3

A healthier and cleaner environment, protecting both ecological and human health

Photo: DECCW

DECCW regulates air and water quality, noise and odour issues, chemical and pesticide use, waste disposal, contaminated sites, the use of radioactive substances, and the protection of native vegetation, threatened species and Aboriginal cultural heritage in NSW.

Context

The NSW community is faced with many significant issues due to the size of the population and the demands placed on the environment. Maintaining and improving air and water quality are always statewide priorities, while the use of chemicals, pesticides and hazardous materials can create localised pollution, contaminate land, and harm human health. Excessive land clearing and degradation of native vegetation contribute to the loss of biodiversity. DECCW is responsible for administering most NSW legislation to protect the environment and people from these threats, and advising planning authorities on environmental issues.

DECCW engages with those in the community who want to help protect the environment, and manages a strategic, risk-based compliance and enforcement program to guide others. Activities cover industry operations, government practices and community activities. DECCW manages programs that provide more certainty for business, promote community awareness, and help business and government operate more efficiently.

DECCW's compliance and regulatory activities include:

- regulating air, water and noise issues; waste disposal and re-use; contaminated sites; the use of radioactive substances, chemicals and pesticides; and the transport of dangerous goods
- regulating unauthorised clearing of native vegetation and impacts on native species, particularly threatened species
- administering the Waste and Environment Levy and load-based licensing systems which drive environmental improvements and raise substantial revenue
- reforming the environment protection regulatory framework to strengthen its effectiveness while minimising red tape and compliance costs
- responding to reports of incidents or environmental harm received from the public
- regulating activities that may have an impact on Aboriginal objects and Aboriginal Places.

Outcomes

- Preventing, reducing or mitigating air, water and noise pollution and other adverse environmental impacts
- Protecting or minimising impacts on outstanding biodiversity values
- Protecting or minimising impacts on Aboriginal cultural heritage
- Remediating or restoring degraded environments
- Improving community wellbeing
- Eliminating unnecessary regulation.

Key drivers

- State Plan – Investing in a Better Future (www.nsw.gov.au/stateplan/)
- Metropolitan Transport Plan: Connecting the City of Cities (www.nsw.gov.au/metropolitantransportplan)
- Action for Air (www.environment.nsw.gov.au/air/actionforair/index.htm)
- NSW Cleaner Vehicles and Fuels Strategy (www.environment.nsw.gov.au/air/actionforair/drftcvstrat.htm)
- *Contaminated Land Management Act 1997* (www.environment.nsw.gov.au/legislation/legislation.htm)
- *Dangerous Goods (Road and Rail Transport) Act 2008* (www.environment.nsw.gov.au/legislation/legislation.htm
- *National Parks and Wildlife Act 1974* (www.environment.nsw.gov.au/legislation/legislation.htm)
- *Native Vegetation Act 2003* (www.environment.nsw.gov.au/legislation/legislation.htm)
- *Pesticides Act 1999* (www.environment.nsw.gov.au/legislation/legislation.htm)
- *Protection of the Environment Operations Act 1997* (www.environment.nsw.gov.au/legislation/legislation.htm)
- *Radiation Control Act 1990* (www.environment.nsw.gov.au/legislation/legislation.htm)
- *Waste Avoidance and Resource Recovery Act 2001* (www.environment.nsw.gov.au/legislation/legislation.htm

Performance indicators

- Air quality outcomes in the greater metropolitan region
- Estimated volatile organic compound emissions in the Sydney metropolitan region
- Aggregate pollutant load indicator for air and water pollutants from premises licensed under load-based licensing
- Environment Line – incident reports about air quality, odours or noise from regulated premises
- New pollution reduction programs negotiated with licensees
- Prosecutions completed
- Penalty infringement notices issued by DECCW under EPA legislation
- Regulatory actions under the *Contaminated Land Management Act 1997* and active sites under regulation
- Contaminated sites remediated
- Waste disposed of to landfill in the greater Sydney region
- Poor regional air quality index days in the greater Sydney metropolitan region
- Beachwatch programs

Photo: R. Newton

Prevent, reduce or mitigate pollution and other adverse environmental impacts

Air pollution

Action for Air

Action for Air is the NSW Government's 25-year air quality management plan, launched in 1998. It contains strategies relating to public transport, motor vehicles and fuels, industry, businesses and homes. An Action for Air update developed in consultation with other state government agencies was released in November 2009. It provides a summary of actions being performed to maintain and improve air quality in NSW, particularly those dealing with ozone and particle pollution.

Clean air, healthy communities

In 2006, the Environmental Trust established the Clean Air, Healthy Communities Fund to progress initiatives that improve air quality and reduce greenhouse gas emissions from transport. The Trust allocated $5 million over three years from 2007, and in 2009–10 has funded:

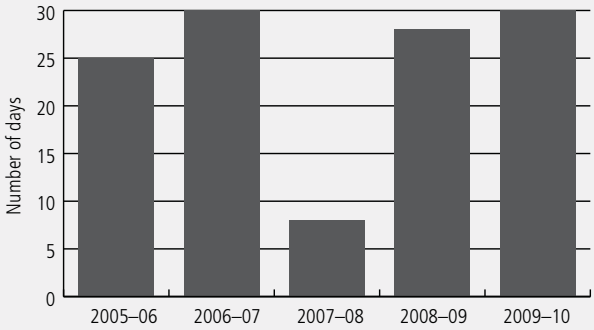
- Air education projects, including a website launched in November 2009 (www.cleartheair.nsw.gov.au); an air education resource kit and workshops for local councils; and six local air quality education projects including Lake Macquarie City Council's project to reduce car usage, and Maitland City Council's project to promote the environmental benefits of cycling.
- The Local Emissions Air Project, which collects information on emissions of volatile organic compounds from aerosols and solvents, and estimates the costs and potential emission reductions achievable through various policy options. Stage 1 of the project, completed in 2009–10, involved preparing a preliminary national emissions inventory. The project will be completed in late 2010.
- *On Your Bike* (see Chapter 2, 'Cycling initiatives' under 'Reduce greenhouse gas emissions').
- FleetWise (see Chapter 2, 'FleetWise' under 'Reduce greenhouse gas emissions').
- The Sustainable Mobility Initiative for Local Environments (see Chapter 2, 'Sustainable urban transport' under 'Encourage the NSW community to adapt to climate change').

PERFORMANCE INDICATOR

Air quality outcomes in the greater metropolitan region

Definition: The National Environment Protection Measure for Ambient Air Quality (Air NEPM) specifies national air quality standards for six pollutants: photochemical smog (ozone), nitrogen dioxide, carbon monoxide, sulphur dioxide, fine particles less than 10 micrometres (PM10) and lead. This indicator details the number of days in the greater metropolitan region (Sydney, Illawarra and the lower Hunter) when one or more of these standards were exceeded at any site. If more than one standard was exceeded on a given day, that day is only counted once.

Number of days air quality standards exceeded in the Greater Metropolitan Region



Interpretation: Sydney experiences good air quality by world standards. Sydney's PM_{10} and photochemical smog (ozone) levels compare favourably with other large cities in the world. However, air quality standards were exceeded on 30 days in 2009–10. These exceedences were caused by photochemical smog, dust storms and bushfires. Over 60% of the time, exceedences were due to high levels of PM_{10} from dust storms. A statewide dust storm on 23 September 2009 caused the highest exceedences yet of the Air NEPM for PM_{10}, not only in the greater metropolitan region but across NSW.

- The Diesel Retrofit Program – see separate section below.
- Activities to reduce wood smoke – see separate section below.

Diesel Retrofit Program

This partnership between the Environmental Trust, DECCW and the Roads and Traffic Authority (RTA) subsidises the modification of older heavy diesel vehicles to reduce emissions. Diesel vehicles are responsible for around 60% of the particle matter emitted by road transport in Sydney. By June 2010, more than 450 vehicles from 70 fleets had been retrofitted under the program. In 2009–2010, DECCW and the RTA began assessing fuel efficiency devices to further reduce air pollution and greenhouse gas emissions from heavy vehicles, and save on fuel costs.

Wood smoke reduction

When not operated properly, wood heaters can become a key source of particles that harm health. In the Sydney region, domestic wood heating is estimated to contribute 38% of winter weekday fine particles (PM_{10}) and almost 52% of winter weekday very fine particles ($PM_{2.5}$). In regional areas, wood heaters emit over 85% of winter particles.

In May 2010, as part of the ongoing wood smoke reduction program, DECCW commenced an audit of wood heaters at their point of sale to assess their compliance with the Protection of the Environment Operations (Clean Air) Regulation 2002. Wood heaters sold in NSW must have compliance plates that state that the model has been tested in accordance with the relevant Australian standard, and that a certificate of compliance is in force.

Wagga Wagga rural particles project

DECCW's monitoring shows occasional high levels of particles in the air in metropolitan areas, but more frequently in rural areas of NSW. Wagga Wagga for example intermittently exceeds the national air quality standard for particles, and not just after bushfires and dust storms. As a result, DECCW commenced a pilot project in Wagga Wagga in August 2009 to find out why high levels of air pollution have been recorded there. The pilot project will run until 2011.

Upper Hunter Air Quality Monitoring Network

DECCW has been working with industry and the communities in the upper Hunter region to provide air quality information on an easily accessible website. Once established, the Upper Hunter Air Quality Monitoring Network will be the largest regional online network measuring air quality in Australia. It will monitor for dust particles, wind speed and wind direction at up to 14 sites. DECCW is working with power generation industries to include sulphur dioxide (SO_2) and nitrogen dioxide (NO_2) monitoring at two of the sites.

In September 2009, a memorandum of understanding was signed by the 11 power generation and mining companies in the upper Hunter and the NSW Government, whereby the industries will fund the construction and ongoing operation of the network and DECCW will construct, operate and manage it as part of its successful air quality monitoring network.

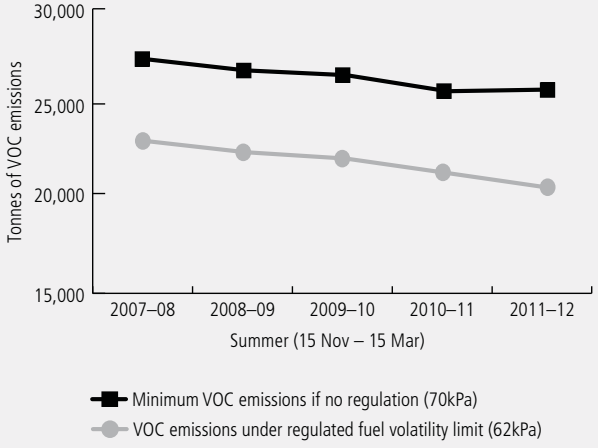
PERFORMANCE INDICATOR

Estimated volatile organic compound emissions in the Sydney metropolitan region

Definition: Petrol vapour containing volatile organic compounds (VOCs) is a main cause of smog in the Sydney metropolitan region during summer. Lowering fuel volatility reduces evaporation and emissions from petrol vehicles and machines. The summer period is targeted because the warmer temperatures contribute to greater evaporation of petrol.

This indicator estimates the reduction in VOC emissions that will be achieved as a result of amendments made in 2004 to the Protection of the Environment Operations (Clean Air) Regulation. The amendments require the fuel industry to comply with volatility limits set on petrol supplied in the Sydney region between 15 November and 15 March each year.

Estimated VOC emissions from petrol in the Sydney metropolitan region during four-month summer periods



Interpretation: The limits set by the Regulation, which are the tightest in Australia, commenced in November 2004. The estimate of VOC emissions from petrol complying with the limits is compared with an estimate of the emissions if no regulation of petrol volatility had been introduced. The estimates for VOC emissions without the regulation are shown to be decreasing due to improved emission control technology in vehicles.

Figures for the years before 2007–08 are not included as they are not directly comparable. Previous data was compiled for on-road vehicles only, but since 2007–08 it also includes non-road engines and fugitive emissions. Emissions are expected to reduce due to vapour recovery technology at petrol service stations, which is required under new legislation.

