

Department of Environment and Conservation  
**2008-2009**  
**Annual**  
**Report**



Department of  
Environment and Conservation

*Our environment, our future* 

### **Acknowledgments**

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8 September 2009

**Hon Donna Faragher MLC**

Minister for Environment

In accordance with section 63 of the *Financial Management Act 2006*, I have pleasure in submitting for presentation to Parliament the Annual Report of the Department of Environment and Conservation for the period 1 July 2008 to 30 June 2009.

This report has been prepared in accordance with provisions of the *Financial Management Act 2006*.



**Keiran McNamara**

Director General



This is the third annual report of the Department of Environment and Conservation since it was created through the merger of the former Department of Environment and Department of Conservation and Land Management.

In the first report, for 2006–07, I commented on the challenges that face a new organisation in maintaining services to the community while at the same time implementing change.

The department was created at a time of remarkable economic conditions that placed considerable strain on the department's resources – both human and physical – especially in respect to environmental assessment and approvals processes for new resources developments and issues such as native vegetation clearing.

In our second year, I remarked that we faced increasing pressure to retain and attract staff, as we had become a 'pool' from which the resources sector drew staff who were well qualified in environmental issues.

Changing world economic conditions since have provided something of a buffer and in this, our third year, we have been able to consolidate, reform some of our internal processes, and in the process create a stronger and more proactive agency.

A department such as DEC is seldom out of the news. There will always be pollution incidents, bushfires, injured or stranded animals, the need to conserve threatened species, projects seeking approvals and the apprehension of people who are breaking the State's conservation and environmental laws.

In fact, never a day goes by when we are not contacted in relation to some issue by the media.

Consequently, the department's profile more often than not is reflected as being 'responsive' rather than 'proactive'.

As the various service statements in this annual report reveal, there is a myriad of activities that the department undertakes that clearly focus on conserving the nature of Western Australia and protecting our environment.

These include working closely with industry in respect to environmental impact assessments, creating and implementing community sustainability programs, biological surveys and research, monitoring our air quality, coordinating the Government's response to climate change, bringing native plants and animals back from the brink of extinction, controlling threats to our natural environment before they become major problems, providing access and an enjoyable experience for the 14 million visitors to the lands and waters we manage on behalf of the people of Western Australia, implementing fire management plans for 25 million hectares of conservation lands as well as a further 89 million hectares of unallocated Crown land, running environmental and conservation educational programs that reach to more than 200,000 school children a year, and involving the community through the thousands of volunteers who contribute their time to environmental protection and nature conservation.

It is this proactive approach – carried out in partnership with the community – that reflects the real face of the department.

I would like to acknowledge the contribution of the Conservation Commission of WA and the Marine Parks and Reserves Authority, the vesting bodies for our terrestrial and marine reserves, along with members of the Waste Authority, Keep Australia Beautiful Council, the Environmental Protection Authority and the Contaminated Sites Committee, and the Swan River Trust to which the department provides administrative and technical support.

And, as always, I thank our 2000 staff throughout the State – from Esperance to Kununurra – for their continuing contribution and commitment to protecting and conserving the nature and environment of WA.

A handwritten signature in black ink that reads "Keiran McNamara". The signature is fluid and cursive.

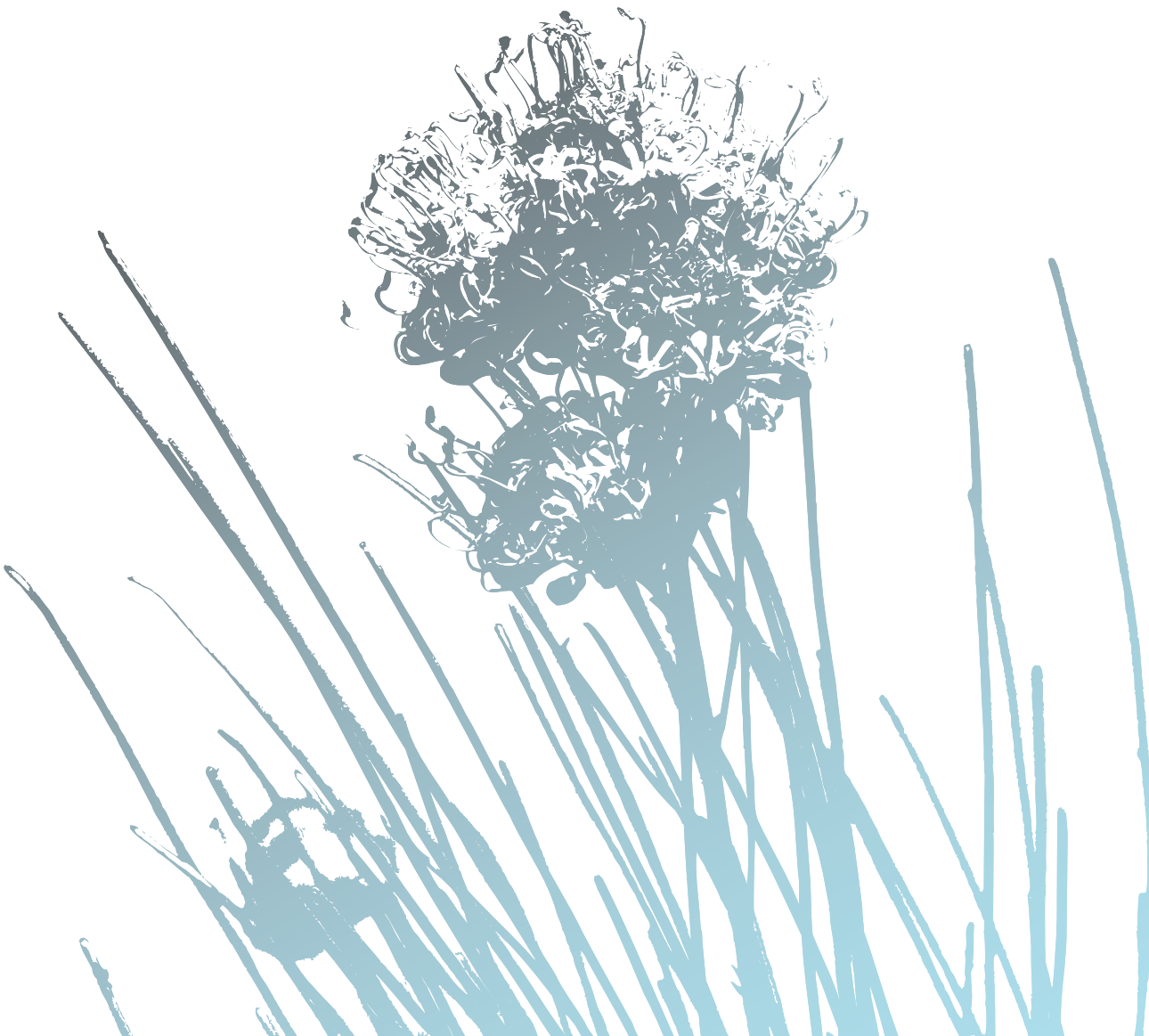
**Keiran McNamara**  
Director General

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# 1 OVERVIEW OF AGENCY





As the State's lead agency on environmental matters, DEC carries out the challenging task of balancing the conservation of WA's biodiversity values with the need to promote responsible development to sustain economic growth in the State.

DEC was well positioned in 2008–09 to continue delivering a healthy, diverse and well-managed Western Australian environment through its range of services to the community, government and stakeholders.

## Protecting our biodiversity

Protecting WA's biodiversity from threats such as introduced animals, environmental weeds, wildfires, *Phytophthora* dieback and the changing climate was a priority for DEC in 2008–09.

Cane toads crossed the border from the Northern Territory in February 2009. The presence of cane toads in WA represents a significant biodiversity conservation challenge and consequently, the *Draft Cane Toad Strategy for Western Australia 2009–2019* was released in May 2009 for a period of public comment. When finalised, the strategy will aim to provide an integrated response to reduce the impact of cane toads on biodiversity, as well as social and economic values. The State Cane Toad Initiative continued in 2008–09 with the regional cane toad team conducting a wide range of on-ground activities against cane toads to reduce the number of toads on the frontline. The team also contributed to toad behaviour research, identified high risk freight and establishment zones, facilitated a Cane Toad Stakeholder Reference Group, and provided educational presentations to schools and community groups. Funding was provided to the community group Kimberley Toad Busters to continue its cane toad control program.

DEC, in partnership with the Centre for Phytophthora Science and Management at Murdoch University, discovered nine new *Phytophthora* taxa and also recorded five taxa that have not previously been seen in WA. Work was also undertaken to determine the level of threat these new taxa pose to biodiversity and to provide formal scientific descriptions for them. *Phytophthora* dieback management projects continued in 2008–09, with a particular focus on Fitzgerald River National Park.

The *Western Shield* program, which works to bring fauna species back from the brink of extinction by controlling foxes and cats through baiting, operated on more than 3.9 million hectares of conservation reserves and State forest.

Two recovery plans covering four fauna species were approved and nine interim recovery plans were approved for flora. A recovery team was active in protecting the western ringtail possum, and a major symposium and workshop was held to develop a framework for a revised recovery plan, coordinate future projects and to raise awareness about the threats to Carnaby's black-cockatoo. The recovery of the critically endangered Gilbert's potoroo also continued, with six of the animals born on Bald Island removed for future translocation into a predator-free fenced enclosure on the mainland.

Important findings were made about the reasons for the recent decline in the woylie population, and the Minister for Environment announced \$600,000 in State Government funding to create a 400-hectare predator-free enclosure for the woylie in the south-west, and for critical conservation actions at Perth Zoo, to ensure the survival of the critically endangered species.

During the year, two native fauna species: a millipede and a butterfly and a native plant species, were added to the threatened fauna and flora lists. One plant, *Phillotheca falcate*, was rediscovered after it was formerly thought to be extinct.

In 2008–09, DEC provided special funding for 42 projects with a budget of \$4.5 million that were conducted across the themes of invasive animal control, environmental weed control, threatened species and ecological communities, *Phytophthora* dieback management, biological survey and research and the State Cane Toad Initiative.

DEC continued to build essential baseline knowledge about the State's biodiversity by conducting surveys and research projects, often in collaboration with partner organisations. Manuscripts for the Pilbara Bioregion Biological Survey were completed and forwarded for external review during the year, and fieldwork continued for the Kimberley Islands and banded iron formations of the Yilgarn Craton surveys.

The focus on the Kimberley increased during the year, and the State Government committed to the development of a Kimberley Science and Conservation Strategy. As a precursor to the community consultation phase of the strategy, the publication *A synthesis of scientific knowledge to support conservation management in the Kimberley region of WA* was published by DEC.

In consultation with key stakeholders, the State Government is also developing a conservation strategy for the Great Western Woodlands and the Minister for Environment invited nominations from key interest groups for appointment to a stakeholder reference group as the first step towards formulating the strategy.

During the year many natural resource management projects funded or co-funded by the Australian Government continued, including recovery planning for threatened species, completion of four regional *Phytophthora* management strategies and purchases of land for addition to the conservation reserve system.

The State Government's new Environmental Community Grants Program was also introduced to provide funding assistance to community groups and individuals undertaking conservation work. A total of \$1.53 million was made available in the first round of funding of the four-year program.

#### **Managing our forests, parks and reserves**

During the year, the area of lands and waters managed by DEC increased by 63,430 hectares to 27,371,881 hectares. The land area included in this figure equates to 10.19 per cent of the State.

During 2008–09, a management plan for Wellington National Park, Westralia Conservation Park and Wellington Discovery Forest was approved, bringing the total number of current management plans prepared under the *Conservation and Land Management Act 1984* (CALM Act) to 55. A further 14 terrestrial management plans were in preparation.

Nearly \$16 million was invested in capital works projects and tourist road improvements in national parks, conservation parks, State forests and other reserves across WA.

A car park, walk trail and lookout were constructed at the Pinnacles Desert Discovery centre at Nambung National Park, which was opened by the Minister for Environment in October. Three major car parks in John Forrest National Park were redesigned and upgraded to improve traffic flow and overcome drainage issues. The Coalmine Beach picnic area near Walpole was upgraded with new paths, toilet and recreation areas.

The Bibbulmun Track was again recognised as an important tourism asset to the State, with the Bibbulmun Track Foundation winning a Bronze Medal in the 2008 WA Tourism Awards in the Tourism Attraction category.

The next stage of the Munda Biddi Trail from Collie to Nannup was opened by the Minister for Environment, including campsites in Wellington National Park and Jarrahwood. Funding of \$3 million over three years from Royalties for Regions grants was announced to finalise the construction of the Trail to Albany.

DEC progressed the World Heritage nomination for the Ningaloo Coast with information sessions being held for local community members in Exmouth, Coral Bay and Carnarvon. Advice was provided to the Australian Heritage Council to assist in the assessment of Fitzgerald River National Park, Ningaloo Coast, Porongurup Ranges and Cheetup Rock Shelter in Cape Le Grand National Park for inclusion on the National Heritage List.

DEC launched the Miriuwung-Gajerrong cultural planning framework. This involved employing eight trainee rangers, managing six new conservation areas totalling 150,000 hectares, and beginning the process to formally allow joint management of the area.

Aboriginal heritage in the Perth hills was recognised with the renaming of several parks, with the names reflecting the culture and heritage of Aboriginal ancestors in the region.

The Community Involvement Program was progressed, with eight new volunteer projects initiated across WA, while the *Healthy Parks, Healthy People* initiative continued to grow, delivering joint activity programs with Diabetes WA, the Asthma Foundation and the Department of Communities.

The Interpretation Australia Association Award for Excellence was given to the Swarbrick Forest Discovery near Walpole, which was designed by DEC's Interpretation Unit. Other interpretation projects this year were the Vincent Serventy Memorial display and exhibits at Dryandra Woodland near Narrogin, panels at Hamelin Bay and at King Leopold Ranges Conservation Park and Tunnel Creek, Windjana Gorge and Geikie Gorge national parks in the West Kimberley.

Employment and training opportunities were progressed for Aboriginal people through the Mentored Aboriginal Training and Employment Scheme (MATES) program.

Attendance to activities at the Perth Observatory increased to more than 7,100 and staff were involved in the development of software and electronics for the Murchison Widefield Array radio telescope, one of two being built by a worldwide consortium of universities for the Square Kilometre Array telescope in WA.

To assist the Conservation Commission, assessments of old-growth forest were undertaken in Beaton, Dombakup, Easter, Mowen, Nelson, Warren and Weld forest blocks and reports were made on community nominated old-growth forest in Quindaning and Gregory forest blocks.

### **Environmental regulation and assessment**

As the State's environmental regulator, DEC continued to manage and protect the environment in areas where human activities impact on the quality of air, land or water.

Fieldwork on the Midland Background Air Quality Study was completed. The monitoring campaign targeted common air pollutants in Midland and surrounding suburbs, with community members participating in the monitoring. The Kwinana Background Air Quality Study was also progressed during the year. The target pollutants, ammonia, volatile organic compounds and carbonyl compounds, were measured. Results of both studies are expected to be published in late 2009.

DEC developed a State-wide *Industry Regulation Compliance Strategy* and supporting compliance program to assist officers in managing proactive planned inspections of industry, and the department continued to implement the industry licensing reform program to remove duplication and overlap in licensing approvals.

Considerable resources were applied to the ongoing management of lead and nickel issues at Esperance and improvements to the licence which regulates the operations of the Esperance Port Authority. The successful removal of the remaining lead concentrate from the port was overseen by DEC.

DEC continued to respond to community concerns about air quality in the Wagerup area, publishing a detailed assessment of air quality in the vicinity of the Alcoa Wagerup alumina refinery. The study has significantly improved DEC's understanding of the complex Wagerup environment and provides opportunities for additional improvements in environmental management.

The department's Environmental Impact Assessment division helped the Environmental Protection Authority complete assessments of a number of significant projects. The *Draft State Environmental (Ambient Air National Environment Protection Measure) Policy* was released for consultation.

### **Taking action on climate change**

As the lead agency for climate change policy coordination in the State Government, DEC's Office of Climate Change (OCC) assesses the impact of climate change and develops mitigation and adaptation strategies for WA.

In 2008–09 OCC commenced the development of the Climate Change Adaptation and Mitigation Strategy for WA. This will assess the likely impacts and risks of climate change and make recommendations for mitigation and adaptation actions, covering each major sector of Western Australian industry as well as urban planning agencies and State water and energy utilities.

Stage three of the \$4 million Indian Ocean Climate Initiative continued. This collaborative initiative between the State Government, Bureau of Meteorology and CSIRO focused on providing better understanding of the current and future climate and the impact of changes particularly in north-west WA.

Other initiatives included the completion of the second round of the Low Emissions Energy Development Fund applications and subsequent announcement of \$12.5 million to support Carnegie Corporation in the development of a 50 Megawatt wave power station.

DEC also completed a major study identifying greenhouse gas abatement options for multiple sectors in WA, developed guidelines for local governments wanting to move towards carbon neutrality and commissioned a study into the impacts of climate change on Indigenous communities in the tropical north in partnership with the Australian Government.

### **Sustainability**

Legislation was introduced to assist in increased recycling and the reduction of waste. On 1 July 2008 the *Waste Avoidance and Resource Recovery Act 2007* (WARR Act) and the *Waste Avoidance and Resource Recovery Levy Act 2007* came into effect. The WARR Act established a Waste Authority to provide independent advice to the Government on waste issues and to oversee application of funds from the WARR account.

Phase two of the Zero Waste Development Scheme, which assists local governments prepare strategic waste plans, was largely completed during the year. More than 94 per cent of all local governments participated in the scheme during the year.

Under the Strategic Waste Initiatives Scheme and the Community Grants Scheme, more than \$1.4 million was allocated to local government, industry and community groups across the State for innovative waste reduction projects.

The *DECcrease* program continued to incorporate DEC's sustainability principles into its diverse range of activities, operations and decision-making processes across WA. The *DECcrease* Committee was established, developing a draft *DECcrease* Policy Statement and two formally endorsed management plans focusing on energy and water efficiency in the workplace.

The major, internationally acclaimed *Earth from Above* sustainability exhibition was successfully staged in the grounds of the Perth Cultural Centre from October 2008 to January 2009. The free-to-public outdoor exhibition of large-scale evocative images depicting sustainability issues around the world attracted more than 250,000 people.

The *Waste Wise* schools program continued, bringing the number of schools involved in the program to 600. A total of \$160,000 in *Waste Wise* grants was provided to 31 metropolitan schools and 13 regional schools.

### **Fire management**

DEC's extensive experience in managing and fighting forest fires was called upon in February 2009, when 40 DEC incident management personnel and fire crews went to Victoria to assist in fighting the most devastating bushfire event in Australian history. While DEC incident management teams have been used interstate and overseas, including a month-long stint in California in August 2008, it was the first interstate deployment for frontline forest fire crews.

Back in WA, DEC attended and monitored 648 wildfires, covering an area of 1.74 million hectares. About 12 per cent of these fires were caused by lightning, while 57 per cent were deliberately lit.

DEC attended 558 wildfires covering more than 23,000 hectares in the three south-west forest regions. More than 90 per cent of all fires were contained to less than 20 hectares due to the early detection and rapid fire suppression response by DEC. In many cases the fires were rapidly contained where they burned into low fuels within previously prescribed burned areas.

The extremely dry summer conditions that prevailed since December 2008 affected most of the State, and resulted in numerous large wildfires. One of these was the Bridgetown fire in January 2009, which burned 5,877 hectares of mostly private property and resulted in the loss of seven houses and nine sheds, and 1,600 hectares of pine and blue gum plantations. The fire fighting effort involved more than 400 DEC staff. DEC was strongly supported by local bushfire brigades, the Fire and Emergency Services Authority (FESA), WA Police and several support organisations.

DEC contracted eight fixed-wing water bomber aircraft during the peak summer months of the 2008–09 fire season to provide rapid aerial suppression capability. The

bombers attended 142 wildfires stretching from Jurien Bay to Esperance. These aircraft dropped 992 loads and flew 575 operational hours. DEC also provided an effective fire detection system in the high fire risk zones of the south-west regions, based on the combination of nine single-engine aircraft and 13 fixed lookout towers.

Prescribed burning is undertaken as a key conservation and fire management strategy for DEC. The combined total area of prescribed burning undertaken throughout the State was 1,053,646 hectares, which is the largest total area ever achieved by the department. In the south-west forest regions, the prescribed burn program for 2008–09 covered 151,818 hectares.

The fire education program continued to operate in 2008–09 through the EcoEducation Section of the Strategic Development and Corporate Affairs Division and Fire Management Services Branch. The program aims to educate school students and teachers about inter-relationships of fire, flora and fauna, and the role of fire and science in conserving biodiversity and protecting communities and natural values.

Fire Management Services Branch Development and Education staff conducted 49 formal fire training courses involving 614 participants. In addition, district and regional staff delivered five formal fire training programs to 29 participants.

### Vision

A healthy, diverse and well-managed Western Australian environment.

### Mission

Working with the community, we will ensure that Western Australia's environment is valued, protected and conserved, for its intrinsic value, and for the appreciation and benefit of present and future generations.

### 1.2.1 Enabling legislation

On 1 July 2006, the Department of Environment and Conservation (DEC) was formed from the amalgamation of the former Department of Conservation and Land Management and the former Department of Environment under the *Public Sector Management Act 1994*.

### 1.2.2 Responsible Minister

DEC's responsibility during the whole of the reporting period was to the Minister for Environment who exercised authority under the *Environmental Protection Act 1986* and the *Conservation and Land Management Act 1984* and other DEC administered legislation. For the first two months of the reporting period, that office was held by the Hon David Templeman MLA. Following the State election in September 2008, the office is now held by the Hon Donna Faragher MLC.

### 1.2.3 The role of the department

DEC is in the portfolio of the Minister for Environment. The department is also part of a greater environmental community and has responsibilities for implementing Western Australian Government policy within that community. Protection and conservation of the environment is a collective role.

The department has the lead responsibility for protecting and conserving the State's environment on behalf of the people of WA. This includes managing the State's national parks, marine parks, conservation parks, State forests and timber reserves, regional parks, nature reserves, marine nature reserves and marine management areas.

Its key responsibilities include broad roles in conserving biodiversity and protecting, managing, regulating and assessing many aspects of the use of the State's natural resources. The department contributes to the development of environmental protection policies, manages the environmental impact assessment process and carries out regulatory functions to achieve improved environmental outcomes. It is also responsible for the management of contaminated sites and responding to pollution incidents.

The department is responsible for fire preparedness and pest animal and weed control on 89 million hectares of unallocated Crown land and unmanaged reserves.

The department provides support or assists the following portfolio authorities and boards to carry out their functions, which are integral to the department achieving its vision and mission:

- Conservation Commission of Western Australia
- Contaminated Sites Committee
- Environmental Protection Authority
- Keep Australia Beautiful Council
- Marine Parks and Reserves Authority
- Swan River Trust
- Waste Authority.

### 1.2.4 Legislation administered by DEC as at 30 June 2009

#### Acts

- *Carbon Rights Act 2003*
- *Conservation and Land Management Act 1984*
- *Contaminated Sites Act 2003*
- *Environmental Protection Act 1986*
- *Environmental Protection (Landfill) Levy Act 1998*
- *National Environment Protection Council (Western Australia) Act 1996*

- *Reserves (National Parks and Conservation Parks) Act 2004*
- *Reserves (National Parks, Conservation Parks and Other Reserves) Act 2004*
- *Reserves (National Parks, Conservation Parks, Nature Reserves and Other Reserves) Act 2004*
- *Sandalwood Act 1929*
- *Wildlife Conservation Act 1950*

### **Regulations**

- Clean Air (Determination of Air Impurities in Gases discharged into the Atmosphere) Regulations 1983
- Conservation and Land Management Regulations 2002
- Contaminated Sites Regulations 2006
- Environmental Protection Regulations 1987
- Environmental Protection (Abattoirs) Regulations 2001
- Environmental Protection (Abrasive Blasting) Regulations 1998
- Environmental Protection (Clearing of Native Vegetation) Regulations 2004
- Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998
- Environmental Protection (Controlled Waste) Regulations 2004
- Environmental Protection (Diesel and Petrol) Regulations 1999
- Environmental Protection (Domestic Solid Fuel Burning Appliances and Firewood Supply) Regulations 1998
- Environmental Protection (Fibre Reinforced Plastics) Regulations 1998
- Environmental Protection (Goldfields Residential Areas) (Sulphur Dioxide) Regulations 2003
- Environmental Protection (Kwinana) (Atmospheric Wastes) Regulations 1992
- Environmental Protection (Metal Coating) Regulations 2001
- Environmental Protection (NEPM-NPI) Regulations 1998
- Environmental Protection (NEPM-UPM) Regulations 2007
- Environmental Protection (Noise) Regulations 1997
- Environmental Protection (Recovery of Vapours from the Transfer of Organic Liquids) Regulations 1995
- Environmental Protection (Rural Landfill) Regulations 2002
- Environmental Protection (Unauthorised Discharges) Regulations 2004
- Forest Management Regulations 1993
- Noise Abatement (Noise Labelling of Equipment) Regulations (No. 2) 1985
- Sandalwood Regulations 1993
- Wildlife Conservation Regulations 1970
- Wildlife Conservation (Reptiles and Amphibians) Regulations 2002

### **Environmental Protection Policies**

- Environmental Protection (Swan Coastal Plain Lakes) Policy 1992
- Environmental Protection (Gnangara Mound Crown Land) Policy 1992
- Environmental Protection (Peel Inlet – Harvey Estuary) Policy 1992
- Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999
- Environmental Protection (Goldfields Residential Areas) (Sulphur Dioxide) Policy 2003
- Environmental Protection (Ozone Protection) Policy 2000
- Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998



- Environmental Protection (Western Swamp Tortoise Habitat) Policy 2002 [Appendix 1 to the Environmental Protection (Western Swamp Tortoise Habitat) Policy Approval Order 2002]

### Other written laws on which DEC officers assist

- *Litter Act 1979*
  - Litter Regulations 1981
- *Swan and Canning Rivers (Consequential and Transitional Provisions) Act 2006*
- *Swan and Canning Rivers Management Act 2006*
  - Swan and Canning Rivers (Transitional) Regulations (No. 2) 2007
  - Swan and Canning Rivers (Transitional) Regulations 2007
  - Swan and Canning Rivers Management Regulations 2007
- *Waste Avoidance and Resource Recovery Act 2007*
- *Waste Avoidance and Resource Recovery Levy Act 2007*
  - Waste Avoidance and Resource Recovery Regulations 2008
  - Waste Avoidance and Resource Recovery Levy Regulations 2008

### Changes made in 2008–09 to legislation administered

Few changes to legislation occurred during the reporting period.

Following assent given to the *Waste Avoidance and Resource Recovery Act 2007* and *Waste Avoidance and Resource Recovery Levy Act 2007*, the Waste Avoidance and Resource Recovery Regulations 2008 and the Waste Avoidance and Resource Recovery Levy Regulations 2008 were gazetted on 20 June 2008, with the substantive regulations taking effect on 1 July 2008.

Section 131A of the CALM Act was amended by section 34 of the *Statutes (Repeals and Miscellaneous Amendments) Act 2009* with regard to its provisions for tabling of Ministerial directions. This amendment removes any provision in legislation that provides that documents which are required to be tabled in Parliament are to be regarded as being a document published by order or under the authority of the House. These provisions are not appropriate as not all tabled documents are ordered to be published, and accordingly such a provision is no longer included unless specifically required.

Part 7A – Barrow Island Trust Account was deleted from the *Conservation and Land Management Regulations 2002* (CALM Regs) by regulation 3 of the *Financial Management (Transitional Provisions) Regulations 2009*. The Barrow Island Trust Account was originally established in 2004 under section 69(1) of the CALM Act when that section required establishment of the trust account to be prescribed (which it was under Part 7A of the CALM Regs). Amendment made to section 69(1) of the CALM Act by the *Financial Legislation Amendment and Repeal Act 2006* removed the requirement for trust accounts to be prescribed. The *Financial Management (Transitional Provisions) Regulations 2009* deleted Part 7A of the CALM Regs and established a new trust account, the Barrow Island Net Conservation Benefit Account, under section 69(1) of the CALM Act; and provided for the transfer of any money credited to the Barrow Island Trust Account to the new trust account.

Copies of the legislation administered by the department are available on the State Law Publisher's website at [www.slp.wa.gov.au/legislation/agency.nsf/dec\\_menu.htmlx](http://www.slp.wa.gov.au/legislation/agency.nsf/dec_menu.htmlx).

### 1.2.5 Performance management framework

DEC supports broad, high-level government goals by more specific desired outcomes. The department delivers services to achieve these desired outcomes, which ultimately contribute to meeting the higher-level government goals.



The following table illustrates the relationship between our agency-level desired outcomes and the most appropriate government goal.

**Table 1: Government goal, desired outcome and DEC**

| Government goal   | Desired outcomes  | DEC services  |
|---|---|---|
| Ensuring that economic activity is managed in a socially and environmentally responsible manner for the long-term benefit of the State. | Conservation and sustainable utilisation of biodiversity.   | 1. Nature Conservation<br>2. Sustainable Forest Management  |
|   | Community enjoyment of park facilities and services, wildlife and the natural environment displayed in parks.   | 3. Parks and Visitor Services   |
|   | Emissions and discharges meet acceptable criteria.  | 4. Environmental Regulation   |
|   | Adoption of environmentally sustainable practices to protect, manage and restore the State's natural resources. | 5. Environmental Sustainability<br>6. Environmental Impact Assessment and Policies for the Environmental Protection Authority<br>7. Coordinate the Response to Climate Change |

### Service 1: Nature Conservation

The development and implementation of programs for the conservation of biodiversity<sup>1</sup>, including:

- management of threatened species and ecological communities
- sustainable use of commercially exploited species
- the acquisition, conservation and protection of representative ecosystems for the national reserve system, and
- promotion of public awareness, understanding and support for nature conservation.

### Service 2: Sustainable Forest Management

The provision of economic, social and cultural benefits from State forest and timber reserves while conserving biodiversity, maintaining soil and water values and sustaining health, vitality and productive capacity of the forest for current and future generations.

### Service 3: Parks and Visitor Services

Management of lands and waters, dealing with public involvement, visitation and appreciation of the natural environment on lands and waters managed by the department, including:

- preparing and implementing management and recreation site development plans
- providing, managing and maintaining appropriate access, recreation opportunities and visitor facilities
- protecting natural areas, visitors and facilities from wildfire
- training departmental staff and volunteers

<sup>1</sup> The variety of life forms: the different plants, animals and micro-organisms, the genes they contain, and the ecosystems they form.

- working with local tourist bureaus and commercial tour operators
- involving Indigenous people in park management and the provision of visitor facilities and services
- providing visitor information and designing and initiating educational and interpretive activity programs that enrich visitor experience and help develop greater community awareness and support for parks, natural areas, astronomy, nature-based tourism and recreation services and policies
- undertaking scientific, visitor and social research, in cooperation with other research institutions, and
- provision of services to, and performance of statutory functions by the Conservation Commission of Western Australia (Conservation Commission).

#### **Service 4: Environmental Regulation**

Regulate emissions and discharges to the environment and the transport of hazardous wastes. Regulate the investigation, classification and management of contaminated sites. Monitor ambient air quality and develop air quality management plans for priority air sheds (the air canopy surrounding population centres, industrial and other facilities, within which impacts of air pollutants need to be considered from health and environmental viewpoints).

#### **Service 5: Environmental Sustainability**

Develop and implement policies and strategies that promote environmentally sustainable practices in industry, government and the community.

#### **Service 6: Environmental Impact Assessment and Policies for the Environmental Protection Authority**

Manage the environmental impact assessment process and coordinate the development of policy for the Environmental Protection Authority to enable sound environmental advice to be provided to the State Government, developers and the public in accordance with statutory functions.

#### **Service 7: Coordinate the Response to Climate Change**

To provide leadership in the development and implementation of strategies to reduce greenhouse gas emissions and adaptation initiatives to reduce the impact of climate change for Western Australia.

### **1.2.6 Changes from the 2007–08 reporting year**

In 2008–09 there were no changes to the department's Outcome Based Management structure.

### **1.2.7 Shared responsibilities with other agencies**

During the year, DEC contributed to whole-of-government reform initiatives including procurement reform and corporate services reform. The department also contributed to the following key cross-agency initiatives.

**Table 2: Key cross-agency initiatives**

| Initiative                   | Contributing agencies  | Result for 2008–09   |
|------------------------------|--|--|
| Responding to climate change | DEC (lead agency), Office of Energy, Department of Treasury and Finance and Department for Planning and Infrastructure | Whole-of-government integrated response to climate change  |
| Salinity                     | Department of Agriculture and Food (lead agency), DEC, Department of Water, Forest Products Commission                 | Improve protection of biodiversity assets and contribute to development of solutions to salinity |

### Our values

People make organisations, and the values they adopt shape those organisations. In working to achieve our mission, we endeavour to behave with:

- Honesty, courage and integrity – acting ethically, lawfully, in the public interest and treating people with impartiality.
- Respect – understanding and respecting individual differences, listening to and valuing each other’s contribution, and respecting the views and aspirations of co-workers and the views and contribution of stakeholders.
- Openness – having decision-making processes that are fair, transparent and understandable.
- Commitment – being responsible, accountable and dedicated in our work, both individually and collectively.
- Innovation – continually seeking new and better ways of achieving desired outcomes.

### We will demonstrate:

- Teamwork – working collaboratively and cooperatively with co-workers, other agencies and in partnership with the community.
- Leadership – being progressive, showing courage, initiative and creativity in meeting our objectives.
- Professionalism – acting in a courteous and fair manner, and using up-to-date and sound scientific principles and accurate information in our work.
- Value – delivering the best possible result for the protection and conservation of the environment through continual improvement of our efforts.
- Learning-based culture – being open to new ideas and concepts learnt from experience and others.

### **Our principles**

In making decisions or providing advice, we will be guided by the following principles.

- Where there are threats of serious or irreversible damage, the lack of full scientific certainty shall not be used as a reason for postponing measures which seek to protect or restore the environment or prevent loss of biodiversity.
- All elements of the environment, including the diversity of ecological communities and native species throughout WA, will be maintained in a healthy state and, where necessary and possible, restored.
- The opportunity for the public to be involved and engaged in developing and delivering benefits to the environment and to their own health and enjoyment will be promoted.
- Outcomes will be delivered in the most effective and efficient way.
- Cooperation, sharing and integration of resources and knowledge within the department and between communities and agencies will be promoted.
- We will be adaptive in our management, taking a flexible and responsive approach to management and operations and being receptive to change.
- Users of the environment and resources should pay fair value for that use.
- Use of environmental resources and wildlife will be on the basis of ecological sustainability.

### **Strategic directions, objectives and strategies**

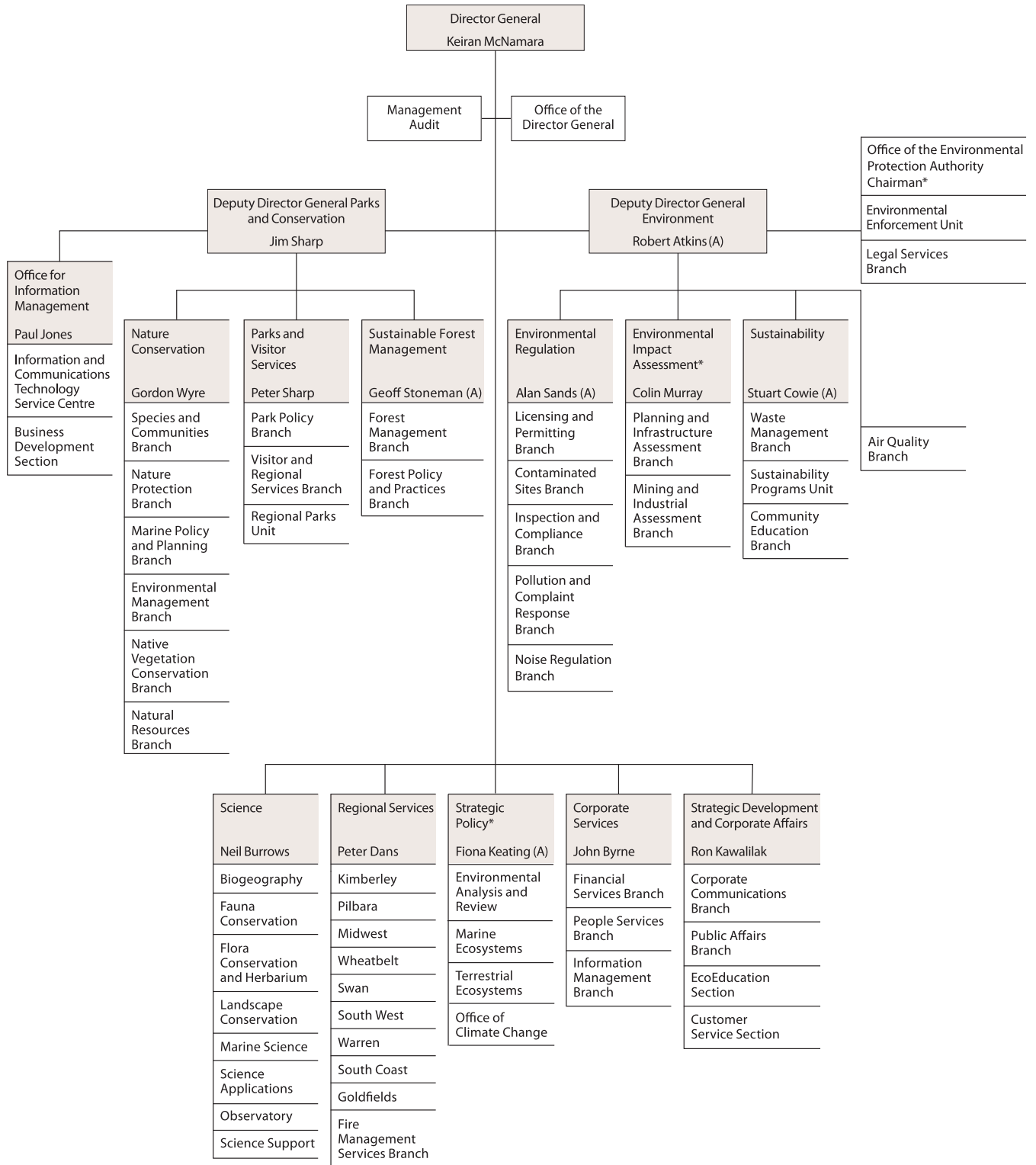
The vision we are working towards is 'A healthy, diverse and well-managed Western Australian environment'.

The department will achieve this vision by:

- conserving biodiversity
- managing natural resources and promoting sustainable practices
- leading climate change actions
- creating a world-class parks system
- implementing sustainable forest management
- preventing pollution and remediating contamination
- maintaining community involvement and support, and
- improving the way we do business.

# 1.4 ORGANISATION STRUCTURE

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\*The Office of the Environmental Protection Authority Chairman, the Environmental Impact Assessment Division and parts of the Strategic Policy Division form an EPA Service Unit.

Figure 1: Operating structure of the Department of Environment and Conservation as at 30 June 2009

# 2

## AGENCY PERFORMANCE



**Financial targets: Actual performance compared to budget targets**

|   | 2008–09<br>target <sup>(1)</sup><br>\$'000 | 2008–09<br>actual<br>\$'000 | Variation <sup>(2)</sup><br>\$'000 |
|---|--|-----------------------------|------------------------------------|
| Total cost of services (expense limit)          | 298,151                                    | 315,953                     | 17,802                             |
| Net cost of services                            | 214,240                                    | 215,633                     | 1,393                              |
| Total equity                                    | 3,575,405                                  | 4,750,630                   | 1,175,225                          |
| Net increase/(decrease) in cash held            | (1,748)                                    | (757)                       | 991                                |
|   | <b>No.</b>                                 | <b>No.</b>                  | <b>No.</b>                         |
| Approved full-time equivalent (FTE) staff level | 1,944                                      | 1,939                       | 25                                 |

(1) As specified in the budget statements for the year in question

(2) Further explanations are also contained in Note 33 'Explanatory Statement' to the financial statements.

**2.1.1 Service 1: Nature Conservation**

The development and implementation of programs for the conservation of biodiversity, including:

- management of threatened species and ecological communities
- sustainable use of commercially exploited species
- the acquisition, conservation and protection of representative ecosystems for the national reserve systems, and
- promotion of public awareness, understanding and support for nature conservation.

**Performance summary**

|   | 2008–09<br>Target<br>\$'000 | 2008–09<br>Actual<br>\$'000 | Variation<br>\$'000 |
|---|-----------------------------|-----------------------------|---------------------|
| Expense by service                                    | 96,815                      | 117,577                     | 20,762              |
| KPI   | 2008–09<br>Target           | 2008–09<br>Actual           | Variance            |
| Average cost per hectare of managing wildlife habitat | \$3.44                      | \$4.30                      | \$0.86              |

**Performance highlights**

- The area of terrestrial conservation reserves increased by 2,647 hectares during the year (including one hectare in national parks, 3,547 hectares in conservation parks, 33 hectares of miscellaneous conservation reserves and a decrease of 934 hectares in nature reserves). As at 30 June 2009, the total area in the formally-established terrestrial conservation reserve system equated to 6.9 per cent of the State's land area.
- Progress towards the creation of a representative marine parks and reserves system for the State continued. The Walpole and Nornalup Inlets Marine Park was gazetted, and proposals for the 'Ngari Capes Marine Park', and the Dampier Archipelago Marine Park and Regnard Marine Management Area were advanced.
- Planning for a network of marine parks and reserves in the Pilbara and lower west Kimberley (Eighty Mile Beach) regions continued with a survey of marine benthic habitats undertaken in October 2008 and information obtained from 924 sites.
- More than 3.9 million hectares of conservation reserves and State forest were baited to control foxes and feral cats and promote native species recovery, using nearly 1.2 million poison baits, under the *Western Shield* program.

- A new \$6 million, four-year Environmental Community Grants Program was launched to support local environmental projects at community level and applications for the first round of funding were invited.
- The public consultation phase of the development of a new Kimberley Science and Conservation Strategy began. As background, the department produced a paper summarising scientific knowledge relating to biodiversity conservation in the region. Public submissions were also invited and a series of community workshops began.
- A total of \$4.5 million was allocated to 42 projects across a range of programs including invasive animal and environmental weed control, threatened species and ecological communities recovery, biological survey and research and the State Cane Toad Initiative.
- The Kununurra-based regional cane toad team conducted on-ground activities in association with volunteer groups and the *Draft Cane Toad Strategy for Western Australia 2009–2019* was released for public comment.
- The department, in partnership with the Centre for Phytophthora Science and Management at Murdoch University, recorded five *Phytophthora* taxa not previously known in WA (but known from elsewhere), and discovered nine new (as yet undescribed) taxa. Investigations to formally describe the new taxa and to determine the level of threat they pose to biodiversity were undertaken.
- *Phytophthora* dieback management projects continued, including the re-survey and mapping of *Phytophthora* dieback extent, an aerial survey of more than 20,000 hectares of river systems, application of fumigant metham sodium and upgrade of access, hygiene and drainage controls at the Bell Track infestation in Fitzgerald River National Park.
- Nominations were sought from key interest groups for appointment to a stakeholder reference group as the first step towards formulating the strategy to better manage and protect the Great Western Woodlands.
- The department provided advice to the Environmental Protection Authority on matters that required environmental impact assessment, particularly the revised Gorgon Gas Field development proposal for Barrow Island. The department provided advice on an initial review of management plans and other environmental documentation required for the Gorgon project.
- DEC provided advice to proponents and decision-making authorities on a range of other development proposals affecting DEC-managed lands and on the assessment and ongoing management of a large number of development projects.
- The Natural Diversity Recovery Catchments program continued at Lake Bryde and Toolibin Lake, Buntine-Marchagee and Lake Warden to halt degradation and recover high value biodiversity assets that were at risk from altered hydrology. DEC's work at Buntine-Marchagee Natural Diversity Recovery Catchment was recognised as one of the Global Restoration Network's 'Highly Commended' projects for Australasia.
- Two fauna species – Sarah's pill millipede and the arid bronze azure butterfly – were specially protected as threatened fauna. There were 210 extant threatened fauna species and 18 fauna species presumed to be extinct at 30 June 2009.
- One species – *Davesia ovata* – was added to the list of threatened (declared rare) flora, and was ranked as critically endangered. One species – *Philotheca falcata* – which was formerly thought to be extinct was rediscovered during the year and listed as endangered. One species – *Stachystemon vinosus* – was deleted from the threatened flora list as it was no longer considered threatened. At 30 June 2009, there were 391 declared rare flora, 13 flora presumed to be extinct and 2,534 taxa are listed as priority flora.
- Two new fauna recovery plans (covering four species) and nine interim flora recovery plans were approved to guide efforts to conserve these species. In addition, reviews of the implementation and effectiveness of interim recovery plans were completed for three threatened ecological communities and four flora.



