition, the EPA's specialist audit team conducted 24 compliance audits at mines (dams at mines), power generators (coal ash dams), a waste incinerator, a pharmaceutical manufacturer, a steel manufacturer and a composting facility. An assessment of each licensee's Pollution Incident Response Management Plan led to these licensees taking 230 actions to improve their environmental performance.

Pollution reduction programs (PRPs) enable the EPA to require licensees to undertake works to improve environmental performance. This year the EPA negotiated 111 PRPs (with a value of over \$133 million) along with 94 environmental improvement and other programs. Sydney Water alone committed \$75 million to programs which address water quality in the Parramatta and Lane Cove rivers, Wolli Creek and coastal waters.

Two enforceable undertakings were entered into, requiring parties to undertake corrective actions and make monetary contributions totalling \$122,000. These were with Bengalla Mining Company Pty Ltd for a water pollution incident at Muswellbrook and Hurd Haulage for transport of concrete by-products.

Rutherford Industrial Estate air quality

The Rutherford Air Quality Liaison Committee was established in 2011 to provide a direct point of contact between the local community and the EPA on matters related to air quality at Rutherford Industrial Estate near Newcastle, including odour and air quality monitoring.

Between 2008 and 2015, the EPA received over 700 complaints from residents in areas surrounding the industrial estate. In response to this community concern, the EPA conducted

odour investigations and sampling, resulting in the installation of extra odour controls at a number of industries. Odour modelling and olfactometry studies were also conducted in consultation with the liaison committee. Following this, odour complaints significantly reduced during 2016.

Radiation industry

The EPA administers radiation user and management licences, accredits consulting radiation experts and radiation security assessors, and conducts compliance and enforcement programs to protect the community and the environment from the harmful effects of exposure to ionising and non-ionising radiation.

The EPA investigated several incidents involving waste containing radioactive material detected at a recycling facility. This resulted in an improvement in the operating procedures at a landfill. Follow-up inspections of radiography and satellite nuclear medicine practices that were found to be non-compliant in 2016 showed that the earlier shortcomings had been addressed.

The EPA, in conjunction with the Radiation Advisory Council, published *Radiation Guideline 6: Registration requirements and industry best practice for ionising radiation apparatus used in diagnostic imaging* to assist consulting radiation experts to achieve and maintain best practice.

Power generators

NSW currently has five coal-fired power stations in operation: Bayswater, Liddell, Mt Piper, Eraring and Vales Point. The EPA specifies regulatory requirements, including for air emissions, for each facility through their individual licence. The licences set site-specific emission limits and monitoring requirements, such as the pollutants monitored, frequency of monitoring and concentration limits.

Power stations are required to monitor a range of pollutants, including nitrogen oxides, sulfur dioxide, particulate matter, fluoride, mercury, metals, hydrogen chloride and chlorine emissions.

In 2016–17, the EPA investigated claims by Environmental Justice Australia (EJA) that environmental regulation of power stations in NSW (and other Australian jurisdictions) was lax and pollutant data had been misreported to the National Pollutant Inventory (NPI). Stakeholder scrutiny of the NPI and monitoring data published by industry is acknowledged as a valuable source of information that helps to inform the EPA regulation of industry.

In response to EJA's concerns, the EPA required the power stations to provide detailed records on air emissions monitoring, load data, emission controls and plant maintenance. The information provided indicated that testing was conducted by accredited consultants in general accordance with required statutory methods. The EPA did not find any evidence of deliberate misreporting of emissions or of routine fuel blending to bias test results from the investigation:

- All power station emission load calculations reviewed by the EPA used approved methodologies to estimate and report emissions.
- Although variation in emission estimation techniques was observed, this was not a compliance issue.
- Emissions from NSW power stations are typically appreciably lower than the limits set in their environment protection licences and would comply with international requirements.

Although the review by the EPA did not identify evidence of deliberate misreporting of emission or routine fuel blending to bias test results, the EPA did find that there were inconsistencies in the licences and some discrepancies in data handling and reporting. The

EPA will continue to work with all power stations to identify and implement improved consistency in estimating emissions.

The EPA will continue to engage with the Commonwealth to assist with the independent review of the NPI program, which is underway. The EPA is actively involved in the review and continues to examine the monitoring data reported by industry.

Stakeholder engagement plays an important role in shaping the EPA's regulatory practice. EJA's ongoing attention to environmental issues is important and their focus on air quality has contributed to improved regulatory oversight.