Following community information and consultation meetings at Singleton and Muswellbrook in November 2009, DECCW has set up a community committee to advise DECCW on the construction and operation of the network.

DECCW intends to set up monitors in the two largest townships of Muswellbrook and Singleton by the end of 2010. The remaining sites will be established in stages, in consultation with scientific experts, the community, government bodies and industry. The full network is planned to be operating by the end of 2011. For more information, see www.environment.nsw.gov.au/aqms/upperhunterqna.htm.

Vapour recovery at service stations – Stage 2

In November 2009, NSW became the first state in Australia to make Stage 2 vapour recovery technology mandatory. The technology captures more than 85% of smog-forming volatile organic compound emissions from vehicle petrol tanks while they are refuelled at petrol pumps. The technology will improve community health by reducing local exposure to toxic compounds and reducing summertime ozone levels.

Equipment is being installed on a staged basis at petrol stations in Sydney, Newcastle, Wollongong and the Central Coast, and is required at new and modified service stations from July 2010. The largest service stations must install the equipment by 2014, and it must be installed at all but the smallest service stations in Sydney by 2017. By June 2010, five petrol stations had already installed the technology.

Once widely adopted, the combined Stage 1 and 2 vapour recovery changes are expected to reduce volatile organic compound emissions across the greater metropolitan area by 5,000 tonnes a year.

Reducing volatile organic compounds from the printing industry

DECCW has continued work in 2009–10 to reduce volatile organic compound emissions from the printing industry. These compounds and oxides of nitrogen (NO_x) form ozone or photochemical smog, particularly on hot days.

This project identified that several printers were not employing adequate means to minimise their emissions. Last year, DECCW successfully negotiated commitments from each emitter to substantially reduce emissions by buying and installing new pollution control equipment, and in 2009–10 DECCW has ensured the equipment upgrades are on track. Once completed, a reduction in volatile organic compound emissions of 1,500 tonnes a year is expected.

Oxides of nitrogen emissions from cogeneration activities

Cogeneration involves using otherwise wasted energy from the production of electricity to provide heating and cooling. Gas-fired cogeneration can be one of the most greenhouse-friendly forms of fossil fuel-generated electricity. However, cogeneration also emits nitrogen oxides (NO_x) into the air which react with volatile organic compounds on hot days to produce elevated levels of ozone.

In November 2009, after consulting with stakeholders, DECCW published the NO_x emission standard that constitutes best available techniques (BATs) for new cogeneration plants in Sydney and the Illawarra (see www.environment.nsw.gov.au/air/cogentrigen.htm). The BAT emission standard is for a natural gas-fired reciprocating internal combustion engine, the most common technology used in cogeneration applications.

■ CASE STUDY

Monitoring the September 2009 dust storm

DECCW's sophisticated air quality monitoring technology enables accurate measurements to be made of extreme weather phenomena. On 23 September 2009, NSW experienced a severe dust storm, followed by a smaller but significant second dust storm on 26 September.

Extraordinarily high dust levels were recorded in the Sydney, Illawarra and lower Hunter regions, as well as rural cities such as Bathurst and Tamworth. For some centres, including Sydney, dust concentrations were the highest on record since monitoring began in the early 1950s.

Reduced ground cover, exacerbated by an extended drought and high winds, caused the storms. The 23 September dust plume was more than 500 kilometres wide and 2,000 kilometres long, and came from the lower Lake Eyre basin in South Australia and north-west NSW.

During the peak of the storm in Sydney, the Australian continent was estimated to be losing 75,000 tonnes per hour of dust less than 10 micrometers in size (PM_{10}) off the NSW coast between Wollongong and Newcastle. Normal days register up to 20 micrograms of dust less than 10 micrometers in size (PM_{10}) in each cubic metre of air, while bushfires generate 500 micrograms per cubic metre. Peak concentrations of around 15,400 micrograms per cubic metre, around 1,500 times normal levels, were recorded at Bathurst and in south-west Sydney during the dust storm.

Photo: Courtesy of R. Doble

Dust particle pollution in Sydney on 23 September 2009.

Following the dust storm, DECCW worked on and released the new Dustwatch website and reporting program, further details of which are provided in 'Dustwatch' in the 'Improving community wellbeing' section.

Some parts of NSW are expected to have less rainfall, longer drier periods and higher temperatures under climate change, making the drought conditions contributing to these recent dust storms more common (see Chapter 2, 'Climate impact profile' under 'Encourage the NSW community to adapt to climate change').

National initiatives

Since 2008, NSW has chaired the Air Quality Working Group which includes representatives from the Australian, state, territory and New Zealand governments. The working group advises governments on strategic and emerging air quality issues, and facilitates collaborative air quality projects and research.

Through the working group, the NSW Government is developing national actions to reduce air emissions from sources including wood heaters, small petrol powered garden equipment, outboard marine engines, non-road diesel engines and surface coatings such as paints. These national actions will help DECCW to improve air quality to meet national air quality goals and NSW State Plan targets.

Non-road diesel engines

Exhaust emissions from non-road diesel engines, such as cranes, excavators, bulldozers and forklifts, can be a significant source of air pollution. In 2009–10, DECCW led a national study, funded by the NSW and Australian governments, to suggest actions to reduce such emissions.

The study found that the emissions from new engines sold in Australia are significantly higher than those from engines sold in the USA or Europe and, in the absence of national emissions standards, there is a risk that the voluntary uptake of cleaner engines could decline. The study also found that reducing emissions would result in significant health benefits. The report is available on www.environment.nsw.gov.au/air/nonroaddiesel.htm.

Water quality

NSW Diffuse Source Water Pollution Strategy

Excessive sediments, nutrients and pathogens can reach waterways from many sources, including from agricultural practices, unsealed roads and urban stormwater. These diffuse pollutants can impact on river ecosystems and the economy (aquaculture, tourism and water supplies) and present risks to public health and amenity.

The Diffuse Source Water Pollution Strategy, released in June 2009 (see www.environment.nsw.gov.au/water/dswp.htm), provides a framework for reducing diffuse source water pollution. The strategy builds on existing actions to deal with such pollution, and encourages information sharing and partnerships to maximise pollution management. The strategy contains actions that various governments and organisations are undertaking, including targeted education programs, on-ground works and developing best practice guidelines.

A range of new projects in 2010–11 will further the achievements to date.

The Lower Hawkesbury–Nepean River Nutrient Management Strategy

This draft strategy, to manage nutrients from stormwater, wastewater and agricultural run-off that enter the lower Hawkesbury–Nepean River, was released for consultation in August 2009.

The final strategy is expected early in 2010–11 (see www.environment.nsw.gov.au/water/hawknepnutmgmtstrat.htm).

■ CASE STUDY

Protecting water quality by maintaining unsealed roads

DECCW maintains more than 33,000 kilometres of unsealed roads that provide essential access to national parks and reserves. Effective management of these roads can reduce erosion. Erosion reduction means less sedimentation and fewer impacts on water quality.

Under the NSW Diffuse Source Water Pollution Strategy, DECCW has developed a field guide that advises park managers, operators and contractors on achieving best-practice soil and water erosion standards for unsealed roads. The guide helps minimise the amount of sediment entering waterways and reduces costs of road maintenance.

DECCW is exploring ways of adapting the field guide for other organisations, such as catchment management authorities and local councils, to further reduce sedimentation in NSW waterways.

Photo: D. Albury, DECCW

DECCW has developed guidelines to minimise soil and water erosion from unsealed roads.

A. McSorley, DECCW

Automated water stations log runoff amounts and collect samples from farms as part of the Lower Hawkesbury–Nepean River Nutrient Management Strategy.

PERFORMANCE INDICATOR

Aggregate pollutant load indicator for air and water pollutants from premises licensed under load-based licensing

Definition: Load-based licensing sets limits on the total pollution emitted by holders of environment protection licences, and links their licence fees to emissions. The lower the emissions, the lower the fee. The scheme provides a powerful mechanism for controlling, reducing and preventing air and water pollution in NSW.

Fourteen types of air pollutants and 17 categories of water pollutants are subject to load-based licensing, and these are reported by licensees and assessed by DECCW.

Air pollutants assessed include nitrogen oxides, benzene, benzo(a) pyrene (equivalent), coarse and fine particles, fluorides, hydrogen sulphide, mercury, sulphur oxides and volatile organic compounds.

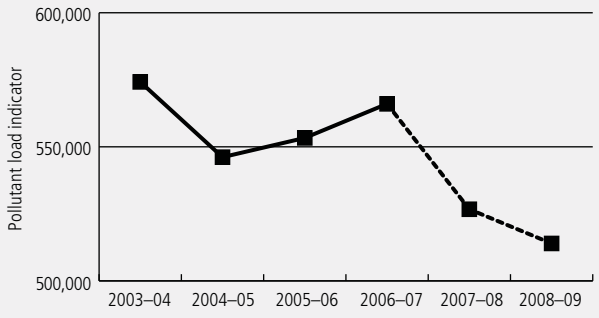
Water pollutants assessed comprise total suspended solids, arsenic, biochemical oxygen demand, cadmium, chromium, copper, lead, mercury, total phenolics, selenium, nitrogen, oil and grease, pesticides and polychlorinated biphenyls, phosphorus, salt, total polycyclic aromatic hydrocarbons and zinc.

The pollutant load indicator (PLI) represents the pollutant load emitted by activities subject to load-based licensing for the reporting year, adjusted to reflect the relative harm of the pollutants and the sensitivity of the environment into which they are emitted.

A pollutant emitted in very large quantities, for example, can have a lower impact than another pollutant with relatively small emissions because of differing levels of toxicity and the sensitivity of the environment into which it is emitted. Fluorides, for example, have a higher pollutant impact than volatile organic compounds, even though their actual pollutant load is lower. The higher the PLI, the greater the overall environmental harm.

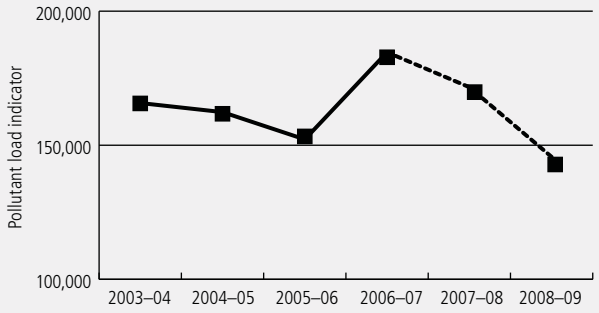
For both the air and water pollutant indicators, data for 2007–08 and 2008–09 is considered provisional (shown by the dotted line), as quality assurance systems can lead to some recalculation up to two years following reporting. Data from all licensees for 2009–10 will be updated in 2011.

Air pollutant indicator



Interpretation for air pollution emissions: Since 2003–04 there has been a long term trend to lower PLI values. Variations observed in PLI values may be related to increased industrial production in 2006–07 and lower production activity during 2007–2009.

Water pollutant indicator



Interpretation for water pollution emissions: The elevated PLI values observed during 2006–2008 were related to wet weather and increased emissions from Sydney ocean sewage plants. A trend to lower PLI values may be observed in the future when more data becomes available.

Waste management

Online waste tracking system

The transport of certain wastes that may be hazardous or harm the environment if managed inappropriately is tracked in NSW through transport owners obtaining prior approval and completing further documentation each time the waste is received or transported. More than 90% of the trackable waste movements in the state are now being monitored through an online waste tracking system. As at 30 June, over 8,500 waste producers, around 930 transporters and 180 receiving facilities were being monitored. The system also provides valuable information about waste flows in NSW, which is assisting other compliance measures such as the collection of the liquid waste levy.

Waste and Environment Levy

The waste and environment levy is the Government's key market-based instrument that drives waste avoidance and resource recovery in NSW. In July 2009, the levy was extended to 21 new local government areas – the coastal council areas north of Port Stephens, and the Blue Mountains and Wollondilly council areas. The levy in these new areas started at the rate of $10 per tonne of waste disposed of.