- The Woylie Conservation Research Project continued. Research findings showed that the population decline since 2001 was due to some combination of feral cat and fox predation, with indications that disease may be a factor, making animals more susceptible to predation.
- The recovery program for Gilbert's potoroo continued. Six animals born on Bald Island were moved to the mainland in preparation for establishment of a second mainland population at Waychinicup National Park.
- The number of specimens held at the WA Herbarium increased by 3.1 per cent (21,447 specimens). WA's vascular flora (flowering plants, ferns, cycads and conifers) now comprises 13,213 species, subspecies and varieties (12,014 native and 1,199 alien).
- Two hundred and seventeen new seed collections were added to the Threatened Flora Seed Centre, 58 of these were from declared rare flora and 61 from priority flora.
- Sorting and identification of specimens collected for the Pilbara Bioregion Biological Survey was completed for most groups, and manuscripts describing the terrestrial mammal fauna, bat fauna, pre-European mammal fauna, ground beetles and ants of the Pilbara were written and forwarded to external referees during the year.
- Wet and dry season sampling was completed for seven islands as part of the Kimberley Islands Biological Survey and fieldwork continued for the floristic and vegetation surveys of the banded iron formations of the Yilgarn Craton.
- DEC undertook work on formulating ecological character descriptions, information sheets and management plans for nine proposed Ramsar sites (Lake MacLeod, Lake Gregory, the Cape Range Subterranean Waterways, Lake Ballard, the Millstream Pools, Shark Bay East – Hamelin Pool, the Ellen Brook Swamps system and Fortescue Marshes).
- Under DEC's *Healthy Wetland Habitats* program, 11 management action plans and funding agreements were developed for properties in association with landowners. This represented a total wetland area of 190 hectares, and an additional 220 hectares of associated remnant vegetation managed for conservation under the *Healthy Wetland Habitats* program.
- *Land for Wildlife* staff registered 90 new properties under the voluntary nature conservation scheme and celebrated the registration of the 2,000th property. The total area of properties visited as part of the *Land for Wildlife* program was brought to 1,992,465 hectares, including 306,374 hectares of land where nature conservation is the primary management purpose. During visits to properties, staff recorded 65 occurrences of rare or threatened fauna, flora or ecological communities.
- The voluntary Nature Conservation Covenant Program entered into covenants in perpetuity on 19 titles, which protected 1,437 hectares of native vegetation.

### 2.1.1.1 Overview

Service 1: Nature Conservation is delivered through six key strategic directions:

1. Building biodiversity knowledge: inventory and resource condition monitoring
2. Establishing a terrestrial and marine conservation reserve system
3. Effective management of the conservation reserve system
4. Recovery of threatened species and ecological communities; and management of other significant species and ecosystems
5. Conserving landscapes and seascapes: integrating off- and on-reserve conservation and managing threatening processes
6. Encouraging public understanding and support of biodiversity conservation and other DEC programs and activities.

### 2.1.1.2 Building biodiversity knowledge

#### Biological inventory

##### *Pilbara Bioregion Biological Survey*

The sorting and identification of specimens collected for the Pilbara Bioregion Biological Survey were completed for all groups except terrestrial plants during the year. Many new records for threatened flora and priority species were documented and numerous taxa new to science were recorded, particularly among the terrestrial and aquatic invertebrate groups and plants. Manuscripts describing the terrestrial mammal fauna, bat fauna, pre-European mammal fauna, ground beetles and ants of the Pilbara were completed and forwarded to external referees for peer review. Dissemination of preliminary survey results continued, with more than 15 presentations given on progress associated with the survey.

##### *Kimberley Islands Biological Survey*

Wet and dry season sampling was completed on seven islands as part of the Kimberley Islands Biological Survey, which is jointly funded by DEC and the Australian Government under its Natural Heritage Trust (NHT). Site selection and sampling (dry season) also commenced for the final six islands off the West Kimberley coast. Thirteen islands were sampled during the survey. Traditional owners and the Kimberley Land Council were consulted throughout the project to ensure the survey achieves biodiversity outcomes while building capacity in local Aboriginal communities to better manage biodiversity.

##### *Banded iron formations of the Yilgarn Craton*

Floristic and vegetation surveys of the banded iron formations of the Yilgarn Craton continued. During 2008–09, the third year for the survey, six ranges were sampled through the establishment of more than 300 sites, bringing the total number of ranges surveyed to 18. Several new populations of priority flora were located during the surveys along with one species new to science. More than 900 vouchers were lodged with the WA Herbarium and the datasets were made available to the community and industry. Several scientific papers were published in *Conservation Science* while others were submitted for external review.

##### *New *Phytophthora* taxa discovered in WA*

During the year, DEC, in partnership with the Centre for Phytophthora Science and Management at Murdoch University, recorded five *Phytophthora* taxa that were not previously known in WA but were known from elsewhere. An additional nine new, and as yet undescribed taxa, were also discovered, and investigation of these new taxa to determine the level of threat they pose to biodiversity (and to provide formal scientific descriptions) progressed.

##### *Hutt River catchment surface aquatic fauna survey*

The Hutt River catchment surface aquatic fauna survey was completed during the year. It described and characterised the aquatic invertebrate fauna and their wetland habitat requirements within the Hutt River Catchment.

##### *Climate change and biodiversity*

DEC addressed climate change through mitigation and adaptation responses, such as conservation land management, seed storage and research. The department achieved and promoted mitigation actions by undertaking revegetation work and researched biomass production and carbon sequestration for the implementation of carbon accounting systems for use by private landholders in revegetation work. Adaptation responses included expansion of the conservation reserve system, use of land management practices to build resilience (by reducing the impacts of threatening processes) and increasing the connectedness of reserves and other areas containing important biodiversity conservation values.

The department developed a comprehensive research program in collaboration with WA's tertiary research community and international collaborators to generate the information required to support sound climate change adaptation decisions. This research program was significantly enhanced by collaboration between the department and the South African National Biodiversity Institute. Projects undertaken during the year included investigation of the impacts of climate change on the habitats of keystone species such as *Banksia* and vulnerable species such as the quokka, and identification of safe havens (those areas that will act as refuges for species and communities threatened by climate change).

### *Marine science*

The department is the lead agency for the Western Australian Marine Science Institution (WAMSI) Node 3: *Managing and Conserving the Marine State*, focused on Ningaloo Marine Park. This is complementary to the CSIRO *Wealth from Oceans* flagship program: *Ningaloo Collaboration Cluster*, hosted by Murdoch University. These two large research programs are collectively known as the Ningaloo Research Program and bring together more than 100 scientists who undertake research in the Ningaloo Marine Park. The department focussed on ensuring that results of this research translate into more effective management of the Ningaloo Marine Park and other coral reef marine parks and reserves in WA.

During the year, DEC increased its capacity and range of available scientific expertise in the Marine Science Program. A review of historical and recent marine research programs in WA was undertaken to assist in the development of integrated marine research plans to ensure future DEC investment in marine science addresses departmental priorities in an integrated manner. Research proposals were developed by departmental staff during the year within this overall framework, and in collaboration with external local and interstate scientists. The review of existing scientific knowledge relevant to DEC's needs also assisted the development and implementation of the Western Australian Marine Monitoring Program, a State-wide, long-term marine monitoring program.

A number of research and monitoring projects continued during the year. Examples included monitoring the recovery of coral reef communities near Coral Bay following a further coral spawning-related natural disturbance, fish recruitment (with the Australian Institute of Marine Science) and coral disease studies in Ningaloo Marine Park.

### *Kimberley Science and Conservation Strategy*

The publication *A synthesis of scientific knowledge to support conservation management in the Kimberley region of WA* was prepared by DEC as a starting point in summarising scientific knowledge relevant to biodiversity conservation in the region. The information in this document will be augmented by additional information collected during stakeholder consultation.

### **Taxonomy and biotic collection management**

At June 2009 the collection at the WA Herbarium comprised the following specimens, from all major groups of plants, algae and fungi (Table 3).

During 2008–09, 21,447 specimens were added to the collection, which now stands at 704,686, an increase of 3.1 per cent during the year. Many specimens were contributed from surveys of the Pilbara and Ravensthorpe Range.

In 2008–09, 2,142 specimens were loaned to other institutions and 1,691 specimens were received on loan from other herbaria. The WA Herbarium received 740 exchange specimens and distributed 2,471 exchange specimens to other Australian and international herbaria.

During the year, the Reference Herbarium of vascular plants reached 14,207 specimens representing more than 11,000 taxa, and was used by more than 3,200 visitors.

**Table 3: Specimens held at the WA Herbarium**

| Taxonomic group         | Number of specimens (June 2009) | Increase since June 2008 |            |
|-------------------------|---------------------------------|--------------------------|------------|
|                         |                                 | number                   | percentage |
| Myxomycetes             | 653                             | 63                       | 10.0       |
| Fungi                   | 20,440                          | 526                      | 2.5        |
| Lichens                 | 15,402                          | 225                      | 1.4        |
| Algae                   | 22,345                          | 157                      | 0.7        |
| Liverwort and hornworts | 1,882                           | 6                        | 0.3        |
| Mosses                  | 6,435                           | 27                       | 0.4        |
| Ferns and fern allies   | 3,502                           | 74                       | 2.1        |
| Gymnosperms             | 1,974                           | 29                       | 1.5        |
| Flowering plants        | 632,053                         | 20,340                   | 3.3        |
| <b>Total number</b>     | <b>704,686</b>                  | <b>21,447</b>            | <b>3.1</b> |

*WA Herbarium Specimen Database*

Records of all specimens incorporated in the WA Herbarium are entered into the WA Herbarium Specimen Database (WAHERB). During the year, 21,347 specimen records were added to WAHERB, including 2,104 priority flora and 456 threatened flora. The total collection of priority and threatened flora comprises 42,395 specimens.

*Flora data for WA*

WA's vascular flora (flowering plants, ferns, cycads and conifers) now comprises 13,213 species, subspecies and varieties (12,014 native and 1,199 alien). The Census of Western Australian Plants maintained by the WA Herbarium as the authoritative reference for all plants of the State, contained 21,557 names at the end of the year, representing 15,037 currently recognised species, subspecies and varieties of plants, algae and fungi (13,812 native and 1,200 alien). The figures include names for the vascular flora as well as the bryophytes, algae and fungi. Additions in 2008–09 comprised 36 unpublished new phrase names and 128 published names; a reduction of 71 manuscript names occurred, through publication or conversion to phrase names for compliance with the Australian Plant Census.

The WA Herbarium image collection database continued to grow through the assistance of volunteers. At the end of 2008–09, 36,083 photographs had been scanned, and composite images illustrating habitat, habit and detail of 6,840 species were available online via FloraBase.

*FloraBase*

In 2008–09, *FloraBase*, the WA Herbarium's web information system for WA's flora and fungi, continued to expand its role as the authoritative source for botanical taxonomic information for WA. A range of projects were funded to enhance the *FloraBase* interface, including additional mapping facilities, such as linkage to DEC's *NatureMap* web application. Significant improvements to the management of the WA Herbarium's large digital image repository will enable users of the next version of *FloraBase* to view and utilise this imagery more simply.

*NatureMap*

The new online portal *NatureMap*, a collaborative project between DEC and the Western Australian Museum, experienced an exponential growth in usage and access to information about the plants and animals of WA.

### *Volunteers*

An extensive volunteer program at the WA Herbarium sees volunteers provide critically important skills and assist in many curation activities. During the year, volunteer participation was significant, totalling more than 11,000 hours.

### **Resource condition monitoring**

#### *Resource condition monitoring projects*

Resource condition monitoring projects continued throughout the year, including:

- Native Vegetation Integrity Project (part funded through the NHT) drafted protocols to measure change in vegetation condition more clearly
- Significant Species and Ecological Communities Project (part funded through NHT) drafted and coordinated the review and approval of many standard operating procedures and monitoring protocols which assisted the department and community in undertaking consistent monitoring programs
- Inland Aquatic Monitoring Project (part funded through the National Action Plan for Salinity and Water Quality) developed standard monitoring protocols and established permanent monitoring points at significant wetlands around the State.

#### *South West Wetlands Monitoring Program*

During the year, a report on the results of 20-year trends in depths, salinities and pH of 152 wetlands was produced for the program. In addition, lakebed contour mapping was completed for 20 wetlands to enable modelling and assessment of the likely impacts of drainage, water diversion, pumping and storage proposals and predicted climate change.

#### *Ecological condition of wetlands of the agricultural zone*

A research project on the ecological condition of wetlands of the agricultural zone, which arose from the State Salinity Strategy, monitored groundwater; wetland water levels and water quality; and flora and fauna in relation to threats, such as secondary salinisation, climate change and catchment land-use practices for 25 wetlands during the past 12 years. During 2008–09, the data collected to date were analysed and scientific reports started for fauna, water chemistry and vegetation components of each wetland.

### **2.1.1.3 Establishment of a terrestrial and marine conservation reserve system**

The formal conservation reserve system comprises national parks, nature reserves, conservation parks, miscellaneous conservation reserves, marine parks, marine nature reserves and marine management areas under the *Conservation and Land Management Act 1984*.

#### **Terrestrial conservation**

The net increase in the area of terrestrial conservation reserves during the year was 2,647 hectares (including increases of one hectare in national parks, 3,547 hectares in conservation parks and 33 hectares in miscellaneous conservation reserves, and a decrease of 934 hectares in nature reserves<sup>1</sup>). The total area in the terrestrial conservation reserve system is almost 17.5 million hectares and equates to 6.9 per cent of the State's land area.

Details of changes during the year are provided in section 2.3.5 DEC-managed lands and waters.

#### **Conservation land acquisitions**

DEC bought 12 parcels of land of high conservation value covering a combined total area of about 115,707 hectares during the year for future addition to the formal conservation reserve system.

<sup>1</sup> The decrease in area was due to a re-survey and re-calculation of reserve area.

The department's priorities for purchase were for those areas containing ecosystems not adequately represented in existing conservation reserves, areas containing threatened species and ecological communities, and for additions to existing reserves that would greatly improve their diversity or facilitate their management.

The purchases were funded from a number of sources: DEC's annual capital allocation for acquiring conservation land; proceeds of asset sales; environmental offset funds (provided from a variety of sources including Western Power, Main Roads WA, Department of Health, developers and mining companies as a result of approved development projects and land clearing); and the National Reserve System component of the Australian Government's *Caring for Our Country* initiative. The total expenditure from all funding sources for the financial year was more than \$3.7 million.

Purchases finalised during the year were:

- Lakeside Pastoral Lease (Shire of Cue) – an approximately 51,530-hectare property containing the lake bed of Lake Austin and supporting a vegetation type unrepresented in the conservation reserve system and restricted in distribution, adjoining former pastoral lease land to the west already acquired for conservation.
- Approximately 672 hectares of remnant vegetation on the Menai Hills south of Port Gregory (Shire of Northampton).
- About 0.3 hectares for addition to Meelon Nature Reserve south-east of Pinjarra (Shire of Murray), containing a threatened ecological community, declared rare and priority flora.
- About 45 hectares of remnant vegetation containing nesting hollows suitable for the endangered Carnaby's black-cockatoo (*Calyptorhynchus latirostris*) for addition to Clackline Nature Reserve (Shire of Northam).
- About 21 hectares of wetland and fringing habitat for addition to Mogumber Nature Reserve (Shire of Gingin), suitable for the translocation of the endangered western swamp tortoise (*Pseudemydura umbrina*). The vendors also donated a further 13 hectares for addition to the nature reserve.
- A 654-hectare block wholly surrounded by Nambung National Park (Shire of Dandaragan), and an additional 40-hectare block near the national park.
- Ninety-six hectares for addition to Wild Horse Swamp Nature Reserve located at the confluence of the Arthur, Blackwood and Balgarup rivers south of Darkan (Shire of West Arthur), with the additional land to increase the resilience of the nature reserve and ecological integrity of an area that has been largely cleared for agriculture.
- About 58 hectares of remnant vegetation containing poorly reserved vegetation types, declared rare and priority flora species within the Kalgan River corridor (Shire of Plantagenet), between Stirling Range National Park and conservation reserves along the State's south coast.
- About three hectares for addition to Lake Warden Nature Reserve (Shire of Esperance) – an ecologically significant site because the reserve forms part of the Lake Warden System Ramsar site.
- About 948 hectares of land containing wetlands, priority flora and under-represented vegetation types and is a foraging site for the Carnaby's black-cockatoo for the creation of a new nature reserve within the Shire of Gingin.

The purchase of the Dirk Hartog Island Pastoral Lease, covering 61,640 hectares, within the Shark Bay World Heritage Property was also finalised during the year. The purchase of the lease was a significant step towards the creation of a national park over most of the island. Permanent protection of this iconic site will fulfil longstanding commitments and result in conservation, historical and tourism benefits to the region and the State. It is hoped that the original fauna of the island, much of which has been lost through habitat change brought about through sheep, feral goats and feral cats, will be reconstructed in future.

The department gratefully acknowledges the contribution made by the Australian Government through the National Reserve System component of the *Caring for*

*Our Country* initiative to conservation land purchases. This year the contribution was \$226,000, with a further \$506,666 received towards the purchase of the Credo Pastoral Lease in the Goldfields and land acquired for addition to Aerodrome Road Nature Reserve (Shire of Ravensthorpe) both of which were purchased in the previous financial year. The support of the Australian Government continued to assist progress towards the establishment of a comprehensive, adequate and representative system of terrestrial conservation reserves in WA.

### **Marine conservation reserve creation**

The area of marine parks at 30 June 2009 was approximately 1,261,000 hectares. The area of marine nature reserves was approximately 132,000 hectares and the area of marine management areas was approximately 143,000 hectares.

On 8 May 2009, the Walpole and Nornalup Inlets Marine Park was created through publication of a notice in the *Government Gazette*. This is the first marine park created in WA since December 2004 and the first on the south coast. The Walpole and Nornalup Inlets Marine Park is an important biodiversity asset because it contains a diverse range of marine habitats and is contiguous with surrounding terrestrial conservation reserve areas.

Planning for the creation of a network of marine parks and reserves in the Pilbara and lower west Kimberley (Eighty Mile Beach) regions continued in 2008–09. A survey of marine benthic habitats was undertaken in October 2008 with information obtained from 924 survey sites.

#### **2.1.1.4 Effective management of the conservation reserve system**

##### **Management planning for conservation reserves**

During 2008–09, the Minister for Environment approved the Wellington National Park, Westralia Conservation Park and Wellington Discovery Forest Management Plan. This brought the total number of current management plans prepared under the CALM Act to 55. A further 14 terrestrial management plans were in preparation. During the year, no draft management plans were released for public comment although four planning areas have draft plans ready for consideration by the Minister for Environment. A further 10 terrestrial draft management plans are in various stages of preparation.

The department continued to enhance the terrestrial management plan development process through a review of management plans and trials of new tools and formats for management plan development, jointly with the Conservation Commission.

A list of the plans that were completed, being finalised or in preparation as draft or indicative plans as at 30 June 2009 is in Appendix G, and further information on management planning is available in section 2.1.3.2 Planning for management.

##### **Good Neighbour Policy**

The implementation of the department's Good Neighbour Policy continued during 2008–09. The programs and projects in the policy include weed control, introduced animal control programs and fire management. Fire management operations were increased at the interface between DEC-managed conservation and forest lands or unallocated Crown lands and private property. Staff training and induction programs were also implemented to help with the effective rollout of the policy.

##### **Fire management for biodiversity**

In order to conserve biodiversity, the department developed and applied fire management strategies based on sound scientific principles. The creation and maintenance of a spatial and temporal mosaic of vegetation structures, fuel ages and habitat niches is essential through the application of fire to the landscape at a range of frequencies and intensities at different seasons, times and scales according to the life cycles, histories and fire responses of native plants and animals.



Master Burn Planning provides rigour, consistency and accountability in burn planning for biodiversity and other outcomes and a computer-based fire planning tool based on Geographic Information System technology was further developed and upgraded during the year. The tool draws on a wide range of corporate datasets to ensure decisions concerning the location, extent, seasonality and intensity of prescribed fire consider both biodiversity conservation and strategic asset protection issues. The use of the planning tool was extended beyond the south-west forest regions to enhance the efficiency and effectiveness of all fire planning across the State.

Each DEC region progressed the development of five-year regional fire management plans, and plans for the Kimberley, Pilbara and Goldfields regions were completed. The plans aim to establish objectives, strategies and success criteria required for conserving and maintaining biodiversity values and ecosystems, protecting fire-vulnerable assets from unplanned fire events, and creating and extending new knowledge.

In 2008–09, the department intensified a program of engagement with traditional owners in remote areas for planning fire programs.

DEC's range of Fire Management Guidelines was expanded to include invasive species such as Buffel grass, and several Fire Management Guidelines were reviewed and revised during 2008–09 in the light of scientific research and learning from operational experience. These documents were developed by scientists, nature conservation specialists and fire practitioners to assist managers and fire operations staff to develop plans and to manage fires to protect and maintain biodiversity values and ecosystem functions. Fire Operations Guidelines, which provide guidance on operating procedures and standards associated with day-to-day fire management, were also updated to ensure compatibility with contemporary fire management practices and environmental standards. During the year, a new Fire Management Services website was launched to give fire managers, nature conservation and other personnel ready access to information on fire and biodiversity for burn planning and operations. More information on the activities of Fire Management Services is provided in the 'Supporting our department' section 2.2.4.

### **Fire and biodiversity research projects**

DEC undertook fire and biodiversity research studies over two dry seasons in the north Kimberley and demonstrated that medium-sized mammals and lizards were responsive to the size and spatial pattern of burnt patches in the landscape. Research was also conducted in collaboration with the Bushfire Cooperative Research Centre to investigate how fire regimes during the past 50 years have influenced the present day distribution and abundance of plants and animals in forests and shrublands. Fieldwork for this project was completed in spring 2008 and data were analysed during the year in preparation for publication. The department actively supported post-graduate students investigating fire regimes in semi-arid woodlands around Lake Johnson (Goldfields Region).

#### **2.1.1.5 Recovery of threatened species and ecological communities, and management of other significant species and ecosystems**

##### **Recovery of threatened species and ecological communities**

The Threatened Species Scientific Committee's recommendations for changes to the lists of threatened flora and fauna under the *Wildlife Conservation Act 1950* were endorsed by the Minister for Environment and gazetted on 5 August 2008.

DEC continued a joint project with the Australian Government to prepare information sheets as the first stage in nominating changes to the list of threatened species under the *Environment Protection and Biodiversity Conservation Act 1999*. This was undertaken to bring those lists in line with the State lists under the *Wildlife Conservation Act 1950*. One species of flora – *Darwinia macrostegia* – was de-listed and eight species of flora – *Acacia imitans*, *Banksia pseudoplumosa*, *Boronia clavata*, *Caladenia melanema*, *Caladenia procera*, *Daviesia obovata*, *Grevillea brachystylis* subsp. *Busselton* (G.J. Keighery s.n. 28/8/1985) and *Schoenia filifolia* subsp. *subulifolia* – and



one fauna species – *Synemon gratiosa* – were listed under the *Environment Protection and Biodiversity Conservation Act 1999*. Information sharing between the Australian and State governments resulted in 52 changes to the list of nationally threatened species under the *Environment Protection and Biodiversity Conservation Act 1999*.

### Flora

One species of flora, *Daviesia ovata*, was added to the list of declared rare flora, and ranked as critically endangered. One species, *Stachystemon vinosus*, was deleted from the list as it was no longer considered to be threatened but was retained on the priority 4 list for monitoring purposes. One species, *Philotheca falcata*, was listed as presumed extinct, but is now listed as extant taxa (endangered) following its rediscovery. A number of nomenclature changes were also endorsed; of particular note was the change of all *Dryandra* species to the genus *Banksia*. This followed a phylogenetic revision of the genus *Banksia*, which was accepted by the WA Herbarium.

There were 391 extant declared rare flora and 13 listed as presumed to be extinct. A further 185 taxa were added to DEC's priority flora list, and 62 taxa were deleted from the list on the basis of further survey and taxonomic review. At 30 June 2009, 2,534 taxa were listed as priority flora.

Recovery actions were implemented for a suite of threatened flora. Highlights include:

- 360 species of threatened and priority flora were surveyed or monitored
- 70 new populations or sub-populations of threatened flora and 38 populations of priority flora were located (of note was the discovery of new populations of the critically endangered *Acacia cochlocarpa* subsp. *velutinosus* and *A. vassalii*)
- recruitment trials were conducted for *A. aphylla*, *Daviesia microcarpa*, *Eremophila lactea* and *Pityrodia scabra* with good numbers of seedlings appearing and surviving the first summer
- phosphite applications were carried out to control *Phytophthora* dieback for 18 threatened flora species
- fencing to protect plants from stock movement was put in place for *Diuris micrantha* and *Grevillea bracteosa* populations
- fencing was also erected for populations of *Banksia fuscobracteata*, *Daviesia microcarpa* and *Stylidium amabile*
- rare flora markers were erected for many populations of threatened flora
- weed control was undertaken for eight species including *Caladenia melanema*, *Daviesia euphorbioides*, *Grevillea dryandroides* subsp. *hirsuta*, *Eremophila virens* and *E. viscida*
- rabbit control was undertaken for 20 species including *Adenanthos pungens* subsp. *effusus*, *Banksia cuneata*, *Conostylis setigera* subsp. *dasy* and *Daviesia euphorbioides*
- the book *Threatened and Poorly Known flora of the Yilgarn Region* (funded by the Avon Catchment Council through the 'Back from the Edge' program) was prepared by DEC's Yilgarn District
- posters and postal fliers *Have you seen this plant* were developed for a number of threatened flora species to promote awareness of threatened flora and encourage the reporting of new populations
- a priority species project undertaken in the Northern Agricultural Region by DEC staff resulted in more than 100 priority flora populations being surveyed and draft nominations prepared for six species that meet the requirements for nomination as declared rare flora
- five plant taxa threatened by *Phytophthora* dieback – *Lambertia fairallii*, *Gastrolobium luteifolium*, *Banksia anatona*, *Banksia brownii* and *Calytrix breviseta* subsp. *breviseta* – were established as either wild populations or seed orchards to ensure the conservation of the species, and
- translocations of many flora species (further details in Appendix B).

### Fauna

Two species were added to the list of threatened fauna during the year: Sarah's pill millipede (*Epicyliosoma sarahae*) and the arid bronze azure butterfly (*Ogyris subterrestris petrina*). The previously un-named threatened Cameron's Cave pseudoscorpion (*Hyella* sp. BES 1154 2525 2546) was formally named *Indohya damocles*. There were 210 extant threatened fauna and 18 presumed to be extinct, and the priority list included 193 taxa at 30 June 2009.

Recovery actions were implemented for many threatened fauna. Highlights include:

- The recovery program for Gilbert's potoroo (*Potorous gilbertii*), the world's rarest marsupial, progressed during the year, mainly as a result of the success of the Bald Island translocation. In July 2008, trapping on the island revealed the presence of at least 21 independent potoroos, including nine of the 10 animals originally released there as early as August 2005. This revealed promisingly high rates of survival and breeding, as some of the founders had been on the island for almost three years. Research was conducted on fungi as a food source for Gilbert's potoroo as the availability of native truffles is a key factor in the establishment of the animal in areas beyond their existing refugia. A report by DEC scientists published during the year determined, for the first time, that potoroos translocated to new areas could find enough truffles to survive and breed.
- The inaugural recovery team meeting for the quokka (*Setonix brachyurus*) was held in October 2008 in response to research in the northern jarrah forest which showed these mainland populations are at risk of isolation, inbreeding and extinction.
- A study on the feasibility of eradicating house mice from the Jurien Bay islands began in 2008–09. The study is to determine if poison baiting with cereal baits poses any danger to dibblers (*Parantechinus apicalis*) and other non-target animals on the islands.
- The Woylie Conservation Research Project continued to investigate the causes of an 80 per cent population decline in woylies (*Bettongia penicillata*) since 2001. The project involved collaboration between DEC and Murdoch University, Perth Zoo, Australian Wildlife Conservancy and the South Australian Department for Environment and Heritage. During the year, investigation focussed principally on the Upper Warren populations, and indicated that the decline was largely mortality-driven, with predation by some combination of feral cats and foxes demonstrated as a cause and disease implicated as a possible factor. Genetic work indicated that four distinct indigenous populations remain at Perup, Greater Kingston, Dryandra and Tutanning. Other discoveries made during the year included a new Papilloma virus, a new tick species and several new native truffle species (food source). The Woylie Recovery Team was established in September 2008 and a draft interim recovery plan was prepared.
- Work progressed on the Busselton Western Ringtail Possum Habitat Review and the recovery team continued its work in assessing and trying to minimise habitat loss due to land development. Updated guidelines for developers and planning consultants were produced. The recovery team worked with the Commonwealth Department of the Environment, Water, Heritage and the Arts and key proponents to find ways to identify and implement offset and approval conditions. Research into various aspects of translocation continues via two PhD students.
- The Carnaby's Black Cockatoo Recovery Team, with Birds Australia Western Australia and WWF-Australia, hosted a symposium and workshop on the recovery of the species. Seventy-six experts and stakeholders discussed research and conservation activities related to Carnaby's black-cockatoo and 30 delegates took part in a workshop which developed a list of prioritised recovery actions for the species. This will form a framework for a revised recovery plan, future projects and raise awareness about the threats faced by Carnaby's black-cockatoo.
- A census of Muir's corella (*Cacatua pastinator pastinator*) found that the population is increasing. An advisory kit on damage control was distributed to 600 landholders and DEC's Warren Region purchased three gas guns to loan to farmers to use for non-lethal crop protection.

- Western ground parrot (*Pezoporus wallicus flaviventrus*) survey trips and noisy scrub-bird (*Atrichornis clamosus*) census work continued to involve considerable volunteer participation in the Fitzgerald River National Park, Waychinicup and Mount Many Peaks areas. Current genetic work in collaboration with the Australian Wildlife Conservancy and CSIRO suggests that eastern and western populations of ground parrots are separate species. However, populations of the western ground parrot declined further during the year, to very low levels, most likely as a result of predation by feral cats. Field trials of autonomous recording were undertaken as they are a cost effective method of evaluating the success of management actions through more accurate population monitoring. Work on possible translocation sites for noisy scrub-birds in the Warren Region progressed.
- Collaborative work between the *Geocrinia* Recovery Team and Perth Zoo continued. Specimens of orange-bellied frog (*G. vitellina*) and white-bellied frog (*G. alba*) egg masses were collected for the captive breeding program. Site selection for potential white-bellied frog translocation was undertaken.
- Approved hydrological modifications were completed at Moore River Nature Reserve to facilitate the translocation of 17 western swamp tortoises.
- A survey was conducted for the *Undescribed* (WAM2295-69) Stirling Range Rhytidid snail (*Rhytidid* sp.) in the eastern Stirling Range. Specimens had not been found since 1997, but seven individuals were found during the survey. A survey for the western archaeid spider (*Austrarchaea mainae*), using new methods developed by the Western Australian Museum, resulted in 40 specimens observed between William Bay and Gull Rock national parks. This species was previously only known from Torndirrup National Park (1983) and the Albany Wind Farm (2007).

Translocations generally involve a succession of releases of animals over two to three years to test site suitability and to provide enough founders to establish a new population. During the year, translocations were undertaken for Gilbert's potoroos, bilbies (*Macrotis lagotis*), malas, dibblers, western ringtail possums, black-flanked rock-wallabies (*Petrogale lateralis lateralis*), western swamp tortoises, quendas (*Isoodon obesulus fusciventer*), tammar wallabies (*Macropus eugenii derbyianus*) and brushtail possums (*Trichosurus vulpecula*) and all except the malas were for continuations of translocations that were started in previous years.

Monitoring of an earlier translocation of numbats (*Myrmecobius fasciatus*) to Cocanarup Timber Reserve, near Ravensthorpe, showed positive results, with rates of survival recorded in 2008 being significantly higher than previous years and several young being observed.

### *Recovery planning*

The Director of Nature Conservation approved two recovery plans covering four species of fauna, and nine interim recovery plans for flora species. In addition, reviews of the implementation and effectiveness of interim recovery plans were completed for three threatened ecological communities and four flora. The interim recovery plans and reviews were generally completed with funding assistance from the NHT.

Recovery plans were approved for the mala (*Lagorchestes hirsutus*), and the Dunsborough burrowing crayfish (*Engaewa reducta*), Margaret River burrowing crayfish (*Engaewa pseudoreducta*) and Walpole burrowing crayfish (*Engaewa walpolea*).

The recovery plans for the mala, forest black-cockatoos (Baudin's cockatoo and forest red-tailed black-cockatoo) and Muir's corella were submitted to the Commonwealth Department of the Environment, Water, Heritage and the Arts for endorsement, and the recovery plan for Muir's corella was formally adopted under the *Environment Protection and Biodiversity Conservation Act 1999*.

Interim flora recovery plans were completed and approved by the Director of Nature Conservation for:

- ballerina orchid (*Caladenia melanema*)

- William's spider orchid (*Caladenia williamsiae*)
- Aldersyde dryandra\* (*Dryandra\* ionthocarpa* subsp. *chrysophoenix*)
- short-leaved frankenia (*Frankenia parvula*)
- woolly lysiosepalum (*Lysiosepalum abollatum*)
- Mason's darwinia (*Darwinia masonii*)
- *Lepidosperma gibsonii*
- woolly foxglove (*Pityrodia axillaris*)
- *Dryandra\* fuscobracteata*

\*A taxonomic change resulted in all members of *Dryandra* genus being transferred to *Banksia*, but these interim recovery plans were completed before the change occurred.

### *Threatened ecological communities*

The Threatened Ecological Communities Scientific Committee met twice during the year and recommended that communities be added or deleted from the State list of threatened ecological communities (TECs) and the informal list of priority ecological communities (PECs).

Highlights of actions that were implemented for TECs and PECs, generally with funding support through the NHT, were:

- Two areas containing vulnerable TECs in claypans in Forrestdale and Dwellingup were acquired for conservation.
- The mapping and data updates for communities on the TEC database continued – 129 PECs (603 occurrences) were added and information for 167 occurrences of existing TECs and PECs was updated. Regular updates of TEC data were supplied to other State Government departments to assist with land management, and with assessment of development proposals.
- A teacher resource about threatened species and communities in the Northern Agricultural Region was prepared and distributed to primary and secondary schools in the area.
- Monitoring protocols were developed and implemented for five TECs, another three protocols were documented (based on monitoring methods developed and implemented previously in other TECs), and four standard operating procedures were developed to present monitoring procedures.
- A broadscale program to re-survey a series of permanent vegetation quadrats (established between 13 and 18 years ago in Swan Coastal Plain TECs) continued.
- A comprehensive monitoring strategy was developed for the critically endangered microbial (thrombolite) TEC in Lake Clifton, and for the vulnerable 'Stromatolite community of stratified hypersaline coastal lake (Lake Thetis)' by DEC hydrologists.
- A spring survey was conducted in the endangered 'Herbaceous plant assemblages on bentonite lakes' following good rainfall.
- Hydrological investigations were undertaken in the 'Claypans with shrubs over herbs' community at Drummond Nature Reserve to determine the threat from increasing salinity and to help determine required management actions.

### Western Shield

During 2008–09, more than 3.9 million hectares of conservation lands and State forest were baited to control foxes and feral cats, using nearly 1.2 million poison baits under the *Western Shield* program. Corporate sponsorship was contributed by ongoing sponsors Alcoa Australia Limited, Tiwest Pty Ltd, BHP Billiton, Worsley Alumina Pty Ltd, Tectonic Resources NL and Western Areas NL.

Operational research into feral cat control on Peron Peninsula (*Project Eden*) continued.

Work continued with the Australian Wildlife Conservancy and the Invasive Animals Cooperative Research Centre to investigate long-term sustained control of feral cats and foxes in the Mt Gibson and Karara-Lochada areas.

Development of a new toxin and bait delivery mechanism for cat control continued in collaboration with the Victorian Department of Sustainability and Environment and the Commonwealth Department of the Environment, Water, Heritage and the Arts.

Research into the effectiveness of fox and cat baiting regimes and the role of feral cats and native predators on native mammals continued this year. Results show there are complex relationships between the abundance of native fauna, introduced predators and bait availability in baited areas.

### *Mesopredator research*

An examination of the effectiveness of fox control techniques continued in a series of collaborative mesopredator research programs in the northern jarrah forest, at Lake Magenta and Tutanning nature reserves, in Dryandra Woodland and the rangelands. Analysis was conducted on fox abundance, fox DNA and the effectiveness of timing, reliability and coordination of aerial and ground bait delivery. Modified and coordinated baiting regimes were tested to improve fox control and remote surveillance demonstrated that interference with baits by non-target species (such as birds and brushtail possums) may be reducing the effectiveness of fox control operations. The response of other predators such as feral cats, chuditch and carpet pythons to fox control was also examined. In the rangelands, feral cat baits were shown to be effective in controlling both foxes and feral cats and trials were undertaken to test the risk to non-target animals (such as chuditch, varanids and quendas).

### *Rangelands Restoration Project*

The Rangelands Restoration Project completed its second year of medium-sized mammal releases on the proposed Lorna Glen Conservation Park, near Wiluna. Successful translocation of bilbies and brushtail possums occurred, with monitoring showing the establishment, breeding and dispersal of populations. To 30 June 2009, 106 bilbies and 72 brushtail possums had been released at Lorna Glen, and approximately 50 per cent of these were monitored in the months following release.

Significant feral cat control was done on the former Lorna Glen pastoral lease through ongoing research and development of methods. However, despite a reduction of feral cats (approximately 70 per cent), the translocation of 28 mala from captive bred populations was not successful, as more than 50 per cent of radio collared released animals were killed by feral cats. To improve the survivorship of translocated mammals at Lorna Glen, particularly those that are unable to persist even with low cat densities, several strategies were developed and implemented including the construction of a large-scale predator-proof acclimatisation enclosure, improvement of feral cat control techniques and improved assessment of the health and suitability of founder individuals. Following the construction of the enclosure, releases will include boodies (*Bettongia lesueur*) and golden bandicoots (*Isodon auratus*) from wild populations, as well as additions of individuals of previously released species to maintain genetic diversity.

### *Threatened Flora Seed Centre*

During the year, 217 new seed collections were added to the Threatened Flora Seed Centre. Fifty-eight of these were from declared rare flora and 61 from priority listed flora. The Millennium Seed Bank Project partnership continued into its final year with almost 1,000 seed collections of significant flora duplicated for safe keeping in WA and in the Royal Botanic Gardens, Kew, United Kingdom. The South Coast Natural Resource Management (NRM) group funded the purchase of a temperature gradient plate to enable the determination of germination temperature profiles for species at risk of decline from warming temperatures.

### Management of marine fauna

DEC attended 31 reported whale and dolphin strandings throughout the year, involving 121 live and dead animals of 10 species – humpback whale, southern right whale, Shepherd's beaked whale (stranded in Shark Bay, most northerly record for this species in WA), Gray's beaked whale, sperm whale, pygmy blue whale, long-finned pilot whale, pygmy sperm whale, Risso's dolphin and bottlenose dolphin. There was one mass stranding of 87 long-finned pilot whales and five bottlenose dolphins on 23 March 2009 at Hamelin Bay. The majority of the whales had died by the time they were discovered. Eleven surviving whales were held overnight and transported to Flinders Bay the following day. Ten surviving whales were released but one had failed to recover and was brought back to shore and euthanased. Six of the animals then re-stranded overnight. Of these, three were found dead and the remaining three were euthanased after veterinary advice. Four of the five bottlenose dolphins were returned to sea at Hamelin Bay.

Three humpback whales were reported entangled in fishing gear; two were totally disentangled and the fate of the third is unknown. A humpback whale collided with a large pleasure vessel causing \$72,000 damage to the vessel and the effects on the humpback were unknown. A second vessel strike was recorded with scar damage observed on a southern right whale mother accompanied by a white calf. Six live humpback whales beached separately in poor condition. Two neonatal calves were pushed back out to sea by members of the public; one was observed from the air being killed by sharks and one was found dead three days after the report (matched by photographs). Two sub-adults died during palliative care and two were euthanased. There was an increase in reports of bottlenose dolphin calves entangled in fishing line debris.

There were eight reported pinniped incidents comprising one Australian sea lion (rested and returned to sea), one New Zealand fur seal found dead and six sub-Antarctic fur seals. Four sub-Antarctic fur seals rested and returned to sea and two were found dead.

DEC staff conducted large whale disentanglement national accreditation training courses at Port Lincoln in South Australia and in Kaikoura on the south island of New Zealand during the year.

### Wetland conservation

#### *Ecological character descriptions*

The department has the lead role in the conservation of wetlands in WA.

WA has 12 wetland sites listed under the Convention on Wetlands (known as the Ramsar Convention). DEC continued to be the lead agency in coordination of proposals for possible nomination of nine wetlands for listing under the Ramsar Convention. Candidate areas were Lake MacLeod, Lake Gregory, the Cape Range Subterranean Waterways, Lake Ballard, the Millstream Pools, Shark Bay East – Hamelin Pool, the Ellen Brook Swamps System, Tributaries of the Lower Blackwood River (formerly Spearwood Creek) and Fortescue Marshes. DEC undertook work to progress ecological character descriptions, information sheets and management plans for these wetlands.

In 2008–09, funding under the NHT and contributions from the Australian and State governments to the National Action Plan for Salinity and Water Quality was allocated for the development of six more ecological character descriptions for Ramsar wetlands, and the descriptions were completed for the Ord River Floodplain, Lake Gore and Eighty Mile Beach. Descriptions for Roebuck Bay, Lake Warden System, and Muir-Byenup System were progressed. Additionally, the ecological character descriptions for Becher Point Wetlands, and Forrestdale and Thomsons lakes were developed but are not yet complete. The Ramsar information sheets for these wetlands were also revised.

Management plans exist for Toolibin Lake (Toolibin Lake Recovery Plan 1994), Forrestdale and Thomsons lakes (Forrestdale Lake Management Plan 2005 and Thomsons Lake Management Plan 2005), Lake Warden System (Esperance Lakes Nature Reserves 1999–2009), and Lake McLarty (a part of the Peel-Yalgorup

System Ramsar site; Lake McLarty Nature Reserve Draft Management Plan 2005). Management planning is under way for seven Ramsar sites:

- Ord River Floodplain (Draft Ord River and Parry Lagoons Nature Reserves Management Plan)
- Roebuck Bay
- Peel-Yalgorup System
- Muir-Byenup System (Draft Management Plan for the Parks and Reserves of the Lake Muir, Perup, Kingston, Tone and Unicup Area)
- Becher Point Wetlands (Draft Rockingham Lakes Regional Parks Management Plan), and
- Lake Gore and Lake Warden System (both covered by the Draft Esperance and Recherche Parks and Reserves Management Plan).

The implementation of key management actions at each Ramsar site was conducted with the support of NHT/National Action Plan for Salinity and Water Quality funding. These management actions have been determined in consultation with site managers and as a result of priorities identified through ecological character descriptions. The management actions undertaken include:

- Lakes Argyle and Kununurra – aerial bird survey
- Roebuck Bay and Eighty Mile Beach – shorebird and benthos survey
- Ord River Floodplain – upgrade of a cattle grid near Parry Lagoons
- Forrestdale and Thomsons lakes – typha mapping and control
- Becher Point Wetlands – fencing, rubbish removal, weed control and access management
- Peel-Yalgorup System – fringing vegetation survey, water quality analysis at Lake Clifton
- Lake Toolibin – upgrade of air pump controllers to maintain groundwater levels
- Vasse-Wonnerup – on-ground bird survey, macroinvertebrate survey and aquatic plant survey
- Muir-Byenup System – on-ground bird survey, and
- Lake Gore and Lake Warden System – *Phytophthora* dieback mapping.