Orica Kooragang: ammonia management improvements

The EPA has been monitoring a six-year upgrade project at the Orica facility at Kooragang. Between February and May 2017, Orica undertook a \$67-million maintenance shutdown of its Kooragang Island ammonia plant. During the restart of the plant, a relief valve, which had been serviced and tested, prematurely activated. Instead of the ammonia being vented directly to the atmosphere, as had occurred in the past, the gas was directed to one of the new flares and burnt, mitigating potential impacts to human health and the environment.

Historically, emergency release of ammonia caused by incidents at the Orica facility was discharged to the atmosphere via a number of high stacks. However an incident at the plant in 2011 caused released ammonia to come to ground with impacts on a neighbouring industrial area. In response to the incident, Orica has undertaken substantial works to improve the management of ammonia at the premises under the company's Ammonia Management Improvement Project in consultation with WorkSafe NSW and the EPA.

As a result, the EPA has formalised key improvement works as a PRP under conditions of Orica's environment protection licence. The project incorporates 12 smaller projects which focus on:

- simplifying the ammonia distribution network
- improving the integrity of ammonia feed tanks
- improving the ammonia collection and scrubbing system
- ensuring that the plant is capable of better managing large emergency releases of ammonia through the construction and operation of three ammonia flares.

4. Regulatory assurance

The EPA has a comprehensive regulatory framework which encompasses legislation, policy, education, incentives, licensing, administration, audit, investigation and compliance and enforcement action. Key themes for the EPA's regulatory framework in 2016–17 included prosecution successes, enhancing the agency's ability to make evidence and risk-based decisions, and aligning environmental impact with economic consequences.

Pursuing those who harm the environment

In December 2016, the EPA established its own Legal Services Branch. Previously all EPA legal services had been undertaken by the Legal Services Division of the Office of Environment and Heritage. The change means the EPA now has its own dedicated lawyers who are familiar with the agency's priorities and objectives and tailor their services to reflect these.

In 2016–17, the NSW EPA completed 103 prosecutions with financial penalties of \$2,448,455. The level of financial penalties was a record for the EPA.

The NSW EPA's prosecution results compare favourably with all other Australian jurisdictions. For example, the Victorian EPA has recently reported it completed 11 prosecutions in 2016–17, securing court-imposed penalties of less than \$200,000.

Of the 103 prosecutions completed by the EPA this year, 54 were for substantive offences while the other 49 were for court-elected matters where recipients of an 'on-the-spot' fines for littering elected to have the matter determined by a court instead of paying the fine.

The EPA maintained a high prosecution success rate with:

- 98% success for non-littering matters
- 84% success for littering reported to the EPA by the public.

In 2016–17, a total of 10,480 penalty notices were issued by the EPA and 6145 notices by other state or local government agencies, such as OEH and the National Parks and Wildlife Service. The total value of all penalty notices was \$5,217,520.

The largest number of fines under EPA legislation related to littering from motor vehicles, with 11,725 infringements amounting to over \$3 million in fines. This reflects the success of the EPA's programs encouraging the public to report littering from vehicles.

In responding to contaminated land, the EPA issues clean-up notices, requests site assessments, declares sites 'significantly contaminated' and enters into voluntary management arrangements for rehabilitation of the land or requires remediation under a management order. The EPA approved two new contaminated land voluntary management plans, bringing the total to 107 such plans by the end of 2016–17.

Further detail on the EPA's prosecutions, penalty notices and other regulatory activity can be found in *EPA Annual Report 2016–17*.

Risk-based licensing system

The EPA's risk-based licensing system aims to ensure that all who hold environment protection licences are regulated according to the level of risk they pose to human health and the environment. Risk-based licensing applies to the 2000 premises that hold an environment protection licence administered by the EPA.

By November 2016, the EPA had completed detailed assessments of the environmental risks at every licensed premises. These assessments were completed during site inspections in consultation with licence holders. The assessment process covered information that helped industry:

- better understand their environmental risks
- identify where they need to make operational improvements to reduce environmental risks and better protect the environment.

Since 1 July 2016, the environmental performance of licence holders has also been used to determine annual licence administrative fees. Poorer performers pay higher fees. By improving their environmental performance, licensees can reduce the annual fees they pay. This provides an ongoing economic incentive for industry regulated by the EPA to achieve better environmental outcomes.

Environmental auditing

The EPA is the first environmental regulator in Australia and the world to become a certified training provider in environmental auditing. Certification enables the EPA to train both its own compliance officers as certified environmental auditors as well as others from regulatory agencies in NSW and other states.