Noise pollution

Interim construction noise guideline

In July 2009, DECCW released an interim construction noise guideline which sets out ways of dealing with the impacts of construction noise on homes, hospitals, schools and other parts of the community. It recommends work practices that minimise noise impacts, presents a streamlined and less costly assessment process for low-impact and short-duration construction works, and contains effective processes for community notification and complaint handling.

During the year, DECCW held 14 information sessions for construction industry personnel, local councils, and acoustical consultants to explain how the new guideline would operate. The guideline will be reviewed in 2012.

Rail noise

In December 2009, DECCW convened an interagency committee to work on measures to mitigate rail noise. In January 2010, the rail agencies began implementing a trial noise abatement program, which will run until September 2010.

DECCW has also commenced a review of the *Interim guideline for the assessment of noise from rail infrastructure projects*, with a view to finalising it in the second half of 2010.

New road noise policy

A draft Road Noise Policy was released in June 2010 for six weeks of targeted consultation. The policy will replace the current *Environmental criteria for road traffic noise*. In preparing the draft policy, DECCW worked with other state agencies and the Local Government and Shires Associations to determine ways to deal with:

- excessive increases in road traffic noise in quiet areas
- inconsistent application of the current policy
- difficulties experienced by some residents in understanding the likely impact of road proposals.

Vehicle noise testing

In 2007, DECCW launched its Noise Testing and Anti-tampering Inspection Scheme for vehicles, with the aim of significantly reducing the number of noisy vehicles on NSW roads.

A network of seven approved inspection stations is now established across NSW to provide a more accessible service for vehicle owners. Stations are established at Granville, Campbelltown, East Roseville, Albion Park Rail,

■ CASE STUDY

Reducing wheel squeal from trains

In response to increasing community concerns about rail noise, DECCW negotiated pollution reduction programs with RailCorp and the Australian Rail Track Corporation Ltd during 2007 and 2008. Results of these programs realised during 2009 and 2010 have included:

- Noise monitoring equipment has identified individual train wagons that produce 'wheel squeal'. Rail corporations have repaired over 400 bogies (wheeled sections) as a result. This noise monitoring will continue after the pollution reduction programs have expired, and the results will continue to be used to identify and repair poorly maintained rail bogies.
- Rail Corp installed devices that reduce wheel squeal by applying lubricant to the railway track, at noise hot spots throughout the rail network.

Photo: DECCW

DECCW monitors rail noise.

- On 30 June 2010, RailCorp removed from its safety practices the requirement for a driver to automatically sound the train horn before moving from a platform.

Redhead (near Newcastle), Wagga Wagga and Dubbo. DECCW will establish a further station on the north coast by August 2010.

Community advice on noise

DECCW has five neighbourhood noise brochures that explain noise control laws and inform the community of ways in which excessively noisy activities can be dealt with. Types of noise covered include vehicles, barking dogs and alarms. Four brochures were updated in 2010 (see www.environment.nsw.gov.au/noise/noise_brochures.htm).

DECCW prepared an article to improve magistrates' understanding of using noise abatement orders to deal with noise complaints. The article was published in the *Local Courts Bulletin* in January 2010.

DECCW is progressively updating the *Noise guide for local government,* which assists council officers in managing local noise problems and interpreting policy and legislation. Sections of the guide covering noise assessment and regulating noise impacts were updated in August 2009 (see www.environment.nsw.gov.au/noise/nglg.htm). Other parts of the guide will be updated later in 2010.

Noise labelling

Federal, state, territory and New Zealand governments established a Noise Labelling Working Group in 2008 to investigate a consistent noise labelling scheme for noisy domestic items.

The working group, led by DECCW, recommended that labelling and testing requirements for portable garden equipment such as leaf blowers be the same as those in the European Union (EU) Noise Directive. The group is now preparing a regulatory impact statement for portable garden equipment.

As air conditioners, another significant source of noise, are not covered by the EU Noise Directive, DECCW engaged an acoustical consultant in 2009 to investigate noise labelling and testing options for domestic air conditioners. The working group is consulting further with the air conditioner industry and expects to finalise proposals for the inclusion of air conditioners in the noise labelling scheme in August 2010.

Industry regulation

DECCW regulates the activities of NSW businesses and industry sectors that could pollute air or water through their production activities and disposal of waste, or whose activities may impact on native vegetation, threatened species or Aboriginal cultural heritage.

Underground petroleum storage systems

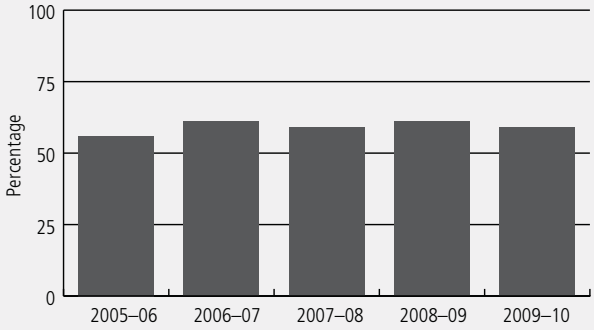
Leaking underground fuel tanks are the cause of much site contamination in NSW. Where leaks have been occurring for a long time, the environmental impact on the nearby community, as well as the financial impacts for owners, can be considerable.

PERFORMANCE INDICATOR

Environment Line – incident reports about air quality, odours or noise from regulated premises

Definition: DECCW's Environment Line receives reports from the public and industry on pollution incidents (see Appendix 12). This indicator measures the proportion of reports about dust, smoke or other airborne particulate emissions, odour and noise from premises which DECCW regulates.

Percentage of total incident reports to Environment Line relating to air quality, odours or noise from regulated premises



Interpretation: When viewed over the past five years, combined air and noise pollution incident reports have remained relatively steady as a proportion of total incidents reported, consisting of 59% of incidents reported in 2009–10. This consistently high percentage reflects the public's ongoing concerns about lifestyle, amenity and the impacts of air and noise pollution. There was approximately an 11% increase in the number of air and odour related reports from 2008–09, which can be attributed largely to the impacts of waste facilities, although the reports of noise from regulated premises fell by 10%. Approximately 61% of noise complaints were related to noise from mines and rail activities.

In July 2009, a new provision in the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008 commenced that requires owners to have an environment protection plan. Each plan includes site management procedures and requirements to keep careful records, which can help to detect leaks early.

Pollution reduction programs

DECCW negotiates pollution reduction programs (PRPs) with businesses and organisations to reduce their air emissions and address specific air and water pollution issues. The performance indicator 'New pollution reduction programs negotiated with licensees' explains how PRPs work.

PRPs negotiated during the year included:

- reducing toxic chemicals and volatile organic compound emissions from the foam manufacturing industry. DECCW identified four licensed operations and one previously unlicensed operation that used and emitted the toxic chemicals toluene di-isocyanate (TDI) and methylene chloride (MC), and which had inadequate or no environmental controls. Each operator has now purchased and installed new pollution control equipment.
- a load reduction agreement over a three-year period with the largest polyurethane manufacturer in Australia. The strict PRP has given the company an economic incentive to reduce its annual pollution fees. The company has installed technology that eliminates the use and emission of around 200 tonnes of MC from its operations, and minimises the use and emission of TDI through efficiency gains. This PRP also has air quality benefits for south-west Sydney.
- managers of Shoalhaven Starches upgrading the odour control and wastewater treatment equipment at their factory and farm in Bomaderry, in conjunction with a proposed expansion in ethanol production from their currently approved level of 126 megalitres each year to 300 megalitres. The upgrade is costing the company around $25 million and will be completed in late 2010. It will reduce the long-standing odour impacts from the factory by an estimated 90% and cut the amount of wastewater requiring disposal through irrigation by 50%. It will also generate an additional 25 jobs at the factory, boost supplies of ethanol for the fuel industry, and help to meet the NSW Government's biofuels targets.
- Delta Electricity installing a treatment facility at its Wallerawang power station, near Lithgow, to reduce the turbidity of the cooling tower discharge into the upper Coxs River. The work was completed by September 2009, and in October DECCW's testing indicated the cooling tower discharge was only 3 nephelometric turbidity units (it had formerly been 10), which confirmed the new system was working well.
- CSR Pty Ltd at Rose Hill reducing its emission of volatile organic compound vapours by 80%. The company produces 14.8 million concrete tiles each year, and was ranked as one of the top 20 industrial photochemical smog emitters in NSW. Tiles were sprayed with a polymer coating, comprising a heavy solvent-based paint. In 2009, the company replaced polymer with water-based coatings and installed a $2.3 million rotary drier. Volatile organic compound emissions from other concrete products are being reduced, and it is expected that emissions can be reduced by another 10% by 2011.

Photo: L. Wythes, DECCW

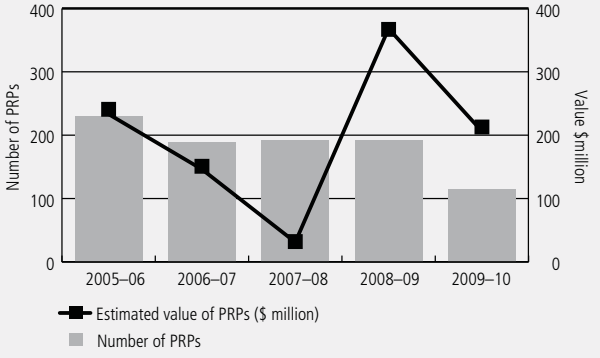
DECCW staff members Stuart Clark and David Gathercole discuss the Paint Pollution Reduction Program at CSR's tile plant at Rosehill.

PERFORMANCE INDICATOR

New pollution reduction programs negotiated with licensees

Definition: This indicator measures the number and estimated value of new pollution reduction programs (PRPs) negotiated during the year. PRPs are programs that are negotiated with licensees and attached to environment protection licences. PRPs require changes to works or management practices to bring about environmental improvements within a specified timeframe. PRPs may be implemented over a number of years, with specific conditions attached to each stage. The dollar values are approximate only.

New pollution reduction programs negotiated with licensees



Interpretation: The estimated value of the 114 PRPs negotiated by DECCW in 2009–10 was $202 million. One PRP for the construction of the Brunswick Valley Sewage Treatment Plant and related works, due for completion by December 2010, was valued at $50 million. The significant peak in the value of PRPs in 2008–09 was due to one PRP for a $348 million upgrade at the Thales Australia Limited plant at Mulwala, due for completion in January 2012.

Photo: D. Clift, DECCW

DECCW negotiated a pollution reduction program with Delta Electricity to reduce the turbidity of liquids being discharged into Coxs River. The bottle on the left shows samples before treatment, the bottle on the right shows samples after treatment.

Photo: DECCW

DECCW staff member Dr Brian Murphy takes a soil sample from an effluent reuse area.

Compliance and enforcement activities

Each year, DECCW undertakes strategic environmental compliance and performance reviews of selected industries. These reviews involve compliance audits and identifying examples of best environmental management practices which are then shared with other operators. Findings also guide reviews of environment protection licences.

Licence reviews

In 2009–10, 576 licences were due for review. Of these, DECCW completed 569 by the due date, with seven completed late. None were left incomplete. The reviews not completed on time were delayed for administrative reasons. In accordance with section 78(3) of the *Protection of the Environment Operations Act 1997*, DECCW advised the EPA Board of this result.

Industry monitoring practices

A report on a review of industry monitoring their emissions was released in October 2009. It found that inadequate monitoring methods were used in some industries, some monitoring equipment was not being properly maintained, and industries could make better use of monitoring results to plan their site operations and improve their environmental performance.