### *Wetlands Mapping and Evaluation Projects*

The department continued to learn about the conservation requirements of the wetlands of the south-west through the continuing project Wetland Mapping, Classification and Evaluation Program for Priority Areas, South West WA. The aim of the project was to document the wetland resources of priority areas in the south-west and ultimately inform wetland protection and management strategies. To date, wetlands in the Margaret River, Leeuwin-Naturaliste Ridge, Donnybrook-Nannup and Manjimup-Northcliffe areas have been mapped and classified and, in most cases, evaluated for conservation significance. The development of spatial datasets for public use was progressed. The project also collected baseline data over two years from 40 wetland sites between Mandurah and Augusta. Parameters measured included water quality, macro-invertebrates, vegetation composition and condition, and fauna observations. The project is funded through the South West Catchments Council and is supported by the Australian and State governments.

The department continued to review the wetland evaluation methodologies for the Swan Coastal Plain to enhance existing endorsed methods.

The department received funding under the National Action Plan for Salinity and Water Quality to coordinate and support NRM regional groups' wetland mapping, classification, evaluation and prioritisation projects and increase community capacity in wetland management and restoration. Regional groups were consulted to



identify their coordination and support requirements and these will form the basis of the products and services DEC delivers in wetland conservation. Progress on a wetland restoration and management manual was also made. The department published *Guidelines checklist for preparing wetland management plans*, which outlines the recommended format and content of a wetland management plan.

During the year, the department continued to maintain and update the State-wide wetlands database – *WetlandBase*. This database increased DEC's ability to distribute wetland mapping and management information to assist in improving the management of privately owned wetlands.

The department secured funding from the National Land and Water Resources Audit and undertook a trial on a framework and indicators for wetland extent, distribution and condition at the regional level. The trial focused on the Wheatbelt Region (substantial wetland mapping and monitoring datasets are available for the region).

### *Wheatbelt Wetlands Project*

The Wheatbelt Wetlands Project – funded by the Department of Water through NHT funding – delineated wetlands in the Wheatbelt at a broad scale. This wetland mapping was used by the Avon Baseline Project to assign basin and granite outcrop wetlands to one of three conservation significance categories. The primary purpose for the development of this dataset was to inform decisions regarding drainage proposals, including the level of environmental assessment required for drainage applications. The project also produced a rapid assessment methodology for use by DEC staff to assess Notice of Intent to Drain proposals, and the methodology was trialled during the year by regional staff.

### **Swan Bioplan**

The Swan Bioplan project approached completion during the year. It drew together information that DEC and its predecessors had compiled through survey and investigations undertaken during the past 15 years including some in collaboration with local governments and community and NRM organisations. The project has produced a series of reports and datasets that significantly improved knowledge and understanding of the biodiversity and conservation values of the southern Swan Coastal Plain between the Perth metropolitan area and Dunsborough and including the adjoining Darling and Whicher scarps.

DEC partnered with the WA Local Government Association to work on the South West Regional Ecological Linkages project which identified regionally significant ecological linkages for the southern Swan Coastal Plain and South West Biodiversity Project Area. A report was developed during the year. Swan Bioplan resources supported the EPA's Dawesville-Binningup strategic initiative to provide a better basis for environmental planning in this very significant coastal region.

### **Priority nature conservation projects**

In 2008–09 DEC allocated funding totalling \$4.5 million to 42 priority projects across the key themes of invasive animal control, environmental weed control, threatened species and ecological communities' recovery, *Phytophthora* dieback management, biological survey and research and the State Cane Toad Initiative. Highlights for the year were:

#### *Invasive animal control:*

- 5,094 lorikeets culled within the Perth metropolitan area
- 28 kilometres of grading and the construction of a 28-kilometre fence to protect Cane River-Mt Minnie Conservation Park from straying cattle



- 66 feral pigs removed from south-west forests and continued support for three established community groups (Muir-Denbarker, Nannup and Northcliffe)
- 521 wild cattle removed from Mitchell River National Park, and
- 109 camels and 274 donkeys removed from the Pilbara Region.

*Environmental weed control:*

- 31 hectares of weeds controlled and 11 tonnes removed from *Bush Forever* sites
- 668 hectares treated for weed control or eradication targeting 26 species, including declared species – African thistle (*Berkheya rigida*), saffron thistle (*Carthamus lanatus*), double gee (*Emex australis*), cape tulip (*Moraea flaccida*), prickly pear (*Opuntia stricta*), arum lily (*Zantedeschia aethiopica*), *Tamarix* (a Weed of National Significance), yellow soldier (*Lachenalia reflexa*, a weed on the National Environmental Alert list), garden geranium (*Pelargonium alchemilloides*) and holly-leaved senecio (*Senecio glastifolius*).

*Threatened species and ecological communities recovery:*

- 8.2 kilometre feral-proof enclosure installed protecting 350 hectares of bushland, including 100 hectares of high-quality Gilbert's potoroo habitat, for multi-species recovery
- translocation of 93 animals including the bilby, mala, and Gilbert's potoroo, and
- six kilometres of fence installed and a further six kilometres upgraded to protect threatened species.

*Phytophthora dieback management (at Bell Track infestation in Fitzgerald River National Park unless otherwise specified):*

- the boundary was re-surveyed and mapped
- the river systems (more than 20,000 hectares) were aerially surveyed for the presence of *Phytophthora* dieback adjacent to the Bell Track infestation
- digital multi-spectral image data were collected in the Bell Track sub-catchments to determine disease occurrence and monitor possible disease outbreaks
- on-ground validation of assumptions from hydrology investigations was conducted
- application of the fumigant, metham sodium via the root barrier irrigation system
- upgrade of access, hygiene and drainage controls
- ongoing monitoring of the research trials into the efficacy of the high-intensity phosphite application at three field sites in the South Coast Region
- completion of spatial variation in the soil population dynamics of *Phytophthora cinnamomi* at three field sites on the south coast, and
- development of a Bayesian Belief Network model for the management activities conducted at Bell Track during 2006 and 2009.

*Biological survey and research:*

- 301 quadrats surveyed on six ranges within the Yilgarn banded iron formations
- 56 quadrats surveyed and four undescribed flora taxa collected from the Ravensthorpe Range
- 120 quadrats surveyed in mallee communities in the Wheatbelt
- two new populations of declared rare flora and 10 new populations of priority flora taxa collected
- 20 new flora taxa described
- 12 new recommendations for listing as priority flora
- improved taxonomic information for 1,801 flora taxa
- 11 papers published, including five in *Nuytsia* and five in *Conservation Science*
- 5,279 specimens of flora taxa collected

- 276 flora voucher specimens lodged with the WA Herbarium, and
- improved taxonomic resolution of 1,801 taxa.

### *State Cane Toad Initiative*

DEC is the lead agency responsible for cane toad management in WA. The Department of Agriculture and Food and the Agriculture Protection Board are also involved in implementing the Cane Toad Initiative, primarily in the areas of quarantine and biosecurity, as cane toads are a declared pest under the *Agriculture and Related Resources Protection Act 1976*.

The Kimberley-based regional cane toad team was maintained during the year and consisted of a community coordinator, operations manager and four technical staff. In 2008–09 the team:

- contributed to a reduction in the number of toads at the frontline (moving from the Northern Territory) through cooperative fieldwork with the community groups Kimberley Toad Busters and Stop the Toad Foundation
- increased knowledge about cane toad behaviour
- identified high risk freight and establishment zones
- trialled tools for cane toad management and improved these tools to increase efficiency and effectiveness
- facilitated a Cane Toad Stakeholder Reference Group
- provided cane toad presentations to schools and community groups
- assisted with various cane toad related research projects, including biodiversity baseline surveys, and
- maintained databases to record sightings and distribution of cane toads.

Under the Cane Toad Initiative, the following activities were undertaken:

- produced State cane toad newsletters
- produced new cane toad information brochures and cane toad kits
- established live cane toad drop-off points in Kununurra
- drafted and released the *Draft Cane Toad Strategy for Western Australia 2009–2019* for public comment
- appointed a community coordinator, and
- supported research on biodiversity, genome mapping, biological controls and cane toad biology.

In accordance with a Government election policy commitment, funding was provided to the Kimberley Toad Busters to continue their cane toad control program.

In February 2009 a live cane toad was found in WA, close to the Northern Territory border. The presence of cane toads in WA represents a significant biodiversity conservation challenge and experience gained over the last four years demonstrates the immense difficulty in fighting this threat even with unprecedented government and community efforts.

New directions were identified in the *Draft Cane Toad Strategy for Western Australia 2009–2019* which was released for public comment in May 2009. The strategy aims to provide an integrated response to focus efforts to reduce the impact of the toads on biodiversity, social and economic values. The public comment period finished in late June 2009 and 22 submissions were received. It is proposed that the final strategy will be completed early in the 2009–10 financial year.

Collaborative research with the University of Sydney continued to investigate the potential impacts of cane toads on Kimberley fauna. DEC also contributed to The University of Western Australia's cane toad genome mapping project. Research was undertaken

to identify toad-specific genetic targets for biological control and to determine monoclonal antibodies that would enable toad toxin to penetrate their own cells.

A research contract between DEC and the University of Sydney to evaluate the potential role of nematode lung worms in impact and control of cane toads continued. The Kimberley Toad Busters also continued their investigations in this area.

### Management of commercial activities involving wildlife

DEC ensured that wildlife-based activities that occurred during the year were licensed and managed in accordance with the *Wildlife Conservation Act 1950*. Monitoring and investigation were conducted to ensure compliance with legislation and the licences issued.

Management of the commercial harvesting of kangaroos continued throughout the year with input from the Kangaroo Management Advisory Committee. Under the nationally approved kangaroo management plans, commercial harvest quotas were set for each species of commercially harvested kangaroo for the 2009 calendar year. During 2008, aerial population surveys were undertaken in the south-east survey zone as part of the triennial survey program. The south-west forest areas were also surveyed to provide a population estimate for western grey kangaroos. These surveys and submissions endorsed by the Kangaroo Management Advisory Committee resulted in the following commercial harvest quotas being approved for 2009:

- western grey kangaroos – 172,500 (down from 257,500 in 2008),
- red kangaroos – 103,000 (down from 108,600 in 2008), and
- euros – 20,300 (up from 14,000 in 2008).

A new management plan for the commercial harvest and farming of crocodiles in WA was approved for the period 2009–13 by the Commonwealth Minister for the Environment, Heritage and the Arts. The following maximum annual quotas were set (though these are seldom filled especially for freshwater crocodiles):

- estuarine crocodiles (*Crocodylus porosus*) – 520 eggs/hatchlings, 50 non-hatchlings, and
- Australian freshwater crocodiles (*Crocodylus johnstoni*) – 1,900 eggs/hatchlings, 200 non-hatchlings.

The harvest was primarily restricted to the Glenelg River in the west Kimberley and the Cambridge Gulf area in the east Kimberley. Annual monitoring of crocodile populations occurred in the Cambridge Gulf area to ensure that wild crocodile populations were conserved.

The commercial harvesting of native flora continued under the approved management plan 'Commercial Harvesting of Protected Flora in WA 1 July 2008–30 June 2013'. This plan facilitated the export of native flora harvested in WA.

The department continued to be represented on the National Flora Management Network, established under the Natural Resources Policies and Programs Committee of the Natural Resource Management Standing Committee, which seeks to establish a greater consistency in State and Territory management of the flora industry.

### Regulation

#### *Flora and fauna licensing*

There were 8,321 fauna licences (other than damage, but including non-commercial) issued during the year, an increase of 2.8 per cent from the previous year (see Appendix E). Continued interest in pet herpetofauna (reptiles and frogs) resulted in an 11.5 per cent increase in licences issued with more than 3,400 people licensed to keep reptiles as pets. There was a 3.8 per cent decrease in avian fauna licences. Overall there was a modest increase in the number of licenses issued. The total number of flora licences and permits issued was 1,972, an increase of 7.6 per

cent from the previous year. DEC issued 369 commercial purposes licences and 281 commercial producer licences and nurseryman licences in 2008–09.

### *Damage and dangerous fauna licences*

The department received reports of problem crocodiles in the Kimberley Region and Ningaloo Marine Park south-west of Exmouth. Licences to destroy two saltwater crocodiles from the wild were issued because they threatened public safety. Twenty-three dangerous fauna licences were issued for magpies (an increase of 76.9 per cent); six of the 11 dangerous fauna licences issued for western grey kangaroos were to mitigate the risk of aircraft strike at Pearce, Bunbury and Jandakot airports; and one licence for a range of bird species was issued to mitigate the risk of aircraft strike at Perth airport. Natural wetlands and bushland near the airport attract a diverse range of fauna in numbers that represent potential risk to aircraft landing and taking off.

Licences issued for the control of fauna causing damage included 12 licences for emus (a decrease of 29.4 per cent); 392 licences for western grey kangaroos a 23 per cent decrease); 11 licences for little corellas (an increase of 57 per cent); 13 licences for western long-billed corellas; 18 licences for twenty-eight parrots; three licences for galahs; and 10 licences for Australian ravens. Two licences were issued to destroy three troublesome welcome swallows. Such licences are issued only when deterrents, trapping and exclusion methods are unsuccessful and where the birds cause damage or health or security concerns. Ninety-six damage licences were issued for birds, a decrease of 19.3 per cent from 2007–08.

### *Wildlife interaction licences*

At 30 June 2009, 126 whale watching boat tour operators were licensed in WA. While these tours were primarily based on humpback whales, southern right whales were also a focus of whale watching activity in the lower south-west areas, particularly at Albany, Augusta and Esperance.

DEC issued 93 boat-based and one beach-based dolphin interaction licences, five in-water dolphin interaction licences (four boat-based and one beach-based) and two boat-based dugong interaction licences. Forty-five boat-based Australian sea lion and New Zealand fur seal interaction licences were issued, as were two licences for marine turtle interaction. One licence was issued to film humpback whales for a documentary on disentangling large whales.

Fourteen whale shark interaction licences were current for the year.

### *Offences*

During the year, DEC staff provided guidance regarding the legal requirements of conservation legislation. There were 590 caution notices for minor offences and 380 infringement notices issued during the year (Table 4). Written reports were prepared for 181 offences under the *Wildlife Conservation Act 1950* and its regulations, and the CALM Act and its regulations. Action in 141 matters under both statutes was completed.

The unlawful taking of black-cockatoos from the wild continued to be of concern. In January 2009, an orchardist was fined \$3,000 for shooting eight Baudin's black-cockatoos. There are indications that the threatened Baudin's and Carnaby's black-cockatoos are frequently shot on private property. Black-cockatoos also continued to be taken unlawfully from the wild for aviculture. In December 2008 two people (in separate incidents) were apprehended in possession of three Carnaby's black-cockatoos and 14 red-tailed black cockatoos. Reports of unlawful taking, possession and keeping of reptiles continued to be high, with 20 incidents investigated during the year.

**Table 4: Number of reported offences in 2007–08 and 2008–09**

|                         | 2007–08<br>reported<br>offences |                      | 2008–09<br>reported<br>offences <sup>2</sup> |
|-------------------------|---------------------------------|----------------------|--|
|                         | As at<br>30.06.08               | Revised <sup>1</sup> | As at<br>30.06.09                            |
| Total offences reported | 1,073                           | 1,135                | 1,151  |
| Court convictions       | 20                              | 38                   | 60   |
| Court dismissals        | 0                               | 0                    | 0  |
| Infringement notices    | 321                             | 322                  | 380  |
| Letters of warning      | 43                              | 50                   | 56   |
| Caution notices         | 637                             | 689                  | 590  |
| No further action       | 19                              | 36                   | 25   |
| Pending                 | 33                              | 0                    | 40   |
| Total court fines       | \$7,200                         | \$16,750             | \$27,750                                     |
| Total court costs       | \$1,212.21                      | \$2,864.80           | \$2,689.80                                   |
| Infringement penalties  | \$24,835                        | \$26,235             | \$30,370                                     |

<sup>1</sup>Figures in this column are updated from those included in the 2007–08 Annual Report.

<sup>2</sup> See Appendix C and D for details of 2008–09 offences.

#### 2.1.1.6 Conserving landscapes and seascapes; integrating off- and on-reserve conservation and managing threatening processes

##### **Biodiversity conservation strategy**

Development of a State biodiversity conservation strategy continued in 2008–09. The department also took part in developing an updated national biodiversity conservation strategy. It is anticipated that the national strategy will be completed in 2009–10 through the Natural Resource Management Ministerial Council and that completion of the State strategy will follow.

##### **Biodiversity Conservation Act**

Drafting of the proposed Biodiversity Conservation Bill continued in the first quarter of the year. Further drafting is subject to policy consideration.

##### **Regional marine planning**

DEC is the lead agency for regional marine planning. Through a partnership of Government, community and stakeholder groups, regional marine planning aims to establish and promote a scientifically robust framework that enhances cooperation and integration between sectors; recognises the importance of social, cultural and economic values that the marine environment can provide for current and future generations; and protect and maintain ecological integrity and biodiversity.

During the year, the document *Oceans of Opportunity: A New Vision for Marine Waters of Western Australia's South Coast* was prepared as a more detailed companion document to the draft Regional Marine Strategic Plan for the State's south coast (Cape Leeuwin to the South Australian border). This was a pilot regional marine planning process undertaken in conjunction with the South Coast Regional Marine Planning Advisory Group. Development of these documents included extensive stakeholder input through a cross-sectoral stakeholder advisory group, community and specialist workshops. The strategic plan and companion document were further developed for Government consideration later in 2009.

### Managing system-wide threats

#### *Salinity management*

During 2008–09, DEC collaborated with the Future Farm Industries Cooperative Research Centre and further developed and applied decision tools in managing complex NRM tasks, including salinity operations. A contract ecophysiologicalist was appointed to research the interaction of riparian vegetation with water quality and quantity.

A 10-year review of the department's salinity management program (to 30 June 2006) progressed, and a draft of two additional sections was completed in 2008–09.

#### *Natural diversity recovery catchments*

The Natural Diversity Recovery Catchments program continued to halt degradation and recover high value biodiversity assets in the south-west that were at further risk from altered hydrology, particularly salinity. Key activities for 2008–09 included completion of the core components of major surface water management works at Lake Bryde and Toolibin Lake. These works helped to ensure that waterlogging of vegetation and surface expression of salinity decreased within parts of the conservation reserve system. The works also contributed to improved water management upstream on farmland, and a component of future works will be aimed at encouraging work on private property for public and private benefit.

Activities in the Buntine-Marchagee Natural Diversity Recovery Catchment centred on integrated water management works on farmland, including revegetation. This work was aimed at decreasing sediment, salt loads, and frequency and volume of surface water that reached the naturally saline braided wetland channel. Work at Buntine-Marchagee was recognised as one of the Global Restoration Network's 'Highly Commended' projects for Australasia.

A major advance occurred in the Lake Warden Natural Diversity Recovery Catchment when a gravity pipeline was successfully constructed between Lake Wheatfield and the ocean. This pipeline was designed to reduce the water level in the lake, one of the Lake Warden complex of wetlands. This was necessary as the first direct action to address the overfilling of lakes in this complex, which was 'drowning' riparian vegetation and caused loss of feeding habitat for wading waterbirds.

The recovery plan for Drummond Natural Diversity Recovery Catchment was well advanced during the year. Analysis of data continued as a pre-cursor for recovery planning in the Muir-Unicup Natural Diversity Recovery Catchment which includes a highly complex suite of wetlands, some of which are Ramsar listed.

The department contributed to a range of committees during the year, including those relating to the Engineering Evaluation Initiative and the Catchment Demonstration Initiative. The department was involved in running a postgraduate course in hydrology at The University of Western Australia which provided an opportunity for research of hydrological issues affecting important biodiversity assets. DEC also established the Hydstra database as a repository for all recovery catchment hydrological information.

### Invasive species control

#### *Feral pigs*

Throughout the year, DEC took part in cooperative management of feral pigs in the south-west. DEC conducted feral pig control activities, including monitoring, trapping and poisoning, in the forests of the south-west and in the Midwest. However, the effectiveness of feral pig control efforts continued to be hindered by illegal hunting, transport and release of pigs by recreational shooters. DEC's Warren Region supported three established community groups to address feral pig control.

### *Feral goats*

Feral goat control activities continued on the Peron Peninsula and Nanga in the Shark Bay World Heritage Property, to minimise the impacts of these animals on mangrove communities and fauna habitat. A ground shoot was also carried out at Kalbarri National Park in an attempt to ensure feral goat numbers stayed low enough to allow rock-wallaby translocation to take place. Exclusion fencing of Burnerbinmah was completed.

### *Cattle, donkeys, camels and invasive birds*

Feral cattle and donkey control in the Kimberley was undertaken in partnership with external stakeholders. Feral donkey and camel control operations in the Pilbara and northern Meekatharra Shire continued in partnership with the Department of Agriculture and Food under the Judas Collar Program. Feral camel survey work in the Great Victoria Desert, Great Sandy Desert and Nullarbor continued in order to provide an assessment of the environmental impacts of feral camels and for development of cost effective control strategies. In partnership with the Department of Agriculture and Food and the Western Desert Lands Aboriginal Corporation, the department took part in a consultation program with Aboriginal communities in the Western Desert and negotiated possible access arrangements and options for camel control on Aboriginal lands.

A program for the control of invasive rainbow lorikeets continued in the Perth metropolitan region to reduce competition for nest spaces and food resources with native species and to prevent the risk of disease impacts to native bird species. The program was implemented by the department, with assistance from fruit growers and other affected land managers. During the year, 6,146 birds were taken, bringing the total for the program to 13,842 birds. Little and long-billed corellas (not native to the Perth metropolitan area), were also controlled through the program, with 356 birds taken during the year, and a program total of 918 birds.

### *Management of environmental weeds*

Weed management actions on DEC-managed lands were prioritised in each region according to the policy outlined in the *Environmental Weed Strategy of WA (1999)*. During 2008–09, work continued on a weed risk management project that will prioritise weeds in each of WA's 26 Interim Biogeographical Regionalisation of Australia (IBRA) bioregions. The project enabled weeds to be assessed for their invasiveness, impacts, potential and current distribution and feasibility of control. The use of an asset-protection-based approach to determine the priority of established weeds was investigated, so that priority-setting for management actions to protect environmental assets from the threat posed by established weeds could occur.

The main species targeted for weed management in 2008–09 included arum lily, asparagus weeds, bridal creeper, blackberry, Bathurst burr, cape tulip, date palms, dolichos pea, Paterson's curse, African lovegrass, rubber vine, calotrope, athel pine, tamarisk, Victorian tea tree, African boxthorn, verbesina, ruby dock, watsonia, cacti and other significant environmental weeds.

The department continued work on a three-year eradication program for rubber vine – a Weed of National Significance – in the West Kimberley. The project was funded through the *Defeating the Weed Menace* program and is administered by the federal departments of Agriculture, Fisheries and Forestry and the Environment, Water, Heritage and the Arts. Throughout 2008–09 the project continued to raise awareness, integration and cooperation between various land managers including State departments, pastoralists, Indigenous communities, tourists and others. The program also focussed on promoting long-term monitoring and surveillance to prevent new infestations and to contain the current population.

Protocols were developed and adopted for the systematic assessment of the potential weed and genetic risk associated with new plant species, introduced for their benefits to productivity and sustainability of agricultural landscapes.



Species management guides for landholders and field trial protocols for researchers to minimise risk to the environment were initiated.

### ***Phytophthora* dieback management**

The following achievements were made in 2008–09 in the management of *Phytophthora* dieback (please also refer to the Priority nature conservation projects section):

- assessed and mapped *Phytophthora* dieback-infested areas within the Fitzgerald River and Cape Arid national parks
- assisted with the development of four *Regional Phytophthora Management Strategies* for the Swan and Avon, South Coast, South West and Northern Agricultural NRM regions as part of the *Project Dieback* NRM project managed by South Coast NRM
- continued to implement a series of projects to isolate and manage the known Fitzgerald River National Park dieback infestation, including isolation fencing and installation of subsurface membranes to prevent further disease spread
- continued aerial phosphite spraying of threatened flora and ecological communities in south-west WA including the montane heath and thicket threatened ecological communities in the Stirling Range National Park
- installed new *Phytophthora* dieback information signage at Stirling Range National Park
- collected seed from populations of a number of threatened flora under threat from *Phytophthora* dieback, and
- screened 80 threatened, priority and keystone flora species for their susceptibility to *Phytophthora cinnamomi*, including four critically endangered (*Acacia imitans*, *Acacia unguicula*, *Calothamnus accedens* and *Verticordia multiflora* subsp. *multiflora*) and three endangered (*Acacia cerastes*, *Eucalyptus crucis* subsp. *praecipua* and *Grevillea murex*) taxa.

### **Fire management on unallocated Crown land and unmanaged reserves**

From 1 July 2003, DEC assumed responsibility for the coordination and on-ground management of fire risk prevention and fire preparedness works on 89 million hectares of non-metropolitan and non-townsite unallocated Crown land and unmanaged reserves. Table 5 shows the distance of firebreak access installed and maintained on these lands, the level of vegetation modification in strategic buffers so as to enable more effective fuel removal by hand burning, and the area of wind-driven open edge prescribed burning and large-scale block ignition using aircraft. Fire risk prevention and fire preparedness works on these lands were mostly undertaken to protect adjacent natural values and community assets.

### **Invasive animal control on unallocated Crown land and unmanaged reserves**

Intensive cat control was undertaken in the Mt Manning area to aid malleefowl conservation and reduce impacts on small mammals. Control activities were conducted adjacent to mining operations in the Windarling and Koolyanobbing areas and 90,000 baits were delivered by air in conjunction with pre- and post-baiting monitoring. The funding for these activities was provided by Cliffs Resources according to Ministerial conditions which allowed mining operations on the banded iron formation.

Wildlife officers engaged in activities to monitor the import and movement of species crossing the Western Australian–South Australian border, including quarantining of birds and reptiles dependant on the type and size of animals.

DEC carried out ground and aerial baiting for wild dog control throughout the Goldfields Region on DEC-managed land, unallocated Crown land as well as targeted control activity on adjoining boundaries with small stock units. Work carried out



**Table 5: Fire prevention works completed on unallocated Crown land and unmanaged reserves.**

| DEC region   | Firebreak access and maintenance (km) |              |              | Scrub rolling/slashing and vegetation modification (km) |           |            | Open-edge burning (km) |            |            | Block burning (ha) |                      |                  |
|--------------|---------------------------------------|--------------|--------------|---|-----------|------------|------------------------|------------|------------|--------------------|----------------------|------------------|
|              | 2006-07                               | 2007-08      | 2008-09      | 2006-07   | 2007-08   | 2008-09    | 2006-07                | 2007-08    | 2008-09    | 2006-07            | 2007-08              | 2008-09          |
| Kimberley    | 30                                    | 30           | 42           | 0   | 0         | 0          | 200                    | 300        | 370        | 230,780            | 663,254 <sup>1</sup> | 340,000          |
| Goldfields   | 174                                   | 314          | 205          | 0   | 43        | 72         | 20                     | 10         | 72         | 23,761             | 495,090 <sup>1</sup> | 1,220,252        |
| Midwest      | 550                                   | 264          | 756          | 0   | 0         | 0          | 55                     | 36         | 28         | 2,101              | 480                  | 655              |
| Wheatbelt    | 718                                   | 544          | 325          | 0   | 0         | 60         | 33                     | 8          | 15         | 0                  | 0                    | 0                |
| South West   | 4                                     | 4            | 0            | 2.5   | 6         | 6          | 0                      | 0          | 0          | 0                  | 12                   | 0                |
| Warren       | 10                                    | 37           | 18           | 0   | 0         | 0          | 0                      | 0          | 0          | 270                | 389                  | 0                |
| South Coast  | 173                                   | 53           | 261          | 75  | 19        | 108        | 38                     | 158        | 90         | 1,728              | 267                  | 953              |
| <b>Total</b> | <b>1,659</b>                          | <b>1,246</b> | <b>1,607</b> | <b>77.5</b>   | <b>68</b> | <b>246</b> | <b>346</b>             | <b>512</b> | <b>575</b> | <b>258,640</b>     | <b>1,159,492</b>     | <b>1,561,860</b> |

<sup>1</sup> The large increases in block burning in the Kimberley and Goldfields regions were due to additional funding for fire management in DEC's remote regions and also a change in bushfire mitigation strategies which includes the aim of developing landscape-scale mosaics.

on adjoining pastoral boundaries consisted of 240 days' ground baiting activities by a DEC contract dogger. Aerial baiting was conducted in conjunction with the Zone Control Authorities and the Department of Agriculture and Food.

### Kimberley Science and Conservation Strategy

The State Government has committed \$9 million over four years to develop an integrated Kimberley Science and Conservation Strategy to ensure the region's natural and cultural values are protected as the region fulfils its economic potential. It was decided that DEC would lead the development and implementation of the strategy, under the direction of the Minister for Environment, and in conjunction with the Department of State Development.

Public consultation began in March with a call for written submissions and a series of community forums and workshops in the Kimberley and in Perth began in June.

### Environmental Community Grants Program

This new four-year grants program, administered by DEC, was launched in February. A total of \$1.53 million was available across seven categories in the first round of funding.

Nearly 300 applications were received by the May deadline, submitting funding proposals with a total value of approximately \$4.5 million.

### Great Western Woodlands

The State Government has committed to better manage and protect the Great Western Woodlands (a continuous band of woodland vegetation spanning the edge of the Wheatbelt to the Mulga country in the north, the inland deserts to the north-east and the Nullarbor Plain to the east) and to ensure the long-term conservation of the unique natural and cultural values of the area. This includes the development of a biodiversity conservation strategy, led by DEC. A project coordinator was appointed by the department.

In March 2009, the Minister for Environment invited nominations from key interest groups for appointment to a stakeholder reference group to ensure existing uses of the area, as well as issues relevant to conservation, science, Indigenous people and local governments are taken into account in formulating the strategy.

The department commenced the development of a conservation strategy for the Great Western Woodlands while ensuring that the economic, social and cultural activities and values of the area are recognised and fully considered.

### Tuart woodlands

Key research support for tuart biodiversity restoration was provided by the Centre of Excellence for Climate Change Woodland and Forest Health, and community volunteers at Ludlow. New trials were set up to determine the effect of soil treatments (ripping and the creation of ashbeds) on the growth and survival of various local canopy and understory species, both planted as seedlings and broadcast as seed. Monitoring and testing of these sites, and planting and seeding treatments, commenced to provide a sound knowledge base for larger-scale restoration of degraded tuart woodlands at Ludlow and Yalgorup. DEC also completed operational restoration of tuart woodlands in unmined areas of sand Mining Lease 70/86 at Ludlow over an area of 6.35 hectares in accordance with the conditions of Ministerial Approval Statement 639, and with conservation offset funds provided by the proponent.

### Assessment of land resource use impacts on biodiversity conservation

In 2008–09, the department continued to provide advice to the Environmental Protection Authority on a proposed increase in the capacity of the Gorgon Gas Field development on Barrow Island. The original project involved a development of two five million tonne per annum (MTPA) gas processing trains and associated infrastructure, which received environmental approval. Following that approval, the proponent submitted a revised proposal which expanded the liquefied natural gas production to 15 MTPA by the addition of a third gas processing train. The proponent sought approval for significant revisions to the layout, size and orientation of a number of marine components and planned construction of marine infrastructure. The revision resulted in potentially important changes to the environmental impacts, increased the rate of carbon dioxide injection into the ground by 24 per cent and changed some terrestrial elements of the project.

DEC was also heavily involved in the initial review of management plans and other environmental documentation required under State approvals. Under the conditions in Ministerial Statement 748 for the Gorgon Project, 17 of 26 plans were provided for DEC review as at 30 June 2009. Under the *Barrow Island Act 2003*, the CALM Act Minister is also required to provide consent to conditions for the granting of tenure. DEC was therefore also involved in developing lease, license and easement conditions and reviewing and approving management plans required for each of more than 20 applications for tenure for the Gorgon Project. DEC also provided advice to the Department of State Development on development proposals required under the *Gorgon Gas Processing and Infrastructure Agreement 2003* as well as advising on possible variations to this agreement.

DEC also started the planning process for staffing and training of additional DEC personnel to provide an operational and regulatory presence on Barrow Island when the Gorgon Project gets under way.

During 2008–09, the department had a significant role in providing advice to proponents and decision-making authorities on a range of other major development proposals affecting DEC-managed lands that were undergoing or proposed for management for conservation purposes. These included Iluka's Eneabba and Bemax's Happy Valley Mineral Sands Projects, the Central West Coal/Coolimba Power Project, Latent Energy's Warro 3D Seismic Survey, the Marandoo Expansion Project, the Karara Iron Ore Project, Koolanooka-Blue Hills DSO Project, and the Polaris Resources Carina project. Advice was also provided on other major projects affecting significant conservation values including the AngloGold Ashanti Tropicana project, Cape Lambert Port Stage B and various mining projects at Cape Preston and in other areas of the Pilbara.

Further advice was provided on the assessment and ongoing management of a large number of development projects, including approximately 20 new projects in the Kimberley, Midwest, Pilbara, Goldfields and South West regions. This involvement included contributing to the development and implementation of environmental conditions for several of the mining and port development proposals, and expansions of rail and other infrastructure by mining companies in the Pilbara.

In addition to providing formal advice on major development projects, DEC staff provided a range of advice and other services to development proponents and approval agencies on resource and other development projects. This aimed to protect the conservation and other values of DEC-managed lands and conserve biodiversity. DEC also assisted the Conservation Commission and the Minister for Environment by providing advice on mineral tenements on reserved lands under Section 24 of the *Mining Act 1978*.

DEC is required to report on its performance in providing conservation-related advice at key stages in the approvals process. Each year the department responds to a large number of requests but the performance reporting applies specifically to advice on development proposals that fall within the State Development portfolio (chiefly mining, petroleum and major industrial projects) that are subject to agreed time limits. The summary of performance for 2008–09 reported in Tables 6 and 7 therefore represents a relatively small proportion of DEC’s overall advice workload.

**Table 6: Performance in relation to provision of Parks and Conservation Services advice for tasks subject to formal Integrated Project Approvals System time limits for the 2008–09 reporting year<sup>1 & 2</sup>**

| Approval process                                | Stage  | Number of advice tasks completed within period | Average number of days taken to provide advice | Number of advice tasks completed within time limit | Percentage of advice tasks completed within time limit | Average number of days within (-) or outside (+) time limit |
|---|--|--|--|--|--|---|
| Environmental Protection Act Part IV – PER/ERMP | Advice/comment on environmental scoping document (Time limit = 15 days)                  | 8  | 12   | 7  | 87.5   | -3  |
| Environmental Protection Act Part IV – PER/ERMP | Advice/comment on environmental review document (Time limit = 20 days)                   | 8  | 13   | 8  | 100  | -7  |
| Environmental Protection Act Part IV – PER/ERMP | Advice during public review period (Time limit = within review period)                   | 6  | 37   | 6  | 100  | 0   |
| Environmental Protection Act Part IV – AR/EPs   | Advice to EPA on project proposal (Time limit = 20 days)                                 | 3  | 11   | 3  | 100  | -9  |
| Environmental Protection Act Part IV            | Post approval environmental management plan/issue management plan (Time limit = 15 days) | 6  | 12   | 6  | 100  | -3  |
| Mining Act                                      | Advice on mining proposal (Time limit = 20 days)   | 1  | 1  | 1  | 100  | -19   |
| Petroleum Act                                   | Advice on petroleum development proposal (Time limit = 20 days)                          | 1  | 12   | 1  | 100  | -8  |
| <b>Mean/total</b>                               |  | Total 33                                       | Mean 14  | Total 32   | Mean 98.2  | Mean -7   |

<sup>1</sup>Based on data for advice provided between 1 July 2008 and 30 June 2009.

<sup>2</sup>Table only includes tasks that were subject to time limits agreed by the State Government in 2005 as a consequence of the implementation of the Keating Review. Tasks relating to exploration, planning, implementation or utility projects not falling under the State Development or Resources portfolios are not included. Overall DEC responded, in respect of its CALM and Wildlife Conservation Act responsibilities, to an estimated 500 requests for advice relating to State Development portfolio development projects and activities.

**Table 7: Contributory factors in cases where formal time limits were not met for the 2008–09 reporting year<sup>1</sup>**

| Reason                                   | Number of cases | Percentage of cases |
|--|-----------------|---------------------|
| Non-availability of documentation        | 0               | 0                   |
| Non-availability of expert staff         | 0               | 0                   |
| Non-availability of staff/time resources | 1               | 100                 |
| Administrative error                     | 0               | 0                   |
| <b>TOTAL</b>                             | <b>1</b>        | <b>100</b>          |

<sup>1</sup>Based on data on advice requests received between 1 July 2008 and 30 June 2009.

#### *Banded Iron Formation Ranges Strategic Review*

The Strategic Review of the Conservation and Resource Values of the Banded Iron Formation of the Yilgarn Craton was endorsed by Cabinet and a strategic framework announced in 2007. Three key banded iron formation ranges in the Mt Manning area (Helena-Aurora, Mt Manning and Die Hardy Ranges) were identified for the creation of Class 'A' national parks or nature reserves (as generally recommended in EPA Bulletin 1226). Early stage planning for the creation of these reserves was undertaken.

#### *Applications to clear native vegetation: assessment and activity*

Clearing without authority is an offence under the *Environmental Protection Act 1986* unless the clearing is done subject to an exemption. DEC's Clearing Permit System database recorded details of all applications and decisions made during the year, and forms the basis of the published records made available on the department's website. DEC received 656 applications to clear vegetation in 2008–09 and made 515 decisions. Under its delegation from DEC, the Department of Mines and Petroleum made 225 decisions.

**Table 8: Permit areas granted to clear under section 51C of the *Environmental Protection Act 1986***

| Purpose                             | Area (ha)     |
|-------------------------------------|---------------|
| Aquaculture                         | <1            |
| Firewood collection                 | -             |
| Flora harvesting                    | -             |
| Pastoral diversification            | -             |
| Water/gas pipeline installation     | -             |
| Mineral production                  | 7,053         |
| Mineral exploration                 | 2,755         |
| State agreement                     | 1,162         |
| Road construction or maintenance    | 398           |
| Building or structure               | 754           |
| Extractive industry                 | 354           |
| Grazing and pasture <sup>1</sup>    | 2,623         |
| Drainage                            | 22            |
| Hazard reduction or fire control    | 32            |
| Timber harvesting <sup>2</sup>      | 1,194         |
| Horticulture                        | 380           |
| Infrastructure maintenance          | 49            |
| Industrial                          | 5             |
| Recreation                          | 30            |
| Plantation                          | 90            |
| Dam construction or maintenance     | 23            |
| Stockpile                           | 1             |
| Bore construction                   | <1            |
| Fence line maintenance              | 25            |
| Miscellaneous                       | 171           |
| Restoration                         | 43            |
| Cropping                            | 18            |
| Landscaping                         | <1            |
| Petroleum production                | 6             |
| Petroleum exploration               | 3             |
| Railway construction or maintenance | 964           |
| <b>Total</b>                        | <b>18,160</b> |

<sup>1</sup> This included a single permit to plant native pasture on a degraded area of 2,425 hectares for pastoral activities in the West Kimberley area.

<sup>2</sup> Includes permits for silviculture. Conditions on permits for silviculture do not permit the permanent clearing of the understorey and require the retention of a minimum basal area.

**Table 9: Areas refused a permit to clear under section 51C of the *Environmental Protection Act 1986***

| Purpose                             | Area (ha)    |
|-------------------------------------|--------------|
| Aquaculture                         | -            |
| Firewood collection                 | -            |
| Flora harvesting                    | 9            |
| Pastoral diversification            | -            |
| Water/gas pipeline installation     | -            |
| Mineral production                  | -            |
| Mineral exploration                 | -            |
| State agreement                     | -            |
| Road construction or maintenance    | -            |
| Building or structure               | 38           |
| Extractive industry                 | 93           |
| Grazing and pasture                 | 597          |
| Drainage                            | -            |
| Hazard reduction or fire control    | 35           |
| Timber harvesting                   | -            |
| Horticulture                        | 295          |
| Infrastructure maintenance          | -            |
| Industrial                          | -            |
| Recreation                          | -            |
| Plantation                          | 8            |
| Dam construction or maintenance     | 25           |
| Stockpile                           | 3            |
| Bore construction                   | -            |
| Fence line maintenance              | 2            |
| Miscellaneous                       | 20           |
| Restoration                         | -            |
| Cropping                            | 29           |
| Landscaping                         | -            |
| Petroleum production                | -            |
| Petroleum exploration               | -            |
| Railway construction or maintenance | -            |
| <b>Total</b>                        | <b>1,154</b> |

DEC's non-statutory target timeframe for assessing clearing permit applications was 90 days, consistent with that of the previous clearing regime under the *Soil and Land Conservation Act 1945*. This timeframe was reduced for applications received after 1 January 2009 in recognition of improved performance and new target timeframes of 80 per cent of decisions made in 60 days and 100 per cent of decisions in 90 days have been implemented.

In 2009, DEC began publishing quarterly reports of its performance in achieving these timeframes for all decisions on applications by DEC and the Department of Mines and Petroleum under delegation. The 2009 reports are shown at Table 10.

**Table 10: Timeframes for decisions on clearing permit applications**

| Purpose  | Number of decisions made<br>(1 January 2009–31 March 2009) <sup>1</sup> |                  |                   |                             |            | Number of decisions made<br>(1 April 2009–30 June 2009) |                  |                   |                             |            |
|--|---|------------------|-------------------|-----------------------------|------------|---|------------------|-------------------|-----------------------------|------------|
|  | Less than<br>or equal to<br>60 days <sup>2</sup>                        | 61 to<br>90 days | 91 to<br>120 days | Greater<br>than<br>120 days | Total      | Less than<br>or equal to<br>60 days <sup>2</sup>        | 61 to<br>90 days | 91 to<br>120 days | Greater<br>than<br>120 days | Total      |
| State development <sup>3</sup>                     | 14  | 12               | 14                | 11                          | 51         | 27  | 25               | 12                | 4                           | 68         |
| Local government <sup>4</sup>                      | 24  | 1                | 0                 | 5                           | 30         | 25  | 2                | 1                 | 0                           | 28         |
| Utilities <sup>5</sup>                             | 8   | 2                | 3                 | 0                           | 13         | 4   | 0                | 0                 | 0                           | 4          |
| Agriculture/horticulture/<br>forestry <sup>6</sup> | 16  | 6                | 3                 | 0                           | 25         | 11  | 4                | 0                 | 1                           | 16         |
| Basic raw materials <sup>7</sup>                   | 4   | 0                | 0                 | 3                           | 7          | 4   | 2                | 1                 | 2                           | 9          |
| Other development <sup>8</sup>                     | 30  | 8                | 2                 | 1                           | 41         | 32  | 12               | 1                 | 2                           | 47         |
| <b>Total</b>                                       | <b>96</b>   | <b>29</b>        | <b>22</b>         | <b>20</b>                   | <b>167</b> | <b>103</b>  | <b>45</b>        | <b>15</b>         | <b>9</b>                    | <b>172</b> |

<sup>1</sup> 'Decisions made' means clearing permit applications that have been granted or given an undertaking to grant, refused, declined, withdrawn, amended, revoked or suspended.

<sup>2</sup> The timeframe calculation for the number of decisions made starts from the date an application is received until the date of the decision, excluding any 'stop the clock' period. Days for decision exclude time periods where the decision-maker has formally written to the applicant requesting further information. The stop the clock period occurs when DEC or the Department of Mines and Petroleum have been notified by the Environmental Protection Authority that a proposal has been referred and that it is constrained under section 41 of the *Environmental Protection Act 1986*; when the initial assessment has been undertaken and the Chief Executive Officer requires further information under section 51E(1)(d) of the Act in writing before making a decision; or when the applicant requests the process be put on hold.