This training helps ensure that compliance staff in the EPA are highly skilled and consistently deliver best-practice environmental regulation. It also helps improve consistency in the way regulators across state and national jurisdictions assess industry's level of compliance.

Gas Regulation Branch

The EPA assumed responsibility in 2015 as the lead regulator for the compliance and enforcement of the conditions of approval for gas activities in NSW. Since then, comprehensive funding and resourcing and the establishment of a dedicated office in Narrabri have helped the EPA to remain on top of issues associated with gas regulation and achieve strong outcomes.

The Gas Regulation Branch conducted 84 inspections in the Narrabri area this financial year. These have included routine inspections that are part of the EPA's annual compliance program, rehabilitation inspections and inspections in response to community complaints.

The EPA attended all 10 Narrabri Community Consultative Committee meetings, which has proven invaluable for both the agency and the local community, particularly through the Narrabri Gas Project Environmental Impact Statement assessment process. The EPA has continued to demonstrate its commitment to the local community with such initiatives as exhibiting at the Narrabri Agricultural Show, speaking on local radio, demonstrating the innovative training tools it uses, consulting on policy projects and responding to community inquiries and concerns.

The Gas Regulation Branch has also focused its efforts around the AGL gas sites at Gloucester and Camden with a total of 73 and 21 inspections, respectively, during 2016–17. At Gloucester, plugging and abandoning of wells and rehabilitation has been the focus as AGL withdraws from the area with 41 of the inspections checking the compliance of rehabilitation. In addition to routine decommissioning and rehabilitation inspections at AGL Camden, the EPA also carried out several investigations, one of which led to prosecution which is currently in court.

Intelligence and Analysis Unit

The EPA established an Intelligence and Analysis Unit to collate and analyse information that is relevant to staff safety and guide operational, tactical and strategic work.

This includes examination of information from case management and licensing databases and relevant technical data, such as waste management information and sharing of information about known safety risks from other agencies, particularly NSW Police.

So far the unit has reviewed intensive agriculture, pest technicians, dangerous goods, transport, coal-fired power stations and existing information sharing networks with key government agencies.

Monetary benefits

Monetary benefits are the benefits acquired by an offender as the result of committing an offence. Since the introduction of the *Protection of the Environment Operations Act 1997*, the EPA has been able to seek court orders to recover monetary benefits when a defendant is being sentenced for an offence in the Land and Environment Court. However, this provision has not yet been tested and the EPA is currently working on how the section would be applied. Victoria's EPA has been working in close partnership with the NSW EPA on monetary benefit approaches. Other regulators are also interested in the NSW EPA's project, including the South Australian EPA, local councils and the NSW Department of Planning and Environment.

Environmental Liabilities Project

The EPA's Environmental Liabilities Project is aimed at reducing the government's future liability for the cost of remediating industrial sites.

In 2016–17, the EPA developed a strategic framework to manage future environmental liabilities in gas and waste industries by:

- carrying out an initial round of community consultation in relation to the NSW Chief Scientist's recommendations for the gas sector
- engaging with the insurance sector about environmental insurance as a potential method to manage financial risk for waste facilities
- examining legacy environmental issues in regional areas.

Load-based Licensing Scheme

The Load-based Licensing Scheme encourages cleaner industrial production through the principle that the polluter pays. Within NSW, specific commercial and industrial facilities must hold an environment protection licence administered by the EPA. The scheme requires some of these licensees to pay part of their licence fees, based on the loads of pollutants their activities release into the environment. By reducing the pollutant loads, the fees paid are also reduced, thereby providing an ongoing economic incentive to achieve better environmental outcomes than those required by legislation or licence condition.

The EPA commenced a review of the scheme in 2016–17 by releasing an [issues paper](#) which provides information about the performance of the scheme and sought stakeholders' feedback on its efficiency and effectiveness to date.

Planning

The EPA works with other government agencies, local councils, business organisations and industry associations to ensure the environment is considered early in planning and development decisions to avoid longer term environmental consequences.

In 2016–17, the EPA advised industry and planning authorities on 100 strategic planning matters, including conditions for development approvals that will reduce the impacts of coal mining on water quality.

Eight major infrastructure projects (including transport and waste management developments) were determined by the Department of Planning and Environment and the EPA's recommendations were agreed to and specified in the conditions of approval.

The EPA also consulted with stakeholders to help evaluate how the as yet untested Protection of the Environment Policies might help reduce pollution and continued to engage with the Greater Sydney Commission's future plans.