The report's findings are helping DECCW to carry out its compliance activities more effectively and consistently (see www.environment.nsw.gov.au/licensing/complianceaudit.htm)

Effluent re-use in irrigation

In February 2010, DECCW completed a review that assessed licensees' compliance with effluent re-use requirements and practices for irrigation, and reviewed the long-term sustainability of irrigation areas. The report summarising the review findings will be released later in 2010, with guidelines being developed on ways in which licensees can implement best environmental management practices.

Management of chlorinated solvents

In May 2010, DECCW commenced a review to assess compliance with requirements attached to environment protection licences for managing chlorinated solvents and conducted research into industry best practice. The review findings are expected to be released in 2011.

Waste compliance

DECCW's waste-related compliance and enforcement program uses targeted inspections, sector compliance programs, education and 'cleaner industry' programs. In 2009–10, DECCW conducted 15 waste compliance campaigns.

Blitz on landfills receiving the wrong types of waste

A one-day inspection blitz was carried out in February 2010 targeting 14 licensed general solid waste (non-putrescible) landfills in Sydney. DECCW officers checked compliance with licence conditions that limit the types of waste that can be received. Receiving the wrong types of waste at these landfills can lead to odour, pest infestations and groundwater impacts. This campaign has been repeated several times by DECCW in recent years, and has raised awareness of the consequences of non-compliant behaviour. As a result of this campaign, two penalty notices and two warning letters were issued.

Targeting dust from waste facilities

A compliance campaign was carried out between September and December 2009 targeting dust and fire management practices at licensed landfills, waste transfer stations and composting facilities.

Letters were sent to 84 facilities about the environmental impacts of dust and fire, and to remind operators of their licence obligations. Following this, DECCW carried out compliance inspections at 21 selected facilities. Most (81%) of the facilities inspected were implementing sufficient dust suppression practices. However, DECCW issued two penalty notices, and three warning letters to licensees.

Groundwater assessment of licensed landfills

DECCW carried out technical reviews of groundwater monitoring networks and data at seven licensed landfills in the Sydney, Coffs Harbour, Illawarra and Hunter regions. The reviews assessed the adequacy of the groundwater monitoring networks and the leachate and groundwater data, to determine whether the monitoring networks could detect polluted groundwater before it could migrate off-site and, where appropriate, provided recommendations to improve groundwater monitoring networks. Improvements to systems will be implemented by DECCW using pollution reduction programs imposed on the licensees.

Roadside litter and waste campaign targeting uncovered loads of waste

Uncovered waste loads greatly increase the risk of spillage of waste and litter from vehicles during transport. DECCW and the Western Sydney Regional Illegal Dumping Squad carried out compliance campaigns during November and December 2009 and March 2010, targeting uncovered loads of waste transported on major roads in the Sydney, Illawarra, Coffs Harbour and Hunter regions.

As a result of the campaigns, DECCW issued five penalty notices and 68 warning letters.

Landfill gas project

In September 2009, DECCW commenced a review and assessment of the way landfill gas is monitored, extracted and stored in NSW. Landfill gas enables on-site generation of electricity. However, it contains large quantities of methane and carbon dioxide. Effective management of landfill gas is a health and safety necessity, and assists with pollution and odour reduction.

The information gathered from this project is helping DECCW to estimate the amount and composition of landfill gas emissions, review the efficacy of current gas management infrastructure, assess the suitability of current practices and recommend potential improvements.

Radiation

DECCW maintains a 24-hour radiation emergency response service linked to the Environment Line. DECCW officers attend radiation incidents to advise on and investigate potential breaches of environmental legislation. DECCW radiation officers also conduct inspections of regulated premises.

In November 2009, DECCW radiation and emergency management officers took part in a multi-agency emergency exercise to test their capacity to respond to a significant radiological incident.

■ CASE STUDY

Protecting health by increasing regulation of solaria

In recent years there has been heightened community awareness of the dangers of ultraviolet tanning units, prompted by high profile cases of melanoma linked to solaria use.

In two surveys of the cosmetic tanning industry in 2003 and 2006, NSW Health and the Centre for Health Research and Psycho-oncology found that voluntary compliance with the relevant Australian Standard was low, implying that industry self-regulation was not working.

As a result, the Radiation Control Amendment (Tanning Units) Regulation 2009 came into force in May 2009 under the *Radiation Control Act 1990*. The Regulation is similar to laws recently introduced in other Australian states and reflects an agreed national approach to regulating tanning units.

The Regulation bans the use of tanning units by people under 18 or with fair skin, and limits the amount of ultraviolet radiation a person can be exposed to from a tanning unit. The Regulation also requires operators to assess a person's skin before exposing them and to obtain the person's informed consent once they have been told about the risks of using tanning units.

DECCW promoted the new Regulation by writing to all known solaria businesses in NSW and advertising in newspapers and industry publications. A survey and education campaign in the Sydney metropolitan area followed in September and October 2009. Initially, the level of compliance with the new Regulation was poor – nearly all operators demonstrated some degree of non-compliance. However, a follow-up campaign in the first half of 2010 across metropolitan and regional NSW found a marked improvement.

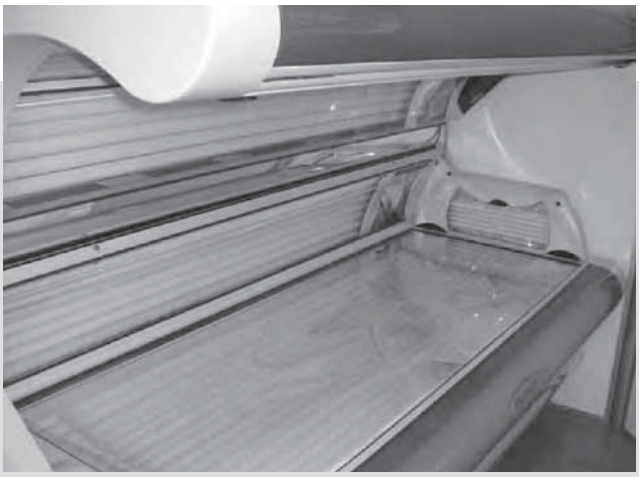


Photo: C. Lamberton, DECCW

Regulation of tanning units has been improved under the Radiation Control Amendment (Tanning Units) Regulation 2009.

Where businesses still failed to comply, regulatory action was taken. Seventeen penalty notices of between $500 and $1000 were issued and a further 43 operators received formal warnings requiring them to improve their monitoring of solaria use. Operators were put on notice that future shortcomings could result in a penalty notice or prosecution.

DECCW's inquiries reveal that demand for solaria tanning is decreasing and that many businesses who offered tanning services in the past (often as a sideline to fitness, or hairdressing or beauty services) have ceased to do so since the Regulation was introduced.

During May and June 2010, DECCW officers conducted regional spot-inspections along the north and south coast to identify any unregistered radiation apparatus or unlicensed operators of apparatus. Twenty-nine diagnostic imaging premises were inspected in the mid-north and north coast regions, and 31 premises were inspected on the south coast. DECCW issued appropriate warning letters and letters stating operator licensing requirements must be complied with.

Threatened species

DECCW protects and manages threatened species, populations and ecological communities and their habitats through advice, education, research, landscape planning, consultation, recovery planning, and regulation including issue of fines and prosecution. Work to protect threatened species in 2009–10 included:

- conserving land containing three endangered ecological communities that are endemic to the Illawarra, including *Melaleuca armillaris* tall shrubland. DECCW worked with other government agencies, local councils, quarry operators and local landholders on the Strategy for the Conservation and Management of Biodiversity in the Shellharbour–Dunmore Hills Area that will be finalised in 2010. The strategy will recommend various actions that can be taken to conserve biodiversity while minimising impacts on agricultural, mining and other industries.
- issuing a land holder with a penalty notice for a breach of the *National Parks and Wildlife Act 1974,* and working with Baulkham Hills Shire Council that is taking the land holder to court, after the land holder illegally cleared bushland in north-western Sydney, destroying many shrubs of the threatened species *Darwinia biflora* and damaging its habitat.

Photo: DECCW

Melaleuca armillaris *tall shrubland and other endangered ecological communities will be protected under the Strategy for the Conservation and Management of Biodiversity in the Shellharbour–Dunmore Hills Area.*

Native vegetation

DECCW is responsible for compliance with and enforcement of native vegetation legislation in NSW. These activities are guided by DECCW's Native Vegetation Compliance and Enforcement Strategy. Engagement with land holders and various industries, strategic investigations, appropriate enforcement actions and targeted compliance campaigns are all components of the strategy.

During 2009–2010, investigations into reports of clearing led to 38 remedial directions being issued to landowners, requiring them to remediate land that had been illegally cleared. A further 57 legal directions and 195 formal

■ CASE STUDY

Boosting a local green and golden bell frog population

The once common green and golden bell frog has declined markedly in distribution and abundance since the mid-1990s and is in danger of extinction.

DECCW carried out a project that identified opportunities to manage and enhance the frog's habitat in the Port Kembla industrial precinct in the Illawarra region. The Port Kembla frog population uses several key breeding sites, including some on industrial premises licensed by DECCW under the *Protection of the Environment Operations Act 1997.*

The project report recommended works in the Port Kembla rail corridor that would assist frogs travelling between breeding sites, enhance old habitat and create new breeding habitat. The project has also identified critical breeding habitat, and established links and corridors between habitats on different properties.

BlueScope Steel will develop a green and golden bell frog management plan under a pollution reduction program attached to its environment protection licence.

Photo: S. Maccagnan

Green and golden bell frog juveniles.

DECCW has formed a working group to continue to progress the recommendations from the report and raise awareness of this frog species by engaging with local industry and the community. Many Port Kembla residents have created their own 'frog-friendly' ponds. Recent surveys of the Port Kembla area are showing the local population of these frogs is increasing.

warning and advisory letters were issued following DECCW investigations.

In 2009–10, DECCW commenced seven prosecutions under native vegetation legislation (see 'Prosecutions' section) and issued 21 penalty notices. A particular focus was to inform those involved in land subdivision and development of legislative requirements when selling rural land of their legal responsibilities under the *Native Vegetation Act 2003*.

Transport of dangerous goods

Following the commencement of the Dangerous Goods (Road and Rail Transport) Regulation 2009 on 1 May 2009 and an updated Australian Dangerous Goods Code, the focus for DECCW's dangerous goods officers in 2009–10 has been:

- transport industry education, including training officers and conducting courses
- updating information resources, including web pages and brochures.

DECCW is a member of the national Competent Authorities Panel, which is responsible for:

- considering applications and referrals for determinations, approvals and exemptions relating to the operation of the Australian Dangerous Goods Code
- making decisions to ensure consistent national application of the code and its implementing legislation
- advising the Australian delegation to the UN Sub-Committee of Experts on the transport of dangerous goods.

Regulatory and compliance activities conducted by DECCW in 2009–10 included following up complaints from dangerous goods officers, who also investigated Hazmat incidents involving dangerous goods. For example, a spill of a corrosive substance from batteries removed from a ship at Circular Quay in March 2010 was investigated, resulting in penalty notices being issued.

Prosecutions

DECCW can commence prosecutions for environment protection offences under the authority of the Environment Protection Authority. DECCW can also commence prosecutions for offences under native vegetation, threatened species, parks, wildlife and Aboriginal heritage legislation. The following sections provide details of some significant prosecutions undertaken in 2009–10. A list of all prosecutions is provided in Appendix 8.

Prosecutions under Environment Protection Authority legislation

Bowport Allroads Transport Pty Ltd – emit excessive exhaust smoke

In October 2009, Bowport Allroads Transport Pty Ltd was convicted in the Land and Environment Court of emitting excessive exhaust smoke from several of its vehicles. The offences were detected in the M5 East Tunnel in early 2007 by cameras installed by the NSW Roads and Traffic Authority to detect smoky vehicles. The company had been previously prosecuted and issued with penalty notices for similar offences. The company pleaded not guilty; however, it was convicted of all charges. It was fined $80,000 and ordered to engage an expert to audit all its vehicles registered earlier than 31 December 2002, to require its drivers to attend the TAFE-run Diesel Emissions Awareness Course, to publicise details of the offences in the *Sydney Morning Herald* and the *St George and Sutherland Shire Leader*, and to pay the prosecutor's legal costs of $48,000.