<sup>3</sup> Clearing for purposes of mineral production, mineral exploration, petroleum production, petroleum exploration (for applications administered by DEC and the Department of Mines and Petroleum) and other State development (including State Agreements) administered under delegation by the Department of Mines and Petroleum.

<sup>4</sup> Includes all clearing by local government authorities. This could include purposes such as road construction and maintenance, building or structures and other infrastructure.

<sup>5</sup> Clearing by utilities including Water Corporation, Western Power, Horizon, Main Roads WA, Verve Energy, Telstra, Alinta, Westnet Rail and the Public Transport Authority. This could include purposes such as infrastructure construction and maintenance, railway construction, road construction and maintenance.

<sup>6</sup> Clearing for the purposes of timber harvesting, plantation, horticulture, grazing and pasture, cropping, drainage and aquaculture.

<sup>7</sup> Clearing for the purposes of extractive industry (e.g. sand and gravel extraction).

<sup>8</sup> Includes all other purposes not listed above, including buildings or structures, industrial, landscaping, fire hazard reduction and fence line maintenance.

### *Monitoring and compliance of native vegetation clearing*

During the year, DEC used remote sensing imagery to identify vegetation change and, based on the analysis of this imagery and inspection of the land, determined whether unlawful clearing was likely to have occurred. Clearing incidents identified as a result of the monitoring program or complaints were investigated and progressed according to DEC's Enforcement and Prosecution Policy. The program focused compliance resources on selected geographic areas. Ground-truthing of vegetation change indicated by satellite imagery was undertaken in the Midwest and South Coast regions during 2008–09.

In 2008–09, there were 206 new clearing complaints, of which 67 were formally investigated. Clearing incidents were given priority for investigation according to a sanction matrix which took into account the environmental impact and the circumstances of the clearing.

DEC regularly conducted analysis of the Clearing Permit System database to identify high risk clearing applications (those with potential to have the greatest impact on the environment, such as clearing of sensitive or large areas) that were resolved, including granted, withdrawn and refused proposals. Inspections included audits against permit conditions and also decisions that refused the proposal. In

addition, random audits were undertaken on a proportion of permits. A total of 54 inspections of clearing permit decisions were conducted during 2008–09.

Data related to enforcement outcomes for clearing are contained in section 2.2.2 Environmental Enforcement Unit.

### *Vegetation conservation notices*

Vegetation conservation notices may be given under section 70 of the *Environmental Protection Act 1986* if the Chief Executive Officer suspects on reasonable grounds that unlawful clearing is likely to take place, is taking place or has taken place on any land. In 2008–09, eight vegetation conservation notices were given, which required the person bound by the notice to ensure that no unlawful clearing or further unlawful clearing took place on the land. A further four vegetation conservation notices for private land were given, which required the person bound by the notice to undertake specified measures to repair or mitigate the environmental harm caused by clearing.

### *Review of native vegetation clearing processes and legislation*

A review has been initiated of the State's native vegetation clearing legislation in June 2008. Under its terms of reference, the review committee was required to report on the clearing provisions of the *Environmental Protection Act 1986* and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 in terms of:

1. their adequacy to provide the outcomes the Government has sought for native vegetation protection
2. any amendments to the legislation, regulations and policies which would improve the effectiveness and efficiency of the regulation of clearing
3. any additional measures that would enhance the effectiveness of the native vegetation clearing provisions, including their interaction with other planning and decision-making processes and biodiversity conservation programs, and
4. any improvements to compliance monitoring systems and processes and overall reporting of outcomes.

The review committee took into account previous investigations, including the 2007 report of the Auditor General on *Management of Native Vegetation Clearing* and the outcomes from the 2006 review for the resources sector coordinated by the Office of Development Approvals Coordination, as well as consultations with key stakeholder groups.

The review committee provided its report to the Minister for Environment during the year.

### **Native tree crops/revegetation**

Development of new, broadscale flora industries based on native plants, particularly as a means of controlling secondary salinisation in the wheatbelt, continued. The role of revegetation in climate change and as direct biodiversity habitat was also investigated.

Work initiated under the Cooperative Research Centre for Plant Based Management of Dryland Salinity was written up and awaits publication through the Future Farm Industries Cooperative Research Centre. The work was conducted by CSIRO and evaluated the habitat value of mallee compared to multiple species plantings, remnant native vegetation and bush in good condition. The research results showed that the value of mallees as habitat for native animals exceeded expectations.

DEC made a prominent contribution to the Future Farm Industries Cooperative Research Centre's Woody Crops Program, which aimed to overcome the remaining impediments to commercial uptake of woody crops in the low rainfall wheatbelt regions of southern Australia. Three projects were active during the year:

- the genetic improvement project designed to gain national level collaboration in the breeding of major low rainfall woody crop species, including mallee



- the supply chain project won a major grant from the State's Low Emissions Energy Development (LEED) Fund and attracted equity participation by an agricultural engineering company to design and build a large capacity and low-cost woody crop harvester, and
- the biomass supply assessment project provided region-specific economic analysis to major project developers.

The established mallee breeding and seed production program within DEC continued to breed mainly WA species. Some 13.7 million seeds were sold during the year, mostly through regional NRM groups to support farmers involved in regional conservation programs.

Several companies promoting mallee planting for carbon sequestration became active during the year.

### 2.1.1.7 Encouraging public understanding and support of biodiversity conservation and other DEC programs and activities

The department continued to be a member and co-chair (with WWF-Australia) of a consortium of government agencies, non-government organisations, and community representatives seeking to develop a biodiversity conservation strategy for WA's south-west. The consortium (the Southwest Australia Ecoregion Initiative) worked with James Cook University and local scientists to ensure that the conservation planning process has a sound scientific basis. Funding of \$367,000 was received through the Australian Government's *Caring for Our Country* program to undertake the data capture and initial conservation planning phase. In total, 502 datasets were identified for the conservation planning process, and 332 of those datasets have been captured for the project. A workshop was held to identify socio-economic information that might be relevant to conservation planning.

#### Public participation programs

##### *Community Conservation Grants Scheme*

DEC provided the administrative support for the Minister's Community Conservation Grants Scheme. Grants were provided to 34 community groups and individuals involved in voluntary community conservation and fauna rescue and recovery.

##### *Healthy Wetland Habitats*

The department's *Healthy Wetland Habitats* program is a voluntary program that provides technical and financial assistance to private land managers for wetlands of high conservation value on the Swan Coastal Plain. Landowners of conservation category wetlands on the Swan Coastal Plain were invited to submit an expression of interest in the program, and a technical advisory committee reviewed the expressions of interest and provided advice on management priorities required to achieve conservation outcomes.

Management action planning and funding to \$10,000 was offered to eligible priority wetlands to assist landholders in managing their wetland habitats under a voluntary management agreement. Information seminars aimed at private landholders and other groups with an interest in wetlands were also run as part of the program.

During the year, 11 management action plans and funding agreements were developed for properties in association with the landowners. This represented a combined total wetland area of 190 hectares, and an additional 220 hectares of associated remnant vegetation. A total of \$103,272 was awarded for conservation management works. A further six properties underwent field assessment.

An information seminar held in Gingin was attended by 29 private land managers and stakeholders and presentations were made on wetland

ecosystems, threats, management options, available funding and other support options. Information reference packs were given to all participants.

### *Roadside conservation*

The Roadside Conservation Committee (RCC) sought to facilitate best practice management of remnant vegetation in transport corridors through awareness raising, liaison and cooperation during the year. The RCC worked to ensure that the need for a safe and efficient road system was achieved in a balanced way for the sustainability of the many values in road reserves. The RCC also advised DEC on roadside vegetation clearing issues.

During the year, RCC staff coordinated a workshop with DEC and Main Roads WA on threatened flora and other environmental issues within road reserves for Main Roads WA contractors in Bunbury. The RCC also coordinated a workshop on roadside vegetation values for the Shire of Plantagenet's road works crew.

Through the RCC, DEC provided roadside conservation value maps with accompanying reports to local governments. Maps were completed for the shires of Donnybrook-Ballingup, Mundaring, Geraldton-Greenough and Kellerberrin. The shires of Narrogin, Busselton, Plantagenet and Dandaragan completed roadside surveys and the information is being processed. The RCC is also working with DEC and the Department of Agriculture and Food on making the roadside conservation value maps and reports available through the Shared Land Information Platform.

### *Wetland Coordinating Committee*

DEC continued to chair the State's Wetland Coordinating Committee and was actively involved in the implementation of the Wetland Conservation Policy for Western Australia (1997). The committee reviewed the policy during the year. The committee also coordinated the development of key State initiatives to improve the protection of wetlands. These included a framework for evaluation of biological impacts of drainage projects; a guideline for the determination of wetland buffer requirements; a framework for mapping, classification and evaluation of wetlands, and a guide to management and restoration of wetlands.

### *Urban Nature*

The *Urban Nature* program continued to work with land managers from more than 40 stakeholder groups during 2008–09 to provide technical advice and support, and to facilitate sound bushland management.

More than 80 on-ground activities were conducted with stakeholders, including community groups, DEC land managers and private landholders. Much of the work involved adaptive management and research trials, and liaison with land managers to implement the results of those trials across 14 high priority sites. This included work towards the development of techniques to manage *Moraea fugax* where it invades shrublands on granites at St Ronans Nature Reserve, the tenth year of monitoring the effectiveness of *Sparaxis bulbifera* management at Brixton Street wetlands and facilitating regeneration of the threatened plant communities at Meelon and Burnside nature reserves following a wildfire in February 2007. Results were disseminated through 19 presentations, 18 newsletter articles and two scientific publications.

Program staff continued to provide training, including the five-day nationally accredited 'Managing Weeds in Bushland' course. In 2008–09, 23 field days and workshops were held and attended by more than 200 participants.

The *Urban Nature* program, with funding from NHT through the Swan Catchment Council, completed a 'Strategic Weed Plan for the Swan NRM', which included the production of six strategic plans for individual high priority weed species. On-ground works were carried out on more than 200 hectares and a priority list of environmental weeds for land managers in the region was produced. Detailed weed management notes on 60 species of bulbous weeds were collated and made publicly available on *FloraBase*.

Control works, as outlined in the *Tribolium uniolae* strategic plan, were progressed to the final stages during the year. The project resulted in a severe reduction in the number of plants and populations and assisted the protection of bushland on the Swan Coastal Plain and Darling Range.

The three-year project for strategic management and control of yellow soldier continued throughout 2008–09. Significant progress was made to curb the spread and impacts of the species particularly in high conservation value sites. The project relied on strong partnerships with a range of external land managers and community groups and increased awareness of the plant and its threat to biodiversity in the region. A final report on the yellow soldier project was released and this created opportunity for release of several high profile media items.

### **Provision of private land biodiversity conservation support and advice**

#### *Land for Wildlife*

During the year, 90 new properties were registered with *Land for Wildlife* (LFW) and the program celebrated its 2,000th property with an event attended by the Minister for Environment. LFW staff visited 132 properties – 95 new ones totalling 81,846 hectares (including 54,681 hectares of dedicated wildlife habitat) and 37 that they formally revisited for stewardship matters. During these visits, staff recorded 56 occurrences of rare or threatened fauna, flora or ecological communities. At 30 June 2009, LFW staff had visited 1,600 properties – an area of 1,992,465 hectares, including 306,374 hectares of land where the primary management purpose is nature conservation. Thirteen landholders resigned from LFW during the year due to property sales, leaving 1,747 properties registered.

The LFW scheme is accredited as a non-binding voluntary management agreement, and assisted 40 funding applications by landholders. Support included provision of voluntary management agreements, GIS maps, project development and letters of support.

Four editions of *Western Wildlife* were produced and LFW staff wrote 36 articles for print media, gave 17 radio interviews, organised 27 displays at agricultural shows or similar, and gave 66 talks at workshops, seminars or to schools or other groups. This included 18 events which specifically used the LFW brand.

Staff nominated four groups or individuals registered with LFW for awards during the year, all of which reached the finals of their category. Of these, one was both a State and national award winner and two were State winners.

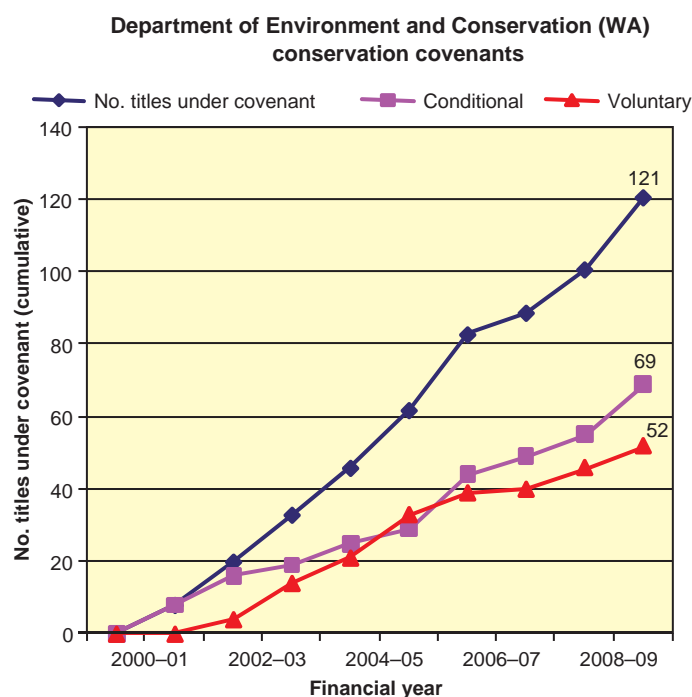
During 2008–09, all LFW sites were added to DEC's spatial database available throughout the department, and outside the department on request.

#### *Nature Conservation Covenant Program*

The voluntary Nature Conservation Covenant Program assisted private landowners with the conservation of bushland of high nature conservation value by placing a protective covenant on the land's title, and by providing management advice and assistance through incentives and a stewardship program. During the year, the program entered into covenants in perpetuity over 20 titles, and protected 1,509 hectares of native vegetation. At 30 June 2009, covenants were cumulatively established over 121 titles and 9,681 hectares of land, including a number of threatened species and ecological communities (Table 11, Figure 2). A further 36 covenants to protect another 3,881 hectares of native vegetation were in negotiation at 30 June 2009.

**Table 11: Conservation values of State and/or regional significance protected under DEC restrictive covenants between 2000–01 and 2008–09**

| Significant conservation value    | Number of occurrences on covenanted sites |
|-----------------------------------|---|
| Specially protected fauna         | 43  |
| Priority fauna                    | 19  |
| Threatened flora                  | 15  |
| Priority flora                    | 21  |
| Threatened ecological communities | 4   |
| Wetlands                          | 15  |
| Rivers and creeklines             | 30  |



**Figure 2: Cumulative number of land titles under covenant between 2000–01 and 2008–09**

The covenant program continued to maintain relationships with other State agencies and non-government organisations to improve the delivery of the covenant service. In particular, the program was involved in the delivery of the WWF-Australia *Healthy Ecosystems* project in the Avon region. Through this project, DEC has entered into conservation covenants over eight titles with six landholders, and protected approximately 491 hectares of bushland. A further six conservation covenants were being negotiated at 30 June 2009. There was also a steady increase in the number of covenants being entered into to meet conditions of subdivision imposed by the Western Australian Planning Commission and Ministerial conditions. As a result of this increased demand, the program contributed to reviews of various local and State Government planning policies, and provided advice internally and to other State Government agencies on conservation covenants as conditions of development approvals.

The department is involved in the operation of the State's revolving fund program *BushBank*, which is administered by the National Trust of Australia (WA). DEC

chaired the technical advisory committee, provided biodiversity advice on prospective properties and made its covenanting program available for protection of properties.

### **Animal ethics**

Under the *Animal Welfare Act 2002*, the department operates as a scientific institution pursuant to a Corporate Licence issued by the Department of Local Government and Regional Development. DEC is required to carry out all activities involving the use of vertebrate animals in accordance with the seventh edition of the Australian *Code of Practice for the Care and Use of Animals for Scientific Purposes*.

Applications and annual reports were assessed by the Animals Ethics Committee at six meetings during 2008–09. For the 2008 calendar year, 133 projects were continuing and active. There were no serious cases of non-compliance with the code during the year.

The Animal Ethics Committee maintained a register of projects in accordance with the conditions of its licence to use animals for scientific purposes. A comprehensive database of applications was developed to store details of the project, staff affiliations and competencies.

In order to ensure conditions of the licence were being adhered to, members of the Animal Ethics Committee conducted annual inspections of animal-housing facilities. Committee members visited five of the 13 facilities during formal meetings or as part of trips by individual members to regional areas. All those inspected were found to be in order.

Standard operating procedures (e.g. Minimising Disease Risk in Wildlife Management: Operating Procedures for Fauna Translocation, Monitoring and Euthanasia in the Field) were developed to assist in the preparation of applications for use of animals. The Animal Ethics Committee assessed applications and ensured that activities that involved native fauna were undertaken to a consistent standard. Standard operating procedures were updated and reviewed as new techniques arose and/or old procedures were improved.

The Animal Ethics Committee received assistance from the Resource Condition Monitoring, Significant Native Species and Ecological Communities Project to review a number of standard operating procedures. As at 30 June 2009, 15 standard operating procedures were endorsed by the Animal Ethics Committee and available on its intranet website. A further 10 were in draft.

During the year, a review was carried out by the Animal Ethics Committee to identify any issues or problems with the existing application process, annual project reports and amendment forms. Following this consultative process, all forms were revised and updated. This resulted in an increase of the standard of information submitted by Chief Investigators and assisted the Animal Ethics Committee review submissions.

The specimen vouchering system was also reviewed during the year. The Animal Ethics Committee liaised with the WA Museum, which resulted in the museum's vouchering and collecting policy being incorporated into a formal standard operating procedure, and the development of a formal endorsement process between the WA Museum and DEC for projects involving vouchering.

## 2.1.2 Service 2: Sustainable Forest Management

**Service description:** The provision of economic, social and cultural benefits from State forest and timber reserves while conserving biodiversity, maintaining soil and water values and sustaining health, vitality and productive capacity of the forest for current and future generations.

### Performance summary

|                    | 2008–09<br>Target<br>\$'000 | 2008–09<br>Actual<br>\$'000 | Variation<br>\$'000 |
|--------------------|-----------------------------|-----------------------------|---------------------|
| Expense by service | 38,956                      | 53,627                      | 14,671              |

| KPI   | 2008–09<br>Target | 2008–09<br>Actual | Variance |
|---|-------------------|-------------------|----------|
| Average cost per hectare of managing State forest and timber reserves | \$30.13           | \$41.33           | \$11.20  |

### Performance highlights

- Continued implementation of the Forest Management Plan 2004–2013 (FMP).
- Contributed to the preparation of the mid-term audit of the FMP.
- Provided supplementary advice to the Conservation Commission on two key issues following the mid-term audit of the FMP.
- *Guidelines for the Management and Rehabilitation of Basic Raw Material Pits* were approved.
- The requirement for disposal of logging waste from around the base of retained trees was reviewed and revised.
- DEC forest management moved to a web-based and more systematic approach, with significant improvement to document availability and control.
- Completed mapping of vegetation complexes for a portion of the Swan Coastal Plain.
- Worked with the Forest Products Commission to advance the preparation of the three-year rolling Timber Harvest Plan 2010–12.
- Completed a comprehensive risk analysis of the *Phytophthora cinnamomi* threat to biodiversity assets in remnant vegetation in the south-west.
- Designed and established the final locations of 18 indicative fauna habitat zones associated with planned disturbance.
- Maintained the spatial and measurement datasets required to manage State forest and timber reserves.
- Two community forest inspections were undertaken.
- Nine *ForestCheck* monitoring grids were reassessed in spring 2008 and autumn 2009 to provide information about the response of biodiversity to timber harvesting in the jarrah forest.
- Continued to facilitate the implementation of the Wungong Catchment Environment and Water Management Project for the Water Corporation.
- A wide range of proposals to access State forest were assessed, conditionally approved and monitored for compliance with environmental standards.

#### 2.1.2.1 Overview

Consistent with the statutory purpose of State forest and timber reserves as defined in the CALM Act, under this service DEC provides for their management on an ecologically sustainable basis. This includes:

- implementing Government policies
- ensuring forest values are managed on an ecologically sustainable basis through implementation of the FMP, and
- providing for the harvesting, regeneration and growth of forest products in accordance with the FMP and guided by the principles of ecologically sustainable forest management.

Service 2: Sustainable forest management addresses five key areas of activity:

1. Implementation of approved forest management plans and government policies and programs
2. Inventory, assessment and modelling of natural resources
3. Maintenance and enhancement of biodiversity and other values
4. Provision for harvesting, regeneration and growth of forest products in accordance with approved management plans and guided by the principles of ecologically sustainable forest management, and
5. Partnerships.

### 2.1.2.2 Implementation of approved forest management plans and government policies and programs

#### Forest Management Plan 2004–2013

Action continued on the implementation of the remaining land category changes that are proposed in the FMP. Consultation on fine-scale boundary definition for the proposed reserves continued during the year. Once the consultation process is complete it is proposed to create the new reserves through the passage of a Reserves Act.

The FMP sets times for the development of a number of guideline documents. Work was carried out on the revision of the *Guidelines for the Management of Informal Reserves and Fauna Habitat Zones* and *Soil and Water Conservation Guidelines* following public consultation on the draft guidelines.

Other documents were prepared that assist the delivery of the Sustainable Forest Management Service including *Guidelines for the Management and Rehabilitation of Basic Raw Material Pits* and the standard for disposal of logging waste from around the base of retained trees.

DEC continued to develop protocols for collecting data and reporting on key performance indicators of the FMP.

The mid-term audit of the FMP was completed by the Conservation Commission and reported to the Environmental Protection Authority in December 2008. The audit examined the extent to which management of land had been undertaken in accordance with the FMP, including progress with implementation of actions proposed in the FMP, results of compliance monitoring, identification of implementation issues, consideration of information on key performance indicators, and issues to be addressed from 2009. The report was released at the end of March 2009 for public comment until the end of June 2009. DEC provided further advice to the Conservation Commission in relation to the additional volumes of karri other bole logs that have been generated and secondly the yield of jarrah sawlogs per hectare being realised from harvesting operations.

#### Community forest inspection program

Community forest inspections provide community representatives with the opportunity to inspect first-hand the systems and processes that are in place to manage the harvest of native forest trees from State forest, and to note compliance with existing management systems and processes. Members of the voluntary conservation movement, representatives from local government, staff from the

Forest Products Commission, the Conservation Commission and DEC inspected harvest coupes in the Warren and the South West regions in December 2008.

### 2.1.2.3 Inventory, assessment and modelling of natural resources

A wide range of technical services related to the inventory, assessment and modelling of natural resources were provided within DEC and to the Forest Products Commission, Conservation Commission and external clients. Major areas of activity were:

- The acquisition and analysis of timber inventory data to assist the Forest Products Commission, DEC and the Conservation Commission in the planning, management and monitoring of timber production in State forest and timber reserves. Digital imagery was acquired across 220,000 hectares of State forest to map forest characteristics and stratify areas for timber inventory. The update of the existing jarrah inventory progressed with measurement of a selection of inventory plots.
- Vegetation mapping was undertaken to inform silvicultural decisions, old-growth forest assessments, disease impact predictions and the protection of poorly represented vegetation complexes.
- Mapping of vegetation complexes was undertaken to extend the coverage of this information to inform land use planning and management on the Swan Coastal Plain.
- Work was completed on a major project to quantify the threat from *Phytophthora* dieback to biodiversity assets and assistance was provided to prepare dieback management strategies.
- Field measurement programs to monitor the yields and silvicultural standards realised in timber harvest operations were maintained. Data processing systems were enhanced to increase the detail available from the data collected, and a major upgrade of a computer application to simulate silvicultural outcomes was completed.
- Specialist services were provided to DEC divisions, the Forest Products Commission, other government agencies, NRM groups and external clients. Services included aerial photography, photo-interpretation, photogrammetry, vegetation and disease mapping surveys, and database design and development.

### 2.1.2.4 Maintenance and enhancement of biodiversity and other values of forests

Activities undertaken by the Sustainable Forest Management Division incorporate measures to sustain, or where possible enhance, biodiversity and other forest values. Staff deliver information services and map *Phytophthora* dieback occurrence to enable operations to be undertaken with the lowest risk of spreading *Phytophthora*. Staff are also responsible for establishing an approvals, monitoring and compliance management system and setting standards for the management of a range of forest values.

DEC's Regional Services Division delivers other sustainable forest management outcomes including implementing the approvals, monitoring and compliance management system and the Science Division undertakes research to enhance management of biodiversity, ecosystem health and vitality and soil and water values.

#### Health and vitality in natural landscapes

Mapping the presence of symptoms of the plant disease caused by *Phytophthora cinnamomi* was carried out by accredited interpreters to determine areas suitable for protection. Hygiene requirements were specified for activities likely to result in the movement of soil (and as a consequence, *Phytophthora cinnamomi*) on lands managed by DEC. A total area of 17,760 hectares was mapped to assist the planning of roads and timber harvesting operations undertaken by the Forest Products Commission. This included 8,760 hectares of previous mapping that was checked for further spread. Mapping and hygiene planning were undertaken on a further 4,720 hectares for DEC's purposes, and 1,600 hectares for external parties. Interpretation from helicopters, coupled with field



sampling, was undertaken to explore for new infestations in Fitzgerald River National Park. Training programs were carried out in disease mapping and hygiene management.

A major project to undertake *Phytophthora* dieback threat assessment and risk analyses for vegetation in the South West and Northern Agricultural NRM regions on both DEC and non-DEC managed lands was completed with the South Coast NRM group. Assistance was provided to incorporate the results into regional disease management strategies.

Work started on an examination of the effectiveness of disease hygiene management associated with disturbance activities on DEC-managed lands. This project will provide the basis for reporting on a Key Performance Indicator (No. 18) of the FMP.

A methodology was developed to apply remote sensing data to monitor for changes in forest vegetation health. This will facilitate the routine broad surveillance of forest condition and enable prioritisation of field inspection activity.

### **Integrated planning support**

The maintenance and enhancement of biodiversity and other values across landscapes requires a high level of integrated planning within DEC. This outcome was supported through:

- planning support to the Regional Services Division to guide the selection and management of public firewood and flora harvesting areas
- monitoring and collation of the areas burnt by wild and prescribed fires across the forest to support integrated fire planning and reporting, and
- assistance to the Regional Services Division to evaluate the biodiversity assets at risk from disturbance associated with proposals for the construction of roads, utilities and other infrastructure.

### **Management of soil disturbance in timber harvesting**

The FMP provides for increased protection of soils during timber harvesting by introducing soil damage risk periods based on a Trafficability Index and prescribing measures to be applied in each risk period to protect soil during timber harvesting. The department continued to manage an approvals process for access during wet soil conditions. Access to harvest areas was authorised during winter and spring based on consideration of risk associated with soil attributes. Access was not granted to areas with an inherently high risk of soil disturbance. During the 2008 wet season, increased attention was placed on the management of hygiene associated with access into protectable areas.

Following feedback through the public comment process, the draft *Soil and Water Conservation Guideline* was substantially revised and, at 30 June 2009, was progressing towards approval.

### **Implementation of fauna habitat zones**

A major initiative of the FMP is the introduction of approximately 280 indicative fauna habitat zones of a minimum of 200 hectares each in State forest and timber reserves. Design, analysis, survey and/or liaison work was undertaken for 26 indicative fauna habitat zones adjacent to proposed disturbance activities and the location of 18 indicative fauna habitat zones was finalised. In addition, further development work was undertaken on the *Guidelines for Selection of Fauna Habitat Zones*.

### **Management system for approvals, monitoring and compliance**

All operations on State forest require consideration and approval from DEC. During the year, significant progress was made on the development of a revised form and process for pre-operational planning.

In addition, departmental staff monitored the compliance of operations with the conditions of approval and with environmental management standards. Where

non-compliance in timber harvesting operations is identified, DEC may issue the proponent with an Incident Report (IR) for minor issues, a Works Improvement Notice (WIN) if the non-compliance can be rectified by further field operations, or a Management Letter (ML) if it cannot. In 2008–09, staff issued 13 IRs, eight WINs and seven MLs, each of which covered one or two issues. Seven of the WINs and MLs related to systems and process issues, four to soil and water issues, two related to biodiversity issues, one to ecosystem health and vitality issues, and one to productive capacity issues. Of the 15 WIN and ML issued in 2008–09, three have been closed with satisfactory outcomes, and 12 are yet to be closed. Of the WIN and ML issued in 2007–08, all those that remained open at the end of 2007–08 still remain open.

### Forest monitoring

Nine *ForestCheck* monitoring grids in Wellington District were re-assessed in spring 2008 and autumn 2009 to provide information about the response of biodiversity to timber harvesting in the jarrah forest. Additional surveys to quantify the amount and condition of coarse woody debris at *ForestCheck* monitoring grids were conducted in recognition of the importance of woody debris for fauna habitat and carbon stock accounting.

Trapping and spotlight surveys were undertaken to monitor vertebrate fauna populations in the Kingston study area which was harvested and regenerated in 1996.

DEC continued to support a PhD student investigating factors affecting regeneration of jarrah in stands harvested by the shelterwood method. This study is developing more precise methods for estimating seed crops in standing trees, and improving understanding of the factors affecting seed release following post-harvest burning. The study also aims to identify relationships between season of burn, fire behaviour, seedfall rates, seed losses due to predation, emergent numbers and seedling mortality rates. These factors are being measured following two post-harvest burns completed in spring 2008 and other burns completed in past years. Application of this knowledge will assist recruitment in shelterwood cut areas.

Monitoring of the response of streamflow and groundwater to timber harvesting in two experimental catchments in the intermediate rainfall zone of the jarrah forest was continued. There was no significant annual streamflow or stream salinity response to either treatment and groundwater level continued to fall despite the timber harvesting.

Findings from a 20-year study of tree growth in low rainfall jarrah forest subject to different fire regimes were accepted for publication in *Environmental Management*. The study found no evidence that regular low-intensity burning had adverse impacts on tree growth, productivity or health. However, long periods of fire exclusion were associated with reduced rates of tree growth, probably because of increased competition for water from woody understorey shrubs.

### Forest auditing

#### *Compliance with the requirement to protect the integrity of management boundaries during harvesting*

The breach of a management boundary is considered an incident. Incidents are categorised as minor if a machine has crossed the informal reserve boundary with minimal soil disturbance or major if the crossing results in soil and vegetation disturbance or tree removal. The approved removal of trees from within zones for reasons of safety is not considered an incident. Compliance is presented in the following table.

**Table 12: Compliance**

|                                     | Stream zone | Diverse ecotype zone | Fauna habitat zone | Other reserves |
|-------------------------------------|-------------|----------------------|--------------------|----------------|
| Length assessed (metres)            | 16,773      | 1,767                | 1,875              | 5,074          |
| Length correctly marked (metres)    | 16,773      | 1,767                | 1,875              | 5,074          |
| Number of minor incidents           | 14          | 1                    | 0                  | 0              |
| Length of minor incidents (metres)  | 156         | 10                   | 0                  | 0              |
| Number of major incidents           | 1           | 0                    | 0                  | 0              |
| Length of major incidents (metres)  | 2           | 0                    | 0                  | 0              |
| Percentage of edge protected intact | 99          | 99                   | 100                | 100            |

*Compliance with the requirement for phased logging in second order catchments*

There is a requirement to retain at least 30 per cent of each second order catchment in intermediate and low rainfall zones of the jarrah forest subject to timber harvesting at a basal area greater than 15 metres<sup>2</sup>/hectare for 15 years after the remainder of the catchment is harvested. This requirement was complied with for all areas sampled.

*Compliance with the requirement for the retention of habitat elements*

It is required that five primary habitat trees per hectare are identified and marked in all areas harvested. An additional six to eight secondary habitat trees per hectare must also be identified in all jarrah forest cut to release regeneration (gap) or create regeneration (shelterwood) or in a selective cut in dieback-affected areas. There is also a requirement for the identification and marking of at least one example of ground habitat per hectare. The average number of habitat trees per hectare for the eight coupes sampled was 17. All nine coupes sampled met the required standards for habitat tree retention. The average number of ground habitats per hectare was 1.4. Of the nine coupes assessed, two were slightly below standard and two had no ground habitat marked.

*Compliance with requirements for the protection of crop trees*

It is required that no more than five per cent of marked crop trees be damaged during harvesting, and that harvesting contractors must ensure that all harvesting debris is removed from the base of crop trees. Seven of the eight coupes were at or below the allowable five per cent limit for crop tree damage and compliance was 81 per cent. No coupe assessed met the required 95 per cent standard for tops disposal of crop trees.

*Compliance with pre-harvest, harvesting and post-harvest checks*

Before harvesting operations are carried out on State forest, checks must be made and documented on a range of factors that may be affected by the harvesting. Approval of the documentation by DEC signifies formal approval for an area to be harvested. All coupes sampled complied with the pre-harvest check requirement. During the harvesting operation a general inspection is required as often as considered necessary and all coupes sampled had documented evidence of general inspections. Inspection and certification at the completion of harvesting were available for only eight of the 10 coupes sampled at the completion of the audit.

*Compliance with specifications for coupe demarcation*

Management boundaries, including those of the coupe, any fauna habitat zone and informal reserve, must be identified and demarcated before the start of tree felling. One hundred per cent of boundaries assessed were marked correctly.

*Compliance with requirements for the protection of soil*

When the extraction of logs is completed in any block, and before the machinery leaves the site, interceptor banks and drains must be constructed across all extraction tracks and firebreaks with exposed soil to minimise the risk of erosion. Eighty-five per cent of assessed tracks complied with the requirement.

*Compliance with requirements for the protection of threatened flora*

Field searches are conducted along proposed road alignments, log landing and gravel pit sites to identify threatened flora before clearing operations begin. Located populations of threatened flora are demarcated and protected from disturbing activity or, if that is not possible, approval to 'take' is sought. All coupes sampled had records of searches.

*Compliance with requirements for the protection of threatened fauna*

Areas planned for harvesting are assessed in a desktop procedure with a system (Fauna Distribution Information System) that identifies the probability of habitats of threatened fauna occurring. Databases containing records of known habitats, populations and sightings are also consulted. All coupes sampled had evidence of the procedure being implemented.

*Summary of compliance*

The achievement for each measure for 2008–09 is summarised below.

**Table 13: Summary of compliance**

| Compliance with individual measures (%)                           |         |
|---|---------|
| Measure   | 2008–09 |
| Protect management boundaries in harvesting                       | 100     |
| Phased logging in second order catchments                         | 100     |
| Retention of habitat trees  | 100     |
| Retention of ground habitat                                       | 56      |
| Requirements for the protection of crop trees                     | 88      |
| Requirements for tops disposal of crop trees and habitat elements | 81      |
| Pre-harvest planning checklists                                   | 100     |
| Complete harvesting inspection report                             | 100     |
| Complete a post harvest inspection and certification report       | 80      |
| Specifications for coupe demarcation                              | 100     |
| Requirements for the protection of soil                           | 70      |
| Requirements for the protection of threatened flora               | 100     |
| Requirements for the protection of threatened fauna               | 100     |
| Average compliance  | 83      |

**Adaptive management**

DEC continued to contribute to the coordination and implementation by the Water Corporation of the Wungong Catchment Environment and Water Management project. This adaptive management trial in the 12,845-hectare Wungong Catchment aims to increase water availability by managing vegetation density. The project has now completed treatment of native forest in two sub-catchments (Cobiac and Chandler) over an area of 1,000 hectares of State forest. The research and monitoring program is continuing with a range of biodiversity measures being completed and monitoring of water responses and forest structure undertaken. Groundwater levels continue to show a falling pattern in response to declining rainfall. Information sessions have been presented to a range of stakeholders.

CSIRO is continuing monitoring in 31 Mile Brook and Cobiac sub-catchments as part of a project on 'Vegetation dynamics and water yield under changing climate and management'. Work began to treat the forest close to two of the groundwater bore transects in 31 Mile Brook catchment following the completion of treemarking and dieback demarcation.

### 2.1.2.5 Provision for harvesting, regeneration and growth of forest products in accordance with approved management plans and guided by the principles of ecologically sustainable forest management

#### Silviculture guidelines

Review of the silviculture guidelines proceeded at a number of levels. Reference material for the jarrah guideline was drafted to provide a clearer understanding of silvicultural practices. Monitoring procedures were developed to assess protection levels for growing stock and habitat trees and for the assessment of treemarking. Review started on the regeneration survey procedure to ensure the data collected lead to the correct application of silviculture at the patch level.

Training has continued both formally, through the delivery of courses, as well as informal coaching in the application of silvicultural practices and the implementation of monitoring procedures.

#### Monitoring of areas subject to timber harvesting and associated treatments

Monitoring of areas subject to commercial timber harvesting, silvicultural treatments and forest disturbance activities carried out under the direction of the Forest Products Commission was undertaken. In the 12 months to December 2008, 8,330 hectares of native forest were harvested with the following silvicultural or management objectives.

**Table 14: Silvicultural objectives**

| Forest type           | Silvicultural objective  | Area<br>cutover<br>(ha) |
|-----------------------|--|-------------------------|
| Jarrah                | Release of regeneration (gap)  | 410                     |
|                       | Establishment of regeneration – eastern jarrah (shelterwood)           | 220                     |
|                       | Establishment of regeneration – western jarrah (shelterwood)           | 2,480                   |
|                       | Promote growth on retained trees (thinning)                            | 610                     |
|                       | Single tree selection (retention in <i>Phytophthora</i> dieback areas) | 1,520                   |
|                       | Selective  | 1,350                   |
|                       | <b>Subtotal</b>  | <b>6,590</b>            |
| Karri                 | Establish jarrah/karri regeneration                                    | 40                      |
|                       | Establish regeneration (clearfall karri)                               | 350                     |
|                       | Establish regeneration (partial karri clearfall)                       | 0                       |
|                       | Promote growth on retained trees (thinning)                            | 660                     |
|                       | <b>Subtotal</b>  | <b>1,050</b>            |
| Wandoo                | Establishment of regeneration  | 0                       |
|                       | Promote growth on retained trees (thinning)                            | 0                       |
|                       | <b>Subtotal</b>  | <b>0</b>                |
| Other/any forest type | Other (mining and clearing for utilities)                              | 690                     |
|                       | <b>Total</b>   | <b>8,330</b>            |

Jarrah silvicultural objectives for 270 hectares harvested in this or previous years were achieved by follow-up treatment during the year. Karri regeneration was completed on 430 hectares harvested in either this or previous years.

### **Regional harvest plans**

DEC reviewed the 2009 Indicative Timber Harvest Plan submitted by the Forest Products Commission to ensure consistency with the settings adopted in the FMP. The Three-year Timber Harvest Plan (2010–2012) required by the FMP to be produced by DEC was developed and will be progressed to public consultation during 2009.

#### **2.1.2.6 Partnerships**

Throughout the year, effective communication and interaction continued with:

- the community and stakeholders
- other State agencies and authorities, and
- Commonwealth agencies.

Through the Sustainable Forest Management Division, DEC contributed to the work of the Dieback Working Group, Primary Industries Ministerial Council, Natural Resource Management Ministerial Council, National Forest Inventory and other national forums on ecologically sustainable forest management and climate change. Partnerships with regional NRM groups were also maintained through joint projects.

Collaboration with research teams located at various universities included projects on forest disease, native forest silviculture and climate change.

**Table 15: Trends in the area of native forest harvested**

|         | Jarrah forest<br>(ha) | Jarrah/<br>wandoo<br>forest<br>(ha) | Karri forest                                   |                 |
|---------|-----------------------|-------------------------------------|--|-----------------|
|         |                       |                                     | Clearfelled<br>or cut to<br>seed trees<br>(ha) | Thinned<br>(ha) |
| 1976-77 | 32,320                | 1,170                               | 2,610  | -               |
| 1977-78 | 26,020                | 740                                 | 4,450  | -               |
| 1978-79 | 25,540                | 530                                 | 2,710  | -               |
| 1979-80 | 25,150                | 860                                 | 2,110  | 60              |
| 1980-81 | 22,930                | 1,440                               | 2,080  | 180             |
| 1981-82 | 24,680                | 610                                 | 2,180  | 320             |
| 1982-83 | 23,740                | 330                                 | 990  | 190             |
| 1983-84 | 21,540                | 580                                 | 1,490  | 260             |
| 1984-85 | 20,010                | 1,440                               | 2,360  | 500             |
| 1985-86 | 22,640                | 650                                 | 1,590  | 340             |
| 1986    | 19,340                | 1,150                               | 1,090  | 490             |
| 1987    | 17,180                | 1,380                               | 1,310  | 700             |
| 1988    | 23,400                | 490                                 | 1,180  | 840             |
| 1989    | 15,130                | 200                                 | 1,510  | 910             |
| 1990    | 12,960                | 100                                 | 1,560  | 340             |
| 1991    | 10,910                | -                                   | 1,920  | 230             |
| 1992    | 13,990                | 30                                  | 1,540  | 310             |
| 1993    | 14,250                | 40                                  | 1,630  | 80              |
| 1994    | 14,050                | 50                                  | 1,440  | -               |
| 1995    | 17,830                | 30                                  | 2,410  | -               |
| 1996    | 22,320                | 50                                  | 1,300  | 60              |
| 1997    | 18,240                | 60                                  | 1,870  | 60              |
| 1998    | 19,250                | 60                                  | 1,970  | 320             |
| 1999    | 14,200                | 50                                  | 1,890  | 360             |
| 2000    | 20,570                | 10                                  | 1,310  | 70              |
| 2001    | 15,760                | *                                   | 1,380  | 120             |
| 2002    | 13,260                | 30                                  | 700  | 350             |
| 2003    | 8,520                 | -                                   | 720  | 485             |
| 2004    | 8,860                 | -                                   | 330  | 920             |
| 2005    | 6,220                 | 30                                  | 460  | 1,070           |
| 2006    | 8,440                 | 300                                 | 400  | 1,130           |
| 2007    | 8,120                 | 60                                  | 560  | 1,000           |
| 2008    | 7,280                 | 0                                   | 390  | 660             |

\*Total includes small areas of other forest types cleared for mining or landings.

## 2.1.3 Service 3: Parks and Visitor Services

**Service description:** Management of lands and waters, dealing with public involvement, visitation and appreciation of the natural environment on lands and waters managed by the department, including:

- preparing and implementing management and recreation site development plans
- providing, managing and maintaining appropriate access, recreation opportunities and visitor facilities
- protecting natural areas, visitors and facilities from wildfire
- training departmental staff and volunteers
- working with local tourist bureaus and commercial tour operators
- involving Indigenous people in park management and the provision of visitor facilities and services
- providing visitor information and designing and initiating educational and interpretive activity programs that enrich visitor experience and help develop greater community awareness and support for parks, natural areas, astronomy, nature-based tourism and recreation services and policies
- undertaking scientific, visitor and social research, in cooperation with other research institutions, and
- provision of services to, and performance of statutory functions by the Conservation Commission of Western Australia.

### Performance summary

|                    | 2008–09<br>Target<br>\$'000 | 2008–09<br>Actual<br>\$'000 | Variation<br>\$'000 |
|--------------------|-----------------------------|-----------------------------|---------------------|
| Expense by service | 65,479                      | 74,089                      | 8,610               |
| KPI                | 2008–09<br>Target           | 2008–09<br>Actual           | Variance            |
| Cost per visit     | \$5.34                      | \$5.23                      | (\$0.11)            |

### Performance highlights

- Expended nearly \$16 million on capital works projects and tourist road improvements in national parks, conservation parks, State forests and other reserves across WA to continue to develop a network of world-class parks. Maintained facilities in a safe and workable condition with a focus on site works that provide for the protection of environmental and cultural values and visitor safety.
- Completed final civil works including the car park, walk trail and lookout at the Pinnacles Desert Discovery centre in Nambung National Park. The Minister for Environment opened the centre in October 2008.
- The Bibbulmun Track Foundation received a Bronze Medal in the Tourism Attraction category of the 2008 WA Tourism Awards in recognition of the track's role as an important tourism asset.
- Redesigned and upgraded three major car parks in John Forrest National Park to improve traffic flow and overcome underlying drainage issues.
- Redeveloped the Lennard Gorge car park in King Leopold Ranges Conservation Park to cater to the increasing visitation to the Kimberley Region.
- Upgraded the Coalmine Beach picnic area near Walpole with new paths, toilet and recreation areas.
- Progressed the World Heritage nomination for the Ningaloo Coast and held information sessions for local community members in Exmouth, Coral



Bay and Carnarvon to provide an opportunity for people to ask questions about the nomination and implications of World Heritage listing.