5. Evaluation of the EPA's performance

Monitoring performance

The EPA Board monitors progress against the agency's Strategic Plan. In 2016–17, the EPA Executive, Senior Management Group and EPA Board reviewed the Strategic Plan to ensure alignment with priorities.

A detailed assessment of the performance of the EPA against its *Strategic Plan 2017–21* can be found in *EPA Annual Report 2016–17*.

The EPA sets out its compliance priorities for the year in an annual compliance plan to provide transparency for industry and the broader community about EPA activities, raise community environmental awareness and encourage compliance among EPA licensees.

AELERT Modern Regulator's Improvement Tool

Every two years, the EPA assesses its strengths and weaknesses as a regulator using the Australasian Environmental Law Enforcement and Regulator's Network (AELERT) Modern Regulator's Improvement Tool. This was developed to help environmental regulators in Australia assess their performance.

In the 2017 assessment, the NSW EPA was ranked as leading in its approach to regulation and stakeholder and community engagement. The results show that the EPA's culture, leadership, strategic plan, training procedures and governance arrangements are all well-established. The EPA is developing a formal problem-solving approach and maturing in its risk-based compliance planning and quality assurance and review functions.

The NSW EPA has shared these results with other Australian jurisdictions and will discuss comparisons at the February 2018 AELERT Conference.

Contaminated land reviews

The NSW Government has commissioned four separate reviews into the management of site contamination and hazardous waste since 2014 in response to community concerns. The EPA has implemented many recommendations from these reviews, resulting in greater protection for communities and the environment. However, some recommendations require additional funding to be delivered and the Board will be recommending increased resourcing to effectively address ongoing improvement needs.

Key reviews into management of site contamination and hazardous waste are summarised below.

Review of the NSW EPA's management of contaminated sites

Professor Mark Taylor of Macquarie University was appointed by the Minister for the Environment to consider the EPA's management of PFAS contamination at Williamstown, its past management of other PFAS-contaminated sites, and its implementation of the findings of the Auditor-General's 2014 report into managing contaminated sites.

Professor Taylor's final report was released in May 2017 and indicated that:

- the EPA could have more proactively managed the Williamstown contamination in the period 2012 to 2015, but since August 2015 the EPA had been 'responsive, timely and appropriate'
- all the recommendations of the Auditor-General's report that could be assessed had been implemented in part or in full by the EPA
- the EPA could further improve the management of significantly contaminated land through the development and dissemination of additional information, such as improved documentation of procedures, better use of the EPA's website, improvements to the contaminated land management database (explained below) and enhanced performance reporting and stakeholder consultation under the *Contaminated Land Management Act 1997* (CLM Act) – all of these recommendations are under consideration.

Contaminated land database

The EPA's Contaminated Sites (EPACS) database was released as the EPA's response to recommendation 9 of the *NSW Auditor-General's Report Performance Audit (Managing Contaminated Sites)*. The Auditor-General's report recognised that there was a disconnect between existing databases that made it difficult for the EPA to readily provide information

on the sites it regulated and track progress with those sites. It was developed to have one central database to store the information provided on the public register and is currently used for:

- documenting initial site assessments and assessments conducted against the matters listed in section 12 of the CLM Act
- monitoring progress against agreed actions and milestones for declared sites
- storage of information, such as sites notified to the EPA under s.60 of the CLM Act and sites regulated by the EPA under the CLM Act
- storing information on the management class of each notified site

Most recently, the database also incorporated the site auditor database.

EPACS is currently the only EPA database able to track regulatory compliance and send automated reminders to EPA staff for any overdue or immediately upcoming requirements of approved voluntary management proposals or management orders. An upgrade of the EPACS database is currently underway and this will meet three recommendations from Professor Taylor's Stage 3 review by enabling:

- spatial mapping of sites notified and regulated under the CLM Act
- monitoring of the CLM Section's performance against target timeframes
- reporting of the CLM Section's key performance indicators.

[NRC Evaluation of the Environmental Trust CLM Program](#)

The NSW Environmental Trust has provided funding for a range of contaminated land projects since 2001. In July 2014, the Environmental Trust approved a devolved three-year grant to the EPA for its Contaminated Land Management (CLM) Program and, following this, it engaged the Natural Resources Commission (NRC) to evaluate the performance and delivery of the current and previous versions of the CLM Program.

In its final report released in May 2017, the NRC found that, while some positive outcomes had been achieved by certain subprograms, there were minimal outcomes for others. The NRC's comments and recommendations have been considered and responses provided to the Environmental Trust.