Causmag Ore Company Pty Ltd – breach of environment protection licence

In September 2009, Causmag Ore Company Pty Ltd was convicted in the Land and Environment Court of one offence of breaching a condition of its environment protection licence. Causmag operates a factory at Young, manufacturing magnesium oxide. Causmag breached its licence by failing to maintain a baghouse filter at its premises in a proper and efficient condition, resulting in dust emissions that settled on nearby residences and parked cars. Causmag was fined $20,000, ordered to pay a penalty of $45,000 to Young Shire Council for an environmental project, ordered to publicise details of the offence in *The Young Witness* and pay the prosecutor's legal and investigation costs of $26,500.

Dib Hanna – transport waste to a place that cannot lawfully receive it

In June 2010, Mr Hanna was convicted in the Land and Environment Court of four offences of transporting waste to a place that could not lawfully receive it. The offences were committed when Mr Hanna disposed of a truckload of mainly building and demolition waste at four separate locations in the Sydney metropolitan area. He disposed of waste near a cul-de-sac in Minchinbury, beside a road near Bankstown Airport, on a vacant building site and on a public reserve. Mr Hanna was ordered to pay penalties totalling $104,000 to the Environmental Trust for its emergency pollution and orphan waste clean-up program. He was also ordered to publicise details of the offences in the *Liverpool Leader* and *Blacktown Advocate*, to pay about $8,000 in clean up costs and to pay the prosecutor's legal costs of $21,000.

George Ghossayn – deal with materials so as to cause air pollution; unlawful use of land as waste facility

In October 2009, Mr George Ghossayn was convicted in the Land and Environment Court of two offences relating to a waste facility in western Sydney that was run by his company, Kari and Ghossayn Pty Ltd. For both

PERFORMANCE INDICATOR

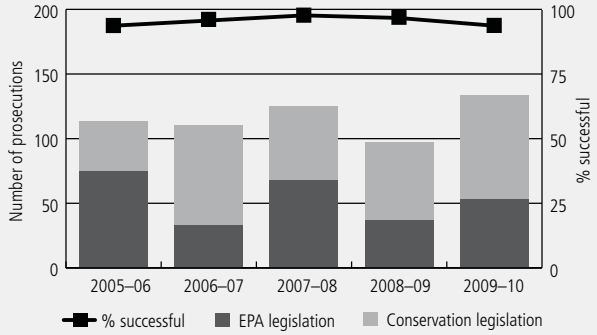
Prosecutions completed

Definition: This indicator measures the number of prosecutions completed under legislation administered by DECCW, the proportion that were successful and the resulting value of penalties imposed by the Land and Environment Court or local courts.

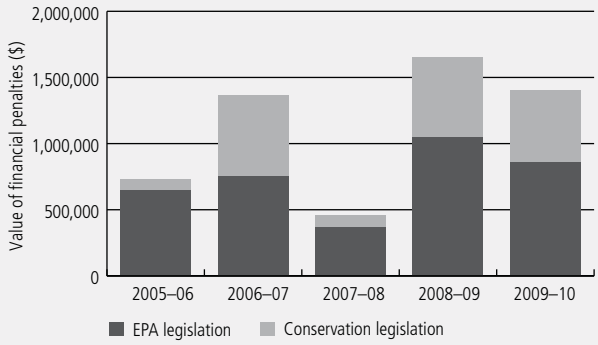
'Successful' refers to prosecution cases that DECCW won or where the offence was dealt with under section 32 of the *Mental Health (Forensic Provisions) Act 1990*. These include cases where the defendant was convicted and a penalty was imposed and cases where DECCW's case was proved but no conviction or penalty was imposed.

The prosecutions are reported under two categories of legislation: Environment Protection Authority (EPA) legislation and conservation legislation (which includes legislation relating to native vegetation, threatened species, parks, wildlife and Aboriginal heritage). Data for native vegetation prosecutions is not included for 2005–06.

DECCW Prosecutions completed



Value of financial penalties



Interpretation: A total of 134 prosecutions were completed in 2009–10 which is the highest number for the past five years. The number of completed prosecutions for both EPA and conservation matters increased noticeably compared to 2008–09, with 53 EPA prosecutions completed in 2009–10 (compared to 37 in the previous year) and 81 conservation prosecutions completed in 2009–10 (compared with 60 in 2008–09).

DECCW maintained its consistently high success rate for prosecutions in 2009–10, with 94% of its prosecutions being successful.

Overall, $1.4 million in financial penalties was imposed in 2009–10, which is well above the five-year average. In addition, in a record 14 prosecutions the courts ordered the offender to undertake community service, and in 24 prosecutions the courts ordered the offender to publicise details of the offence in a newspaper or similar publication. This reflects DECCW's continuing focus on more serious offences.

Considerable attention continues to be given to progressing native vegetation matters. In 2009–10, DECCW completed 12 prosecutions for native vegetation clearing offences. DECCW was successful in 11 of these prosecutions, resulting in the imposition of $342,500 in fines.

offences, Mr Ghossayn was prosecuted in his capacity as a company director. The first offence related to odours from smouldering fires in waste stockpiled at the facility. The second offence related to receiving waste at the facility while the company's environment protection licence was suspended. Mr Ghossayn was fined $51,000 and ordered to pay the prosecutor's legal costs of $40,000.

Ramsay Food Processing Pty Ltd – pollute waters; failing to notify the EPA of a pollution incident that caused or threatened material harm to the environment

In February 2010, the Land and Environment Court convicted Ramsay Food Processing Pty Ltd of failing to notify the EPA of a pollution incident that caused or threatened material harm to the environment, and two charges of polluting waters at South Grafton. Untreated effluent escaped from the company's abattoir into Musk Valley Creek and Musk Valley Western Tributary, following the fracture of an underground pipe. Complaints received from the public led to an investigation that discovered the spill. The spill killed aquatic fauna in the creek. The company did not notify the EPA of the incident for four days. It was fined $130,000 and ordered to publicise details of the offences in the *Sydney Morning Herald* and the *Grafton Daily Examiner*. The company was also ordered to pay the prosecutor's investigation costs of $13,477.82 and legal costs.

Martin Wattke and Rene Geerdink – negligently dispose of waste in a manner that harms the environment; pollute waters

In June 2010, the Land and Environment Court convicted Mr Wattke of being a director, and Mr Geerdink of being a manager, of Hook-It-Waste Pty Limited, a company that negligently disposed of waste in a manner which harmed the environment and polluted waters. Both Mr Geerdink and Mr Wattke were personally involved in the illegal activities of the company. Over approximately six months in 2007 the company transported 4.8 megalitres of liquid waste to a property at Ilford, which had been specially purchased for the disposal of waste. The company did not hold an environment protection licence or a development consent to dispose of waste on the property. The waste was dumped in creeks and on other areas of the property and caused significant environmental harm. The Court fined each defendant $60,000 and ordered each to perform 460 hours of community service. Each defendant was also ordered to pay $15,000 in investigation costs and the prosecutor's legal costs.

Prosecutions under threatened species, parks, wildlife and Aboriginal heritage legislation

Lance Rawson – pick threatened species plants

In October 2009, Mr Rawson was convicted in the Land and Environment Court of seven offences of harming 1,279 threatened species trees on a property at Pacific Highlands Estate, Terranora, near Murwillumbah. The trees included three endangered species and four vulnerable species. Mr Rawson was fined $135,000, and ordered to perform 270 hours of community service and pay the prosecutor's legal costs.

Wellington Council – disturb Aboriginal object

In September 2009, Wellington Council was convicted in the Wellington Local Court of damaging a scarred tree that was an object of Aboriginal cultural heritage value. The offence arose out of works undertaken by council employees to widen a road. The council was fined $1,500 and ordered to pay the prosecutor's legal costs. The council also agreed to preserve the remains of the scarred tree and to place it on public exhibition at a cost of $20,000.

Prosecutions under native vegetation legislation

Calman Australia Pty Ltd, Iroch Pty Ltd and GD & JA Williams Pty Ltd – clearing native vegetation

In November 2009, the Land and Environment Court convicted the above three companies of unlawfully clearing native vegetation, consisting of river red gums near Tocumwal on the Murray River. The companies were fined $22,000 each and also ordered to pay the prosecutor's legal costs of $24,333 each.

John Rae – clearing native vegetation

In August 2009, Mr Rae was convicted in the Land and Environment Court of unlawfully clearing vegetation at a property in the NSW central west. Mr Rae and an employee used heavy machinery to substantially clear 215 hectares of woodland. Members of the public reported the clearing to DECCW. Mr Rae was fined $160,000 and ordered to pay the prosecutor's legal costs.

Enforceable undertakings

Enforceable undertakings are an adjunct to prosecutions and are available to DECCW in dealing with environmental incidents. DECCW negotiated one enforceable undertaking in 2009–10.

Kosciuszko Thredbo Pty Ltd agreed to pay $100,000 for environmental rehabilitation work along the banks of the Thredbo River after admitting its role in an overflow of between 800 and 1,200 litres of diesel from a tank at the Thredbo ski resort, some of which entered the Thredbo River. The $100,000 is being used on a three-year project that includes developing a rehabilitation plan for the river banks to address stream bank erosion control, weed management, revegetation and habitat restoration.

New and revised regulations

Marine parks

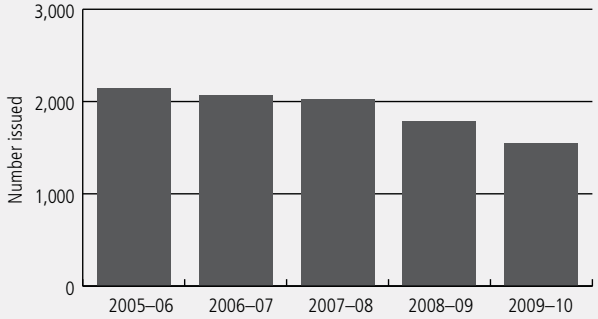
The Marine Parks Regulation 2009 commenced on 1 September 2009. It deals with a range of general matters, such as consents and powers of the Marine Parks Authority. The Regulation also amended and renamed the previous Marine Parks Regulation 1999 as the Marine Parks (Zoning Plan) Regulation 1999, which contains zoning plans for marine parks and the various provisions relating to zoning plans, including the objects of zones and offences.

PERFORMANCE INDICATOR

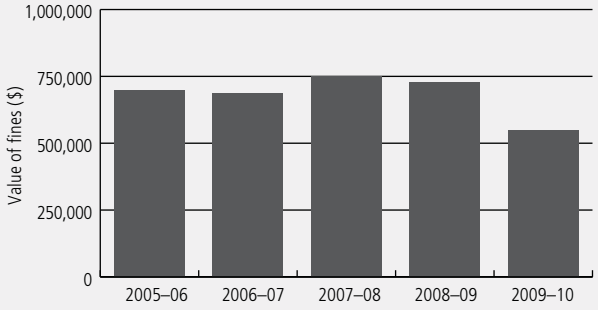
Penalty infringement notices issued by DECCW under EPA legislation

Definition: Penalty notices impose a fine for minor breaches of the Environment Protection Authority (EPA) legislation administered by DECCW, as well as for smoky and noisy vehicles and littering from vehicles. This indicator includes only the number of penalty notices issued and processed by DECCW, and not those issued by local councils or other authorities.

Number of penalty notices issued



Value of fines from penalty notices issued



Interpretation: In 2009–10, 1,546 penalty notices totalling $548,900 in fines, were issued for smoky and noisy vehicle offences, littering from vehicles and breaches of the EPA legislation administered by DECCW. In recent years, the number of penalty notices for motor vehicles, especially for smoky vehicles and littering from vehicles, has decreased. DECCW's surveys confirm a decrease in the number of smoky vehicles in Sydney. The decrease is partly due to improvements in motor vehicle fuel standards and emission controls, and also reflects the success of DECCW's enforcement and education activities.