- Provided advice to the Australian Heritage Council to assist in the assessment of Fitzgerald River National Park, Ningaloo Coast, Porongurup Ranges and Cheetup Rock Shelter in Cape Le Grand National Park for inclusion on the National Heritage List.
- Finalised draft management plans for Lane Poole, Leeuwin-Naturaliste Capes, Yanchep-Neerabup and Northern Yilgarn planning areas and continued work on 10 terrestrial draft management plans which, at 30 June 2009, were in various stages of preparation. Released the Wellington National Park, Westralia Conservation Park and Wellington Discovery Forest management plan.
- Under joint management arrangements with the Yawoorroong Miriuwung Gajerrong Yirrgeb Noong Dawang Aboriginal Corporation, DEC launched the *Cultural Planning Framework – Miriuwung and Gajerrong Peoples' Guidelines for Developing Management Plans for Conservation Parks and Nature Reserves under the Ord Final Agreement*, employed eight trainee rangers, managed six new conservation areas (totalling 150,000 hectares), began the process to formally allow joint management of the areas and began a process to investigate tourism and recreation economic development potential of the areas.
- The next stage of the Munda Biddi Trail from Collie to Nannup was opened by the Minister for Environment and includes two new dedicated campsites. Funding of \$3 million over three years from Royalties for Regions grants was announced to finalise the construction of the trail to Albany.
- Progressed the Community Involvement Program with the development of seven new volunteer projects across the State. Continued to grow the *Healthy Parks, Healthy People* initiative, by delivering joint activity programs with Diabetes WA, the Asthma Foundation of WA and the Department for Communities, and presenting at the Australian Health Promotion Association Conference.
- Continued to undertake social research, including seven partnerships with the Sustainable Tourism Cooperative Research Centre; completed a review of DEC's visitor data collection program; and redesigned the department's visitor satisfaction survey. The total number of visits to DEC-managed lands and waters increased to 14.18 million from 12.56 million last year.
- Won the Interpretation Australia Association Award for Excellence for the Swarbrick Forest Discovery near Walpole. The site was designed by DEC's Interpretation Unit which also completed projects such as the Vincent Serventy Memorial display and exhibits at Dryandra Woodland near Narrogin, panels at Hamelin Bay and at King Leopold Ranges Conservation Park and Tunnel Creek, Windjana Gorge and Geikie Gorge national parks in the West Kimberley.
- Carried out effective and meaningful liaison with Aboriginal groups through the development of joint management agreements and the progression of employment and training opportunities for Aboriginal people through DEC's Mentored Aboriginal Training and Employment Scheme (MATES) program.
- Increased attendance to activities at the Perth Observatory to more than 7,100. Observatory staff were also involved in the development of software and electronics for the Murchison Widefield Array radio telescope, one of two being built by a worldwide consortium of universities for the Square Kilometre Array telescope in WA.
- Completed assessments of old-growth forest in Beaton, Dombakup, Easter, Mowen, Nelson, Warren and Weld forest blocks to assist the Conservation Commission. Completed reports on community nominated old-growth forest in Quindaning and Gregory forest blocks.

### 2.1.3.1 Overview

Service 3: Parks and Visitors Services is reported in 12 key areas:

1. Planning for management
2. Acquisition and administration of protected areas
3. Park presentation and resource protection
4. Visitor communication and management
5. Aboriginal liaison, consultation and heritage
6. Business management
7. Legislation and policy for parks and visitor services
8. Recreation activities and trails
9. Community involvement and regional parks
10. Social and visitor research
11. Astronomy, and
12. Performance of support to the Conservation Commission.

Several significant projects such as joint management with the Miriuwung-Gajerrong People, World and National Heritage and regional activities merit reporting separately.

### 2.1.3.2 Planning for management

During 2008–09, the Minister for Environment approved the management plan for Wellington National Park, Westralia Conservation Park and Wellington Discovery Forest bringing the total number of current management plans prepared under the CALM Act to 55. At 30 June 2009, a further 14 terrestrial management plans (three for regional parks) were in preparation. Proposals for a marine park and marine management area at Dampier Archipelago and Regnard and a proposal for a marine park at the south-west Capes, together with the preparation of their final management plans, were well advanced. The Walpole and Nornalup Inlets Marine Park was created on 8 May 2009 and its final management plan is due for release in mid 2009.

During 2008–09, four draft management plans were prepared for consideration by the Minister for Environment: Lane Poole Reserve, Leeuwin-Naturaliste Capes area parks and reserves, Yanchep-Neerabup and Northern Yilgarn planning areas. A further 10 terrestrial draft management plans were in various stages of preparation.

During 2008–09, an indicative management plan for a proposed network of marine parks for the Pilbara and lower West Kimberley (Eighty Mile Beach) was being prepared for Government consideration.

The public contributed to the content of these management plans through public and peak stakeholder workshops and meetings, formal advisory committees, newsletters, and invitations to comment on draft plans. Aboriginal people were also engaged through the involvement of Aboriginal native title representative bodies and Aboriginal park councils.

DEC's website continued to enable people to make submissions electronically as well as download information about management planning including issues papers, 'Have Your Say' brochures, final and draft management plans, analysis of public submission reports and copies of the *Planning Diary* newsletter. This newsletter aims to keep stakeholders up-to-date with progress on each management plan in preparation. Three issues of the *Planning Diary* were produced during 2008–09 and sent to about 950 stakeholders.

DEC, together with the Conservation Commission, continued to enhance the development of terrestrial management plans through a review of management plans and trials of new tools and formats.

Appendix G provides a list of the plans that were completed, were being finalised or were in preparation as draft or indicative plans. In summary, as at 30 June 2009, there were:

- 55 final statutory management plans
- 14 final management plans in preparation
- 14 draft management plans in preparation, and
- one indicative marine management plan in preparation.

Appendix G also lists the area of conservation reserve tenure category managed by the department for which plans have been completed.

### 2.1.3.3 Acquisition and administration of protected areas

#### Reserve acquisition

The formal process of adding land to the State's system of protected areas continued throughout the year.

DEC's program of buying land for addition to the conservation reserve system resulted in the finalisation of purchases of 10 freehold properties and two pastoral leases during the year. Details of these acquisitions are provided under the heading 'Conservation land acquisitions' in section 2.3.5 'DEC-managed lands and waters'. Agreements to acquire nine further properties were also reached during the year, and will be finalised in the next financial year.

Other programs and processes also led to the acquisition of lands (such as land ceded to the State as a condition of subdivision, land acquired from negotiated exchanges and reserves no longer required by other agencies and organisations) that are suitable for inclusion in the conservation reserve system.

Work continued on the implementation of tenure changes proposed in the FMP and towards the implementation of outstanding tenure recommendations in other management plans.

DEC continued its role of providing advice on land proposals referred from other organisations, such as the Department for Planning and Infrastructure, and advised on issues including the use or disposal of unallocated Crown land and surplus Crown reserves.

DEC also undertook actions necessary for excisions from the State's conservation and forest estates to accommodate proposals that have a community benefit.

#### Leasing activities

DEC has lease arrangements for a wide range of purposes. At the end of the financial year there were 155 current formal arrangements for uses on lands managed by DEC including recreation, tourism accommodation, utilities and sawmills.

The formal arrangements comprise 117 leases, 30 written agreements, four licenses, two memoranda of understanding and two sawmill site permits.

DEC entered into 22 formal agreements in 2008–09, which mainly involved the renewal of agreements for existing uses. Included was the renewal of the John Forrest Tavern lease where the lessees exercised their option for an additional five-year term. Some of the new agreements included a memorandum of understanding between the Department of Water, CSIRO and the Water Corporation for a meteorological station in the Wungong Catchment and an agreement for Alcoa Australia to co-locate on DEC's Mt Solus communication facility.

During the year a number of other formal arrangements expired and were at various stages of being renewed.

### Apiary site management

At the end of the financial year there were 3,280 current apiary site permits issued on Crown land in the State. Of these, 1,594 (48 per cent) were on lands managed by DEC, with 866 located on State forest, 106 on timber reserves, 360 on national parks, 174 on nature reserves, 62 on conservation parks and 26 on other lands vested in the Conservation Commission.

During the year, 582 apiary site permits were issued, comprising:

- 112 permits transferred between beekeepers
- 64 permits from applications to occupy new or previously cancelled sites, and
- 406 permit renewals.

The Beekeeping Consultative Committee met twice during the year to discuss issues including the granting of apiary sites in the Kimberley, the management of the small hive beetle and proposed amendments to subsidiary legislation regulating the management of apiary site permits. The committee is convened by DEC and comprises industry, government and beekeeping groups.

### 2.1.3.4 Park presentation and resource protection

DEC aims to achieve high-quality visitor services and facilities that are planned, designed, developed and managed in a sustainable way.

#### Capital works

The Parks and Visitor Services capital works program aims to improve and maintain recreation and tourism assets located in national parks, marine parks, conservation parks, State forests and other reserves across the State. Works are typically associated with construction, upgrading and maintenance of roads, day-use and camping facilities and with work required to ensure visitor safety. In addition to maintaining and improving visitor experiences, the program also seeks to protect environmental, social and landscape values at these sites.

During the year, \$15.5 million in capital works was expended on park improvements and roads. A more detailed description of capital works projects undertaken within each region is provided under section 2.1.3.15 Parks and visitor services regional activities.

#### Roads

DEC continued to progress the development of its road classification and asset management systems. DEC is working closely with other agencies to ensure that appropriate standards and user requirements are met.

DEC started a classification, assessment and inventory project in April 2008 and, throughout the year, assessed all important DEC roads for the Goldfields, Wheatbelt, Midwest, Pilbara and Kimberley regions. The road assessment and inventory of the whole State is due to be completed in October 2009. This project is the first stage of a process to complete a thorough inventory and condition report for all DEC-managed sealed and unsealed roads, bridges and associated road assets across the State. Once completed, DEC will have a comprehensive database of more than 37,000 kilometres of roads. This initiative will assist DEC to identify high priority road improvement works, plan its strategic road requirements and continue its collaborative work with local government authorities and Main Roads WA on inter-regional road construction and maintenance work across agency boundaries. DEC has also been working with the Western Australian Local Government Association to consider the implementation of a new asset management system for local government and DEC roads.

A review of DEC's policy for roads and the road classification system was started in April 2009. The development of operational guidelines for road managers

was started which, when completed, will provide a reference for inspection and maintenance requirements based on the DEC road classification system.

A State-wide bridge inventory was initiated in April 2009 and, at 30 June 2009, was nearing completion. This involved the physical inspection and basic assessment of every DEC bridge structure across the State to develop a single database for asset management.

### **Recreation planning and design**

Master plans, concept plans and site development plans were prepared for many projects around the State. These plans assist with strategic planning decisions and funding applications and enable capital works projects to be built to a high standard. Some examples include plans for upgrading visitor access and facilities at Hangover Bay in Nambung National Park, parking areas at John Forrest National Park, Congelin Campground in Dryandra Woodland and Donnelly Boat Landing, Lake Jasper and Black Point in D'Entrecasteaux National Park. Detailed design was also progressed for wildfire-damaged recreation sites on the south coast at Stokes Inlet in Stokes National Park and Thomas River in Cape Arid National Park. Design continued on upgrading visitor facilities at Yardie Creek in Cape Range National Park as well as Sugarloaf Rock in Leeuwin-Naturaliste National Park and Lennard Gorge in King Leopold Ranges Conservation Park. Planning for visitors continued for the Ningaloo Coast, Yanchep National Park and Esperance coastal reserves.

Site planning and detailed design were also continued for the Walpole Wilderness Discovery Centre site at Mount Frankland.

Design and/or construction documentation drawings were prepared for many small structures such as boardwalks, toilets, steps and lookouts, including new toilets in Millstream-Chichester National Park, a new shelter for Walyunga National Park, a new boardwalk for Forrestdale Lake near Perth and a new lookout at Cascades in Gloucester National Park. Designs were completed for new lookouts at Mount Frankland in Mount Frankland National Park and Castle Rock in Porongurup National Park.

Planning, training and design advice for recreation was provided as needed. Informal training in recreation and tourism planning and design was provided to DEC staff on a project-by-project basis throughout the year. Advice was given on numerous projects associated with DEC and staff represented the department on working groups including the Coastwest Technical Assessment Group.

Visual impact assessment, recommendations, guidelines and specialist advice were provided for a number of proposals throughout the year.

### **2.1.3.5 Visitor communication and management**

#### **Interpretive planning**

DEC's Interpretation Unit provided strategic communication input into the preparation of management plans, visitor services plans, recreation site development plans and interpretive projects. Interpretation project plans were prepared for all major site developments with interpretive facilities, exhibits and sign products.

The unit also provided support to the Recreation Planning and Interpretation Branch Working Group on visitor services planning for the Kimberley Region and the Ningaloo Coast.

#### **Interpretive design**

DEC's Sign Design Studio continued to meet regional needs for signs and displays in managing visitors to DEC-managed areas. Designs were prepared for 362 projects with the majority installed in parks and reserves throughout the State.

Interpretive projects of particular note were the Vincent Serventy Memorial display and exhibits at Dryandra Woodland near Narrogin; Hamelin Bay interpretive

panels in Leeuwin-Naturaliste National Park; interpretive panels, trailhead and trailside signs in the West Kimberley at King Leopold Ranges Conservation Park and Tunnel Creek, Windjana Gorge and Geikie Gorge national parks.

The studio produced park orientation signs, interpretation panels, trailhead and trailside signs for various sites including a shelter of six panels in Greater Beedelup National Park at Giblett; Conspicuous Cliff shelter with six new panels to replace old panels; 14 panels containing orientation and interpretive information for Stokes Inlet National Park entry, day-use and campground redevelopments; six large illustrated panels for Moingup Springs in Stirling Range National Park; and two shelter panels for the innovative Kepwari Pipeline Project in the Lake Warden Wetlands, Esperance.

Swarbrick Forest Discovery, within the Walpole Wilderness, designed by DEC's Interpretation Unit, won the Interpretation Australia Association Award for Excellence in October 2008.

The studio also produced signs detailing visitor risk management, wildlife management and site rehabilitation and signs for the dieback sign system which is being implemented across the State's south-west. New risk signs were designed for a dingo risk area in Karijini National Park and a crocodile risk area along the Pilbara Coast.

The planning and design for a new parks sign system was completed for the West Kimberley parks.

### **Community liaison, consultation and advisory services**

Consultation with special interest groups, agencies, individuals and Aboriginal communities is a key aspect of site developments. The Conservation Council WA provided access to records to complement the stories told at Giblett forest protest site in Greater Beedelup National Park. Aboriginal community consultation was also used in interpretation projects at Stokes National Park near Esperance and Kokerbin Rock near Quairading, and an Interpretation Officer was invited to visit Mogumber Mission Settlement and advise the South West Land and Sea Council in the development of an interpretive trail.

DEC also worked with the Heritage Council of WA, the Forum Advocating Cultural and Ecotourism (FACET) and Interpretation Australia Association in facilitating training opportunities in creative writing for interpretation.

Advice was also given to local authorities and various 'Friends' groups across the State on the planning, design and production of signs. The City of Wanneroo worked with DEC on interpreting and planning the Yaberoo Budjara Heritage Trail from Lake Joondalup to Yanchep National Park.

### **Guided interpretive programs**

Guided interpretive programs continued to be provided regularly in major areas throughout the State. These included the *Nearer to Nature* program, which was provided in Perth's regional parks and at the Perth Hills National Parks Centre near Mundaring, Yanchep National Park, Penguin Island Conservation Park and the Perth Observatory. Regional guided experiences were provided at Geikie Gorge National Park, Monkey Mia Reserve in Shark Bay, Valley of the Giants and Coalmine Beach near Walpole, Barna Mia in Dryandra Woodland, Perup 'Nature's Guest House' near Manjimup and at Leeuwin-Naturaliste National Park.

The four-day 'Designing Guided Interpretive Experiences' course was conducted at the Perth Hills National Parks Centre near Mundaring in July 2008 and at Dwellingup with the MATES program participants in November 2008.

### 2.1.3.6 Aboriginal liaison, consultation and heritage

DEC's Aboriginal Heritage Unit focuses on liaison, consultation, planning, relationship building, education, training and Aboriginal protocol.

It places a high priority on liaising, consulting and working with traditional owners, Elders and other interested stakeholders to enhance management of DEC-managed lands and waters. During the year, this included liaising or working with:

- Elders and the wider community from Quairading on a range of different projects in the community including salinity and on rare plants on DEC-managed land
- the Balladong Group at Kokerbin Rock, Quairading so local DEC staff could meet the traditional owners and learn appropriate protocol for future work on DEC-managed land
- members of the Miriuwung-Gajerrong group from Kununurra who visited Walyunga National Park in Perth. Aboriginal Heritage Unit staff showed the Miriuwung-Gajerrong people the importance of the area to the Nyoongar people and the Miriuwung-Gajerrong people talked about their *Cultural Planning Framework – Miriuwung and Gajerrong Peoples' Guidelines for Developing Management Plans for Conservation Parks and Nature Reserves under the Ord Final Agreement* to bring cultural planning into joint planning guidelines when developing management plans
- the Nudgu group from Norseman and Department of Corrective Services. Men from the Aboriginal Heritage Unit were invited to the Norseman Aboriginal community court to discuss DEC traineeships and assistance in setting up a working relationship with DEC
- Elders and men from Broome to Kununurra and Halls Creek (Gijja group) on men's issues on DEC-managed land
- the Aboriginal community in Cue, Murchison
- the Halls Creek group to discuss community issues, concerns and work opportunities
- the Nyangumarta group through the Pilbara Native Title Service at Port Hedland and staff from DEC's Marine Policy and Planning Branch about marine reserve issues in the area
- the Kojonup Aboriginal Corporation and Elders at Koja Place, Kojonup to establish community programs with DEC
- the Kondinin community and Elders on sites of interest for Aboriginal people on DEC-managed land, and
- Elders in local Aboriginal communities, regarding traditional land use and protocols.

#### Planning and relationship building

The Aboriginal Heritage Unit places a high priority on building external and internal relationships with Aboriginal and non-Aboriginal groups, individuals and organisations. This included:

- providing advice to DEC staff regarding Aboriginal involvement in DEC-managed land and waters
- continuing to liaise with the City of Swan regarding employment for Aboriginal people
- providing links between DEC regional and district staff and Aboriginal communities
- continuing to build a good working relationship with the South West Aboriginal Land and Sea Council through its memorandum of understanding with DEC
- coordinating the first DEC Aboriginal staff conference at Yanchep National Park in March–April 2009. An Aboriginal Employment Reference Group was initiated as a result of the conference
- continuing to work with the Department of Corrective Services to deliver Aboriginal programs at Acacia, Bunbury and Albany prisons, and

- continuing to liaise through the Gnulla Maarman Moort Boodjah men's group to progress joint land management initiatives with DEC.

### Education and training

The Aboriginal Heritage Unit continues to deliver quality Aboriginal educational programs to schools (day-care to secondary), community groups and special event groups. During the last year the unit provided:

- 63 presentations to schools, community and special event groups with a total of 3,611 participants
- two cultural protocol workshops at Walyunga National Park for 23 DEC staff and 20 Campground Hosts
- mentoring to Aboriginal trainees through the MATES program and support to other Aboriginal staff in DEC when required
- training to a school-based trainee to progress towards DEC's 10 to 15 per cent Aboriginal employment target by 2015
- assistance to DEC staff in organising their Welcome to Country ceremonies for events, and
- training to 97 DEC staff on correct protocol for Nyoongar acknowledgment at meetings.

### 2.1.3.7 Business management

Providing accurate park information, promoting responsible behaviour by visitors and providing services to the tourism industry are important functions of DEC.

### Communication and promotion

During 2008–09, DEC revised and reprinted the brochure *National, marine and regional parks in Western Australia – A visitor's guide to the State* for distribution throughout the State and to selected interstate events. The brochure outlines the features, facilities and activities available at more than 100 DEC-managed parks and reserves.

In November 2008 DEC attended the Perth 4WD and Adventure Show and presented information about parks and visitor facilities. In March 2009 a DEC display was coordinated at the 2009 Perth Caravan and Camping Show to promote tourism to protected areas of WA and to encourage sustainable behaviour in parks. Wildlife rehabilitators, Campground Hosts and Keep Australia Beautiful staff provided support by broadening the focus of the displays and satisfying public enquiries.

DEC continued to be involved in tourism industry activities by providing information and services, including:

- production and distribution of the bi-monthly *Touring Western Australia* e-newsletter to more than 5,000 stakeholders in the tourism and travel industry, DEC staff, other government agencies and local government authorities
- quarterly meetings with DEC's Tourism Industry Reference Group to facilitate two-way communication between DEC and the nature-based tourism industry
- redesign and upgrade of static display resources for use at promotional and educational events to meet updated corporate style, and
- provision of editorial assistance to Tourism Western Australia regional staff as well as various independent organisations in the park-related content of their publications to ensure accuracy and provision of a wider range of information.

### Park passes and fees

National park passes were distributed at 88 points around the State including DEC offices, selected national parks and 42 independent retail outlets. The introduction of



Holiday Park Pass sales at car and motor-home hire companies proved very successful, with 1,140 passes being sold to primarily interstate and overseas customers.

Distribution figures indicate a substantial increase in the sale of all park pass types. While both the output capacity of the Marketing Unit and the number of distribution points for the passes have remained constant, there has been increased focus on support, training and communication with both internal and external points of sale. The increased sales demonstrate the cumulative power of a sustained and consistent campaign.

**Table 16: Breakdown of pass distribution 2008–09**

| Type of park pass     | Number distributed | Change from 2007–08    |
|-----------------------|--------------------|------------------------|
| Holiday               | 8,111              | Increased 40 per cent  |
| Annual local          | 11,028             | Increased 109 per cent |
| Annual all            | 5,265              | Increased 50 per cent  |
| Annual all concession | 2,681              | Increased 107 per cent |
| Goldstar              | 1,294              | Increased 6 per cent   |

Note: includes sales and passes sent to DEC offices but not yet sold.

In 2008–09, DEC approved 225 requests for entry fee waivers. The value of foregone revenue is approximately \$50,744 based on estimated visitor numbers of 16,479 (see Table 17). DEC approves fee waivers to support aged and infirm visitors, disabled groups, carers, educational groups, community service groups and not-for-profit organisations.

**Table 17: Fees waived – visits by region**

| Region             | Swan  | Midwest | Pilbara | Kimberley | Warren | South Coast |
|--------------------|-------|---------|---------|-----------|--------|-------------|
| Number of visitors | 8,479 | 2,547   | 2,469   | 127       | 651    | 1,710       |

### Commercial operations and events

DEC licenses commercial operations to monitor and manage the commercial use of DEC-managed lands and waters. The *Tour Operator Handbook* details licence conditions applicable to commercial operators conducting such activities. In June 2009, updates to the *Tour Operator Handbook – Terrestrial* were printed and distributed to commercial operators. The *Tour Operator Handbook – Marine* is scheduled to be re-printed in July 2009.

As at 30 June 2009, 370 commercial operations licences were current for activities in marine and terrestrial reserves: 324 general 'T' class licences and 46 'E' class licences for operations that must be restricted. The number of commercial operations licences increased from 360 licences at the end of 2007–08.

An expression of interest was conducted for the allocation of up to 15 licences permitting commercial operations in the restricted area of Coral Bay in Ningaloo Marine Park. Applicants were required to address selection criteria based on the principles of 'triple bottom line' sustainability and the process was overseen by an independent probity auditor. Fourteen applicants who met the required standards were offered licences.

DEC continued to help raise standards in the tourism industry by encouraging commercial operators to obtain either Eco Certification (with business and environmental components) or National Tourism Accreditation Program (business certification) or Green Globe accreditation.

DEC has established an events working group to prepare a policy and a process for managing large-scale commercial events to cater to an increasing number of commercial events occurring in protected areas, particularly in the State's south-west.

At 30 June 2009 the implementation of the Coral Bay Boating Strategy was nearly complete. The strategy is aimed at increasing swimmer safety and reducing user conflict by removing non-essential commercial and all recreational motorised or wind powered vessel activity from Bills Bay, adjacent to the Coral Bay town site.

### 2.1.3.8 Legislation and policy for parks and visitor services

DEC continued to develop a new set of regulations to form part of the *Conservation and Land Management Regulations 2002* for the management of apiary sites. The apiary site management regulations are currently in the *Forest Management Regulations 1993*. Consultation continued with the beekeeping industry on the development of the new regulations.

### 2.1.3.9 Recreation activities and trails

DEC coordinates the management of outdoor recreation activities consistent with the protection of natural and cultural values on the lands and waters it manages.

During 2008–09, DEC worked closely with the Department of Sport and Recreation and other key stakeholders on important recreation initiatives, including:

- representation on the Joint Agency Implementation Committee for the State Trail Bike strategy, and
- the continued development and refinement of Adventure Activity Standards with Outdoors WA.

DEC continued to work with the Department of Corrective Services in the development and ongoing maintenance of various major trails. Specific projects included:

- Bunbury Regional Prison crews worked on the development and maintenance of the Munda Biddi Trail between Collie and Nannup and the Cape to Cape Track in Leeuwin-Naturaliste National Park
- Walpole Work Camp (from Albany Regional Prison) continued with maintenance on the Bibbulmun Track in the Frankland District, and
- a new crew from Karnet Prison assisted with maintenance of the Munda Biddi Trail and the Bibbulmun Track.

DEC released a new set of maps for the Cape to Cape Track, the fourth Munda Biddi Trail map for the Collie to Jarrahwood section and updated and reprinted the existing Bibbulmun Track and Munda Biddi Trail maps.

#### **Bibbulmun Track**

DEC continued its strong partnership with the Bibbulmun Track Foundation in 2008–09. The track was awarded a Bronze Medal in the 2008 WA Tourism Awards in the Tourism Attraction category in recognition of its role as an important tourist asset to the State.

The tenth anniversary of the 'new' track alignment was celebrated in 2008 and DEC assisted the Bibbulmun Track Foundation in its '10th Anniversary – the journey of a decade' celebrations which included a guided walk along the track.

A detailed user survey of the Bibbulmun Track was funded by DEC and Lotterywest and completed by the Bibbulmun Track Foundation. The survey estimated that the track received more than 130,000 walkers per year, totalling approximately 430,000 visits.

DEC continued with maintenance and improvements along the full length of the track.

#### **Munda Biddi Trail**

The partnership between DEC and the Munda Biddi Trail Foundation continued to strengthen throughout the year. In recognition of its successful community

events program, the Munda Biddi Trail Foundation was named a finalist in the Adventure Tourism category of the 2008 WA Tourism Awards.

DEC, with the assistance of the Munda Biddi Trail Foundation and funding through ALCOA, developed and launched a new volunteer involvement program for the Munda Biddi Trail. The program includes the development of an online database for Munda Biddi Trail Foundation volunteers to report trail maintenance issues and a volunteer training and support program.

The next section of completed trail – between Collie and Nannup – was formally opened by the Minister for Environment on 16 April 2009. The 165-kilometre section includes two new dedicated campsites: the Nglang Boodja campsite within the Wellington National Park and the Nala Mia campsite at Jarrahwood.

Planning for the remaining length of the trail between Nannup and Albany has continued with a detailed community consultation program undertaken on the section between Nannup and Walpole.

On 29 June 2009, the Minister for Regional Development announced the allocation of \$3 million over three years under the Royalties for Regions grants, to finish construction of the trail from Nannup to Albany.

### **Western Australian 4WD Association and Track Care WA**

During the year, DEC continued to work with the Western Australian 4WD Association and member clubs, Track Care WA and the Four-Wheel Drive Industry Association to promote the responsible use of public lands by four-wheel drivers and other motorised visitors. Track Care WA and the Western Australian 4WD Association actively supported DEC through track stabilisation and clean-up projects and other environmental care initiatives. The 'Adopt a Track' initiative has been embraced by clubs with numerous tracks being adopted and more clubs interested in joining the scheme.

### **Off-road vehicles**

During the year, DEC continued to be involved in planning for better management of off-road vehicle use and took part in implementing the State Trail Bike Strategy with Motorcycling Western Australia, Recreational Trailbike Riders' Association of WA, the Department of Sport and Recreation, Department for Planning and Infrastructure and Department of Local Government and Regional Development.

DEC developed and began implementation of recreation plans for two gazetted off-road vehicle areas on DEC-managed land at Gnangara and Pinjar. The plans will detail options for trail development, facilities, training, education and collaborative management at these sites.

DEC formed a working group and engaged a consultant to undertake a regional off-road vehicle land use study to assist the department and local government in identifying suitable areas for these vehicles along the Darling Scarp between the Shire of Swan in the north and the Shire of Collie in the south.

#### **2.1.3.10 Community involvement and regional parks**

##### **Community Involvement Unit**

DEC's Community Involvement Unit continued to provide an effective means of enlisting community support as well as meaningful and interesting opportunities for volunteers to take part in conservation and land management activities.

In 2008–09 4,000 volunteers contributed 426,000 hours of support to projects across WA.

**Table 18: Community involvement volunteers**

| Year    | Number registered | New projects | Number of volunteers contributing | Number of hours |
|---------|-------------------|--------------|-----------------------------------|-----------------|
| 1998–99 | 2,400             | 19           | 836                               | 108,630         |
| 1999–00 | 3,800             | 12           | 1,400                             | 121,000         |
| 2000–01 | 4,499             | 26           | 1,600                             | 190,000         |
| 2001–02 | 5,683             | 20           | 2,500                             | 217,000         |
| 2002–03 | 5,160             | 32           | 3,150                             | 264,000         |
| 2003–04 | 6,100             | 30           | 2,700                             | 355,000         |
| 2004–05 | 7,600             | 28           | 4,000                             | 422,000         |
| 2005–06 | 8,230             | 6            | 3,882                             | 470,600         |
| 2006–07 | 9,726             | 8            | 3,250                             | 406,000         |
| 2007–08 | 7,784             | 9            | 3,439                             | 424,500         |
| 2008–09 | 9,558             | 7            | 4,000                             | 426,000         |

**Community involvement volunteers**

In December 2008, DEC held its annual Volunteer of the Year and Outstanding Service awards function to acknowledge the important support it receives from its volunteers.

Volunteers continued to take part in many ongoing projects such as the Campground Host program, the Bibbulmun Track Foundation (office support and track maintenance), the wildlife rehabilitators program, the Wildcare Helpline and projects at the WA Herbarium.

In addition, Conservation Volunteers Australia, the Department of Corrective Services and four-wheel drive clubs continued to work closely with DEC field staff to provide training opportunities as well as to rehabilitate and enhance the natural environment.

Seven new volunteer projects were started in 2008–09:

- refurbishment of the Geraldton Historical Bore
- pruning of walk trails in Cape Range National Park
- construction of the Neale Junction Campsite
- assisting with Keep Australia Beautiful programs
- implementation of the Biodiversity Conservation Experience project
- protection of waterbirds at Goegrup and Black Lakes in the Peel Inlet, and
- climate change community outreach and empowerment program.

During 2008–09, DEC provided training programs to DEC volunteers with support from specialist services in DEC and external agencies. Training included the Campground Host forum; Honorary CALM Officers' program; safe work practices as part of DEC's corporate induction; risk management; basic fire awareness; first aid; cross cultural awareness; the basic wildlife rehabilitators' course (at regional and metropolitan locations); advanced and special topics for wildlife rehabilitation; and Wildcare Helpline evaluation and training. Approximately 600 volunteers attended training in Perth, Newman, Kununurra, Broome, Karratha and Albany.

The *Minimum Standards for Wildlife Rehabilitation in WA 2008*, prepared by the Community Involvement Unit, was released in August 2008. The purpose of the minimum standards is to ensure the welfare of native animals in all stages of the wildlife rehabilitation process and to maximise the potential to return native animals to the wild.

An initiative from the Community Involvement Unit and Main Roads WA saw the Wildcare Helpline contact number being added to signs at 'black spot' areas around the Perth metropolitan area to enable people to assist with injured wildlife.

### Regional parks

Major achievements in managing Perth's regional parks during 2008–09 were:

#### *Planning and management*

Work continued to finalise the Woodman Point, Rockingham Lakes and Jandakot regional park management plans.

DEC assisted the Department for Planning and Infrastructure in planning for the establishment of the proposed Ocean to Preston River Regional Park in Bunbury. Progress was made on planning for the establishment of Peel Regional Park.

A number of Crown reserves comprising Canning River Regional Park were transferred to the Conservation Commission. Liaison continued with the cities of Joondalup and Wanneroo regarding land tenure changes at Yellagonga Regional Park and with the City of Stirling regarding land tenure changes at Herdsman Lake Regional Park.

The memorandum of understanding was finalised between the Department of Health, Department of Housing and Works and DEC for environmental management and conservation initiatives associated with the Fiona Stanley Hospital and Health Precinct.

The provision of advice on land use planning proposals affecting regional parks continued. Major projects included the Gnarara Branch Sewer proposed to be constructed through Yellagonga Regional Park, the recreation boating precinct at Woodman Point Regional Park and the Kennedy Bay development at Rockingham Lakes Regional Park.

#### *Conservation works*

DEC implemented works relating to the rehabilitation of land in Beeliar Regional Park and community-based conservation programs associated with the Fiona Stanley Hospital and Health Precinct.

An ongoing water supplementation program was started at Thomsons Lake Nature Reserve in Beeliar Regional Park to maintain water in the lake for a longer period into early summer. A feral pig control program was also successfully implemented in Wungong Regional Park.

Numerous weed control and revegetation projects across the regional park network were undertaken, in particular in:

- Canning River Regional Park at the Liege Street Wetland, Greenfield Street Bridge, Masons Landing, Urban Forest, the Billabong and Wilson Wetland
- Herdsman Lake Regional Park along the banks of Popeye Lake
- Rockingham Lakes Regional Park at Port Kennedy Scientific Park, Paganoni Swamp, Lake Cooalongup, Lake Walyungup and Cape Peron
- Yellagonga Regional Park at the Luisini Winery (in conjunction with the National Trust)
- Woodman Point Regional Park around the threatened ecological communities
- Beeliar Regional Park at North Lake, South Lake, Kogolup Lake and Thomsons Lake Nature Reserve, and
- Wungong Regional Park at the old airstrip.

#### *On-ground park improvements*

The car park and road into the Wildlife Centre Precinct at Herdsman Lake Regional Park were upgraded to enable improved vehicle and bus access and parking, making the site safer for school students visiting the centre.

The dual use path system throughout the regional parks network was extended by 4.4 kilometres. A three-kilometre pathway was constructed in the Woodman Point Regional Park – from John Graham Recreation Reserve via the Woodman Point Headland to the Recreational Boating Precinct. In Yellagonga Regional Park a 1.4-kilometre pathway on the north-western side of Lake Joondalup was constructed.

Day-use facilities at John Graham Recreation Reserve in the Woodman Point Regional Park were upgraded. Works included the upgrade of the beach showers, construction of limestone retaining walls and installation of an interpretive mosaic to enhance the amenity at this popular visitor destination.

Interpretation shelters and panels were installed at Popeye Lake in Herdsman Lake Regional Park and at Lake Goollelal in Yellagonga Regional Park.

Aboriginal (Nyoongar) names for the four regional parks in the Darling Range were finalised and new boundary signs were installed at Woorloo, Mundy, Banyowla and Wungong regional parks.

Major works started at Lesmurdie Falls in Mundy Regional Park to upgrade two existing lookout structures and construct a new pedestrian bridge and boardwalk. It is planned that the toilet block will be refurbished and access tracks upgraded to provide universal access.

Significant rectification works to the Cape Peron viewing platform in Rockingham Lakes Regional Park were completed.

### *Community liaison and participation*

The Community and Regional Parks Branch continued to administer eight community advisory committees for regional parks including 44 committee meetings.

The Regional Parks Community Grants Scheme was successfully administered for the seventh year. In total, \$80,000 was offered to volunteer groups to undertake works in regional parks with \$30,000 of this funding being provided by the Department of Health through the Fiona Stanley Hospital and Health Precinct project. Twenty-six community groups were successful in securing funding. A community workshop was held to assist DEC in the assessment of the grant applications.

Volunteers contributed 8,900 hours undertaking works primarily related to weed control and rehabilitation in regional parks.

### *Healthy Parks, Healthy People*

In accordance with the *Healthy Parks, Healthy People Strategic Plan (2008–2011)*, work has continued on increasing awareness among DEC staff of the initiative and on extending cross-promotional opportunities with partners.

In partnership with Diabetes WA, World Diabetes Day was launched at Matilda Bay Reserve. The 2008–09 *Healthy Parks, Healthy People* park-based activity program for seniors was completed in partnership with the Department for Communities and evaluation of the program was started. A presentation of the 2007 *Healthy Parks, Healthy People* seniors' park-based activity program was delivered at the Australian Health Promotion Association Conference in May 2009. The *Healthy Parks, Healthy People* program was also presented at the Department of Sport and Recreation's Active 08 Conference in December 2008 and for the Southern Darling Catchment Group in February 2009.

A *Healthy Parks, Healthy People* wetland walk was incorporated into the Asthma Foundation's Triple E Challenge for children. In partnership with the National Heart Foundation, and as part of their Community Walking Initiative, a calendar of monthly park walks was being prepared at 30 June 2009.

### 2.1.3.11 Social and visitor research

DEC's Social Research Unit undertakes a coordinated and comprehensive approach to conducting social research on DEC-managed lands and waters and defines social research as "research that improves our understanding of how people respond to the environment and protected areas".

During 2008–09, a number of projects were undertaken, through collaboration with various branches and divisions within DEC, tertiary institutions and other agencies. Projects included:

- a study of the characteristics and environmental attitudes of adventure racing participants in the Anaconda Adventure Race, Mountain Designs Great Southern Adventure Race and Cape to Cape Mountain Bike Challenge
- ongoing involvement in monitoring the penguin viewing experience and interaction with wildlife at Penguin Island
- ongoing involvement in a study of the impact of forest thinning techniques in water catchments on perceptions of recreation value and ecosystem health, and
- continued involvement in the Australian Government's 'Wealth from Oceans' research program in Ningaloo Marine Park.

DEC continued to play an active role as a member of the Sustainable Tourism Cooperative Research Centre and, at 30 June 2009, was involved in seven projects at various stages of completion. Several projects were completed in 2008–09 including:

- developing good practice user pays systems for protected areas
- marketing protected areas as a tool to influence visitors' pre-visit decisions, and
- developing terrestrial ecosystem indicators and methods for the sustainable management of visitor use of protected areas.

DEC continued to work closely with WA's major tertiary institutions via the Nature Based Recreation and Tourism Research Reference Group, comprising academic staff from all five Western Australian universities as well as DEC staff and representatives from Tourism Western Australia. This group provided funding to honours, masters and PhD students and projects included:

- developing a wastewater technology selection tool for remote tourist areas, and
- developing indicators of the impacts of tourism and Purnululu National Park on the Warmun community.

DEC completed a review of its visitor data collection program in 2008–09. The visitor satisfaction survey was also redesigned and pilot tested as part of a Sustainable Tourism Cooperative Research Centre national research project and the new survey was distributed in 2008–09.

#### Visitor use monitoring

Visitor use was monitored at 373 sites using traffic classifiers and counters, pedestrian counters, observation surveys and ticket sales in national parks, State forest and other reserves throughout the State. The total number of visits to lands and waters managed by DEC during the year was 14.18 million, an increase from the 12.56 million visits recorded during 2007–08 (Table 19).

**Table 19: Total visits to land and waters managed by DEC**

| Year    | Number of data collection sites | Total number of visits (million) |
|---------|---------------------------------|----------------------------------|
| 1998–99 | 149                             | 8.7                              |
| 1999–00 | 158                             | 8.9                              |
| 2000–01 | 158                             | 9.7                              |
| 2001–02 | 185                             | 9.8                              |
| 2002–03 | 190                             | 10.2                             |
| 2003–04 | 200                             | 10.92                            |
| 2004–05 | 246                             | 10.99                            |
| 2005–06 | 255                             | 11.84                            |
| 2006–07 | 317                             | 12.06                            |
| 2007–08 | 363                             | 12.56                            |
| 2008–09 | 373                             | 14.18                            |

DEC also continued to upgrade the Visitor Information and Statistics and Visitor Survey databases contained within the Recreation and Tourism Information System database and the hardware required to monitor visitor use.

#### Visitor Survey Program

DEC's Visitor Survey Program continued to provide visitor feedback that was used to assess visitor needs and expectations, as well as gauge visitor satisfaction with recreation and tourism facilities and services provided by DEC.

National parks and other recreation areas surveyed represent a broad range of recreation settings based on visitor use levels, access to the site and presence of facilities. The annual survey provides feedback from visitors regarding the management of these areas, the main purpose of their visit, the activities undertaken during the visit and their overall level of satisfaction. The collected information aids in the planning and management of these recreation areas and includes site planning and design, visitor communications, business and marketing plans and performance evaluation.

As part of the Visitor Survey Program, a newly designed survey form was distributed to visitors across the State during 2008–09. DEC staff, Campground Hosts and other volunteers distributed and collected the completed forms from respondents.

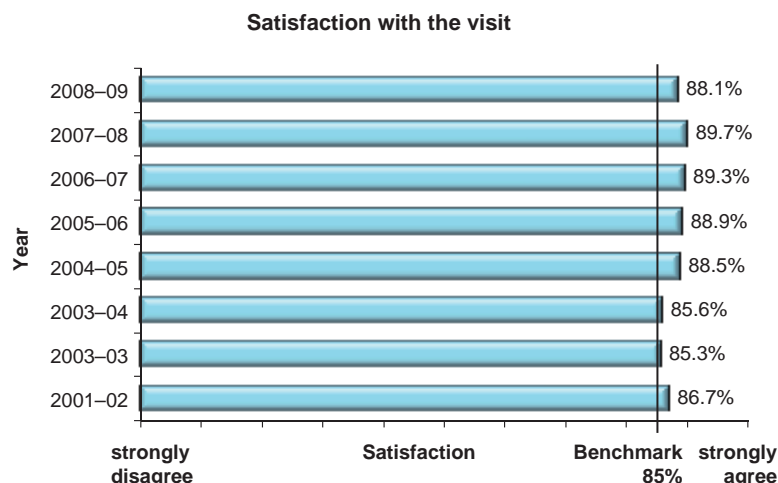
The survey was conducted across a broad range of parks, reserves and forest areas representative of the geographic variability of these areas and associated seasonal variation in visitor patterns across the State.

Respondents to the 2008–09 survey program (N=1581) displayed the following characteristics:

- respondents were from WA (63.7 per cent), interstate (12.3 per cent) and overseas (24 per cent)
- the majority of respondents surveyed were visiting with family/partner (86 per cent) or friends (8.8 per cent) as opposed to travelling on their own (3.3 per cent), with an organised group (0.8 per cent), on a tour (0.6 per cent) or other (0.5 per cent).
- the highest proportion of respondents were in the 35–44 year age bracket (25.1 per cent), followed by the 25–34 year age bracket (19.2 per cent). The 45–54 age bracket (17.5 per cent), 55–64 age bracket (17.0 per cent), 18–24 age bracket (11.2 per cent) and 60 or older (10 per cent), and
- overall, 58.6 per cent of respondents were first-time visitors to the recreation areas surveyed.



As part of the program, a benchmark Visitor Satisfaction Index has been adopted to compare visitor satisfaction levels each year. This benchmark has been set at 85 per cent. The 2008–09 index, averaged from visitor responses to the survey at the selected parks, reserves and forest areas around the State, was 88.1 per cent. This outcome, with results from previous years of the survey program, is illustrated in Figure 3.