[Review of the EPA's CLM Act 1997 Procedural Guide](#)

On 30 May 2017, the Minister for the Environment appointed Professors Fell and Leeder to review the EPA's current procedural guide for officers administering the CLM Act.

Their report released in June 2017 indicated that the EPA's approach to managing contaminated sites is broadly consistent with that in other jurisdictions. The report found that both Victoria and South Australia had also conducted similar reviews and, as a result, Victoria was updating its legislation to be more prescriptive while SA was focusing on greater transparency in decision-making and the consequences of contamination discovered during urban renewal.

Professors Fell and Leeder believed the changes proposed align with considerations already in place in the NSW EPA and they noted:

'The benchmarking review indicates that there are no significant shortcomings apparent in the capabilities of the NSW regulatory system for managing contaminated sites for existing or approved land use via the Contaminated Land Management Act and that the system is effective.

'The Review Panel congratulates the EPA on the rigour and professionalism in relation to its handling of contaminated sites, noting that it compares favourably with the best Australian and international jurisdictions.'

The Fell–Leeder review made a series of recommendations aimed at improving the procedural guide and the service the EPA provides to the community and owners of legacy and newly declared contaminated sites. The EPA is currently implementing their recommendations.

Ombudsman’s review into asbestos management in NSW

The 2017 NSW Ombudsman’s Report, *Asbestos: How NSW government agencies deal with the problem*, recognised the significant gains made by NSW since an earlier 2010 Ombudsman’s report, which had led to the establishment of the Heads of Asbestos Coordination Authorities (HACA). The Ombudsman acknowledged the work by HACA in implementing the first statewide Asbestos Plan with NSW now recognised as having the nation’s best-practice approach to managing asbestos.

Outcomes will continue to be achieved with government agencies and local councils collaborating on asbestos-related issues within their own legislation and skill sets to achieve best practice in waste management, work health and safety, public health and environment protection.

The NSW Government is considering its response and recommendations that the EPA take a greater role. Additional funding would be required were that to come into effect.

Energy from waste technology: NSW Upper House Inquiry

On 6 April 2017, an Upper House Parliamentary Inquiry was established to inquire into and report on energy from waste technology in NSW. The EPA gave evidence to the inquiry and the outcomes of the review will be reported in next year’s Regulatory Assurance Statement, following an expansion of the terms of reference of the inquiry and the Committee now expected to release its findings in 2018.

ICAC review into allegations of corrupt behaviour by a RID squad officer

In August 2016, the Independent Commission Against Corruption (ICAC) held a public hearing into allegations of corrupt activity by a Western Sydney Regional Illegal Dumping (RID) squad officer (‘Operation Scania’). The NSW EPA provides funding to RID squads under *Waste Less, Recycle More*.

ICAC found that the former Western Sydney RID Squad officer engaged in seriously corrupt conduct by deliberately failing to investigate unlawful waste disposal, including asbestos dumping, in return for benefits, including cash payments and mobile telephones. ICAC’s report noted that the investigation not only exposed seriously corrupt conduct, but also revealed multiple weaknesses in the strategic oversight, management and governance systems that controlled the activities of the Western Sydney squad, creating opportunities for corrupt conduct.

The ICAC report made 15 recommendations relating to improved governance procedures, accountability and performance of RID squads. The EPA has taken the following actions to address those ICAC recommendations specific to the agency:

- In December 2016, the EPA engaged Procure Group Pty Ltd to conduct an independent audit into the governance and probity procedures of the Hunter–Central Coast and Sydney RID squads. The purpose of the audit was to review corporate governance and provide recommendations to mitigate the risk of corruption and improve corporate governance procedures. The audit identified additional measures that could be implemented for the RID program by the EPA, member councils and RID squads. These findings have been incorporated into all RID program funding agreements. Some specific

recommendations for Hunter–Central Coast and the Sydney RID squads have also been actioned.

- The EPA has incorporated ICAC’s recommendations into the funding agreements for the entire RID program and/or has actioned specific recommendations.
- The EPA will provide a submission to ICAC with an attached action plan addressing each of the recommendations.

The EPA supports the ICAC and independent audit recommendations as well as improved corporate governance and implementation of actions to mitigate the risk of corruption in the RID program.

Stakeholder survey

In 2016–17, the EPA commissioned Ipsos Australia to conduct an independent survey of key stakeholders and the community. This followed a previous stakeholder survey in 2013, commissioned not long after the EPA was reformed as an independent agency. The surveys aim to encourage stakeholders to provide feedback about the EPA and its management of environmental issues in order for the agency to continue to improve services to its stakeholders and the community.