See Appendix 7 for details of the legislation under which these penalty notices are issued by DECCW and local councils.

Pesticides

The Pesticides Regulation 2009 commenced on 1 September 2009, and repeals and remakes the previous Pesticides Regulation 1995 with some minor amendments. It raises penalty notice fines for certain record keeping offences, changes certain training provisions and updates references and terminology used to reflect the current provisions relating to aerial applications and air operators' certificates.

National parks

The National Parks and Wildlife Regulation 2009 commenced on 1 September 2009, replacing the previous National Parks and Wildlife Regulation 2002 with minor amendments. It contains provisions relating to the regulation and use of reserved land.

Environment protection

The Protection of the Environment Operations (Clean Air) Amendment (Vapour Recovery) Regulation 2009 commenced on 13 November 2009. It amends the Protection of the Environment Operations (Clean Air) Regulation 2002 to expand provisions requiring vapour recovery (stage 1) equipment to be installed at petrol stations and to add new provisions requiring vapour recovery (stage 2) equipment to be installed at certain petrol stations. The requirement to comply with the new equipment obligations will be phased in over the next seven years.

The Protection of the Environment Operations (Noise Control) Regulation 2008 was amended in February 2010 to delay the phase-in of Australian Design Rule (ADR) 83/00 so there is transparency and certainty about required vehicle exhaust noise levels. The federal Department of Infrastructure, which publishes noise signature levels for vehicles certified to ADR83/00, has not been able to complete the list, so clause 4 of the regulation was amended to provide a further 18 months (until September 2011) before the ADR83/00 signature level limits take effect in NSW.

Native vegetation

The Native Vegetation (Application of Act) Regulation 2009 commenced on 4 December 2009. It amends Schedule 1 of the *Native Vegetation Act 2003*, which describes land to which the Act does not apply, by adding some seniors housing developments.

Water management

The *Water Management Amendment Act 2009* commenced on 26 February 2010. It amends the *Water Management Act 2000* and the *State Water Corporation Act 2004*. The two main aspects of the amendments relate to metering and water trade rules.

The Water Management (General) Amendment (Miscellaneous) Regulation 2009 commenced in part on 30 June 2009, in part on 1 July 2009 and in part on 1 July 2004. The key aspect of the Regulation provides for the modification of Schedule 10 of the *Water Management Act 2000* to replace entitlements held under the *Water Act 1912* with access licences for the NSW Border Rivers Regulated River Water Source.

The Water Management (General) Amendment (Controlled Activity Approval Exemption) Regulation 2009 commenced on 17 July 2009. The Regulation creates an exemption from the requirement to hold a controlled activity approval for a controlled activity carried out in, on, or under waterfront land if a person carries out the development in accordance with the Oran Park and Turner Road Waterfront Land Strategy 2009.

The Water Management (General) Further Amendment (Miscellaneous) Regulation 2009 commenced on 1 August 2009. The Regulation provides for access licences that authorise the taking of tidal pool water from tidal pool water sources covered by the Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009 and the Water Sharing Plan for the Lower North Coast Unregulated and Alluvial Water Sources 2009.

The Water Management (General) Amendment (Transitional) Regulation 2009 commenced on 18 December 2009. The object of the Regulation is to confirm the rights of current members of the Eagle Creek Pumping Syndicate Incorporated in relation to certain access licences for the NSW Murray and Lower Darling regulated river water source.

The Water (Part 2 – General) Amendment (Entitlements Transfer Process) Regulation 2009 commenced on 18 December 2009. The object of the Regulation is to enable the Water Administration Ministerial Corporation to acquire and dispose of water rights in water sources that are not the subject of a volumetric water allocation scheme under the *Water Act 1912*.

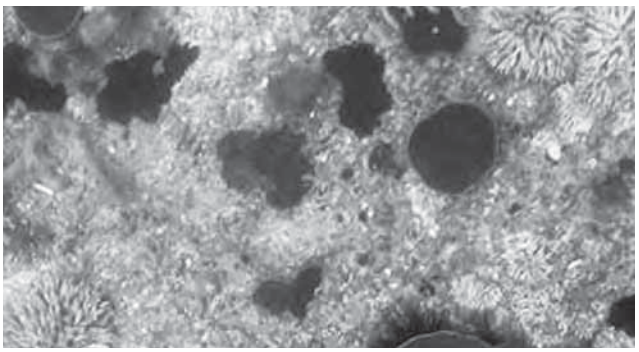


Photo: J. Neilson, DECCW

The Marine Parks Regulation 2009 will ensure the continued protection of marine parks through appropriate zoning plans.

Photo: R. Sherack

Remediate or restore degraded environments

Contaminated sites

Contaminated sites are a legacy of poor chemical or waste management practices in the past. Such contamination often significantly impacts on the adjacent community and the environment, and can limit the future productive use of the land.

In 2009, some amendments to the *Contaminated Land Management Act 1997* were commenced, including a requirement to report contaminated land under section 60 of the Act. Since commencement of these provisions, more than 750 notifications have been received, more than 90% of which are associated with petrol stations (see 'Underground petroleum storage systems' in previous section).

All notified sites are being assessed by DECCW to determine what follow-up actions are required under the Act, the *Protection of the Environment Operations Act 1997* or other land-use planning processes.

NSW Site Auditor Scheme

The site auditor scheme established under the *Contaminated Land Management Act 1997* provides greater certainty to planning authorities and the community through independent reviews of consultant reports. DECCW initiated a new round of applications for site auditors in early 2010. The accreditation process attracted 21 applications, and after a written exam and interview, four successful candidates were accredited under the scheme. This brings the number of site auditors to 37.

■ CASE STUDY

Transforming contaminated sites into a valuable asset – Rhodes Peninsula and Barangaroo

DECCW has regulated the remediation of 45 hectares of former foreshore industrial land on Rhodes Peninsula which was once one of the most contaminated sites in Australia, largely due to dioxin contamination. The whole area has been remediated using various technologies, including thermal treatment of contaminated soils and sediments. The full cost of remediation is approaching $180 million, and is scheduled for completion in early 2011. Construction of substantial residential and commercial buildings is already under way. The development value of this rejuvenated land is estimated to exceed $2.5 billion.

The new Barangaroo development at Darling Harbour will require the clean-up of a former gasworks facility, which lies underneath the old port area and part of Hickson Road. DECCW's regulation ensures that the land will be made suitable for residential and commercial uses. Remediation activities will be carried out under environment protection licences issued by DECCW, which will incorporate stringent environmental and emissions standards to protect the local community and the adjacent marine ecology.

Photo: R. Sherack

Recent developments on the Rhodes Peninsula.

The Barangaroo area is subject to major future residential and commercial development, with the value of development projects already awarded by the Barangaroo Delivery Authority exceeding $6 billion.

DECCW has worked with government agencies, community groups and industry to remediate these lands, enable the public to use these sites, and reduce environmental harm.

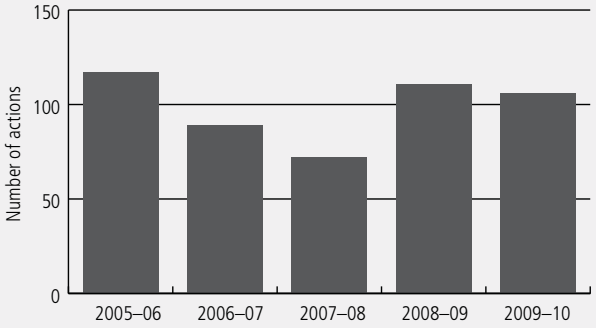
■ **PERFORMANCE INDICATOR**

Regulatory actions under the *Contaminated Land Management Act 1997* and active sites under regulation

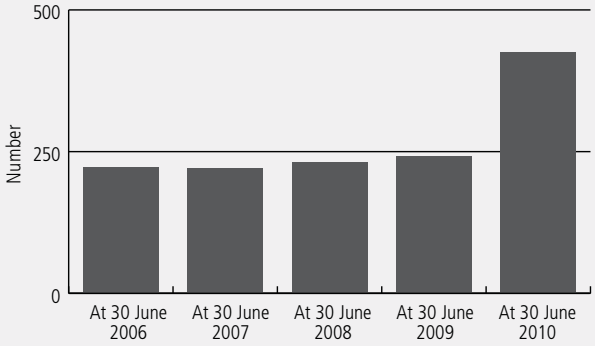
Definition: This indicator outlines the number of regulatory actions DECCW has taken under the *Contaminated Land Management Act 1997* (CLM Act). When significant contamination occurs, DECCW may take one or more regulatory actions to clean up the site. These actions include assessing contamination, declaring significantly contaminated land, and developing orders and agreements for voluntary proposals relating to investigation or clean-up tasks.

The total number of sites under active assessment and regulation includes sites under assessment for significant contamination, significantly contaminated sites requiring regulation, and sites under regulation. It does not include sites that have already been remediated and sites that have been assessed as being not significantly contaminated. Figures for 2009–10 include only the proportion of notifications under new provisions of the CLM Act that are being actively assessed or managed.

Regulatory actions under the *Contaminated Land Management Act*



Number of total active sites



Interpretation: In 2009–10, DECCW undertook 106 regulatory actions compared with 111 in 2008–09.

A change of reporting requirements in December 2009 led to 802 new site notifications. The 425 active sites for 30 June 2010 comprise 299 active sites being managed under traditional formal CLM regulation, and 126 new section 60 notifications that are being 'risk managed' but have not yet been allocated for formal CLM Act assessment.

DECCW also carried out 49 formal assessments of contaminated land, issued 37 regulatory notices and revoked 20 regulatory notices in 2009–10. Seventeen more sites were brought under the regulation of the CLM Act, bringing the number of sites under current regulation to 134. The remediation or investigation of 10 sites was completed, bringing the total number of remediated sites to 93.

As at 30 June 2010, 124 sites were under formal assessment, 41 sites were to be regulated and 134 sites were under regulation. A further 117 sites notified under the new provisions of section 60 of the CLM Act were under informal assessment, 9 sites were being managed for serious contamination outside the CLM Act and 484 sites were awaiting further information to be provided by the notifier.

As several actions are normally taken to regulate a site, completing a clean-up can take several years. As equilibrium has not been reached between the number of new contaminated sites notified and the number of sites successfully cleaned up each year, the number of sites being regulated is still increasing.

Improving regulation through education

Six short courses on contaminated sites assessment, remediation and management have been developed by DECCW, the University of Technology Sydney and industry. These courses enable industry consultants and local and state government employees to gain greater expertise and communicate more effectively regarding contaminated site management.

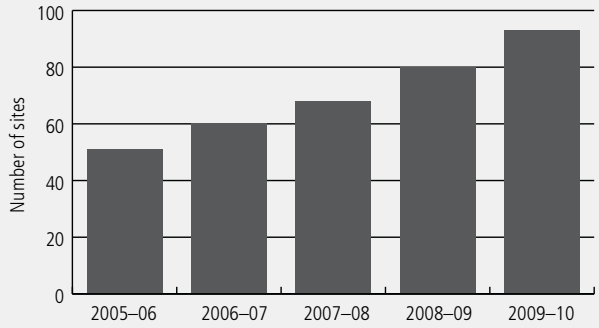
DECCW and the Local Government and Shires Associations held a contaminated land workshop for local councils in May 2010, to improve staff knowledge and understanding of contaminated land issues and management.

PERFORMANCE INDICATOR

Contaminated sites remediated

Definition: The total number of sites remediated is the cumulative number of sites which were considered under the *Contaminated Land Management Act 1997* (CLM Act) to be significantly contaminated, and were reassessed in 2009–10 as being no longer significantly contaminated. Remediation can occur through regulation under the CLM Act, through regulation under the *Environmentally Hazardous Chemicals Act 1985*, or through planning processes.