**Figure 3:** A comparison of annual visitor satisfaction levels within the DEC-managed estate (N=1581)

### 2.1.3.12 Astronomy

Astronomy is conducted at DEC’s Perth Observatory in Bickley, WA. DEC provides a range of public viewing and participation opportunities at the observatory and contributes to scientific research in astronomy by cooperating with national and international institutions in the acquisition, analysis, interpretation and dissemination of information.

#### Public viewing and participation

Throughout 2009, the Perth Observatory organised and took part in events to support the ‘International Year of Astronomy’. The International Year of Astronomy is a worldwide public outreach program that is sanctioned by the General Assembly of the United Nations and coordinated by the International Astronomical Union.

Until December 2009, an exhibition of astronomical photographs, taken by an observatory staff member, will tour metropolitan and rural cultural centres. Perth Observatory has taken part in two of the International Year of Astronomy’s worldwide events – ‘1 January 2009 Solar Astronomy Day’ and the ‘100 Hours of Astronomy’, by taking portable telescopes for both events to Kings Park for public viewing. Other activities involved assisting Scitech to stage a ‘space camp’. Observatory staff visited a prominent bookshop to promote astronomy to its customers and an open air night-time lecture was staged in summer.

Public awareness of the observatory remains high. The number of visitors who attended star viewing nights and daytime guided tours was 5,844 in 2008–09, up from 5,325 in 2007–08. Customer satisfaction and perceptions of the quality of the educational service or information they received remained high at 98 per cent, which was a similar value to previous years. The number of people who attended talks, astronomy field nights and International Year of Astronomy events in 2008–09 was 4,449.

Observatory staff informed the public of astronomical events in 37 radio interviews, three television interviews, 119 newspaper articles and answered 557 email queries. The observatory also provided information via its website, which received more than 299,439 ‘page viewings’. Volunteers assisted observatory staff in many activities, notably with star viewing nights and International Year of Astronomy events.

Observatory staff also gave 44 lectures and presentations to 1,294 people. These lectures included the majority of the lectures for a first-year university unit, all of the lectures for a second-year university unit, as well as general talks to primary schools and community groups.

The internet has become an increasingly important tool for observatory outreach. An all-sky camera was commissioned and provides an internet-accessible wide-angle view of the Perth night sky. Images from the sky camera can be accessed from the Perth Observatory website. The observatory has established a second internet-accessible telescope with the commissioning and use of a telescope belonging jointly to the Oil Region Astronomical Society and Clarion University, Pennsylvania.

### Research activities

The results of a study of supernova SN1999ga were published in a refereed scientific paper and showed that this exploding star is a rare, and little-researched, low luminosity, linearly declining supernova. Light curves for another potentially important supernova, SN2008cn, were collected and one supernova, SN2009y, was discovered.

The Probing Lensing Anomalies NETwork (PLANET) collaboration continued throughout the year to observe changes in brightness caused by the gravitational focusing of light from a star. This lensing effect occurs when two stars are aligned, when viewed from the Earth. A microlensing study found new limits on the mass and distance to an extrasolar planet (OGLE-2005-BLG-071Lb) and its host star. A microlens event OGLE-2007-BLG-472 was used to demonstrate a new statistical method for obtaining the best fitting set of physical parameters for a given set of microlens brightness observations. Five refereed papers resulting from this research project have been accepted for publication.

Observation of variable stars continued to be an active area of research. Multi-colour photometry monitoring of Eta-Carina during the 2009 close approach between its two component stars event was completed. The observation of 30 central stars of planetary nebulae was completed. Six of these planetary nebula stars were found to be variable.

During the year, a member of staff was involved in the development of software and electronics for the Murchison Widefield Array radio telescope. This instrument was one of two pathfinder telescopes being built at the proposed Western Australian site for the Square Kilometre Array radio telescope. The Murchison Widefield Array is being built by a worldwide consortium of universities, including The University of Western Australia and Curtin University.

### New works

Research activities were given a major boost with an allocation of \$350,000 in 2006–07 for the construction of a building to house a one-metre telescope from the Lowell Observatory (USA's largest private astronomical observatory). In 2008–09, \$99,000 of the original allocations remained, and a tender for the construction of the only major structural component yet to be constructed, the movable roof or dome, was prepared.

#### 2.1.3.13 Support to the Conservation Commission

DEC supports the Conservation Commission through the Conservation Commission Service Unit, in accordance with the Operational Relationship Agreement between the two organisations signed in 2006 and the CALM Act. Support during the year was provided by various individuals and branches in DEC, such as the Planning Unit. During 2008–09, DEC assisted the Conservation Commission with:

- staffing of the Conservation Commission Service Unit, which supported the Conservation Commission in:
  - establishing changes to the management planning process and overseeing a management plan research project
  - providing ongoing guidance and comment on draft management plans

- auditing management plan performance, including Yalgorup National Park and Purnululu National Park management plans
- initiating an issue-based performance assessment of dieback management on lands vested in the Conservation Commission
- completing Stage 1 of the status-based performance assessment of biodiversity conservation on islands vested in the Conservation Commission
- initiating the investigation of a new management performance assessment methodology for conservation reserves
- undertaking a mid-term performance audit of the FMP, and
- assessing old-growth forest extent in Beaton, Dombakup, Easter, Mowen, Nelson, Warren and Weld forest blocks and reporting on community nominated old-growth forest in Quindaning and Gregory forest blocks.
- advice and information relating to the statutory functions of the Conservation Commission regarding leases, licences and permits, land tenure, mining proposals and ecologically sustainable forest management, and
- the preparation of management plans for lands vested in the Conservation Commission. A list of final management plans completed and approved by the Minister for Environment and management plans in preparation during 2008–09 is in Appendix G.

As an independent statutory authority, the Conservation Commission reports on its activities in a separate annual report.

### 2.1.3.14 Other initiatives

#### Memoranda of understanding

DEC continued its long-standing partnership with the Department of Corrective Services through the memorandum of understanding between the two agencies. Department of Corrective Services' prisoners continued to provide a valued contribution to DEC projects and the community through maintenance of the Bibbulmun Track, construction of the Munda Biddi Trail and the Cape to Cape Track. They also assisted in cane toad control, construction of walk trails, signage work, construction of picnic tables and benches, weed control, maintenance of firebreaks, and cleaning and repair of campground facilities in many parks and reserves throughout the State including Mirima, Millstream-Chichester, Porongurup and Leeuwin-Naturaliste national parks and Coalseam Conservation Park.

The memorandum of understanding partnership between DEC and Leave No Trace Australia continued this year with further collaboration on projects to promote minimal impact visitor behaviour. Leave No Trace messages continued to be included in DEC publications and signs and Leave No Trace continued its involvement in the completion of the Adventure Activity Standards. DEC supported Leave No Trace Australia in its partnerships with the mining industry including partnering with BHP Billiton in the production of the first Leave No Trace Cultural Heritage Skills and Ethics book – Aboriginal Cultural Heritage of the Goldfields and South Coast Regions. There is also an in-principle agreement with a Pilbara mining operation to implement an on-site Leave No Trace program for staff and contractors in July 2009 with the view to extending it across the region.

The successful partnership between DEC, Conservation Volunteers Australia and Rio Tinto continued with the signing of a new memorandum of understanding in May 2009, with the Department of Education and Training as an additional partner, in Rio Tinto's *Earth Assist* conservation program. The five-year program, funded by Rio Tinto, will deliver volunteer opportunities to Western Australian secondary school students and teachers in national parks, nature reserves, regional parks and marine parks. The program will promote environment-based volunteering to secondary school students eligible to take part in the Community Service Program introduced to schools in 2009.

### World and national heritage

DEC progressed the World Heritage nomination for the Ningaloo Coast in collaboration with the Australian Government. Information sessions were held for local community members in Exmouth, Coral Bay and Carnarvon, providing an opportunity for people to ask questions about the nomination and implications of World Heritage listing. The Australian Government postponed submission of the World Heritage nomination to allow further negotiations between the Australian and Western Australian governments on the nomination boundary.

Advice was also provided to the Australian Heritage Council to assist the Australian Government in the assessment of Fitzgerald River National Park, Ningaloo Coast, Porongurup Ranges and Cheetup Rock Shelter in Cape Le Grand National Park for inclusion on the National Heritage List.

### Miriuwung-Gajerrong

DEC and the Yawoorroong Miriuwung Gajerrong Yirrgeb Noong Dawang Aboriginal Corporation (MG Corporation) are jointly responsible for developing management arrangements for six new conservation reserves (totalling 150,000 hectares) in the East Kimberley. Five project areas were advanced during the financial year:

#### *1. Development of the Cultural Planning Framework – Miriuwung and Gajerrong Peoples' Guidelines for Developing Management Plans for Conservation Parks and Nature Reserves under the Ord Final Agreement*

The cultural planning framework consolidated the Miriuwung and Gajerrong peoples' cultural responsibilities, views and aspirations for the future management of the six new conservation areas.

#### *2. Employment and training*

In June 2008, eight Miriuwung-Gajerrong trainee rangers were employed to work on the new conservation reserves. The trainees represent relevant traditional owner groups with specific connections to country. Their training program comprises a range of courses delivered through TAFE, Charles Darwin University, and DEC's Dwellingup Training Centre. In addition, a cultural training component was developed in partnership with the Mirima Language Centre.

#### *3. Creation of the new conservation areas*

New conservation areas were formally created in May 2009. An interim works plan was being developed at 30 June 2009 to guide management before the management plan is finalised.

#### *4. Joint management arrangements*

DEC has obtained approval to seek amendments to the CALM Act to formally allow Aboriginal joint management arrangements and to allow a wider range of Aboriginal activities on DEC-managed land and waters.

#### *5. Tourism and recreational study*

DEC has been in discussion with the MG Corporation and Tourism Western Australia since March 2009 to investigate the tourism and recreation economic development potential of the reserves, consistent with the cultural planning framework. A formal research proposal has been developed and endorsed. The study will commence in July 2009.

### 2.1.4.15 Parks and visitor services regional activities

#### Goldfields Region

- A diesel solar power hybrid system was installed at Credo Station, which improved water provision to the homestead. There were further improvements to the homestead site including upgrading internal walls and flooring with assistance from volunteers.
- The Lorna Glen research facilities were upgraded, including installation of a new building for the research laboratory, expanded solar power system and improved laundry and kitchen facilities for accommodation.
- The development of the Lake Ballard Gormley Statues site for the Shire of Menzies was completed. DEC provided site design and supervision of works with the Menzies Aboriginal Corporation.
- The main access road to Goongarrie homestead was upgraded and sheeted to complete flood damage repairs near the homestead and at Wallaroo Rock.
- Working with Conservation Volunteers Australia, DEC removed pitfall trap sites and completed a new biological survey at Lorna Glen.
- Facility maintenance and reserve management work was completed at Credo and the first joint management discussions with native title claimants were held.
- A memorandum of understanding with Wiluna native title claimants for joint management work at Lorna Glen and Earraheedy was updated and implemented. Also, a 'working together' project at Sydney Heads was completed to provide a basic camping area, shed tank, barbecue and table and information shelter.
- Joint management work at Great Victoria Desert was reinstated and a biological survey at Neale Junction was completed with assistance from participants of a *LANDSCOPE* Expedition, the Tjuntjuntjarra community and AngloGold Ashanti.
- Two shed tanks were installed in the Gibson Desert Nature Reserve with assistance from the Patjarr community.
- The draft Northern Yilgarn (Mt Manning, Jaurdi, Mt Elvire) Conservation Reserves management plan was completed with active public participation from stakeholders.
- An agreement for conservation work with Cliffs Asia Pacific Iron Ore Pty Ltd was expanded to include reserve management work and Aboriginal trainees on DEC-managed lands for 2009–10.
- Working partnerships with community groups including four-wheel drive clubs and local businesses were expanded.

#### Kimberley Region

- Diesel solar hybrid power facilities were installed at Purnululu National Park and Mt Hart Wilderness Lodge in the King Leopold Ranges Conservation Park. The Kimberley Region is now fully serviced by solar diesel hybrid power systems in remote area locations.
- A \$1 million upgrade to the Domes Track in Purnululu National Park was completed in December 2008, greatly improving the standard of the unsealed road to this iconic location.
- New hybrid toilet systems were installed at Bell and Lennard gorges in the King Leopold Ranges Conservation Park while Mitchell River National Park had three systems installed at the campground.
- DEC continued negotiations with traditional owners at Purnululu National Park regarding the expansion of car parking facilities and walk trails at Mini Palms and Piccanniny gorges.
- Lennard Gorge car park was redeveloped to cater for increasing access to this site in the King Leopold Ranges Conservation Park.
- Conservation Volunteers Australia volunteers were engaged in conservation activities at Geikie Gorge and Purnululu national parks.

- The memorandum of understanding between Bunuba Cattle Company Pty Ltd and DEC was signed in 2006 and continued to be important for employment of Aboriginal trainee rangers and fostering employment opportunities with the Bunuba Aboriginal Corporation.
- DEC continued negotiations with the Yawuru native title holders on proposed joint management arrangements in and around the township of Broome.
- The West Kimberley District met and liaised closely with the Karrijarri and Nyangumarta people to gather information and understand their views and concerns so these can be incorporated in any proposed marine reserve for the Eighty Mile Beach area.

### Midwest Region

- The Pinnacles Desert Discovery centre in Nambung National Park was officially opened by the Minister for Environment in October 2008. Civil works were completed for the visitor interpretive centre including a car park, walk trail and lookout.
- Toilet blocks were constructed in Lesueur National Park at two day-use sites.
- Year three of the NRM-funded Coastal Assessment and Restoration project saw works completed at Lake Thetis in Nambung National Park, including a boardwalk with interpretation among the stromatolites. Works were also implemented for the Shire of Northampton at Wittecarra Creek and the Bowes River mouth to rationalise vehicle access, protect coastal landforms and enhance visitor amenities. Plans were prepared for future works at Little Bay, north of Horrocks and the coast about 20 kilometres north of Guilderton.
- There was ongoing liaison and design work with Main Roads WA during construction of Indian Ocean Drive through Nambung National Park and Nilgen and Wanagarren nature reserves.
- Major redevelopment of the Bottle Bay campground and day-use area in Francois Peron National Park was completed. This included new toilets and extensive landscape protection and rehabilitation.
- Seating was constructed along the new Eagle Bluff boardwalk in the Shark Bay World Heritage Area.
- Monkey Mia Visitor Centre was painted and refurbished.
- Boardwalk construction continued on the coastal walk and lookout shelter at Natural Bridge in Kalbarri National Park. New trailhead and interpretive signs were installed at several coastal sites.
- Site development concept plans were prepared for The Loop, Z Bend and Meanarra Hill in Kalbarri National Park.
- A loop walk trail was constructed at Irwin Lookout in Coalseam Conservation Park.
- Building conservation works continued at the Old Bangemall Inn on Cobra Station and included roof reconstruction.
- New interpretive panels were installed at Shell Beach in the Shark Bay World Heritage Area; at Lancelin Island, Molah Hill and Grigsons Lookout in the Moora District and Red Bluff in Kalbarri National Park.
- Outdoors WA progressed work on assessing visitor risk along 60 kilometres of the Murchison River Gorge.
- Planning for the redevelopment of Hangover Bay in Nambung National Park including working with the Yued Aboriginal Group and seeking local community feedback on concept options.
- 'Wonderfully Wild' activity programs were conducted during school holidays at Monkey Mia attracting 2,030 people.

### Pilbara Region

- Major works were started at Deep Reach in Millstream-Chichester National Park to build a new car park, toilets, viewing platform, water entry and walk trail in partnership with the Pilbara Development Commission and Shire of Ashburton.
- Sections of Snappy Gum Drive in Millstream-Chichester National Park were renovated in partnership with the Shire of Ashburton.
- A toilet block at Yardie Creek in Cape Range National Park was constructed.
- The Coral Bay Foreshore Plan was completed after consultation with community groups, the Shire and other stakeholders.
- Hazard amelioration on Charles Knife Road in Cape Range National Park continued in partnership with the Shire of Exmouth.
- The park headquarters office at Karijini National Park was moved to a new building as a result of damage caused by Cyclone George.
- Sections of Weano Road in Karijini National Park were upgraded and re-sheeted in partnership with the Shire of Ashburton.
- An energy-efficient solar/diesel power supply was installed at Karijini National Park to service the visitor centre and ranger station.
- A Dampier Archipelago and Montebello Islands interpretation and information shelter was installed at Dampier boat launch ramp with cooperation from other agencies.
- The Warlu Way interpretive drive trail from Exmouth to Broome was launched in partnership with Tourism WA's 'Australia's North West' region.

### South Coast Region

- Following damage caused by a December 2008 wildfire, path restoration work was undertaken on a 4.5-kilometre section of the coastal trail between Hellfire Bay and Le Grand Beach in Cape Le Grand National Park as well as a 1.2-kilometre section of the Stokes Heritage Trail in Stokes National Park (including erecting a new foot bridge).
- Repairs to road works following flood damage on Telegraph Track and a western boundary strategic buffer in Cape Arid National Park were implemented.
- A new information shelter was erected at Thomas River in Cape Arid National Park.
- DEC assisted Mackenzie Island Cruises erect a new viewing platform in Woody Island Nature Reserve.
- Vehicle access was re-established on the Old Telegraph Track section between Wattle Camp and Point Culver, Nuytsland Nature Reserve (55 kilometres) previously closed as a result of the December 2006 wildfire.
- A new alternative (wind and solar) power supply unit at Cape Arid National Park headquarters was installed, replacing a diesel generator.
- Redevelopment of the Stokes Inlet campground and day-use area in Stokes National Park was started including the replacement of camp kitchens, information shelters and toilets. The previous facilities were destroyed in the November 2006 wildfire.
- Protective fuel hazard reduction burns were undertaken at Seal Creek and Jorndee campgrounds in Cape Arid National Park and around the park headquarters in Cape Le Grand National Park.
- Consultations with the Goldfields Land and Sea Council, the Esperance Nyungar native title claimant group and Ngadju native title claimant group were undertaken over a range of cultural heritage and environmental issues within DEC's Esperance District.
- Major road works (re-sheeting and grading) were undertaken on Hamersley Drive (Fitzgerald River National Park), Stirling Range Drive (Stirling Range National Park) and Sharp Point Road (Torndirrup National Park).
- Maintenance of rubber belting to assist traffic movement through fragile sandy areas was undertaken on Dunskey Beach four-wheel drive track within West Cape Howe National Park.

- Two kilometres of Two Peoples Bay Road in Two Peoples Bay Nature Reserve was sealed.
- East Mt Barren car park in Fitzgerald River National Park was constructed and sealed.
- New interpretation and information shelters were installed in Stirling Range National Park with Australian Government funding provided through the *Gift to the Nation* program.
- Major hut maintenance was undertaken on the section of the Bibbulmun Track between Wilson Inlet and Albany.
- Visitor risk assessments were undertaken at recreation attractions with remedial action implemented. DEC also updated management guidelines for visitor safety on the coastline of Torndirrup National Park and other local areas managed by DEC.
- Consultation occurred with the local Albany Heritage Reference Group Aboriginal Corporation over proposed works in Gull Rock National Park. This led to an Aboriginal heritage survey of Gull Rock National Park being undertaken by a consulting anthropologist and archeologist.
- A Preliminary Draft of the *Breaksea Island Built Structures Conservation Management Plan* was prepared for the Albany Maritime Foundation. The purpose of this conservation plan was to:
  - identify the cultural heritage values of the Breaksea Island Lighthouse complex
  - provide guidelines for the future use, care and management of the site, and
  - provide a schedule of recommended maintenance and conservation works for the buildings.

### South West Region

- Visitor risk management remained a high priority. Formal annual inspections of all recreation sites were conducted, and quarterly and annual reviews to monitor progress on achieving risk mitigation targets were completed.
- DEC continued to work with local fishing groups to encourage safe fishing practices and to install warning signs and anchor points at popular fishing sites along the Leeuwin-Naturaliste coast.
- A consultant geologist was engaged to conduct inspections at high visitation cliff sites at Huzzas and Hamelin Bay in Leeuwin-Naturaliste National Park.
- Tree lopping was undertaken at recreation sites, including Honeymoon Pool, Potters Gorge, Leschenault Peninsula, Bibbulmun Track, St John Brook, Sue's Bridge, Calgardup Cave, Wellington Discovery Forest and the Margaret River Eco Discovery Centre to minimise the risk to visitors from falling branches.
- DEC continued delivering *EcoEducation* programs at Wellington Discovery Forest and the Margaret River Eco Discovery Centre. The number of programs delivered increased significantly from previous years from about 120 excursions to 170. The total number of students and teachers who attended the Wellington Discovery Centre was 2,283 and a record number – 1,850 – attended the Margaret River Eco Discovery Centre. An additional 1,661 children took part in *EcoEducation* programs this year compared with 2007–08.
- At 30 June 2009 the five-year development plan for Honeymoon Pool was nearing completion with the installation of gas barbecues, picnic tables and interpretation in the day-use area. Improvements were started to the Rivers Edge Path with the construction of viewing platforms and the installation of two river access stairways.
- At Cape Naturaliste, realignment and hard surfacing of trails to provide access for people with disabilities was started and a 400-metre section of the Whale Trail was sealed.
- Footpaths, seating and resealing of the northern parking area at Hamelin Bay were completed.



- At Sugarloaf Rock the access road, parking areas and footpaths were upgraded to enable bus parking and universal access.
- Universal access campsites, footpaths and interpretation were installed at Sue's Bridge in Blackwood River National Park.
- Construction of the Buffalo Beach lookout, stairs and universal access ramp were near completion at 30 June 2009. Dune rehabilitation by brushing, seeding and planting native species was undertaken during the year.
- A major road upgrade program in Wellington National Park continued in conjunction with the shires of Collie and Dardanup, with the surveying, engineering and construction of a further 1.2 kilometres of Pile Road in preparation for sealing.
- Maintenance and development of mountain bike trails continued in Wellington National Park in conjunction with the South West Mountain Bike Club and West Australian Mountain Bike Association with the installation of trail head shelters and information panels. The clubs continue to work closely with DEC to maintain trails and organise trail building workshops.

### Swan Region

- In partnership with the Perth mountain bike community, DEC continued to work towards developing the Goat Farm Mountain Bike Park in Greenmount to internationally recognised standards.
- The redesign and upgrade of three major car parks in John Forrest National Park to improve traffic flow and overcome underlying drainage issues, was completed.
- A program of restoration and replacement of recreation facilities burnt or damaged during the 2007 Dwellingup wildfire was completed.
- A major upgrade of Scarp Road bridge south of Jarrahdale was finalised. The upgrade will provide strategic access for bushfire suppression and safe access for pedestrians and cyclists in the region.
- DEC continued to develop strategic partnerships with four-wheel drive clubs and Trackcare, establishing volunteer maintenance of existing four-wheel drive circuits through the 'Track Adoption' program.
- Interpretive signage was reinstated on Matilda Bay Reserve providing key information to the public about the reserve and its history.
- The sand stabilisation and revegetation works associated with the southern beach re-nourishment project on Penguin Island were completed.
- DEC partnered with the Shire of Harvey to design and develop a small day-use site at Pink Lake.
- The walk trail to the thrombolites and the loop walk trail at Yalgorup National Park were resurfaced.
- The Heathlands Walk Trail was realigned to avoid inundation during winter months, enabling safer and easier access at Len Howard Conservation Park.
- An arboricultural program, in which a number of trees have been implanted with vitamins, was continued and has worked well to reduce visitor risk management issues with tree limbs in Yanchep National Park.
- Cave tours were booked out on a regular basis on weekends at Yanchep National Park.
- Perth Hills National Parks Centre saw an increase in attendance to the *Nearer to Nature* program with more than 2,250 children taking part in interpretation activities. In addition, the centre had its highest attendance in camping for more than 15 years.
- Swan Region continued to implement the Disability Services Commission 'You're Welcome' initiative to increase access for people with disabilities.
- More than four million people visited the parks in the Swan Region this year.

### Warren Region

- A master planning process for the Black Point and Lake Jasper precinct in the northern end of the D'Entrecasteaux National Park was started.
- An upgrade of Pneumonia Road access in the northern end of the D'Entrecasteaux National Park began through a jointly funded project with the Shire of Nannup and Main Roads WA.
- Four entry point shelters in D'Entrecasteaux National Park were constructed containing general park information and orientation panels.
- Site planning for the upgrade of the Cascades day-use site was completed.
- Two kilometres of access road into Big Brook Dam and two large car parks were sealed, completing the access upgrade at the site and providing a fully sealed, two-way access from Pemberton to the site.
- Replacement of revetment walls and the boat ramp as stage one of the Coalmine Beach small boat facilities upgrade started. This was a joint DEC and Department for Planning and Infrastructure-funded project.
- The upgrade of the Coalmine Beach picnic area facilities was completed and included toilet construction, path sealing and the establishment of grassed areas.
- The holiday interpretive programs were expanded at the Valley of the Giants Tree Top Walk and satellite sites in the Walpole Wilderness area.
- The re-sealing and refurbishment of the Tree Top Walk car park and entry area was completed.
- Twenty-four interpretation and management sign projects were completed, amounting to almost 100 sign products.
- DEC staff continued to consult and seek advice from the South West Aboriginal Land and Sea Council for a range of site developments, including recreation site upgrades and road works.

### Wheatbelt Region

- The Congelin Campground project to improve facilities and reduce environmental degradation was completed with improved roading, car parks, new and replacement visitor interpretation panels, replacement fencing, new picnic tables, new fire rings and new toilets.
- The Vincent Serventy Memorial at the Old Mill Dam in Dryandra Woodland was opened. The memorial opening was attended by the Serventy family, conservation groups, DEC staff and community members.
- Barna Mia Nocturnal Visitor Centre, located in Dryandra Woodland, continues to provide a unique experience for visitors to Dryandra Woodland and the Wheatbelt Region of WA. Key achievements for 2008–09 were:
  - an upgrade of the electric fencing system to improve security for the enclosed animals
  - the development of a business plan to improve commercial and management practices at Barna Mia
  - an increase in visitation of 158 people to 2,213 in 2008–09, and
  - increased local promotion and merchandise sales through the Dryandra Country Visitor Centre.
- The Toyota Land Cruiser Club of WA continued to assist with volunteer maintenance work at Dryandra Woodland.
- Fencing was completed around the historic well on Namelcatchem Nature Reserve to ensure visitor safety.
- Maintenance of the Mount Matilda walk trail within Wongan Hills Nature Reserve was completed in partnership with the local community.

- A recreational area was established in Kokerbin Nature Reserve with the construction of two interpretation shelters, installation of a car park and picnic tables at the historic well site and the planning and surveying of a proposed walk trail. All works were carried out in consultation with stakeholders, community groups and Njaki Njaki and Ballardong Aboriginal Elders.
- Plans were developed for a campsite and recreation area at Kwolyin Reserve. DEC is liaising with the Shire of Bruce Rock in the development process and is in consultation with local Aboriginal claimant groups regarding this site. Construction began on a visitor information panel and an interpretation shelter.

### 2.1.4 Service 4: Environmental Regulation

**Service description:** Regulate emissions and discharges to the environment and the transport of hazardous wastes. Regulate the investigation, classification and management of contaminated sites. Monitor ambient air quality and develop air quality management plans for priority air sheds (the air canopy surrounding population centres, industrial and other facilities, within which impacts of air pollutants need to be considered from health and environmental viewpoints).

#### Performance summary

|   | 2008–09<br>Target<br>\$'000 | 2008–09<br>Actual<br>\$'000 | Variation<br>\$'000 |
|---|-----------------------------|-----------------------------|---------------------|
| Expense by service                            | 43,380                      | 37,725                      | (5,655)             |
| KPI   | 2008–09<br>Target           | 2008–09<br>Actual           | Variance            |
| Average cost per air monitoring station       | \$454,875                   | \$468,375                   | \$13,500            |
| Average cost per industry licence             | \$16,977                    | \$21,686                    | \$4,709             |
| Average cost per contaminated site assessment | \$6,667                     | \$7,190                     | \$523               |
| Average cost of remediating State sites       | \$2,989,600                 | \$1,436,000                 | (\$1,553,600)       |

#### Performance highlights

- Developed a State-wide Industry Regulation Compliance Strategy and supporting Compliance Program to assist officers in managing proactive planned inspections of industry. The program will be undertaken throughout 2009–10.
- Continued implementation of the industry licensing reform program to remove duplication and overlap in licensing approvals.
- Processed 90 per cent of State Development Portfolio project approvals within target timeframes.
- Regulated the successful removal of the remaining lead concentrate from the Esperance port.
- Continued implementation of the *Contaminated Sites Act 2003*, including maintaining the public database.
- Completed background air quality studies in Midland and Kwinana.

#### 2.1.4.1 Controlled waste

During 2008–09 there was a lower staff vacancy rate than in recent years. This assisted in clearing the backlog of paper tracking forms that had built up, and, at 30 June 2009, all forms had been processed. The percentage of carrier companies using the electronic tracking system, rather than paper tracking forms, continues to increase, with the majority of tracking now done via the electronic system.

Despite the economic climate, new carrier licence applications continued, along with associated vehicle and driver applications. Licence renewals were also processed as required. A program has been implemented to ensure that the legal identity of each licensed company is verified when licences are issued or renewed.

The number of licences processed was as follows (2007–08 figures are in brackets):

|          |     |       |
|----------|-----|-------|
| Carrier  | 341 | (294) |
| Vehicles | 474 | (381) |
| Drivers  | 940 | (829) |

Compliance auditing of carriers continued during 2008–09.

DEC also continued to deliver driver training, with 142 drivers attending training in 2008–09.

The total volume of controlled waste tracked during 2008–09 was 682,950 (540,808) kilolitres in 74,815 (64,654) loads. These comprised of:

- 58.2 per cent biological
- 11.45 per cent alkalis
- 13.19 per cent waste oils
- 9.9 per cent low strength wastewaters
- 7.26 per cent other.

### 2.1.4.2 Implementation of the Keating Review recommendations

DEC is continuing to implement the recommendations and objectives of the Keating Review (2002) via reform projects for Part V licensing under the *Environmental Protection Act 1986*.

DEC is in the fifth year of tracking the approvals process for the assessment of State Development portfolio project applications, which have an agreed target timeframe of 60 working days. In 2008–09 DEC achieved an average of 57 working days to process 32 works approvals. Only three of the 32 works approvals were not issued in the 60 working days. DEC has analysed the causes for these delays and implemented measures to ensure future works approval applications are issued within the target timeframe. These measures have resulted in a decrease in the average processing time for works approvals in the first and second quarter of 2009 to 52 days.

For State Development portfolio project licence applications, DEC met the 60 working day target timeframe and achieved an average of 49 working days for 21 licence applications.

Key achievements in implementing other Keating Review recommendations during 2008–09 were:

- development of improved internal guidelines to assist the approval process
- internal publication of 'regulatory maps' for 15 prescribed premises categories, identifying areas of regulatory duplication between DEC and other decision-making authorities and identifying opportunities for reform, and
- advancing the development of business improvement projects such as sourcing guidelines for ambient air parameters applicable to WA for use in the environmental assessment of works approvals and licences submitted under Part V of the *Environmental Protection Act 1986*.

### 2.1.4.3 National Pollutant Inventory

DEC administers reporting to the National Pollutant Inventory (NPI) of substance emissions from Western Australian industrial facilities. Emission reports were received from 735 facilities in 50 industry sectors for the period 2008–09.

The department provides advice to facilities to assist them in their reporting obligations. A workshop program was completed in July 2008, together with a training program to coincide with introduction of a new online reporting system. Seventy-one per cent of facility reports were subsequently submitted using the online system.

#### 2.1.4.4 Industry regulation

##### Regulation of prescribed premises

During 2008–09, 898 premises held licences under Part V of the *Environmental Protection Act 1986*. Eighty-five works approvals were issued in 2008–09, compared with 80 the previous year. A total of 108 new licences were issued.

**Table 20: Prescribed premises**

| Region       | New works approvals issued 2008–09 | New licences issued 2008–09 | Active licences 2008–09 |
|--------------|------------------------------------|-----------------------------|-------------------------|
| Goldfields   | 13                                 | 10                          | 89                      |
| Kimberley    | 3                                  | 3                           | 33                      |
| Midwest      | 9                                  | 11                          | 95                      |
| Pilbara      | 25                                 | 19                          | 120                     |
| South Coast  | 6                                  | 17                          | 56                      |
| South West   | 12                                 | 7                           | 154                     |
| Swan         | 17                                 | 41                          | 351                     |
| <b>Total</b> | <b>85</b>                          | <b>108</b>                  | <b>898</b>              |

##### Industry Regulation Compliance Strategy

Compliance inspection is one regulatory tool available to assess a licensee's compliance with its legal requirements, and to review achievable environmental standards.

DEC developed an Industry Regulation Compliance Strategy during 2008–09 that aims to improve DEC's inspection and compliance capability within industry regulation by prioritising compliance activities and resources to meet performance targets.

Under the compliance strategy, a Compliance Program has been agreed for 2009–10. The program will focus resources on inspections of prescribed premises based on risk, planned industry sector programs and monitoring compliance with environmental conditions set on projects assessed by the Environmental Protection Authority under Part IV of the *Environmental Protection Act 1986*.

Restructuring of the relevant areas in DEC to deliver the planned compliance activities was completed during the year.

##### Port assessment program

Working with the Department of Health and the Department of Mines and Petroleum, DEC continued inspections of Western Australian ports (started in 2007–08) to determine if there were issues related to emissions from port precincts, assess environmental or health risks and monitor compliance with relevant legislation.

The ports of Albany, Port Hedland and Fremantle were assessed during the year. Assessments identified issues requiring attention in relation to infrastructure and management procedures. DEC worked closely with the Department for Planning and Infrastructure and the relevant port authorities to address the issues and improve the environmental performance in handling mineral ores at ports.

### Indian Ocean Territories

DEC continued to provide environmental regulatory services for Christmas Island and Cocos (Keeling) Islands as part of a formal arrangement between the Australian and State governments. At 30 June 2009, a new service agreement for the 2009–10 financial year was being negotiated.

### Noise regulation

DEC provides technical advice to the environmental impact assessment process as well as policy, technical and enforcement support for a network of about 230 local government environmental health officers, WA Police officers and DEC regional officers.

During 2008–09, the department provided advice on 52 projects undergoing environmental impact assessment.

A notice was published in the *Government Gazette* on 5 June 2009 that the Minister for Environment had approved a variation of the noise emission standard for the Talison Greenbushes mining operation under Regulation 17 of the Environmental Protection (Noise) Regulations 1997.

The Big Day Out concert held at the Claremont Showground in February 2009 was approved by DEC.

### Pollution and complaint response

During 2008–09, 81 local government officers attended training provided by the department on the Environmental Protection (Unauthorised Discharges) Regulations 2004. DEC continued providing training in pollution response/hazardous materials safety for DEC staff, local governments and other agencies, as well as final year university students, with 121 people attending five courses during the year.

DEC provides State-wide hazardous materials emergency response for environmental pollution incidents as well as emergency advice and on-scene detection and monitoring of emissions for hazardous materials incidents managed by the Fire and Emergency Services Authority (FESA) under the State Emergency Plan for hazardous materials (Westplan Hazmat).

Major incidents attended by DEC officers during 2008–09 included:

- six incidents involving illegal dumping of chemicals in Pinjar forest and near Mundaring Weir
- mass bird deaths at Woodman Point and Henderson (July 2008 and May 2009). The cause of the May 2009 poisoning incident was determined to be the pesticide Fenthion
- a fire at a pesticide factory near Northam (March 2009)
- a fuel tanker rollover in Narrogin (May 2009), resulting in a spill of 40,000 litres of diesel fuel in a residential area
- a fuel tanker fire and explosion at a service station in Maddington (May 2009), and
- a fire at the Southern Metropolitan Regional Council's recycling facility in Canning Vale (June 2009).

### Southern Metropolitan Regional Council's Canning Vale Waste Composting Facility

The Southern Metropolitan Regional Council's Canning Vale Waste Composting Facility continued to be the subject of odour complaints from the community. DEC issued the Council with an Environmental Protection Notice in February 2009. The Council complied with the Environmental Protection Notice and at 30 June 2009 was undertaking further remedial work to reduce odours. DEC expended significant resources in responding to complaints, investigating odour events and liaising with Southern Metropolitan Regional Council and local government staff. DEC is also investigating a number of odour incidents under the provisions of the *Environmental Protection Act 1986*.

### 2.1.4.5 Esperance Port lead issue

DEC continued to apply considerable resources to the ongoing management of the lead issue at Esperance and improvements to the licence which regulates the operations of the Esperance Port Authority. The key actions and achievements included:

- The sampling and clean-up of lead contamination in the port area, required under an Environmental Protection Notice issued by DEC to the Esperance Port Authority in October 2007, has been completed and the required certificate of completion has been provided to DEC.
- The detailed air monitoring plan, required under a second Environmental Protection Notice issued by DEC to the Esperance Port Authority in October 2007, will soon be completed with the installation of the final high volume air sampler near the shire council offices. The extensive air quality monitoring requirements have been incorporated into the Port Authority's licence and monitoring results are reported to DEC on a monthly basis.
- DEC agreed to a Lead Removal Plan and issued an prevention notice in November 2008 authorising the removal of 9,000 tonnes of lead concentrate stored inside a sealed shed at the port. The notice contained stringent conditions to ensure the environment of Esperance was not put at risk by the export of the remaining lead concentrate. The plan required the lead concentrate be put into double sealed bags and the bags be placed into locked steel shipping containers awaiting export. All containers were exported by 4 May 2009. Extensive air quality monitoring and reporting were undertaken during this operation to confirm that lead dust did not enter the environment during the bagging and export of the remaining lead concentrate. DEC confirmed that the notice has been complied with and the notice has been formally revoked.
- A three-year licence was issued to the Esperance Port Authority in January 2009 following review and a period of community consultation. This superseded an interim licence issued in October 2008. The licence requires a range of improvements to be undertaken at the port, the most significant being improved air quality monitoring and reporting systems, setting air quality targets; the requirement for short-term (March–August 2009) upgrades to the receipt, storage and loading facilities for metal concentrates; the completion of new world-class storage, handling and loading metal concentrate facilities by March 2011; and improvements to waste water management facilities. The licence also requires the port to have in place a shiploading protocol which takes into account wind conditions to ensure air quality targets are met.
- Results of air quality monitoring over the past year have shown considerable reduction in levels of nickel dust in the environment, particularly during shiploading events. Monitoring has also shown that lead levels in the air in Esperance are extremely low or below the levels of detection of the monitoring equipment.

### 2.1.4.6 Regulation of contaminated sites

#### **Implementation of the *Contaminated Sites Act 2003***

One hundred and forty new reports of known or suspected contaminated sites were received under the *Contaminated Sites Act 2003* in 2008–09.

DEC classified 383 sites during the year, bringing the total number of sites classified under the Act to more than 1,029. Soil and groundwater investigations confirmed the presence of contamination at approximately 232 of these sites (made up of more than 1,849 individual lots), which are listed on the publicly available database on DEC's website. DEC commenced systematic follow-up of sites requiring remediation or identified as a high priority for further investigation, and this will continue. The response to DEC's enquiries to date regarding investigation or clean-up works in progress or planned has generally been positive.

In May 2009, the Minister for Environment approved the transfer of funds totalling \$3,605,000 from the Contaminated Sites Management Account

to six State Government agencies for the investigation or remediation of contaminated sites. By 30 June 2009, \$2,780,000 had been transferred, with transfer of the remaining funds expected early in 2009–10.

Specialist technical advice was provided to external parties such as community groups, land developers, industry and State and local government, in relation to the assessment and management of contaminated sites and areas affected by acid sulfate soils or water.

The department reviewed and provided advice on 600 technical reports relating to contaminated sites and 297 technical reports relating to acid sulfate soils and water. These reports were submitted to comply with planning and Ministerial conditions, dewatering licence requirements, or as part of the investigation or remediation of reported contaminated sites.

### Acid sulfate soils

DEC continued to facilitate workshops on acid sulfate soil issues for the community, local government and environmental consultants at metropolitan and regional venues. To assist with this education and awareness, DEC published two guidelines:

- *Identification and investigation of acid sulfate soils and acidic landscapes* (May 2009).
- *Draft Treatment and management of soils and water in acid sulfate soil landscapes* (January 2009).

The Acid Sulfate Soils Technical Advisory Committee continued to meet on a regular basis to provide technical input into the acid sulfate soil mapping program, made possible by Commonwealth and State funding. By 30 June 2009, soil cores from more than 185 sites in the Perth Metropolitan area had been tested for acid sulfate soil occurrence.

The information captured through field and laboratory testing was stored in a new acid sulfate soil database linked to DEC's computer-based Geographic Information System. Acid sulfate soil risk maps are now also accessible via the Shared Land Information Platform (SLIP) hosted by Landgate.

Participation in research projects continued in 2008–09, mainly through in-kind contributions of technical advice and logistical support. Projects included an assessment of whether monosulfidic black ooze had accumulated in canals near Busselton and investigation of acidification processes and heavy metal mobilisation on the Gnangara Mound and in other Swan Coastal Plain sandy soils.

### 2.1.4.7 Perth Air Quality Management Plan

The Perth Air Quality Management Plan is a 30-year initiative that was started in 2000. The plan aims to steadily improve Perth's air quality by reducing the emission of air pollutants in order to protect the environment and the health of the community, now and in the future. During 2008–09, DEC continued to focus on strategies to address vehicle emissions, haze from domestic wood heaters and air quality research.

### Vehicle emissions

Emissions from motor vehicles and State responsibilities under the National Environment Protection (Diesel Vehicle Emissions) Measure are managed through DEC's *CleanRun* program. During 2008–09, *CleanRun* continued to focus on vehicle emissions testing and driver behaviour.

The objective of the vehicle emissions testing is to collect data in order to assess the need for an ongoing in-service vehicle emissions management program. Following the success of a vehicle testing campaign in 2007, DEC acquired a specialised remote sensing device in November 2008 to develop emissions testing capacity within WA. The device was used in a testing campaign in February 2009 and further campaigns are scheduled during the next 18 months.



DEC continues to liaise with fleet operators to encourage their participation in the *CleanRun* behaviour change initiative.

As part of the *CleanRun* environmental verification, the Perth Traffic Corridor Study was undertaken in 2007 and 2008, involving ambient air monitoring for particles and polycyclic aromatic hydrocarbons along one of Perth's major transport routes. The data analysis phase continued through 2008–09, with a technical report on the results due for release in late 2009. The measurements taken from this study will serve as a baseline of current emissions, including the contribution of diesel emissions at selected locations throughout Perth.

As an industry partner in the Cooperative Research Centre for Asthma and Airways, DEC contributes funding and air quality data from the Perth air monitoring network.

### **Haze from domestic wood heaters**

DEC continued to implement a range of programs to manage and reduce winter smoke haze in Perth. The Haze Reduction Initiative of the Perth Air Quality Management Plan aims to reduce emissions contributing to haze formation, including those from domestic wood heaters. Specific programs included the wood heater rebate program, wood heater retailer audits, preparation of education brochures, development of a pilot smoke patrol program and haze alerts.

Haze alerts are issued by the Bureau of Meteorology, on advice from DEC, when a haze event is predicted (generally between June and September each year). No haze alerts were issued during the year.

### **2.1.4.8 Regional air quality management plans**

DEC continued work on the development of air quality strategies for Port Hedland, Collie and Kalgoorlie as part of its commitment to manage air quality in key regional centres in WA.

DEC has progressed a number of air quality studies in Port Hedland as part of a whole-of-Government initiative to develop a strategic approach for air quality management. A study to identify options for a policy framework for a Regional Air Quality Management Plan was completed.

Another study, on the toxicity of dust from various locations on lung cell cultures, has been finalised and, at 30 June 2009, was going through peer review by the University of Newcastle and University of Queensland.

A number of air quality investigations were undertaken in Collie during the year. These investigations provided information for the assessment of current air quality and emission sources, and for identifying issues to be considered as part of broader airshed management. Collie is a key economic growth centre for the State with a range of existing and proposed industrial activities.