In 2016–17, four times as many EPA stakeholders as in 2013 were surveyed and twice as many community members. Overall, the stakeholder component demonstrated that the EPA has significantly improved its perceived performance, particularly in regard to communication and the quality of its interactions and engagement with stakeholders. The greater use of community consultative committees and the EPA’s website engagement hubs was particularly valued by stakeholders, as were individual relationships and face-to-face interactions with EPA staff.

A range of performance issues identified in the previous survey were also perceived to have improved, including responsiveness, timeliness, transparency and being an effective regulator. The issue most commonly raised about the EPA’s performance in 2017 related to perceptions of inconsistency in regulatory activity between regions and rigidity in the application of regulations.

The EPA will apply the results to refine its Stakeholder Engagement Strategy and Strategic Plan to take account of the findings, promote understanding of its role and better target its communication with stakeholder groups and the community.

Staff engagement

The EPA performed well in the *NSW People Matter Employee Survey* conducted in June 2017 with higher scores in all categories compared with the whole-of-public sector results.

The EPA had a 94% response rate and, while the overall engagement index of 73% was 2% lower than the previous year, this was still above the 65% average for the whole of the public sector.

The results showed the EPA had a high level of integrity with 82–87% staff agreeing that:

- their teams strive to achieve customer and client satisfaction
- the workplace is supportive and respectful, including showing respect for individual differences
- role expectations are understood and managers listen to staff
- they are proud to work for the EPA.

A total of 79% of staff reported that they had not witnessed misconduct or wrongdoing at work compared with the sector average 62%.

Responses showed improvement from previous years' results in the areas of receiving feedback, action being taken in response to survey results, opportunities for career development and managers dealing appropriately with poorly performing employees. More respondents this time also agreed that senior managers are encouraging innovation and supporting the career advancement of women.

Areas for improvement were also indicated with only 38% of employees agreeing that change is handled well (1% less than the sector) and just over half agreeing that senior managers keep staff informed and cooperation between teams is good. The survey also showed that 10% of EPA staff had been subject to bullying, compared with a sector average of 18%.

The EPA is responding to the results by supporting the Public Service Commission's *Respect, Reflect, Reset* anti-bullying campaign and reviewing the various methods of internal communication and the delivery of training to better meet employee and organisational needs.

In addition, the Senior Management Group is participating in a high performing teams' development program.

Equity and diversity

The *Code of Ethics and Conduct* requires EPA staff to act professionally and respectfully when interacting with the public. The EPA Diversity Committee is helping to guide diversity and inclusion outcomes to ensure all staff feel safe, encouraged and supported in their work and that the workforce reflects the diversity of the wider community. The EPA Diversity Committee this year released a diversity and inclusion policy, plan and reporting framework.

The EPA is developing strategies to increase its employee diversity, which currently has the following profile:

- Women comprise 31.82% of the Executive in the EPA.
- Women comprise 53.7% of employees.
- Aboriginal and Torres Strait Islander people comprise 1.1% of employees.
- People with a disability comprise 3.8% of employees.
- People whose first language spoken as a child was not English comprise 13.1% of employees.

6. Progress against the 2015–16 Board recommendations

The EPA has delivered outstanding outcomes this year, particularly where properly resourced, to manage new and emerging human health and environmental issues.

This report provides details on the EPA's performance across PFAS incident management, gas regulation, air quality, hazardous waste, illegal dumping, pursuing environmental liabilities and regulating native forestry. The Board also notes progress reported by the EPA Stakeholder Survey, *NSW People Matter Survey* and the Diversity Committee.

The EPA opened an office in Port Macquarie with a focus on the new integrated forest licensing legislation and also in Narrabri to support the gas regulation function by providing on-the-ground support to the delivery of these outcomes.

In 2016–17, the EPA consulted on a draft amendment Regulation that would allow the agency to directly regulate the environmental impacts associated with railway rolling stock, rather than indirectly via railway system operators' licences as currently.

The EPA continues to pursue a proactive role in environmental planning with the Greater Sydney Commission and removal of plastic from our environment.

Additionally, the EPA has progressed digital strategy initiatives to improve access to EPA services, including redevelopment of the EPA website and online licensing and reporting tools.

7. Recommendations for improving EPA performance

Relocation of head office to Parramatta

The EPA is planning for an appropriate change and expected disruption to the organisation when all Sydney CBD-based staff relocate to Parramatta in the second half of 2019.