Contaminated sites remediated (cumulative)



Interpretation: At 30 June 2010, 93 significantly contaminated sites have been remediated since the CLM Act came into effect in 1998–99. Sixty-five of these sites were remediated through regulation under this Act, and 28 were remediated under other processes.

Collaborative pesticides and soil contamination research

Research this year included:

- developing passive samplers for use Australia-wide – these devices resemble 'artificial fish' that can help measure exposure to certain chemicals. DECCW scientists worked with the National Research Centre for Environment Toxicology at the University of Queensland and industry partners, to develop and test passive sampler technologies to measure exposure to emerging pollutants in water: perfluorinated compounds, chemicals in pharmaceuticals and personal care products, and brominated flame retardants.
- producing a draft new risk-based methodology for investigating soil contamination, which has involved collaborating with scientists from CSIRO, funded by the Environmental Trust. The methodology allows assessment of contamination levels of arsenic, zinc, naphthalene and DDT in soils in urban areas to be assessed.

Crackdown on illegal dumping

Illegal dumping degrades the environment by polluting waterways, destroying vegetation and contaminating land. Illegally dumped waste can also pose a health risk and leave landowners with substantial clean-up costs.

Regional Illegal Dumping (RID) Squads are established with DECCW support by local councils in western Sydney and in the greater southern area to ensure illegal dumping is addressed in a cooperative regional way.

Campaigns in 2009–10 to reduce illegal dumping included checking whether tyre retailers in the Sydney region were taking proper measures to avoid illegal dumping. DECCW published a brochure titled *Waste tyres – Know your responsibilities* in May 2010 which contains simple steps for businesses to follow to avoid fines and clean-up costs.

Information sessions were held during May and June 2010 in Sydney, Wollongong and Newcastle for waste tyre generators, such as retail businesses.

Facilities that stockpile waste illegally generally do not have adequate controls to prevent polluted water from running into creeks or dust from polluting the air. Unlawful facilities can also inhibit resource recovery and cause inequity in the waste market.

DECCW inspected potentially illegal facilities in the Hunter area during 2010. Each site was checked to see if it had appropriate approvals to store waste. Regulatory action included providing licence application information and issuing clean-up notices.

At one facility alone, 35,000 tonnes of concrete waste were illegally stored. As a result of regulatory action by DECCW, the facility now has appropriate pollution controls in place and is operating in accordance with an environment protection licence. The facility is reprocessing waste into a resource for re-use, diverting up to 35,000 tonnes annually from landfill.

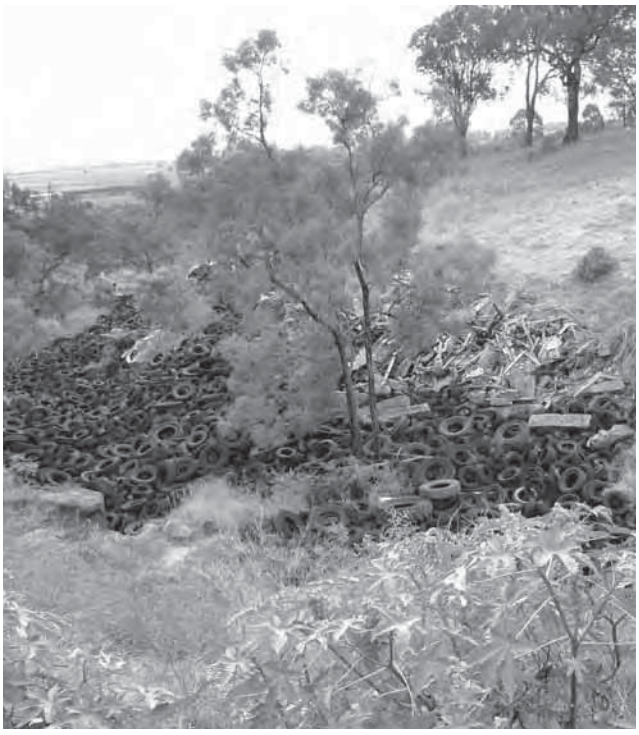


Photo: L. Kearney, DECCW

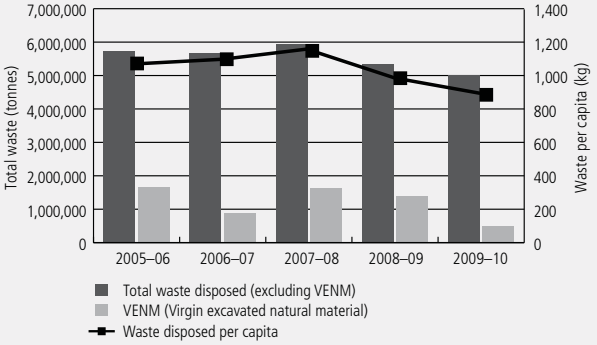
DECCW is cleaning up old tyre dumps in the Hunter Region. They can be a fire risk and can cause air and water pollution once set alight.

PERFORMANCE INDICATOR

Waste disposed of to landfill in the greater Sydney region

Definition: This indicator measures the tonnes of waste disposed of to landfill in the greater Sydney region, which extends from Port Stephens to the Shoalhaven. Separate figures are provided for virgin excavated natural material (VENM) and for other mainstream waste. VENM waste is generated by a range of industries and is used for approved practices at landfills such as final capping, landfill lining and pond filling. Per capita disposal of waste (excluding VENM) is also shown.

Waste disposed of to landfill in the greater Sydney region



Interpretation: Disposal of waste decreased overall in the greater Sydney region in 2009–10 for a second successive year.

Waste other than VENM going to landfill was around 5 million tonnes, which represented a decline of 6%. This followed a 10% fall from the previous year. Lower waste disposal may be attributable to a range of factors, including more waste recycling, less waste generated and the continuing effects of the worldwide economic downturn.

Per capita waste disposal (excluding VENM) for 2009–10 was 937 kilograms in the greater Sydney region. This has decreased by 22% since 2000.

VENM disposal declined by 64% in 2009–10 to around 0.5 million tonnes. Quantities of VENM disposal may fluctuate considerably in any given year due to the number and size of major excavation works occurring, which influences both the generation of VENM and the landfill management needs for VENM.

Photo: B. Hlavica

Improve community wellbeing

Regional Air Quality Index website

In the Sydney region, the Regional Air Quality Index (RAQI) provides a health alert system that informs asthmatics and other sensitive members of the community about the level of pollution each day so they can take measures to minimise the impact on their health. This system is complemented by automatic alerts issued by email and SMS built into the RAQI website. Members of the community can subscribe to these services by visiting www.environment.nsw.gov.au/AQMS/aboutaqi.htm.

DustWatch

In March 2010, DECCW launched the new DustWatch website (see www.environment.nsw.gov.au/dustwatch), which provides accessible satellite data of dust storm movements. NSW is the first state to provide dust monitoring access online to help scientists, farmers, land managers and the broader community with regular reports about dust conditions.

The impacts of dust storms include erosion, loss of income for farmers, cancelled flights, health issues and a significant clean-up effort. During dust storms, most dust will settle within 100 kilometres of the erosion site, although finer particles can be carried long distances, even as far as New Zealand.

The DustWatch program aims to:

- report on the extent and severity of wind erosion by measuring dust concentration and visibility
- raise awareness of the effects of wind erosion on the landscape and the impacts of dust on the community and the environment.

The website also reports observations that will assist scientists gathering data. Current 'dust watchers' include a group of dedicated individuals as well as catchment management authorities. Participating dust watchers receive weekly reports and can upload their observations of dust activity online.

The program has proven to be highly effective in determining when and where dust events are occurring, particularly in western NSW.

Beachwatch and Harbourwatch

The Beachwatch and Harbourwatch partnership programs inform the public about beach water quality (see www.environment.nsw.gov.au/beachapp/default.aspx).

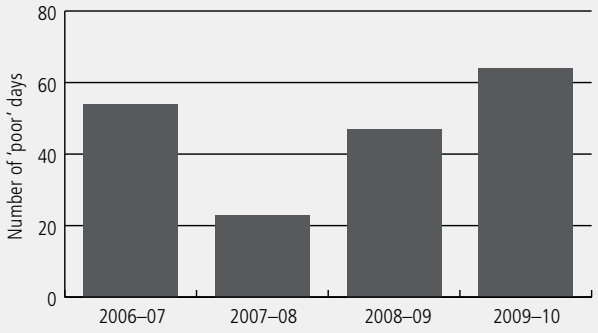
PERFORMANCE INDICATOR

Poor regional air quality index days in the greater Sydney metropolitan region

Definition: The regional pollution index was superseded in June 2008 by the regional air quality index (RAQI). The RAQI measures hourly concentrations of photochemical smog (ozone), nitrogen dioxide, sulphur dioxide, carbon monoxide, fine particles (as PM_{10}) and visibility, and has three high pollution categories – 'poor', 'very poor' and 'hazardous'. Regional pollution index data from 2006–07 and 2007–08 has been recalculated to allow comparison with the RAQI.

The RAQI is reported for three regions in Sydney (central east, north-west and south-west), the Illawarra and the lower Hunter. The RAQI is now reported hourly. RAQI values in the 'poor', 'very poor' or 'hazardous' categories indicate that one or more measured parameters have exceeded the national standards or that visibility is less than the NSW goal of 10 kilometres. A day is counted as having high pollution if the RAQI in one or more regions reached 'poor', 'very poor' or 'hazardous' during the day.

'Poor' regional air quality (RAQI) days in the Sydney Greater Metropolitan Region



Interpretation: The RAQI rated air quality as 'poor', 'very poor' or 'hazardous' on 64 days during 2009–10, 17 days more than in the previous year. These exceedences were driven by photochemical smog during the summer of 2009–10, dust storms and bushfires. A statewide dust storm on 23 September 2009 triggered the hazardous category for PM_{10} in all regions of NSW for most of that day and the following day. This event produced the highest levels of PM_{10} recorded.

The calculation of the hourly index for PM_{10} is based on a rolling 24-hour average, which will lead to more exceedences than are found in calculating a midnight-to-midnight 24-hour average, which is the protocol for assessing compliance with the national ambient air quality standard for PM_{10}.

This data also provides a broad measure of the effectiveness of stormwater and wastewater management practices, and highlights areas where improvements are required.

During the summer of 2009–10, 86% of swimming sites monitored along the NSW coast were given beach suitability grades of 'good' or 'very good' under the National Health and Medical Research Council's recreational water quality guidelines.

Overall, ocean beaches in NSW are in excellent condition, although monitoring shows that many coastal lakes and estuaries are susceptible to microbial contamination for several days following rainfall.

Emergency management

DECCW is the coordinating agency for protecting the environment during disasters and major emergencies. DECCW is represented on state and district emergency management committees, where it advises other agencies on ways of preventing or minimising environmental impacts. Key emergency management initiatives in 2009–10 included:

- contributing to NSW's Disaster Recovery Plan
- working with the NSW Fire Brigades and NSW Police to improve plans for responding to incidents involving radioactive materials
- involvement in a multi-agency training exercise and a national workshop to test counter-terrorism preparedness and procedures
- ongoing training for a range of emergency response activities, and training of other agencies' staff to better enable them to minimise the environmental impacts of disasters
- DECCW laboratory staff continuing their rapid response to testing chemicals and ecotoxicological substances during emergency incidents.