Monitoring campaigns in Collie focussed on sulfur dioxide (SO<sub>2</sub>), particulate matter (PM) and volatile organic compounds (VOCs). A novel approach to visual assessment of haze was also trialled in Collie. The approach included compiling photographs of haze formation across the region and correlating with parallel monitoring data. Technical reports on these campaigns are available from DEC.

A systematic review of the current knowledge base of air quality in the Kalgoorlie-Boulder area was completed. This included a review of known air emission sources, air chemistry, meteorology and a preliminary assessment of SO<sub>2</sub> and PM<sub>10</sub> monitoring data.

DEC also undertook a home heater survey in Kalgoorlie-Boulder to investigate the use and prevalence of wood heaters, and compliance of wood heaters with the current emission standards. The findings indicate the potential to reduce wood heater use.

#### 2.1.4.9 Air quality monitoring

##### Monitoring stations

DEC operates 10 metropolitan and six (including two temporary) regional air quality monitoring stations in WA. The stations monitor a range of pollutants including carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide and particles as  $PM_{10}$ .<sup>1</sup> Air quality monitoring data are assessed against ambient standards established in the National Environment Protection (Ambient Air Quality) Measure. Particles as  $PM_{2.5}$ <sup>2</sup> are also monitored at selected sites as part of a nation-wide project.

The data gathered are used to report on ambient air quality through the annual *Western Australia Air Monitoring Report* and periodic State of the Environment Reports, and are also updated on DEC's website each day.

##### Wagerup

DEC has been active in the Wagerup area for many years in response to community concerns about air quality. During 2008–09 DEC published the findings of the *Winter 2006 Study: Intensive Air Quality Investigations at Wagerup*, a detailed assessment of air quality in the vicinity of the Alcoa Wagerup alumina refinery. The community played a vital role in gathering data during the study which has significantly improved DEC's understanding of the complex Wagerup environment and provides opportunities for additional improvements in environmental management. Study findings were presented to the community and other stakeholders in October 2008, and made available on DEC's website.

DEC started additional air quality investigations in winter 2009 to build on the knowledge obtained from the 2006 study. Temporary monitoring stations have been established in Yarloop and Cookernup as part of the study. The 2009 campaign will focus on the specific weather conditions that contribute to air quality events of concern to the community.

##### Background air quality study, Midland and Kwinana

DEC began the Midland Background Air Quality Study in August 2007 and completed the fieldwork component in October 2008. The objective of the study was to characterise air quality in Midland and surrounding suburbs, which is an area with a diverse range of air pollution sources. The monitoring campaign used both active and passive sampling methods to target a number of common air pollutants, with community members taking part in the monitoring. At 30 June 2009 the final results of the survey were scheduled to be published later in 2009.

The Kwinana Background Air Quality Study was also progressed during the year. The target pollutants, ammonia volatile organic compounds and carbonyl compounds, were measured at a number of locations. Results are expected to be published in late 2009.

DEC worked closely with the Kwinana Airshed Study Advisory Group, comprising representatives from the community, local government, industry, and the Department of Health. Two new air monitoring sites were commissioned in Calista and Hillman as part of the next phase of work, which also has collaborative links with the Kwinana Child Health Study being undertaken by The University of Western Australia.

<sup>1</sup>  $PM_{10}$  – Particle matter with an aerodynamic diameter of 10 micrometres or less.

<sup>2</sup>  $PM_{2.5}$  – Particle matter with an aerodynamic diameter of 2.5 micrometres or less.

## 2.1.5 Service 5: Environmental Sustainability

**Service description:** Develop and implement policies and strategies that promote environmentally sustainable practices in industry, government and the community.

### Performance summary

|                    | 2008–09<br>Target<br>\$'000 | 2008–09<br>Actual<br>\$'000 | Variation<br>\$'000 |
|--------------------|-----------------------------|-----------------------------|---------------------|
| Expense by service | 24,747                      | 14,693                      | (10,054)            |

| KPI   | 2008–09<br>Target | 2008–09<br>Actual | Variance |
|---|-------------------|-------------------|----------|
| Cost of administering Waste Management and Recycling Account as a percentage of total funds | 17.1%             | 8.1%              | (9.0%)   |

### Performance highlights

- Implementation of the *Waste Avoidance and Resource Recovery Act 2007* (WARR Act) and the *Waste Avoidance and Resource Recovery Levy Act 2007* (WARR Levy Act).
- Zero Waste Plan Development Scheme, involving development of Strategic Waste Management Plans for local government.
- Two rounds of the Strategic Waste Initiatives Scheme and Community Grants Scheme.
- Active community engagement through education and behaviour change programs including *Ribbons of Blue/WaterWatch WA*; *TravelSmart*; *Waste Wise Schools*; *AirWatch* and *CleanRun*.

#### 2.1.5.1 *Waste Avoidance and Resource Recovery Act 2007;* *Waste Avoidance and Resource Recovery Levy Act 2007*

The WARR Act and the WARR Levy Act came into effect from 1 July 2008.

The WARR Act provides for waste avoidance and resource recovery in WA; establishes a statutory Waste Authority; provides for waste services by local governments in a manner that improves on the provisions available under the *Health Act 1911*; repeals those *Health Act 1911* provisions; allows for product stewardship plans and extended producer responsibility schemes; and provides for the proper administration and disbursement of funds arising from levies placed on certain wastes.

The WARR Act also creates the Waste Avoidance and Resource Recovery Account administered by the Waste Authority, which holds funds from the levy on waste disposed in landfill.

The WARR Levy Act provides for a levy to be imposed on certain wastes, essentially on wastes 'received at disposal premises' as prescribed by way of regulations.

The WARR Regulations 2008 and the WARR Levy Regulations 2008 were approved by the Governor in June 2008 and came into effect on 1 July 2008.

The Waste Authority is a separate statutory authority and produces its own annual report for Parliament.

#### 2.1.5.2 Zero Waste Plan Development Scheme

Phase One of the Zero Waste Plan Development Scheme started in August 2007 and involved 91 per cent of Western Australian local governments.

Phase Two of the scheme has led to a high level of regional collaboration between local governments in waste management planning. In addition to constituted regional councils working to develop regional Strategic Waste Management Plans

on behalf of their member councils, the majority of individual local governments have also indicated their intention to develop regional Strategic Waste Management Plans in partnership with one or more of their neighbouring councils.

Only eight out of the 139 local governments in WA were not participating in Phase Two of the scheme at 30 June 2009. Of those participating, about 90 per cent were working in collaboration with at least one other council in a regional planning approach. Twenty-five regional groupings have been confirmed, ranging in size from groups of two to 12 local governments, with an average size of five member councils.

### 2.1.5.3 Strategic Waste Initiatives Scheme and Community Grants Scheme

Two rounds of funding for the Strategic Waste Initiatives Scheme were advertised and assessed and \$1,222,655 was awarded during the year. In Round Two in 2008, grants totalling \$509,223 were awarded to 10 projects. In Round One in 2009, grants totalling \$713,432 were awarded to 11 projects.

Two rounds of funding for the Community Grants Scheme were advertised and assessed. A total of \$222,770 was awarded during the year. In Round Two in 2008, grants totalling \$111,905 were awarded to nine projects. In Round One in 2009, grants totalling \$110,865 were awarded to 10 projects.

### 2.1.5.4 Sustainability programs

The major, internationally acclaimed *Earth from Above* sustainability exhibition was successfully staged in the grounds of the Perth Cultural Centre from October 2008 to January 2009. The free-to-public outdoor exhibition of large-scale evocative images depicting sustainability issues around the world was extremely popular, attracting more than 250,000 visitors. It proved effective in enhancing community appreciation of and involvement in addressing sustainability issues.

The Sustainability Programs Unit continued to collaborate with and provide high-level advice and practical support to State agencies, local government and non-government organisations on development and implementation of sustainability policy, initiatives and reporting.

### 2.1.5.5 Community education

During 2008–09 the Community Education Branch continued to deliver a wide range of initiatives including:

#### ***Ribbons of Blue***

*Ribbons of Blue* is now in its twentieth year and continues to address educational outcomes while fostering action for a better environment. Across WA, 458 classes in 278 schools took part in the program during the 2008 calendar year, with an estimated 8,500 students being involved. This included at least 50 schools conducting community action projects and 218 teachers undertaking professional development activities.

#### ***AirWatch* schools program**

*AirWatch* staff delivered six workshops for teachers, pre-service teachers and sustainability students. These workshops involved 101 participants from 28 WA schools, two TAFE institutions and Murdoch University. Staff also visited 15 *AirWatch* schools as part of the schools program and 1,039 students took part in a 50-minute *AirWatch* lesson at their school. Students at 70 WA schools took part in the *WeatherWatch* project from July 2008 to June 2009. *WeatherWatch* is a partnership between DEC, Channel Seven Perth and local WA school communities.

## Waste Wise schools

More than 600 schools are now involved in the *Waste Wise* schools program with 30 regional schools joining through the year.

The *Waste Wise* schools team delivered four metropolitan workshops for teachers, with 129 participants from 76 schools. Seventy-six teachers attended regional professional learning workshops.

The *Waste Wise* schools program officer visited 53 schools and spoke to 5,094 students. Of these, 3,397 students from 50 schools took part in a *Waste Wise* lesson, while the remaining 1,697 students were able to take part in conducting a waste audit of their school.

A total of \$160,000 in *Waste Wise* grants was provided to 44 schools (31 metropolitan and 13 regional), which collectively, have 14,097 students.

## TravelSmart Workplace

DEC's *TravelSmart* staff conducted the *TravelSmart* workplace program at 12 workplaces during 2008–09 including the cities of Belmont and Mandurah, King Edward Memorial Hospital for Women, Ruah Community Services and Princess Margaret Hospital for Children who all joined the program in 2009.

## Keep Australia Beautiful Council

The Keep Australia Beautiful Council is a separate statutory authority and receives support from the Community Education Branch of DEC. The Council produces its own annual report for Parliament.

The Council's operations are defined by the *Litter Prevention Strategy for Western Australia 2006–09*.

## 2.1.6 Service 6: Environmental Impact Assessment and Policies for the Environmental Protection Authority

**Service description:** Manage the environmental impact assessment process and coordinate the development of policy for the Environmental Protection Authority to enable sound environmental advice to be provided to the State Government, developers and the public in accordance with statutory functions.

|   | 2008–09<br>Target<br>\$'000 | 2008–09<br>Actual<br>\$'000 | Variation<br>\$'000 |
|---|-----------------------------|-----------------------------|---------------------|
| Expense by service                      | 13,541                      | 13,132                      | (409)               |
| KPI                                     | 2008–09<br>Target           | 2008–09<br>Actual           | Variance            |
| Cost per environmental assessment       | \$40,531                    | \$36,865                    | (\$3,666)           |
| Cost per environmental policy developed | \$475,333                   | \$191,833                   | (\$283,500)         |

## Performance highlights

- Ongoing assessment of the Yannarie Solar Salt Project on the east coast of Exmouth Gulf.
- Assessed several proposals related to the expansion of mineral export facilities at Port Hedland.
- Completed the assessment of the Southern Seawater Desalination plant near Binningup.

- Provided advice on environmental matters associated with the selection of the preferred site for the proposed Kimberley LNG Precinct.
- Prepared the Draft State Environmental (Ambient Air National Environment Protection Measure) Policy which was released by the Minister for Environment for consultation
- Finalisation and release by the EPA of the Water Quality Improvement Plan for the Rivers and Estuary of the Peel-Harvey System – Phosphorus Management.

### 2.1.6.1 Overview

DEC manages the environmental impact assessment process and policy formulation for the Environmental Protection Authority (EPA). This is done through the provision of advice on development proposals and planning schemes and amendments with the aim to ensure that the environment is protected for the community. In relation to environmental policies, DEC supports the EPA's policy functions through environmental protection policies, State environmental policies, and guidance statements and other policy initiatives. DEC supports the EPA through the EPA Services Unit which sits administratively within the department but, for EPA matters, is under the control of the EPA.

The EPA is a separate statutory authority and produces its own annual report for Parliament.

### 2.1.6.2 Major projects

#### **Yannarie Solar Salt Proposal, East of Exmouth Gulf**

The EPA concluded in its report and recommendations (Report 1295) that the proposed Yannarie Solar salt farm is located in an area that presents unacceptably high risks of environmental harm to wetland values and unacceptable levels of uncertainty in relation to long-term management of bitterns.

The key areas where significant impacts or risks of impacts were identified by the EPA were:

- Loss of biodiversity and wetland values in a listed wetland of national importance.
- Significant loss and fragmentation of benthic primary producer habitat and associated ecosystem services as a result of salt pond levee walls blocking the distributional adjustments of algal mat and mangrove communities in response to sea level rise.
- Potential loss of regionally significant mangroves and algal mats caused by the mobilisation of hypersaline groundwater.
- A high level of uncertainty in relation to the proponent's ability to manage the ongoing production of more than one million cubic metres per annum of bitterns C, which is toxic to marine biota and therefore likely to degrade wetland and biodiversity values should bitterns discharge occur either accidentally or be required to maintain salt farm production in the long term.
- Potentially significant and damaging changes to nutrient availability and delivery to coastal waters, affecting productivity in Exmouth Gulf.
- Potential release of acid and heavy metals to coastal wetland environments during dredging operations and from stored acid sulfate sediments following excavation.

The EPA found that the proponent has not been able to demonstrate to the EPA that the environmental values of the area could be maintained with a high degree of certainty, nor that the risks to those values would be acceptably low in the long term.

#### **Southern Seawater Desalination Project**

The EPA assessed the proposal by the Water Corporation of Western Australia to construct and operate a 100 GL per annum reverse osmosis seawater desalination plant at Binningup and provided its report and recommendations to the Minister in Report 1302.

The key issues considered by the EPA related to marine discharge from the proposed plant and impacts on vegetation and wetlands associated with construction of the plant and related infrastructure.

The EPA concluded that marine Environmental Quality Objectives can be met subject to the proponent complying with the recommended conditions which provide for the identification of trigger levels, monitoring, reporting and contingency measures. "The EPA also considered the effects on biota including marine mammals and benthic habitat relating to the construction of the intake and outfall structures. It determined that these should be limited in area and duration, and best practice design and management measures should be employed to minimise impacts.

The EPA acknowledged that approximately 27 hectares of native vegetation would be removed during construction. This includes locations containing four different Priority Ecological Communities, losses of a number of individuals of three different Priority flora species identified in the survey undertaken on behalf of the proponent, and also impacts to two regional ecological linkages. Construction of the plant and infrastructure may directly affect a number of conservation category wetlands and Resource Enhancement Wetlands due to clearing and dewatering.

The EPA concluded that it is unlikely that the EPA's objectives would be compromised provided there was satisfactory implementation by the proponent of the recommended conditions.

### **Kimberley LNG Precinct Strategic Assessment**

DEC made a significant contribution to the functioning of the Northern Development Taskforce, which coordinated the process of identifying a single site suitable for servicing multiple gas resource prospects in the Browse Basin off the Kimberley coast. Site selection was stage one of a two-stage joint coordinated Strategic Environmental Assessment process with the Australian Government. The site selection process involved an extensive technical review, stakeholder consultation and public comment process.

DEC's Strategic Policy Division played a significant role in the site selection process for the LNG Precinct by coordinating a multi-disciplinary group of experts from DEC, other government agencies and non-government institutions. This group provided the technical knowledge of the physical and biological characteristics of potential locations, at the regional context and site scales required to underpin the shortlisting of sites on environmental grounds.

DEC also coordinated targeted studies of the four shortlisted sites, to provide the more detailed information needed for public comment and EPA advice to Government on the site selection process and the four shortlisted locations. This work involved a range of consultants. DEC staff contributed to the design of terrestrial flora, vegetation and fauna surveys, worked collaboratively with CSIRO and the Australian Institute of Marine Science on marine habitat mapping and met-ocean studies, and supported intertidal, coastal geomorphology and landscape assessments of the sites, within tight timelines.

The EPA provided early environmental advice on Stage One of the strategic assessment in December 2008 (Report 1306) in relation to the State Government's site evaluation process for a multi-user liquefied natural gas (LNG) processing precinct (hereafter referred to as the LNG precinct).

The EPA's advice included the following high-level conclusions:

- The EPA strongly supports the concept of undertaking a strategic review of potential LNG processing sites in the Kimberley.
- The EPA strongly supports focusing development at a single site so that environmental impacts can be contained and operational efficiencies maximised in ways that will minimise environmental impacts.
- The EPA considers that the site evaluation review undertaken by the Northern Development Taskforce was a rigorous, inclusive and public

process that resulted in the clear identification of high level environmental risks and values based on the data, resources and time available.

In relation to the four short-listed sites, the EPA advised, based on available information, that:

- Gourdon Bay is the least environmentally constrained of all four shortlisted sites for a gas processing precinct
- the James Price Point area is the least environmentally constrained of the two short-listed sites on the Dampier Peninsula for a gas processing precinct
- North Head is not suitable for large-scale industrial development from an environmental point of view, and
- Anjo Peninsula is not suitable for large-scale industrial development for both environmental and wilderness values reasons.

The EPA's advice was provided under section 16(e) of the *Environmental Protection Act 1986*. The sites have not yet been subject to formal environmental assessment. To address this, the EPA advised that a formal environmental assessment of a strategic proposal would be undertaken under the *Environmental Protection Act 1986* to fulfil this requirement, with future development proposals which fit within the assessed strategic proposal, known as derived proposals, not generally being subject to further assessment by the EPA.

#### **Mungada and Karara iron ore projects**

The EPA reported on the proposals by Karara Mining Limited to develop the Karara Iron Ore Project to mine magnetite ore from Mt Karara; the Mungada Iron Ore Project to mine hematite and magnetite ore from the Blue Hills North and Terapod deposits; and associated mine infrastructure (Reports 1321 and 1322).

The Karara Iron Ore Project proposal indicated the project would lead to the disturbance of approximately 1,723 hectares of land, through the removal of vegetation and excavation of ground. In combination with the infrastructure components that are being considered as separate proposals related to the Karara Iron Ore Project, this would increase to more than 2,330 hectares. The Mungada Iron Ore Project proposal would lead to the disturbance of a further 1,005 hectares of land, through the removal of vegetation and excavation of ground.

The Blue Hills area has very significant regional conservation values. These include a Declared Rare Flora species, a Priority Ecological Community, Priority Flora species, listed fauna species and other flora and fauna of interest including new taxa.

The area of the former Karara pastoral lease in the vicinity of the proposed Karara Iron Ore Project and Mungada Iron Ore Project contains a suite of important conservation values that warrant long-term protection in the conservation estate. However, there is currently no land in the region set aside with the dedicated purpose of protection of these species and other significant conservation values. While the former Karara pastoral lease has been acquired by DEC for conservation purposes, much of the area is also held under granted, or applied for, *Mining Act 1978* leases.

The significant conservation values as well as mineral potential of the Blue Hills area were acknowledged in the 2007 *Strategic Review of the Conservation and Resource Values of the Banded Iron Formation of the Yilgarn Craton*. In relation to the Blue Hills area, the review states that the then Government "indicates a predisposition that in the interests of sustainable economic development in the highly bio-diverse Karara/Mungada/Blue Hills area, to allow the development of the identified magnetite resource in the south west section of the range but the Government is not predisposed to the extraction of the hematite deposits of the area".

The Minister for Environment advised the EPA that the Government would set aside a significant proportion of the Mungada Ridge as a Class 'A' Nature Reserve and statutorily protect that reserve from development. As a result, key environmental values that include



those that would be affected by the Karara Iron Ore Project proposal would be protected in perpetuity. The EPA believes that it is therefore likely that the threat status of the remaining populations of key flora, vegetation communities and fauna would not be increased as a result of future development, and the values could be effectively managed.

In relation to the proposals, the EPA considered that implementation of the Karara Iron Ore Project proposal and the Blue Hills North component of the Mungada Iron Ore Project proposal would not compromise its environmental objectives, provided there was satisfactory implementation by the proponent of the recommended conditions. However, the EPA also recommended that the Terapod deposit should not be developed as it is part of the Mungada Ridge.

### **Gorgon Gas Development Revised and Expanded Proposal**

Chevron Australia Pty Ltd and its joint venture partners' proposal to revise and expand the Gorgon LNG development on the Barrow Island Nature Reserve was the subject of EPA Report 1323.

The EPA reiterated, as a matter of principle, its original view in 2003 that any development on Barrow Island Class 'A' Nature Reserve should not be implemented, particularly given the very high and unique conservation and environmental values of the island.

The EPA recognised in Report 1323 that an LNG processing and export project has been granted environmental approval on Barrow Island, following an appeals process, undertakings by the proponent to provide a number of offsets and the imposition of environmental conditions by the then Minister for the Environment.

Following its assessment of the revised and expanded proposal, the EPA considered that there was an increased likelihood of additional impacts and risks, beyond those assessed as likely from the approved project. Furthermore, based on current knowledge, varying levels of uncertainty remained around those additional impacts and risks and the degree to which they may be manageable under the conditions and other undertakings required for the approved project.

The EPA particularly noted the increased likelihood of additional impacts on high-value environmental assets, especially marine turtles and the high value coral dominated habitat of the Lowendal Shelf, associated with the proposed 50 per cent increase in LNG production and revisions to marine infrastructure. The impacts of the revised and expanded proposal on the long-term viability of the Town Point flatback turtle rookery is of increased concern to the EPA, since this is one of the most significant rookeries in WA.

The EPA considered that the current proposal could only meet the EPA's environmental objectives provided stringent conditions were applied to it.

### **2.1.6.3 Environmental policies**

#### ***Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999***

In accordance with s36(1)(b) of the *Environmental Protection Act 1986*, the EPA has deferred starting the review of the *Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999* as directed by the Minister for Environment. This direction is in effect until 31 December 2009. The EPA released a discussion paper on options for the *Environmental Protection (Kwinana) (Atmospheric Wastes) Policy* in June 2009.

#### ***Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998***

The EPA has initiated the review of the *Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998*. The EPA released a draft *Environmental Protection (South West Agricultural Zone Wetlands) Policy 2008* and review document for public comment in December 2008. The EPA is yet to consider all submissions.

### State Environmental (Ambient Air NEPM) Policy

The Draft Ambient Air State Environmental Policy has been finalised by the EPA and was released by the Minister for Environment in June 2009 as part of her Ministerial consultation phase of the approvals process.

### Environmental Protection (Ozone Protection) Policy 2000

The EPA has recommended to the Minister for Environment that the *Environmental Protection (Ozone Protection) Policy 2000* be revoked as the Commonwealth regulations contained in the *Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995* align with the Environmental Protection Policy. Stakeholder consultation by the EPA confirmed that the Environmental Protection Policy is no longer required. The Minister for Environment has considered this advice and agreed that the policy be revoked.

### Water Quality Improvement Plan for the Rivers and Estuary of the Peel-Harvey System – Phosphorus Management

A Water Quality Improvement Plan for the Rivers and Estuary of the Peel-Harvey System – Phosphorus Management has been finalised by the EPA and was released in November 2008.

### Fertiliser Action Plan

Following a Ministerial announcement in June 2008, the next phase of the Government’s plan was initiated. This included the start of demonstrations to trial low water soluble phosphorus fertilisers on site selected farms, the phase-out of high water soluble phosphorus fertiliser, the establishment of working groups to provide guidance on implementation of the policy, and the proposal for the EPA to prepare a State Environmental Policy for phosphorus fertilisers.

In May 2009, the Government announced the further development and funding of the Fertiliser Action Plan. This included the development of trials for soil amendments in rural and urban environments.

### Ministerial Taskforce on Environmental Data (State Environmental Assessment Knowledge, SEAK)

As an outcome of the Environmental Impact Assessment Review by the EPA, the Minister for Environment announced the establishment of a taskforce to examine the issue of environmental information supporting the Environmental Impact Assessment process. The taskforce started its work in May 2009 and will provide an interim report to the Minister in August 2009 and a final report in November 2009.

#### 2.1.6.4 Reports produced during 2008–09

EPA reports and bulletins in type order

##### Strategic Environmental Assessment

| Bulletin number | Title  | Release date  |
|-----------------|--|---------------|
| 1318            | Sussex Location 413 Yallingup – Smiths Beach Development Guide Plan: Canal Rocks Pty Ltd | 20 April 2009 |

##### Environmental Review and Management Plan

| Bulletin number | Title  | Release date |
|-----------------|--|--------------|
| 1295            | Yannarie Solar Salt East Coast of Exmouth Gulf: Straits Salt Pty Ltd | 23 July 2008 |

## Public Environmental Review

| Bulletin number | Title  | Release date  |
|-----------------|--|---------------|
| 1294            | 40MW Biomass Power Plant, Manjimup: Western Australia Biomass Pty Ltd  | 7 July 2008   |
| 1302            | Southern Seawater Desalination Project: Water Corporation  | 6 Oct 2008    |
| 1305            | 1,000 Tonnes Per Year Production Of Barramundi In Cone Bay, Shire Of Derby-West Kimberley: Maxima Pearling Company Pty Ltd               | 24 Nov 2008   |
| 1307            | Devil Creek Gas Development Project: Apache Energy Ltd   | 5 Jan 2009    |
| 1308            | Tutunup South Mineral Sands Project: Iluka Resources Limited   | 5 Jan 2009    |
| 1311            | Utah Point Berth Project (Stage B): Port Hedland Port Authority  | 12 Jan 2009   |
| 1321            | Karara Iron Ore Project: Karara Mining Limited   | 28 April 2009 |
| 1322            | Mungada Iron Ore Project: Karara Mining Limited  | 28 April 2009 |
| 1323            | Gorgon Gas Development Revised and Expanded Proposal: Barrow Island Nature Reserve: Chevron Australia Pty Ltd                            | 30 April 2009 |
| 1328            | Koolanooka-Blue Hills Direct Shipping Ore Mining Project: Sinosteel Midwest Corporation Limited  | 2 June 2009   |
| 1330            | Fremantle Port Inner Harbour and Channel Deepening, Reclamation at Rous Head and Offshore Placement of Dredged Material: Fremantle Ports | 15 June 2009  |

## Proposal Unlikely to be Environmentally Acceptable

| Bulletin number | Title   | Release date |
|-----------------|---|--------------|
| 1313            | Granite Extraction, Lot 2036 Bird Road, Torbay: A. D. Contractors Pty Ltd | 2 Feb 2009   |

## Section 48A

| Bulletin number | Title  | Release date  |
|-----------------|--|---------------|
| 1316            | Shire of Waroona Town Planning Scheme No. 7 Amendments 4 and 17 – Lots 1 and 3 Southern Estuary Road, Lake Clifton | 30 March 2009 |
| 1326            | City of Geraldton-Greenough Town Planning Scheme No. 1A Amendment 4 – Brand Highway, Cape Burney                   | 25 May 2009   |

## Assessment on Referral Information/Environmental Protection Statement

| Bulletin number | Title   | Release date |
|-----------------|---|--------------|
| 1296            | Extension Hill Hematite Haulage: Mt Gibson Mining   | 21 July 2008 |
| 1304            | Dredging at Finucane Island, BHP Billiton RGP5 Project, Port Hedland: BHP Billiton Iron Ore   | 17 Nov 2008  |
| 1317            | Silicon Project, Kemerton and Mine at Moora - Addition of a Fourth Submerged Arc Furnace at the Kemerton Smelter: Simcoa Operations Pty. Ltd. | 6 April 2009 |
| 1299            | Cooljarloo Mine – Falcon Extension: Tiwest Pty Ltd  | 11 Aug 2008  |
| 1301            | Albany Protected Harbour Development, Princess Royal Harbour, Albany: LandCorp  | 8 Sept 2008  |
| 1303            | Koolyanobbing Iron Ore – W2 pit – mining below the groundwater table: Portman Iron Ore Limited  | 17 Nov 2008  |
| 1309            | Balla Balla Magnetite Project: Ferro Metals Australia Pty Ltd   | 5 Jan 2009   |
| 1310            | Western Extension to the Dardanup Mineral Sands Project to include the Burekup Mineral Sands Deposit: Doral Mineral Sands Pty Ltd             | 5 Jan 2009   |
| 1325            | Western Turner Syncline-Section 10 Iron Ore Mine: Rio Tinto Pty Ltd   | 11 May 2009  |

**Section 46**

| Bulletin number | Title  | Release date  |
|-----------------|--|---------------|
| 1297            | Austral Bricks (previously Prestige Brick) brickworks at Midland – Proposal under S46 of the EP Act to change conditions and commitments of Statements 002 and 012 (Assessment No. 1734): Austral Bricks | 4 Aug 2008    |
| 1298            | Brick and tile works, Malaga – Proposal under S46 of the EP Act to change conditions and commitments of Statements 003 and 352 (Assessment No. 1740): Austral Bricks                                     | 4 Aug 2008    |
| 1300            | Jack Hills iron ore mine project (ministerial statement 727) – Proposed change to environmental conditions under S46 of the EP Act: Crosslands Resources Ltd   | 18 Aug 2008   |
| 1314            | Magellan Lead Carbonate Project, Wiluna – Containerised Lead Carbonate Exports through the Port of Fremantle. Additional advice on draft environmental conditions: Magellan Metals Pty Ltd               | 2 Feb 2009    |
| 1315            | Sand excavation lot 242 Corio Road, Pinjarra – extension of approval: Bronzewing Investments Pty Ltd   | 9 Feb 2009    |
| 1320            | Pardoo direct shipping iron ore project – proposal under s46 of the EP Act to remove condition 8-1 related to troglofauna sampling: Atlas Iron Limited   | 28 April 2009 |
| 1324            | Gnangara Mound Groundwater Resources – Change to Environmental Conditions: Department of Water   | 4 May 2009    |
| 1327            | Perth Metropolitan Desalination Proposal – Water Quality Management, Change to Implementation Conditions: Water Corporation  | 25 May 2009   |
| 1331            | Bluewaters Power Station – proposal to remove Environmental Management Commitment 7.2  | 29 June 2009  |
| 1332            | Bluewaters Power Station Phase II – proposal to remove Environmental Management Commitment 7.2   | 29 June 2009  |

**Section 16**

| Bulletin number | Title  | Release date |
|-----------------|--|--------------|
| 1306            | Kimberley LNG Precinct: Minister for State Development   | 19 Dec 2008  |
| 1329            | Advice on Conservation Values and Review of Nature Reserve Proposals in the Lake Cronin Region | 2 June 2009  |

**Guidance Statements**

| Bulletin number | Title   | Release date |
|-----------------|---|--------------|
| 20              | Sampling of Short Range Endemic Invertebrate Fauna for Environmental Impact Assessment in Western Australia | 25 May 2009  |

**Environmental Protection Bulletin**

| Bulletin number | Title                                      | Release date  |
|-----------------|--|---------------|
| 1               | Environmental Offsets – Biodiversity       | 8 Sept 2008   |
| 2               | Port Hedland Dust and Noise                | 12 Jan 2009   |
| 3               | EIA Review – Interim Assessment Procedures | 30 March 2009 |
| 4               | Strategic Advice – Dawesville to Binningup | 4 May 2009    |
| 5               | Deep Drainage in the Wheatbelt             | 29 June 2009  |

## Noise regulation 17

| Bulletin number | Title   | Release date  |
|-----------------|---|---------------|
| 1312            | Application by Talison Greenbushes mining Operations for a noise Variation under Noise Regulation 17: Talison Greenbushes | 19 Jan 2009   |
| 1319            | Port of Esperance Noise Regulation 17 Variation: Esperance Port Authority   | 28 April 2009 |

## 2.1.7 Service 7: Coordinate the response to Climate Change

**Service description:** To provide leadership in the development and implementation of strategies to reduce greenhouse gas emissions and adaptation initiatives to reduce the impact of climate change for Western Australia.

### Performance summary

|                    | 2008–09<br>Target<br>\$'000 | 2008–09<br>Actual<br>\$'000 | Variation<br>\$'000 |
|--------------------|-----------------------------|-----------------------------|---------------------|
| Expense by service | 15,233                      | 5,110                       | (10,123)            |

| KPI  | 2008–09<br>Target | 2008–09<br>Actual | Variance |
|--|-------------------|-------------------|----------|
| Cost of administering Low Emissions Energy Development Fund as a percentage of total funds | 0.30%             | 0.25%             | (0.05%)  |

### Performance highlights

- Commenced the development of the Climate Change Adaptation and Mitigation Strategy (CCAMS) for Western Australia.
- Completed the second round of the Low Emissions Energy Development (LEED) Fund applications and made recommendations to the Minister for Environment and the Minister for Energy to support Carnegie Corporation in the development of a 50 Megawatt wave power station.
- Coordinated the Complementary Measures Review for WA in relation to the Australian Government's proposed Carbon Pollution Reduction Scheme.
- Completed a major study identifying greenhouse gas abatement options for multiple sectors in Western Australia.
- Developed guidelines for local governments wanting to move towards carbon neutrality.
- Completed a project in collaboration with the Australian Government to identify the impacts of climate change on Indigenous communities in the tropical north and assess the vulnerability of these communities.
- As a platinum sponsor, coordinated the State Government contribution to the Greenhouse 2009 International Conference in WA.
- Completed the Longitudinal Study of Community Attitudes to and Preferences for Mitigation and Adaptation Policies in Western Australia in collaboration with Edith Cowan University.
- Completed the Margaret River Tourism Project in collaboration with the Sustainable Tourism Cooperative Research Centre.
- Completed the Climate Change Education Partnership project aimed at developing climate change school curriculum and training for school teachers.

### 2.1.7.1 Overview

Through its Office of Climate Change (OCC), DEC is the lead coordinating agency for climate change-related policy in the State Government.

The OCC is progressing the State Government's commitment to develop the climate change adaptation strategy with mitigation measures for WA. The initial phase of the strategy development includes an issues paper for Climate Change Adaptation and Mitigation Strategy to be released in the second half of 2009.

### 2.1.7.2 Significant achievements in the 2008–09 financial year

#### *Low Emissions Energy Development Fund (LEED)*

Carnegie Corporation was announced as the sole recipient for funding under the second funding round to support development of a 50 Megawatt wave power station and the commissioning of a five Megawatt pilot plant.

#### *Climate Change Adaptation and Mitigation Strategy*

The OCC progressed the development of the Climate Change Adaptation and Mitigation Strategy which will cover each major sector of Western Australian industry as well as urban planning agencies and State water and energy utilities. It will also assess the likely impacts and risks of climate change to various sectors of the economy and to communities and make recommendations on mitigation and adaptation actions.

#### *Indian Ocean Climate Initiative Stage 3*

Research continued into the nature and impacts of climate change on WA. The Indian Ocean Climate Initiative (IOCI) is a \$4 million investment by the State Government in partnership with CSIRO and the Bureau of Meteorology to provide basic climate research in WA. Stage 3 is building on the existing work completed by IOCI to provide better understanding of the current and future climate and the impact of changes particularly in north-west WA. This investment will enable the development of better projections of regional weather to allow people and businesses, as well as State Government agencies, to plan and adapt to a changing climate.

#### *Complementary Measures Review*

The OCC coordinated the Complementary Measures Review for WA with the aim of identifying those policies that are non-complementary with the Australian Government's proposed Carbon Pollution Reduction Scheme.

#### *Climate Change in Local Government Partnership Agreement*

The *Climate Change in Local Government Partnership Agreement* between DEC and the WA Local Government Association was progressed following its establishment in June 2008 for the purpose of building the capacity of local governments to be able to respond to climate change issues. A web-based toolkit for local governments was developed to assist local government respond to climate change issues and to incorporate climate change considerations into policies and decision-making processes.

#### *Impacts of climate change on Indigenous communities*

In partnership with the Australian Government, a study was commissioned to identify the impacts of climate change on Indigenous communities in the tropical north and assess the vulnerability of these communities and to assist in identifying knowledge gaps and future on-ground priorities.

### 2.2.1 Strategic Development and Corporate Affairs

The Strategic Development and Corporate Affairs (SDCA) Division provides corporate leadership in communications and organisational development for the department.

It works with other areas of DEC to provide services and products that support the department in achieving its mission and maintaining community trust. Responsibilities include media relations, publications and online services, public participation, events coordination, advertising, marketing, *EcoEducation* programs and corporate planning.

The division provided communications support for other sections of the department on a range of major issues and programs in 2008–09, including:

- media management of major fires at Bridgetown and Ferndale in January
- media management of a mass whale stranding on 23 March 2009 at Hamelin Bay
- media activity to advise of the advancement of cane toads towards the WA border and to communicate the scientific and on-ground measures being taken to control them
- development of brochures, newsletters and other informational products to prepare Western Australians for the arrival of cane toads
- planning and holding the 'Over the Horizon' forum on 1 December 2008, which saw 120 senior department managers come together, for the first time
- building and developing the website for the IOCI, which went live in May 2009, and
- designing the whole-of-Government display for the Greenhouse 2009 International Conference.

DEC's annual Environment Awards attracted a record 107 entries – a 55 per cent increase from previous years – across its 12 categories. The awards recognise organisations, community groups and individuals that are setting new benchmarks in environmental care.

In addition to developing quality publications and online services to support major departmental initiatives, the division produced a range of saleable products. As well as producing four issues of the quarterly *LANDSCOPE* magazine, the division contributed three new Bush Book titles and two new books to the Discovering series. Another new book, *Shark Bay: Twin bays on the edge*, was launched in November and the DEC-published children's book *Tuart Dwellers* was short-listed for the Children's Book Council of Australia – Eve Pownall Award, listed as an 'Honour Book' in the Picture Book of the year Notable Books category and won the 2009 Wilderness Environment Award for Children's Literature.

In June 2009, DEC replaced its A3 monthly printed newsletter – *Environment and Conservation News* – with a colour PDF newsletter available on DEC's website or through email subscription. This move will eliminate the printing and distribution costs associated with the newsletter and will minimise the impact production of the newsletter has on the environment.

In July 2008, DEC's new website – [www.dec.wa.gov.au](http://www.dec.wa.gov.au) – went live. The new website brought together all the content services and applications of the former departments of Conservation and Land Management and Environment. Work also continued on the development of a single intranet site, which was close to completion at 30 June 2009.

Media, publications and marketing support was also provided for programs including *Waste Wise*, *Ribbons of Blue* and *Clean Up Australia* and Keep Australia Beautiful programs including *Tidy Towns*, *Sustainable Communities* and the National Litter Index.

*LANDSCOPE Expeditions* conducted five research expeditions in 2008. Sixty-two volunteers assisted scientists and regional staff on field research programs as part of larger DEC programs.

Highlights included the discovery of a *Dasyercus* on the Canning Stock Route expedition. This small carnivorous marsupial had not been recorded in the area for more than 70 years. The discovery of Margaret's blind snake was made during the

biological survey expedition to the Neale Junction Nature Reserve in the Great Victoria Desert. Previous to this expedition, only a single individual had ever been recorded.

*EcoEducation* continued its busy programs for schools throughout the year with about 15,000 students and teachers taking part in *EcoEducation's* school programs and professional development days.

Four new *EcoEducation* programs were introduced to the Dryandra Woodlands Ecology Centre and a new *EcoEducation* excursion, titled *Leave No Trace*, targeting outdoor education teachers and students was implemented at DEC's *EcoEducation* centres. In addition, a new in-school program, *Curious in the environment*, was developed for Early Childhood students adding to DEC's *Western Shield* schools program, *Saving Threatened Fauna*. The popular resource *Catchment Carers' Trail* and was revised.

During 2008–09, *EcoEducation* forged a partnership with Curtin University which led to a three-week placement at the Perth Hills Centre for a Curtin University student teacher. *EcoEducation* also provided professional learning sessions to teachers and other groups during the year, including a three-day Ningaloo Professional Learning Symposium for teachers, accompanied by the Western Australian Chief Scientist.

*Bush Rangers WA*, part of the Cadets WA Program, celebrated its tenth year in November – the same month it was named finalist in the 'Creating a healthy, safe and vibrant Western Australia' category of the 2008 Premier's Awards for Excellence in Public Sector Management. At 30 June 2009, 1,255 cadets and 143 instructors were taking part in the program in 42 *Bush Ranger* units around the State contributing to local conservation and community projects.

A major update and revision was carried out to the program's resources in 2008–09 with the development of a new *Introduction to the Bush Rangers WA Program* and new manuals for the program's three levels.

DEC's Public Participation Planning Unit planned and implemented community information sessions in Exmouth, Coral Bay and Carnarvon about the World Heritage nomination of Ningaloo Coast; in Esperance about the lead/nickel issue; in Yarloop about DEC's air quality monitoring study in relation to the Alcoa Refinery in Wagerup; in Midland to communicate the final results of the Midland Background Air Quality Study; and to develop a draft management plan for Parks and Reserves of the Lake Muir, Perup, Kingston, Tone and Unicup area.

The unit also planned and facilitated strategic planning sessions for the Native Vegetation Conservation Branch and the Works Approval and Emissions Licensing Section; assisted the OCC to develop a communication plan and a public participation strategy for the Climate Change Adaptation and Mitigation Strategy; delivered public participation training to 16 staff; and planned and implemented a trial of Community Based Participatory Research at Perth Modern School with the Air Quality Management Branch. A unit representative was also involved in the steering committee for WA's first Youth Environment Conference.

### 2.2.2 Environmental Enforcement Unit

#### Enforcement support

The Environmental Enforcement Unit (EEU) contributes to the protection of the environment through the provision of quality investigative and enforcement support to the department's environment stream.

The unit is responsible for taking the lead role in investigations into major environmental incidents and has conducted and assisted with departmental investigations into a broad range of environmental events. The EEU investigators worked during the year to successfully coordinate and conclude investigations throughout the State in partnership with regional environmental staff, resulting in prosecutions and other high-level sanctions.

As part of its 'quality assurance' role and commitment to promoting and improving the investigative skill sets of officers throughout the State, the EEU is involved in delivering



the Regulatory Officers Training Course (ROTC) in consultation with the department's Regulatory Training Section. The two-week ROTC is held at the WA Police Academy in Joondalup and involves the co-delivery of generic investigations and DEC agency-specific training. Since its inception in 2005, more than 300 departmental officers have benefited from ROTC training with 26 officers completing the post work required to achieve the nationally recognised qualification, Certificate IV in Government (Investigation).

The EEU is committed to ensuring improved environmental enforcement outcomes through delivering training, mentoring and providing investigative support through working partnerships with regional and branch incident owners.

### 2.2.2.1 Finalised environmental prosecutions for 2008–09

The following DEC environmental prosecutions were subject to final court determination during 2008–09. Several other matters remain before the courts and are expected to be finalised within the next 12 months.

#### **Merredin Magistrates Court**

On 2 July 2009 a 68-year-old Mukinbudin man faced court to answer two charges of unauthorised clearing of native vegetation contrary to Sections 51C and 99Q of the *Environmental Protection Act 1986*.

It was alleged that between 18 July 2004 and 16 January 2007 an estimated 169 hectares of native vegetation had been cleared from three properties in the Shire of Mount Marshall.

It was also alleged that the accused, without authorisation, caused to be cleared a total of 90.5 hectares of native vegetation from two properties, of which he is the owner, in Dalgouring Road Wailki (Charge 1) and allowed a further 79.2 hectares of native vegetation to be cleared from a property, of which he is the occupier, in Moondon Road, Bonnie Rock (Charge 2).

The man pleaded guilty and was fined \$4,000.

#### **Joondalup Magistrates Court**

On 26 January 2009, a 45-year-old Victoria Park man appeared in the Joondalup Magistrates Court for allegedly illegally dumping waste cooking oil into a drain contrary to section 23 of the *Litter Act 1973*.

It was alleged in court, during a contested hearing, that, on Wednesday 25 April 2007, the accused, a driver for a waste disposal company, attended a fish and chips shop in the Quinns Village Shopping Centre, Quinns Rock and, after collecting two 205-litre metal drums containing unwanted waste cooking oil, drained 100 litres of cooking oil from one of the drums into a nearby storm water drain.

The Magistrate accepted the facts, however found that the accused had acted during the existence of an emergency and subsequently acquitted him because of this defence.

Costs of \$3,000 were awarded against the department.