While the move will provide significant benefits and productivity from new technology and facilities and having staff together in one location, a range of transitional issues will need to be addressed. These may include high staff turnover for an extended period as people opt out of the move, an impact on morale, lower productivity, extra commuting time including for staff travelling from regional areas and a general underlying anxiety that comes with change and the unknown. All these factors impact on staff engagement, pride in the workplace and being an employer of choice – measures where the EPA currently ranks highly compared with the average for the public sector.

The Board therefore recommends that the EPA give significant attention to this matter in financial year 2017–18 and supports the already established senior executive subcommittee to consider EPA-specific needs. These include dedicating resources to development of change management and communication plans and having senior executive representation at cluster level planning and communication committees.

Contamination response

The EPA is operating in a changing environment, with greater expectations from the community about timeliness and response to issues. The community has been critical of the timeliness of Government responses to contamination issues. In response to these concerns, the Government has commissioned four separate reviews into site contamination management since 2014.

While the EPA has delivered on many of these review recommendations, the EPA Board is strongly of the view that additional funding and resources are critical to protect the community and deliver on the recommendations below.

Resourcing of contamination response

The EPA will enhance responsiveness, transparency and certainty around the management of contaminated land and improve ways to efficiently assess new notifications of contaminated land. The EPA is currently implementing 63 of the 98 recommendations from the four reviews as well as complementary actions to address illegal dumping and asbestos management and prevent future contamination.

The Board recommends that the EPA continues to respond decisively to the recommendations by:

- clearing the backlog of contaminated sites by the end of 2017 and continuing to improve business practices with more efficient assessment times, regulatory action, tracking and reporting and further development of the contaminated sites database

- working with the Department of Planning and Environment to finalise the review of the statewide planning approach to remediation of contamination, including reviewing information that should be included on section 149 planning certificates about notified sites and considering placing EPA-funded staff into clusters of councils to build regional capacity
- improving public access to information supporting open government, including the quality of, and access to, publicly available information on management of contaminated land
- reviewing contaminated land legislation and regulations against those used in other jurisdictions and international best practice to shift the onus onto the polluter or landowner to provide adequate information for EPA site assessment
- investigating whether the role and statutory responsibility of accredited site auditors should be expanded
- establishing a new independent expert technical and a scientific panel to assist in identifying emerging contamination issues and developing an environmental sampling capability within the EPA to undertake assessment and sampling of emerging contaminants
- investigating whole-of-government funding options for managing large-scale emergency clean-up and orphaned, abandoned or high-risk sites
- addressing the regulatory gaps for contamination of Commonwealth sites by continuing to work collaboratively with the Heads of EPA and the National PFAS Taskforce on the PFAS National Management Plan and National Framework and recovery of \$3.5 million from Defence for costs incurred by the EPA around testing at Williamstown.

Timeliness and community engagement

The EPA is meeting changing community expectations by being proactive and quick on releasing information back to the community. Where investigations or issues require careful consideration and adequate time to resolve, the EPA will provide updates and information about when the public may expect a response.

The Board recommends that the EPA continues to increase its strong focus on stakeholder engagement to build awareness of the agency's role across the general population by:

- improving existing communication channels and focusing on increasing opportunities for stakeholders to contribute and provide feedback
- reviewing the existing community consultative committees to ensure their effectiveness
- further developing the role and function of dedicated community outreach staff
- continued provision of training, support and development opportunities to staff to improve engagement capability and customer service
- developing an electronic stakeholder management system to improve stakeholder data retention, better understand interactions and have more targeted conversations with key stakeholders
- improved updates to public reporters of pollution.

Waste management

The EPA continues to make substantial gains in waste management in NSW under the *Waste Less, Recycle More* initiative. Significant reductions in reported litter volumes have been achieved, along with continued high rates of resource recovery.

Waste crime

The EPA Board supports the establishment of a dedicated team to tackle significant illegal dumping activities. The new EPA Waste Crime Taskforce will require a budget enhancement to properly resource this crucial initiative. In order to more quickly undertake current priority investigations, the EPA has re-prioritised existing budget and reallocated staff into the taskforce, but longer term funding will be needed to sustain this effort.

The EPA should also continue to crack down on illegal waste disposal by considering tougher penalties for certain illegal dumping offences to act as a deterrent, changes to legislation that will disrupt the business model of illegal dumpers and extending the types of waste captured by WasteLocate (the EPA's online system to monitor the transport and management of waste tyres and asbestos waste).