Significant emergency management cases during the year included:

- responding to reports of a tsunami generated by an earthquake off the coast of Chile – on advice from the State Emergency Service, DECCW staff monitored the situation and took action to keep visitors to its coastal national parks safe

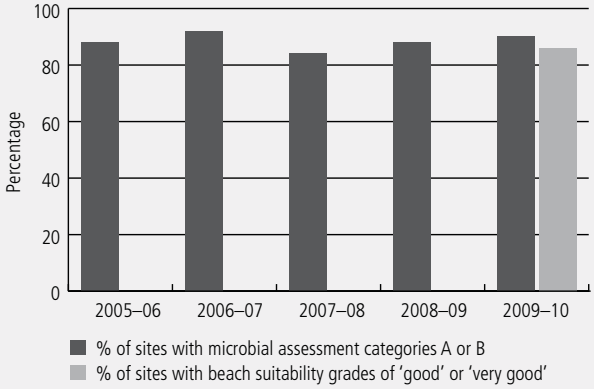
PERFORMANCE INDICATOR

Beachwatch programs

Definition: DECCW's Beachwatch and Harbourwatch programs monitor water quality at 126 swimming sites in Sydney, the lower Hunter and the Illawarra. A further 139 swimming sites are monitored in partnership with 14 coastal councils from Byron Bay to Bega under the Beachwatch Partnership Program. Samples are tested for the bacterial indicator enterococci. Daily water quality reports are issued in the Sydney region, with all areas covered by weekly star ratings and an annual *State of the beaches* report, which is released in October.

In May 2009, the National Health and Medical Research Council's guidelines for assessing risks in recreational waters were adopted for use in NSW, meaning results are no longer being reported as a percentage of compliance. Instead, beaches are classified from 'very poor' to 'very good', based on a risk assessment of pollution sources and water quality data. An interim indicator, which measures the percentage of Beachwatch and Harbourwatch sites with microbial assessment categories of A or B (measured levels of faecal contamination), is reported here, with the categories back-calculated for previous years.

Beachwatch and Harbourwatch sites with low faecal contamination or graded 'good' or 'very good'



Interpretation: Trends for the new microbial assessment reflect those of the previous indicator, with long-term improvements shown in water quality but lower results shown during years of higher rainfall.

With average rainfall conditions recorded in 2009–10, the water quality along the NSW coast continued to be of a very high standard, with 86% of sites graded as 'very good' or 'good', and 90% of sites with microbial assessment categories of 'A' or 'B'. This is an improvement on results from 2007–08, when only 84% of sites achieved these categories due to stormwater pollution and sewage overflows triggered by wet weather.

Photo: DECCW

The water quality at Bondi Beach is regularly monitored through Beachwatch to ensure the ocean is safe for swimming.

- responding to the Lennox Head tornado – DECCW worked with other agencies to facilitate the cleaning up of hazardous waste generated by the tornado.

DECCW provides real-time data from the NSW Coastal Data Network to the Bureau of Meteorology and the State Emergency Service, as part of its responsibilities under the State Flood Sub Plan. The data network is managed by DECCW and operated by Manly Hydraulics Laboratory, and includes 230 river and estuary water level recorders, 17 ocean tide gauges, 72 rainfall stations and seven deep water 'waverider' buoys. The data is used to generate emergency warnings and maintain services during extreme events and natural disasters. Real-time data is available by visiting the laboratory's website (http://mhl.nsw.gov.au/www/real_quick.htmlx).

Hazmat incident response

DECCW maintains a 24-hour emergency response and hazardous materials advice service, which is linked to DECCW's Environment Line and its regional after-hours services. DECCW staff attend significant incidents involving hazardous materials, usually to oversee clean-up or to investigate potential breaches of environmental legislation.

In 2009–10, DECCW was notified of 146 hazardous materials incidents and attended 41 incidents. Advice was provided via the telephone for other incidents. Significant incidents in 2009–10 included:

- a multi-boat fire in Pittwater, where 8,000 litres of fuel was spilled into the waterway – DECCW advised on the clean-up
- a major fire at an importing company's premises at Silverwater – DECCW advised on the materials involved and worked with other agencies and the local council on managing potential asbestos contamination
- an incident on a 16,000 tonne ship carrying a variety of chemicals, where a nitric acid leak was corroding the hull – DECCW worked with agencies to minimise risks to the environment.

Hazmat technology assessments

DECCW assesses and regulates technologies that can be used to treat hazardous materials in NSW. In 2009–10, DECCW began assessing the treatment of contamination at the Orica site at Botany using a method of 'directly heated thermal desorption'.

DECCW also continued to regulate the storage of Orica's hexachlorobenzene waste, pending its final destruction. In June 2010, Danish authorities accepted a 'duly reasoned request' to export the waste to Denmark for safe and environmentally sound destruction.

Nanotechnology

Nanotechnology is the manipulation of matter to create new materials, structures and devices, sometimes with novel properties. Products containing nanomaterials can enter the environment through waste disposal, sewage systems and run-off.

In response to the report of the NSW Legislative Council Standing Committee on State Development inquiry into nanotechnology conducted in 2008 (see www.parliament.nsw.gov.au/prod/PARLMENT/committee.nsf/0/35D2E3E37498A908CA2574F1000301BB), the NSW Government has committed to supporting national initiatives for labelling, reporting and risk assessment of nanomaterials.

On a state level, actions under way include working through the NSW Nanotechnology Policy Coordination Committee, of which DECCW is a member, to review and make recommendations about the NSW Government's regulatory environment for dealing with nanotechnology.

Pesticide use

New requirements for licensed pest controllers

New notification requirements commenced on 1 September 2009 that now require licensed and certain other pest management technicians to provide prior notice of their intention to use pesticides near certain 'sensitive places', which include schools, childcare centres and nursing homes. New print and web-based guidance materials were produced and seminars conducted for the pest control industry to explain the new requirements.

1080 and pindone pesticide control orders

1080 is used as a pesticide in NSW to control wild dogs, foxes, feral pigs and rabbits, while pindone is used to control rabbits. As these baits can harm the environment, wildlife and domestic animals, all 1080 and restricted pindone products are regulated by DECCW using pesticide control orders (PCOs). These orders state who can use 1080 and pindone and the ways in which they can be used in NSW.

In 2009–10, the Pesticides Amendment (Qualifications) Regulation 2010, which commenced in May 2010, amended clause 9 of the Pesticides Regulation 2009 to enable PCOs to set out qualifications for users of particular pesticides, and enable pesticide-specific training to be permitted as an alternative to the standard pesticide training course. The State Management Council of Livestock Health and Pest Authorities and DECCW developed a specific 1080 and pindone training course for land holders who use these pesticides in June 2010.

Photo: S. Cohen

A new training course will benefit land holders who use 1080 as a bait for foxes and other feral animals.

Photo: DECCW

Eliminate unnecessary regulation

National and state regulatory reform

For many years, DECCW has held as a priority the need to cut red tape and reduce regulatory burdens on business, government and the community, while maintaining necessary environmental controls and outcomes. In 2009, DECCW established a Regulatory Reform Committee to keep track of the various reform initiatives, and to promote opportunities for future reform. In 2009–10, DECCW engaged in over 30 major reform initiatives including, for example:

- rationalising the requirements for managing contaminated land, which involved combining the previous two stages of 'investigation' and 'remediation' into a more efficient single management stage
- implementing a new standardised licence for road construction projects that reduces compliance costs
- updating the requirements for consultation with Aboriginal people as part of cultural heritage assessments, to improve clarity and certainty for proponents of development activities.

Heritage assessments

A National Parks and Wildlife Amendment Act 2010 was passed by the NSW Parliament in June 2010 to streamline heritage assessment and approvals as part of development assessment processes. Provisions include:

- limiting the need to obtain an Aboriginal heritage impact permit for archaeological investigations
- providing a clear process to determine who to consult as part of the permit process
- providing clarity for DECCW officers, development proponents and Aboriginal people on what factors must be considered when determining a permit application
- introducing powers to vary, transfer, suspend and revoke permits
- introducing provisions to allow using remediation actions as an alternative to prosecution.

Tourism in parks

The *National Parks and Wildlife Act 1974* was amended in 2010 to assist the development of sustainable, nature-based visitor opportunities in national parks, consistent with recommendations of the 2008 Taskforce on Tourism and National Parks. The reform streamlines provisions relating to leasing and licensing, as well as clarifying what is permissible under the Act.

Native vegetation

DECCW is implementing a compliance system that identifies illegal vegetation clearing that is detected by satellite imaging. The system will enable officers to respond to any illegal clearing more efficiently and effectively, and improve overall compliance with the *Native Vegetation Act 2003*.

Chemical use

During the year, DECCW participated in initiatives to standardise legislation relating to chemical use, including:

- working as a member of the National Framework for Chemicals Environmental Management Working Group to progress uniform national environmental controls for industrial chemicals
- providing input to the Council of Australian Government's initiative to develop a new nationally uniform system for regulating pesticides and veterinary chemicals.

Photo: Courtesy Tourism NSW

There will be new opportunities for visitors to national parks as a result of amendments to the National Parks and Wildlife Act 1974.

Planning reform – review of concurrences and referrals

DECCW has concurrence and referrals roles regarding certain development applications in NSW, particularly where there are identified impacts relating to threatened species, water, cultural heritage and pollution. In 2009–10, DECCW commenced reporting on concurrences and referrals to and from the NSW Department of Planning. DECCW's processing of concurrences and referrals was well within statutory timeframes with an average of 21 days.

Aligning waste management with resource recovery regulation

While DECCW encourages the recovery and re-use of waste where it is beneficial and does not harm the environment or human health, many waste-derived materials cannot be applied to land due to potential contamination or used in thermal applications because of potential air emissions.

In 2008, DECCW introduced 'resource recovery exemptions' under the Environment Operations (Waste) Regulation 2005 to enable waste or waste-derived materials to be used as fill or fertiliser (land applications) or as a fuel or alternative raw material in thermal applications.

CASE STUDY

Resource recovery exemption for alternative waste treatment facilities

NSW has more alternative waste treatment facilities in Australia that process household organic waste than any other state. The main output from these facilities is an organic material that can be suitable for land filling or agricultural applications.

In March 2010, DECCW issued a resource recovery exemption for 'organic outputs derived from mixed waste'. This enables the output from alternative waste treatment facilities to be applied to uses such as mine site rehabilitation and some specified agricultural applications. This exemption is the first of its kind in Australia that puts chemical and physical contaminant limits on this type of material, to protect the environment and human health.

In May and June 2010, DECCW carried out a two-part enforcement and education campaign to support the implementation of the exemption. The campaign involved inspecting all alternative waste processors and selected consumers' sites. Samples of organic outputs were taken for analysis by DECCW's laboratories to assess compliance with the standards set in the exemption.

DECCW consulted the alternative waste treatment industry about the exemption, and has provided transitional arrangements to give the industry a chance to progressively reduce levels of physical contaminants.

During 2009–10, DECCW granted nine general resource recovery exemptions for commonly recovered wastes, making 27 general exemptions in total. In addition, DECCW formalised agreements with over 60 companies for specific waste or waste-derived materials to be used in industrial processes or in construction and landscaping projects.

More information is available on www.environment.nsw.gov.au/waste/RRecoveryExemptions.htm.

Radiation control

During 2009-10, DECCW continued its participation in the program to establish national uniformity of radiation protection across Australia through implementing the National Directory for Radiation Protection. The directory is being developed through the national Radiation Health Committee, which is supported by the Australian Radiation Protection and Nuclear Safety Agency. DECCW contributed to the development of national codes of practice and radiation standards, advising on:

- the classification of radioactive waste
- Radiation Health Committee national radiation protection qualifications and accreditation and training standards
- risks from handling deceased persons recently treated with radioactive materials.

In April 2010, in line with national uniformity agreements, DECCW gazetted nine national codes and standards for adoption under the *NSW Radiation Control Act 1990*, including:

- *Code of practice for the security of radioactive sources*
- *Code of practice for radiation protection and radioactive waste management in mining and mineral processing*
- *Code of practice for radiation protection in the medical applications of ionising radiation.*

The Radiation Advisory Council and DECCW established a working group to develop guidelines for the management of naturally occurring radioactive materials and technologically enhanced radioactive materials emitted by specific industries. DECCW invited an expert from the USA, Mr Charles Simmons, to talk to DECCW staff and the council about naturally occurring radioactive materials. Participants received valuable insights on ways in which to approach such materials and implement legislation that addresses radiation risks to human health and the environment.