Long distance transport of waste

To protect the significant gains in resource recovery achieved by the NSW waste legislative and policy framework, the Board recommends that the EPA continues to work independently and as part of the national process under the Heads of EPA National Waste Working Group to determine appropriate national solutions to waste problems, including the long-haul transport of waste.

Addressing specific resource recovery problems

To address problems being experienced by resource recovery industries, particularly glass recyclers, the Board recommends the EPA work with industry to look for innovative recycling and waste disposal opportunities, such as the use of crushed recycled glass in pavements for NSW Government projects.

Asbestos

The Board notes the Ombudsman's 2017 report, *Asbestos: How NSW government agencies deal with the problem*, and recommends the EPA take a leading role for government in the coordination of efforts to ensure asbestos is properly and safely managed in NSW, pending additional resourcing required for this role.

Air quality

While NSW generally experiences good air quality by world standards, some communities at times experience elevated pollution. Further population growth, increasing population densities, climate change and increased business, transport and freight, and household activities, will place long-term pressures on air quality, particularly in areas already subject to air pollution.

To support the Government's commitment to improved air quality, the EPA Board recommends the finalisation of the Clean Air for NSW Strategy. Clear actions on improving air quality under the major themes of air quality and health, air quality monitoring, the clean air metric, woodsmoke, hazard reduction burning, transport and land-use planning, industry best practice and innovation, are supported.

The Board also supports the review of the Load-based Licensing Scheme to ensure it is efficient and effective in reducing pollutant loads on the environment.

Towards net zero emissions by 2050

The NSW Government has a target of net zero emissions by 2050. Reducing greenhouse gas emissions and using energy, water and waste more efficiently requires local and district action. The population of Greater Sydney is modelled to grow to 8 million over the next 40

years. The development of future urban structure and built form can support NSW's transition towards net zero emissions.

In response to these changes, the EPA Board supports investigation into potential regulatory mechanisms that set low-carbon, high-efficiency targets and a framework for monitoring the performance of priority urban renewal precincts and housing growth areas. Possible actions include:

- closely integrating land use with transport planning to help slow emissions growth by locating new homes near public transport and high-quality walkways and cycle paths.
- building on existing public transport connections with electric vehicle transport hubs, shared autonomous vehicles and other innovative transport technologies that reduce greenhouse emissions and levels of noise and air pollution
- designing high-efficiency homes and incorporating renewables that reduce emissions and costs, resulting in improved energy and water efficiency of buildings and less waste in urban renewal projects and infrastructure projects
- recycling local water and harvesting stormwater to create opportunities for greening public open spaces, thereby diversifying the sources of water to meet demands for drinking, irrigating open spaces, keeping waterways clean and contributing to Sydney's water quality objectives.

These actions provide benefits to the community through improved affordability, energy security and resilience to the shocks and stresses of climate change.

Forestry reforms

The Board recommends that the EPA continues to collaborate with other agencies to deliver the forestry reforms, including the development of new native forestry legislation and associated regulations for public and private land, resolving the Integrated Forestry Operations Approvals, increasing penalties and developing a new licensing approach for logging contractors. The EPA should continue to engage with all stakeholders, including industry and the community, to seek their views on reforms.

Strategic planning

The EPA has a critical role in informing major planning decisions in NSW and it is important to ensure that the environmental impacts of all proposals are considered in making decisions. The NSW Government is committed to a planning system that is straightforward and ensures high-quality decisions and planning outcomes.

The Board supports proposals that improve environment protection and provide clarity and certainty to both the community and industry. The EPA is a key stakeholder in the Department of Planning and Environment's planning reforms and an active supporter of the proposals that enhance community participation and deliver better environmental impact assessment and more effective regulatory oversight by removing regulatory duplication.

A significant component of the EPA's work involves the assessment of development proposals and the provision of advice to planning authorities. However, the EPA is currently unable to recover the increasing costs of its role in the determination of planning decisions. The Board believes this is an area for further consideration and work by the EPA.

Water group outcomes

The approach to managing water in NSW would benefit from the development of a focused strategic policy and improved coordination and accountability across the sector. The Board supports the EPA working with relevant agencies to clarify specific roles and responsibilities, articulate strategic policy and communicate single-point accountability on specific issues.

Cost recovery approach

To ensure those that directly benefit from Government services bear the cost, it is important for cost recovery to be considered in the delivery of the EPA’s regulatory functions. This approach is consistent with the polluter pays principle. The Board recommends that the EPA continues moving towards implementing cost recovery for regulatory programs, including the EPA’s advisory role in planning decision-making.

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Published by

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ISBN 978 1 925688 35 1
EPA 2017P0318
October 2017