#### **Kalgoorlie Magistrates Court**

On 10 June 2009, the Esperance Port Authority appeared in the Kalgoorlie Magistrates Court and pleaded guilty to the following charges:

1. Caused Pollution Section – 49(3) *Environmental Protection Act 1986*.
2. Failed to Notify the CEO of a Discharge of Waste Likely to Cause Pollution – Section 72(1) *Environmental Protection Act 1986*.
3. Caused Pollution – Section 49(3) *Environmental Protection Act 1986*.

4. Failed to Notify the CEO of a Discharge of Waste Likely to Cause Pollution – Section 72(1) *Environmental Protection Act 1986*.
5. Emitted an Unreasonable Emission – Section 49(5) (a) *Environmental Protection Act 1986*.
6. Caused an Emission Not in Accordance with any conditions of a Licence – Section 56(1) *Environmental Protection Act 1986*.

The port was remanded to the Esperance Court on 11 September 2009 for sentencing.

### **Moora Magistrates Court**

On 3 July 2008, a 49-year-old Badgingarra man appeared in Moora Court for contravening a notification that rejected his native vegetation clearing proposal contrary to sections 47(4) and 99Q of the *Environmental Protection Act 1986*.

DEC alleged in court during a contested hearing that satellite imagery showed the man had cleared an estimated 450 hectares of native vegetation on his Badgingarra property between 12 November 2003 and 11 January 2005. It was alleged the clearing occurred after the man was notified that his proposal to clear the land had not been approved.

The man was acquitted and no costs were awarded.

### **2.2.2.2 Modified penalty fines**

Modified penalty fines are administered under Section 99A of the *Environmental Protection Act 1986* which empowers the department to issue a fine where statutory conditions are met. These conditions include minimising and remedying the impacts of the incident and amending procedures to ensure a similar incident does not reoccur. The amount of the fine is determined by legislation which directs that the first and second offences will be at 10 and 20 per cent respectively of the maximum penalty available.

If the fine is not paid within the specified time, the department will commence prosecution action.

#### **Modified Penalty Notice 3/2008**

DEC issued a \$25,000 modified penalty to a mining company in Kalgoorlie for allegedly causing environmental harm under Section 50B (2) of the *Environmental Protection Act 1986*.

The penalty was issued after an investigation which identified that, on 6 November 2006, the company allegedly caused a spill of tailings from a tailings storage facility at one of their facilities located approximately 25 kilometres north of Kalgoorlie. It is alleged that the spill impacted on vegetation.

The company accepted and paid the modified penalty fine.

#### **Modified Penalty Notice 4/2008**

DEC issued a \$12,500 modified penalty to a mining company in Kambalda for allegedly contravening its licence under section 58(1) of the *Environmental Protection Act 1986*.

The penalty was issued after an investigation conducted by the department's Goldfields Region identified that, on 17 November 2006, the company allegedly failed to conduct visual inspections of their tailings storage area, located at their mining facility 15 kilometres south of Kambalda, as required by their licence.

Subsequent to this failure an estimated 150 kilolitres of hyper saline water discharged from a return water dam into the environment.

The company accepted and paid the modified penalty fine.

### 2.2.2.3 Environmental Enforcement Statistics 2008–09

Environmental Enforcement actions:

|  |       |
|--|-------|
| Environmental Complaints Received                            | 1,718 |
| Confirmed Environmental Incidents                            | 854   |
| Environmental Field Notice (caution)                         | 241   |
| Environmental Protection Notice                              | 2     |
| Infringement Notice  | 83    |
| Letter of Warning  | 58    |
| Licence Review/Amendment                                     | 12    |
| Modified Penalty Brief                                       | 2     |
| Prescribed Action  | 4     |
| Prosecution Brief  | 11    |
| Site Inspection  | 373   |
| Site Visit   | 745   |
| Statutory Direction/Notice                                   | 4     |
| Stop Work Order  | 2     |
| Keep Australia Beautiful Council (KABC) Litter Infringements | 4,565 |

### 2.2.3 Legal Services Branch

The Legal Services Branch provides general legal advice to DEC in relation to legal issues of significance to the department, including issues relating to the legislation administered by the department and legislative reform.

#### 2.2.3.1 Litigation

The department received six writs during the reporting period. All relate to claims for personal injury sustained or property loss incurred as a result of alleged negligence by the department.

Three of the actions relate to alleged property loss from wildfire on 30 December 2007 when a road was opened to allow traffic to pass through an area that was affected by fire.

The remaining actions relate to personal injury claims against the department.

#### 2.2.3.2 Freedom of Information

The Legal Services Branch manages the processes for the department under the *Freedom of Information Act 1992*. The department's Information Statement 2009–10 accurately reflects the functions of the department and its related agencies, the nature of the information held by the department and its related agencies, and that information which is made available to the public. The Information Statement can be located on the department's website.

During the year, the department received 260 applications for access to information, 13 of which were subsequently withdrawn. The average time taken to process each application was 18 days.

The department refused to deal with one application which was considered too large and would divert a substantial and unreasonable portion of the department's resources away from its other operations.

The department received 13 applications requesting internal review of the department's decision. Of those applications, six went to the Information Commissioner for external review.

### 2.2.4 Fire Management Services Branch

#### 2.2.4.1 Fire season 2008–09

The 2008–09 fire season in southern parts of WA experienced two different sets of fire weather conditions in the first and second half of the financial year. Regular rainfall events during the spring and early summer months restricted the prescribed burning days, particularly in the southern forests near Pemberton and Manjimup. The summer months and the autumn burning period were abnormally dry, leading to a severe restriction to the prescribed burning program. The forest fuel conditions in the forests between Perth and Bridgetown were too dry to burn until the first significant rainfall in mid-May 2009. As a result, very limited prescribed burning was possible in the northern jarrah forests in autumn 2009. However, within the southern forests a productive period of prescribed burning was realised.

The area of the 648 wildfires attended and monitored by DEC staff throughout the State was about 1.74 million hectares. Of this area, about 88,111 hectares occurred in the Pilbara Region, 32,020 hectares in the Goldfields Region, 1.51 million hectares in the Kimberley Region, 25,216 hectares in the South Coast Region, 58,552 hectares in the Midwest Region, 1,633 hectares in the Wheatbelt Region and about 23,910 hectares in the three forest regions (Swan, South West and Warren).

Lightning-caused fires represented about 12 per cent of all wildfires attended by DEC staff. This is below the 10-year average of about 22 per cent. Deliberately lit or arson-caused fires started 57 per cent of all fires. This is a significant increase on the 10-year average of about 44 per cent.

Other causes of wildfires included accidental fires (10 per cent), escapes from private burns (five per cent) and unknown (15 per cent). Nine small wildfires that were the result of escapes from DEC prescribed burns represented one per cent of all fires. Eight prescribed burns escaped in the forest regions.

DEC staff attended 558 wildfires in the three south-west forest regions. These fires burned about 15,596 hectares of DEC-managed land and an additional 8,314 hectares was burnt on non DEC-managed lands. Five of the biggest fires (in the forest regions) accounted for 19,566 hectares (82 per cent). Ninety-two per cent of all fires were contained to less than 20 hectares due to the early detection and DEC's rapid fire suppression response. In many cases the fires were rapidly contained where they burned into low fuels within previously prescribed burned areas.

The extremely dry summer conditions that prevailed from December 2008 affected most of the State and resulted in numerous large wildfires. The most serious wildfires attended by DEC forces occurred in DEC's South West and Swan regions.

The Bridgetown fire that occurred on 15 and 16 January 2009 coincided with days of Very High Fire Danger and seriously threatened the town of Bridgetown and nearby subdivision of Highland Estate. The fire burned out 5,877 hectares of mostly private property lands (3,400 hectares) and resulted in the loss of seven houses and nine sheds, and 1,600 hectares of mostly privately owned pine and blue gum plantations. The fire fighting effort involved 411 DEC staff over 12 shifts. DEC was strongly supported by local bushfire brigades, the Fire and Emergency Services Authority (FESA), WA Police and several support organisations.

On 16 January 2009, DEC in conjunction with FESA and the local bushfire brigades dealt with a very large fire that started near Two Rocks, and rapidly spread through the northern sections of Yanchep National Park and pine plantations to the north and east of the Yanchep National Park. The fire area totaled 10,270 hectares of which 1,836 hectares was within Yanchep National Park, 2,664 hectares was on private property and 5,760 hectares was on State forest, of which about 4,000 hectares was Forest Products Commission pine plantation. This fire involved 165 DEC staff over six shifts.

During the same period in January, DEC's fire fighting forces had to contain several fires in the Perth Hills District and the Wheatbelt, Midwest, South Coast and Pilbara regions.

On 19 January 2009, a fire at Lewana, 20 kilometres north-west of Bridgetown, burned through 640 hectares, including 380 hectares of pine plantations and 180 hectares of private lands. Another pine plantation fire occurred on 14 February 2009 at Ferndale and burned 1,700 hectares, including 1,100 hectares of pine plantations and 140 hectares of farmlands. All these fires resulted in significant damage to plantation timber managed by the Forest Production Commission.

The long fire season meant that a large number of fire suppression and fire management staff were required to be rostered late into the fire season to provide rapid and effective fire detection, fire suppression and recovery operations.

Five departmental pre-formed incident management teams comprising approximately 60 incident management staff in each team were rostered throughout the fire season. These pre-formed teams were engaged at five large fires during the year. These teams consisted of departmental personnel who train together and are ready during the bushfire season to respond to large incidents. The mobilisation of teams to these large, complex fire incidents proved very effective.

Details on the wildfires attended by DEC staff are provided on the following pages and in the tables in Appendix H.

### 2.2.4.2 Prescribed burning

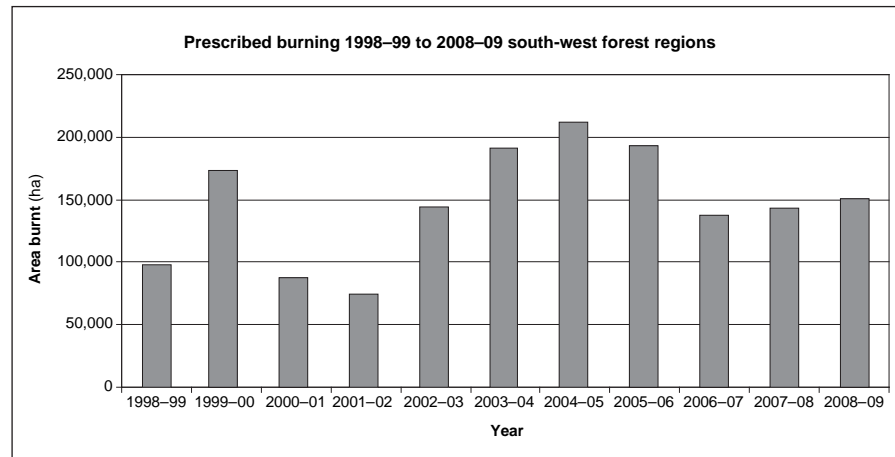
Each year the department plans and implements prescribed burning on DEC-managed lands throughout the State for three primary purposes: to protect and conserve biodiversity values and community assets; to reduce the occurrence and impacts of large, intense wildfires; and to regenerate and protect forest ecosystems following harvesting operations or other disturbances. In many cases these outcomes are achieved together within a prescribed burn.

The annual indicative prescribed burning target for the south-west forest regions in the 2008–09 financial year was determined to be 200,000 hectares. In order to meet the objectives, the department's Master Burn Planning process identified more than 300,000 hectares that was available for prescribed burning in the south-west forest regions for the 2008–09 burning seasons. The available burn area, which is in excess of the annual target, provided the flexibility required to take advantage of any favourable burning situations throughout the south-west.

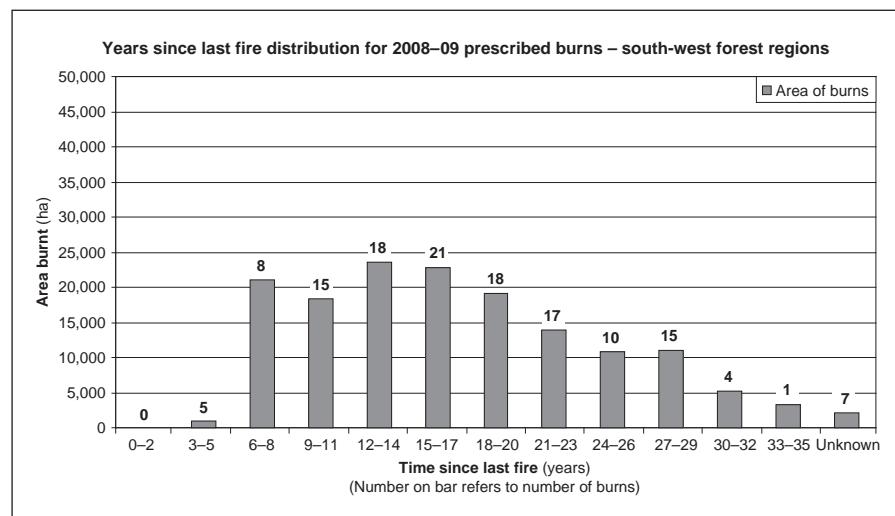
In the south-west forest regions, the prescribed burn program for 2008–09 achieved 151,818 hectares, including 715 hectares that were burnt for pine plantation protection. Forty-five per cent of all burns were undertaken in the spring–early summer period (September to December 2008); 44 per cent in the autumn–early winter period (April to June 2009); eight per cent in summer–early autumn period (January to March); and three per cent in winter (July and August 2008).

The inability to achieve the 200,000 hectares annual target in the south-west forest regions during 2008–09 was due to the limited number of suitable burning days in spring 2008 (too wet in southern forests) and autumn 2009 (too dry in northern forests). There were also significant constraints to burning due to concerns over smoke impacts on wine grapes and major population centres.

The following graph shows the achievement of prescribed burning in the south-west forest regions from 1998–99 to 2008–09. The decline in the burning from 1998 to 2003 reflects the impacts of drought and unfavourable burning conditions that prevailed in these years. The average annual area of burning achieved during the six years since 2002–03 has been about 172,000 hectares.



The chart below shows the year of last burn of the vegetation/fuel within all the prescribed burns conducted in the south-west forest regions in 2008–09. Approximately 81 per cent of the burns contained fuels that had not been burnt since 1997, or more than 11 years ago.



In addition to the burn programs achieved in the south-west forest regions, 902,000 hectares of prescribed burning was undertaken by DEC in areas other than the south-west forest regions. Many of these burns were open-edge burns and aerially ignited wind-driven burns that provided protective buffers intended to limit the spread of wildfires from burning out entire reserves, thus protecting local biodiversity and nearby community assets and maintaining a diversity of habitat for local biota. The burns were carried out on DEC-managed lands as well as on unallocated Crown lands and unmanaged reserves within the rangelands.

The combined total area of prescribed burning undertaken throughout the State was 1,053,646 hectares which is the largest total area ever achieved by the department.

Details on the prescribed burn areas achieved are provided in Appendix H (H1–6).

### 2.2.4.3 Fire preparedness on unallocated Crown lands

Since July 2003, DEC has been responsible for the coordination and on-ground management of fire risk prevention and fire preparedness works on rural unallocated Crown land and unmanaged reserves. This Crown land comprises approximately 89 million hectares.

The fire preparedness works undertaken in 2008–09 included the upgrade and maintenance of about 975 kilometres of fire access and firebreaks, establishment of 110 kilometres of fuel breaks by scrub rolling and slashing; about 250 kilometres of prescribed burning of burn buffers; and establishment and maintenance of water supplies.

Unallocated Crown land fire management works were undertaken near Ravensthorpe, Shark Bay, Kimberley (Kalumburu and Oombulgurri Aboriginal communities), Bullfinch and Yellowdine.

A significant proportion of the unallocated Crown land fire access and burning program was part funded by the Bushfire Mitigation Program that is equally funded by the Australian and State governments.

Fire preparedness works completed under the Bushfire Mitigation Program are listed in the table below.

**Table 21: Fire preparedness works**

|              | Firebreak access and maintenance (km) | Scrub rolling/ slashing and vegetation modification (km) | Open-edge burning (km) UCL | Water Points UCL | Bridge replacement | Culverts | Strategic roads (km) |
|--------------|---------------------------------------|--|----------------------------|------------------|--------------------|----------|----------------------|
| Kimberley    | 268 (UCL 160)                         |  | 200                        |                  |                    |          |                      |
| Goldfields   | 205 (UCL 205)                         | 72 (UCL 72)  | 50                         |                  |                    |          |                      |
| Midwest      | 334 (UCL 54)                          |  |                            | 2                |                    |          |                      |
| Wheatbelt    | 429 (UCL 429)                         |  |                            |                  |                    |          |                      |
| South West   |                                       |  |                            |                  |                    |          | 14                   |
| Warren       |                                       |  |                            |                  | 1                  | 3        | 50                   |
| South Coast  | 162 (UCL 127)                         | 39 (UCL 39)  |                            |                  |                    |          |                      |
| Swan         |                                       |  |                            |                  |                    |          | 5                    |
| <b>TOTAL</b> | <b>1,398 (UCL 975)</b>                | <b>111 (UCL 111)</b>                                     | <b>250</b>                 | <b>2</b>         | <b>1</b>           | <b>3</b> | <b>69</b>            |

UCL – unallocated Crown land

### 2.2.4.4 Aerial water bombing operations

DEC contracted eight fixed-wing water bomber aircraft during the peak summer months of the 2008–09 fire season to provide rapid aerial suppression capability in the South Coast Region, south-west forest regions, and the Perth outer metropolitan area. One pair of Dromader aircraft was based at Manjimup. A pair of Air Tractor 602 aircraft was based at Albany and a pair of Air Tractor 802 was based at each of Bunbury and Perth. These eight aircraft provided an aerial rapid-attack capability to assist ground crews in the initial attack on wildfires. In addition to the fixed-wing aircraft, four light helicopters (helitankers) and a Type 1 Helicopter (Sikorsky) were contracted by FESA to provide coverage for the Perth urban and nearby rural areas.

The fixed-wing aircraft and helitankers were used successfully in combination on several bushfires that threatened residential areas in the outer metropolitan area of Perth.

The eight fixed-wing aircraft contracted by DEC from 15 December 2008 to 28 April 2009 attended 142 wildfires stretching from Jurien Bay to Esperance. These aircraft dropped

992 loads and flew 575 operational hours. This compares with 938 loads and 543 hours in 2007–08.

During the Bridgetown and Two Rock fires that occurred at the same time, 81 personnel from DEC, FESA and local government authorities were engaged in aerial suppression, aerial observation and ground refuelling roles during each of the three days of active fire fighting.

### 2.2.4.5 Fire detection

DEC provided an effective fire detection system in the high fire risk zones of the south-west forest regions, based on the combination of nine single-engine aircraft and 13 fixed lookout towers. The department's fleet of nine aircraft (American Champion Scout) flew 4,800 hours for aerial surveillance within pre-determined circuits in the south-west forest regions at schedules that varied according to the fire danger levels and the level of fire activity. The aircraft also flew 202 hours in support of aerial suppression operations. The aircraft were flown by two permanent senior pilots and 16 seasonal and casual pilots. One of the Scout aircraft was damaged in a mishap at Albany airport and was subsequently written off.

### 2.2.4.6 Fire training and development

DEC's Fire Management Services Branch development and education staff conducted 49 formal fire training courses involving 614 participants. In addition, district and regional staff delivered five formal fire training programs to 29 participants.

The formal courses conducted in 2008–09 included Australasian Interagency Incident Management System (AIIMS) Awareness, Introduction to AIIMS, Prescribed Burning, Fireline Construction Using Machines, Basic Wildfire Awareness, Fire Fighting Level 1, Fire Fighting Level 2, Wildfire Suppression 3, Structural Fire Fighting, Fire Operations 1, Operational Management, Planning Section Management, Information Services Management, Situation Unit Management, Incident Mapping, Resources Unit Management, Management Support, Logistics Section Management and Fireline Leadership.

Aviation section personnel also provided training for 109 aerial operations personnel including fire detection pilots; air attack supervisors; helitorch operators; incendiary operations supervisors; and incendiary machine operators. In addition, 25 courses were provided for 250 participants to support aerial water bombing operations. The majority of these participants were from volunteer bushfire brigades and local State emergency service units throughout the south-west of the State.

Overall, course participants were predominantly from DEC, but included personnel from the Forest Products Commission, FESA, local government authorities, and the department's Campground Hosts and *Bush Ranger* cadets.

The development and promotion of common fire training programs and course materials continued between DEC and FESA, and with other agencies in Australia and New Zealand. Of particular note was the development of a course in Major Incident Management jointly between DEC, FESA and WA Police.

Eighty-four staff took part in the Fireline Leadership program in 2008–09, bringing the total over past three years to 385 participants.

### 2.2.4.7 Fire ecology education programs

The fire education program continued to operate in 2008–09 through the *EcoEducation* section of DEC's Strategic Development and Corporate Affairs Division, and the Fire Management Services Branch. The program aims to educate students and their teachers at primary and secondary school levels about inter-relationships of fire, flora and fauna, and the role of fire and science in conserving biodiversity and protecting communities and natural values.



During the 2008–09 financial year, 5,715 students, teachers and parents took part in fire-related *EcoEducation* programs held at the Perth Hills National Park Centre, Henderson Centre, Wellington Discovery Forest and Margaret River Eco Discovery Centre.

A total of 443 students from 21 metropolitan schools attended DEC's *Fire – A Force of Life* program at the Perth Hills National Park Centre and Henderson Centre, and 142 students from five schools attended DEC's *Fire – A Force of Life* program at the regional *EcoEducation* centres.

Two fire professional development days were held with 35 teachers attending.

In 2008, the department hosted a *Bush Rangers WA* Fire Awareness Course at Dwellingup which included theoretical fire course work and field exercises involving the conduct of a small prescribed burn in nearby forest.

*EcoEducation* fire resources were developed in both printed and electronic forms for use in the classroom and made available to teachers for download from DEC's website.

Updates were made to the *Fire – A Force of Life* program in order to meet curriculum requirements of the new geography course. The course covers fire as a natural hazard, so more information on hazard reduction and reasons for prescribed burning as well as fire behaviour was added into the excursion program.

The section on DEC's website relating to fire management was upgraded during the year to provide easy access to students and the general public to information on a range of fire management and fire ecology topics, as well as updates on current prescribed fire operations.

### 2.2.4.8 Radio communications and fire information technology services

DEC owns an extensive radio communications network that provides reliable and flexible communications for use during fire and other emergency operations as well as normal day-to-day administration. The network includes about 1,300 mobile and portable radios, 125 office based radios, more than 75 repeaters and towers, and 12 portable broadband satellite terminals.

The department is a major stakeholder in the Western Australian Emergency Radio Network (WAERN), and the department's Radio Communications Section staff continued to commission new radio infrastructure such as towers and repeaters across the State including in the Warren, South Coast, Wheatbelt and Swan regions. The WAERN program will result in the upgrade of the department's current Mid Band VHF radio network to High Band VHF over the next one to two years. This will provide better radio communications interoperability with FESA, volunteer bushfire brigades, local authorities and other Government agencies during emergency incidents and normal day-to-day operations.

The department's corporate information management and decision support system for fire management termed the DEC Fire Support System, is being re-engineered to improve data access, management and interchange between DEC and its stakeholders; and to increase the functionality of DEC's Master Burn Planning, Wildfire Threat Analysis and Resource Management systems. The department started installing a resource tracking system that will provide managers with immediate access to information on the locations and activity of aircraft, tankers, machinery and transport vehicles used at incidents and elsewhere throughout the State. This year, the department had the capacity to monitor the movements of 150 units including aircraft and heavy vehicle fleet.

The department has entered into a research partnership with Landgate's Satellite Remote Sensing Services team to improve automatic detection and mapping of fire using satellite remote sensing technology.

DEC worked closely with the Department of Commerce and other government agencies and non-government organisations to acquire Australian Government funds to improve telecommunications and associated support facilities for emergency management throughout rural and remote areas of WA. This funding assisted DEC to establish and

enhance its State-wide radio communications and decision support systems such as Radio Over Internet Protocol (ROIP); mobile/portable radio, satellite and information technology; and remote sensor and resource tracking systems.

### Fire management services performance indicators

#### South-west forest regions 2008–09 Key effectiveness indicators (1 and 2)

##### 1. Prescribed burning in south-west forest regions

| Region       | 10-year rolling average (ha) | Actual 2008–09 | Difference (ha) | %         |
|--------------|------------------------------|----------------|-----------------|-----------|
| Swan         | 44,924                       | 33,482         | -11,442         | -25%      |
| South West   | 45,042                       | 56,233         | 11,192          | 25%       |
| Warren       | 52,182                       | 62,103         | 9,921           | 19%       |
| <b>Total</b> | <b>142,148</b>               | <b>151,818</b> | <b>9,671</b>    | <b>7%</b> |

These statistics compare the 2008–09 prescribed burning achievements with the 10-year rolling average for prescribed burning.

The prescribed burning achieved within the south-west forest regions was slightly higher than the 10-year rolling average.

The total area achieved (151,818 hectares) was below the nominal annual target for the south-west forest regions of 200,000 hectares largely due to the dry autumn 2009 conditions in the Swan Region, and the wet spring 2008 in the Warren Region.

##### 2. Fire suppression in south-west forest regions

| Region                   | Priority 1 and 2 (%) |         |         |         |
|--------------------------|----------------------|---------|---------|---------|
|                          | Standard             | 2006–07 | 2007–08 | 2008–09 |
| Swan                     | 95                   | 90      | 97      | 97      |
| South West               | 95                   | 95      | 100     | 93      |
| Warren                   | 95                   | 90      | 100     | 91      |
| DEC average (one year)   |                      |         |         | 94      |
| DEC average (five years) |                      |         |         | 92      |

\*Only includes records where DEC was first attack agency

The fire suppression efficiency indicator is represented by the percentage of all forest wildfires burning under 95 percentile weather conditions that are attacked with effective DEC suppression forces before these fires exceed five hectares in Priority 1 and Priority 2 areas. These priority areas include high values that may be vulnerable to wildfires or inappropriate fire regimes. The percentage standard to be exceeded is 95 per cent of all forest fires requiring suppression by direct attack. The 95 percentile weather conditions include the days when forest fire danger is below 'Very High' as calculated in the department's Forest Fire Behaviour Tables (1998).

### 2.3.1 People Services Branch

DEC's People Services Branch provides client-focused human resource services including employee relations, workforce services, policy delivery, learning and development programs and initiatives, strategic planning, data analysis and reporting, and risk management of the safety, health and well-being of our employees.

A significant proportion of the financial year focused on finalising new pay rates for professional staff covered by the Specified Calling Provisions of the *Public Service Award 1992*.

#### **Workforce services**

A number of actions were taken by the Workforce Services Section to assist in the recruitment of a skilled workforce, including the establishment of a talent pool from which suitable and available people can be directly appointed to DEC positions, introduction of strategies that allow for fields of applicants to be expanded where necessary, and participation in career expositions.

The section underwent a restructure, resulting in increased supervision and an improved framework of controls in the personnel and payroll functions.

The department's Human Resources Information Management System underwent a significant upgrade, resulting in improved navigation, increased functionality, faster processing and improved accessibility.

The new *Public Service General Agreement 2008* was implemented, including new pay rates and payment of arrears to all public service employees. In addition, implementation of the memorandum of understanding – Specified Calling Claim, including salary increases, was finalised.

Twenty-two policies were reviewed and updated, including policies on staff selection, transfer, flexible working options, personal leave and reclassification.

Achievements in the areas of equal employment opportunity and diversity management, and disability services are included in 4.5 Governance Disclosures.

#### **Workforce planning and performance**

During 2008–09, the Workforce Planning and Performance Section concentrated on a number of key strategic and tactical initiatives derived from the department's workforce planning and performance reporting model.

Priorities that were identified and addressed during the year included updating the employee induction system, implementing a pilot succession management program, reviewing the People Services Branch intranet, and reviewing workplace conditions and practices. These issues are linked to continued attraction and retention of staff.

An initiative under way at 30 June 2009 was the People Services Branch Information Sessions. These sessions were conducted in metropolitan and regional areas. The sessions were designed as part of the section's ongoing communication with management and staff and involved the presentation of information on topics including employee entitlements, organisational learning and development programs, recruitment and selection, conduct in the workplace, workforce planning and performance programs and initiatives and other specific areas.

The department also undertook and facilitated major and minor internal staff surveys to enhance the quality of decision-making in attraction and retention processes. These surveys covered staff attraction and retention, an external employment climate update and past employees (retired and others). They contributed to the development and implementation of attraction and retention strategies.

### **Risk management**

The Risk Management Section is responsible for developing and implementing risk management policies and procedures in regard to occupational safety and health, corporate health and fitness, workers compensation, injury management, general liability and the corporate insurance portfolio.

The department is committed to providing and maintaining a safe and healthy working environment for its workers. The objective is to prevent work-related injury and illness, as well as create a working environment that maximises the effectiveness of each worker.

### **Organisational learning and development**

During 2008–09, employees were offered a wide range of internal and external learning and development opportunities, in areas such as field operations, safety and health, nature conservation, fire management, marine qualifications, cultural development, licensing and regulation, and corporate training.

The department is a Registered Training Organisation operating within the Vocational Education and Training system. As such, the department is able to offer nationally recognised training to staff to help them safely, effectively and efficiently carry out their duties and deliver high-quality training, development and assessment initiatives.

There are targeted programs for Indigenous trainees and cadets (MATES) and a Graduate Development Program.

The Indigenous traineeship element has 17 trainees, with 14 trainees recently graduating from certificates II, III or IV in Conservation and Land Management. Since the inception of the program 23 trainees have graduated, 13 of who are still employed full-time with DEC.

The National Indigenous Cadetship Project component of the program has four cadets supported by the department, with another cadet recently graduating from the program.

The Graduate Development Program for 2008 placed 23 new and existing recruits in the department; there are 23 graduates in the 2009 program.

Twelve employees received assistance through the following DEC scholarships:

- career development scholarship
- sciences scholarship
- leadership scholarship
- women's scholarship.

### **2.3.2 Financial Services Branch**

The department's central Financial Services Branch coordinates the processing of revenue and expenditure and the recording of assets. The branch also manages the department's fleet of light and heavy vehicles and produces statutory and management reports. During 2008–09 the branch continued to refine financial and related systems.

### **2.3.3 Information Services Branch**

#### **Corporate Information Services**

Corporate Information Services continued to support the department's compliance with the *State Records Act 2000*. Under Section 19 of the Act, the department is required to develop a recordkeeping plan detailing the recordkeeping program within the organisation. The DEC Recordkeeping Plan (RKP 2007087) was formally approved by the State Records Commission in December 2008. A new DEC Retention and Disposal Schedule (RD2008023) was also approved by the State Records Commission in December 2008, and will assist in the efficient retention and disposal of DEC functional records.

A client survey was completed in November 2008 to assess the effectiveness within DEC of recordkeeping awareness training and recordkeeping advice provided by Corporate Information Services. A recordkeeping compliance checklist was also developed as a tool for evaluating recordkeeping practices within individual business units. The online Recordkeeping Awareness Training package (RAT) continues to be popular with more than 96 per cent of participants responding that the course improved their understanding of government recordkeeping responsibilities.

As part of the progressive implementation of the Electronic Document and Records Management System across the department, the migration to the 'Objective' system of the former Department of Environment document database and connected business information systems continued to be a high priority and is due for completion by the end of 2009.

### **Geographic Information Services**

Geographic Information Services continued to provide maintenance and support for the corporate spatial databases underlying major departmental business information systems. The section also distributed extensive corporate spatial datasets to branch and regional Geographic Information System (GIS) users, and provided training and support in desktop GIS and customised GIS software. The section completed its contribution to the South West Emergency Services Directory for which it provided digital spatial data depicting DEC-managed lands and waters, aerial photography and georeferenced versions of the department's operations maps. It is working on the Great Southern Coastal Emergency Services Directory.

The section continued to provide GIS support for the processes involved in the establishment of the national reserve system, in particular the analysis of pre-European vegetation data against a number of other spatial datasets. It carried out hydrological modelling for natural diversity recovery catchments and provided assistance for the road classification project and the development of the State wetlands database. Remote sensing technology was used for a variety of projects including vegetation monitoring – in particular over the Gngangara Sustainability Strategy study area, monitoring for wandoos decline, wheatbelt wetlands baseline monitoring and marine and coastal mapping and monitoring in the Pilbara, Kimberley and South Coast regions.

The section also took part in Landgate's Shared Land Information Platform (SLIP) project with contributions to the natural resource management, emergency management and interest enquiry focus areas.

### **2.3.4 Office for Information Management**

To progress the objective of developing a more corporate approach to information management in the department, advice was sought from the consulting industry on the development of strategic frameworks for enterprise architecture, methods, and skills and organisation.

Advice on the frameworks was delivered in March and an implementation plan was developed that will see the department adopt a new information management operating model, change its governance arrangements to suit that model, establish a program office to better manage projects and start to develop its future state enterprise architecture.

#### **Information Communications Technology Service Centre**

The Information Communications Technology Service Centre (ICTSC) manages the department's centralised information infrastructure.

Two major projects continued to be pursued: integrating the department into one new computing network domain and developing service management processes in accordance with the Information Technology Information Library framework.

During the year the ICTSC also started virtualising 25 computer servers. The benefits will include assisting the department reduce electricity consumption; more efficient use of server resources and improved server availability.

### 2.3.5 DEC-managed lands and waters

#### Total estate

At 30 June 2009, the total area under DEC's care was 27,371,881 hectares, representing an increase of 63,430 hectares during 2008–09.

The terrestrial area (that is, not including marine reserves) is approximately 10.19 per cent of the land area of WA.

Table 22 provides a summary of all tenure classifications.

#### National parks

National parks are for wildlife and landscape conservation, scientific study, preservation of features of archaeological, historic or scientific interest, and enjoyment by the public. They have national or international significance for scenic, cultural or biological values.

The area of the 97 national parks at 30 June 2009 was 5,637,483 hectares, a net increase of one hectare for the year. This increase was a result of a re-calculation and re-survey of the Walpole-Nornalup National Park.

#### Conservation parks

Conservation parks have the same purpose as national parks, but they do not have the same national or international significance. They have significant local or regional value for conservation and recreation.

The area of conservation parks at 30 June 2009 was 847,586 hectares, a net increase of 3,547 hectares. The major addition was an area of 2,773 hectares situated 11 kilometres south of Guilderton.

#### Nature reserves

Nature reserves are for wildlife and landscape conservation, scientific study, and preservation of features of archaeological, historic or scientific interest. Recreation that does not harm natural ecosystems is allowed.

The area of nature reserves at 30 June 2009 was 10,872,105 hectares, representing a net decrease of 934 hectares for the year. The major change was a decrease in area of 1,368 hectares to Wandana Nature Reserve due to a re-calculation and re-survey of the reserve area.

#### State forest

State forests are managed for multiple purposes, including water catchment protection, recreation, timber production on a sustained yield basis, and conservation. Provision is also made for public utilities and mineral production, where these activities are imposed. Within State forests, designated areas are managed for specific purposes, such as conservation or optimum yield of exotic plantings.

The area of State forest at 30 June 2009 was 1,304,709 hectares, a net decrease for the year of one hectare.

#### Timber reserves

Timber reserves declared under the *Conservation and Land Management Act 1984* are managed on the same basis as State forests. The category is transitional; as reserves are evaluated they may be changed to a more appropriate tenure, e.g. State forest or nature reserve.

The area of timber reserves at 30 June 2009 was 123,279 hectare. This did not change from the previous year.

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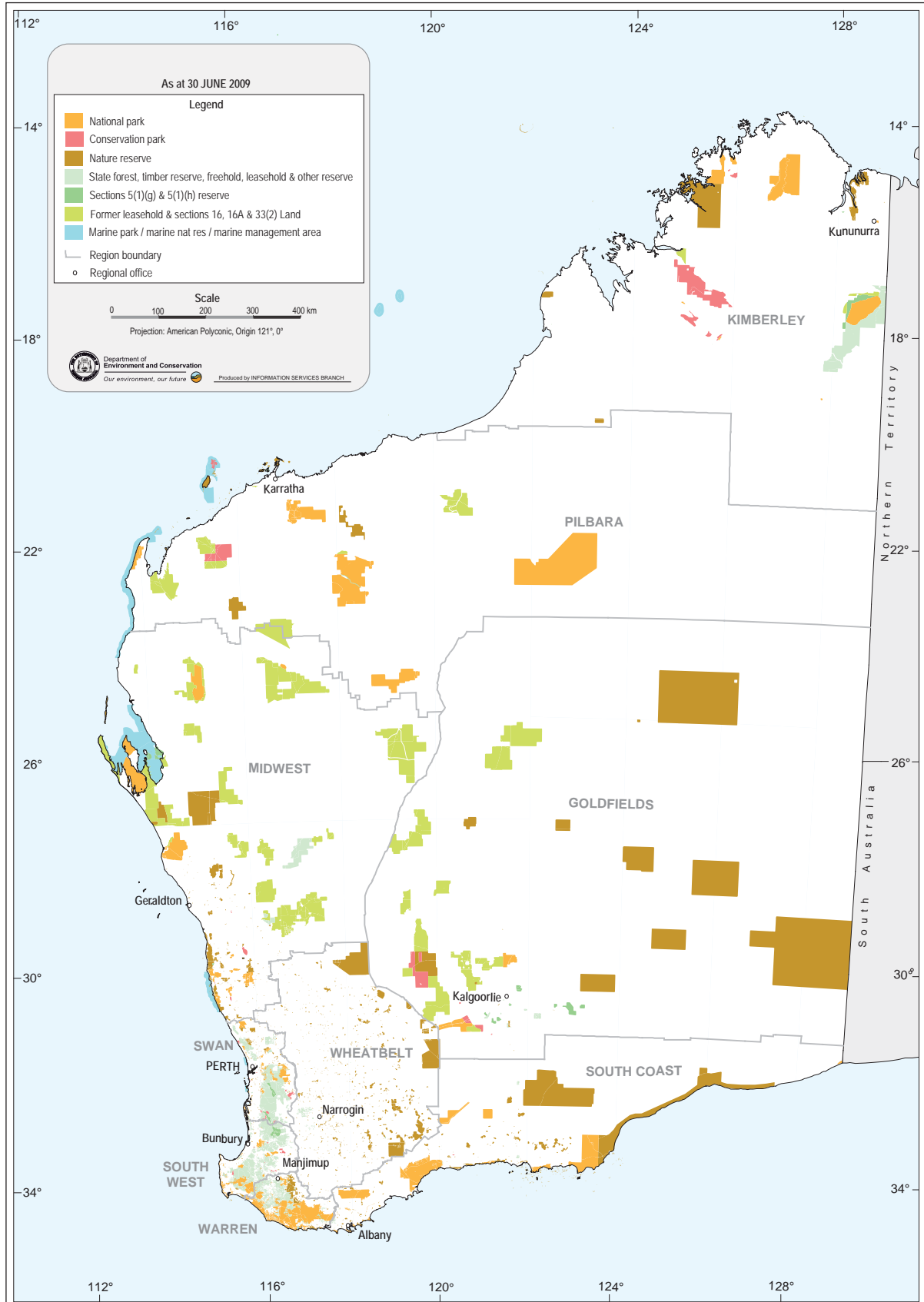
**Table 22: DEC-managed lands and waters (ha) by region as at 30 June 2009**

| Tenure classification              | Goldfields       | Kimberley        | Midwest          | Pilbara          | South Coast      | South West     | Swan           | Warren         | Wheatbelt        | Total             |
|------------------------------------|------------------|------------------|------------------|------------------|------------------|----------------|----------------|----------------|------------------|-------------------|
| National park                      | 153,161          | 829,689          | 505,360          | 2,432,461        | 894,066          | 141,800        | 117,195        | 562,458        | 1,292            | 5,637,483         |
| Conservation park                  | 182,817          | 460,232          | 14,967           | 149,348          | 677              | 13,560         | 24,350         | 76             | 1,559            | 847,586           |
| Nature reserve                     | 6,304,226        | 809,611          | 738,634          | 249,669          | 1,566,321        | 12,913         | 52,456         | 86,882         | 1,051,393        | 10,872,105        |
| Marine park                        | -                | 87,807           | 868,860          | 288,108          | -                | -              | 16,391         | 1,446          | -                | 1,262,612         |
| Marine nature reserve              | -                | -                | 132,000          | -                | -                | -              | -              | -              | -                | 132,000           |
| Marine management area             | -                | -                | -                | 143,385          | -                | -              | -              | -              | -                | 143,385           |
| State forest                       | 781              | -                | -                | -                | 4,055            | 542,629        | 466,522        | 262,656        | 28,066           | 1,304,709         |
| Timber reserve                     | 28,509           | -                | 26,338           | -                | 5,231            | 26,484         | 28,501         | 8,216          | -                | 123,279           |
| Sections 5(1)(g) & 5(1)(h) reserve | 81,566           | 80,624           | 1,974            | 7,810            | 408              | 31,014         | 27,598         | 1,513          | 1,427            | 233,934           |
| Miscellaneous reserve              | <1               | 575,245          | 510              | 1,779            | 3,766            | 124            | 5,944          | 245            | 15               | 587,629           |
| Freehold (CALM exec body)          | -                | <1               | <1               | <1               | -                | 20,838         | 85             | 4,658          | 1                | 25,582            |
| Leasehold (CALM exec body)         | -                | -                | 173,618          | -                | -                | -              | -              | -              | -                | 173,618           |
| Former leasehold                   | 1,846,091        | 80,748           | 3,183,081        | 786,503          | -                | -              | -              | -              | -                | 5,896,423         |
| Section 33(2) managed land         | 28,514           | -                | 90,118           | -                | -                | -              | -              | -              | -                | 118,632           |
| Sections 16 & 16a managed land     | -                | 4,840            | -                | -                | -                | 121            | 7,903          | 40             | -                | 12,904            |
| <b>Totals</b>                      | <b>8,625,665</b> | <b>2,928,796</b> | <b>5,735,460</b> | <b>4,059,063</b> | <b>2,474,525</b> | <b>789,483</b> | <b>746,945</b> | <b>928,191</b> | <b>1,083,753</b> | <b>27,371,881</b> |

Source: Information Management Branch

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### Marine parks and marine nature reserves

Marine reserves comprise marine parks and marine nature reserves.

Marine parks are managed for conservation and recreation, with areas zoned for commercial fishing on a sustained yield basis. Marine nature reserves are managed for the conservation of marine and terrestrial flora and fauna and their habitats. Fishing and collecting are not permitted.

The area of marine parks at 30 June 2009 was approximately 1,263,000 hectares, a net increase of 1,400 hectares due to the creation of the Walpole and Nornalup Inlets Marine Park.

The area of marine nature reserves at 30 June 2009 was approximately 132,000 hectares. There were no changes during the year.

### Marine management areas

Marine management areas provide a formal integrated management framework over areas that have high conservation value and intensive multiple use, selected primarily on the basis of their biological and recreational values and their existing or future commercial activities.

The area of marine management areas at 30 June 2009 was approximately 143,000 hectares. There were no changes during the year.

**Table 23: Marine areas vested in the Marine Parks and Reserves**  
Authority as at 30 June 2009 (all figures are approximate to account for the quality of mapping of watermark boundaries)

| Name  | Area (ha)*       |
|---|------------------|
| Barrow Island Marine Park                                       | 4,169            |
| Barrow Island Marine Management Area                            | 116,616          |
| Hamelin Pool Marine Nature Reserve                              | 132,000          |
| Jurien Bay Marine Park  | 82,376           |
| Marmion Marine Park   | 9,500            |
| Montebello Islands Marine Park                                  | 58,375           |
| Muiron Islands Marine Management Area                           | 26,769           |
| Ningaloo Marine Park  | 263,313          |
| Rowley Shoals Marine Park                                       | 87,807           |
| Shark Bay Marine Park   | 748,735          |
| Shoalwater Islands Marine Park                                  | 6,545            |
| Swan Estuary Marine Park  | 346              |
| Walpole and Nornalup Inlets Marine Park (Marine Reserve No. 13) | 1,446            |
| <b>TOTAL</b>  | <b>1,537,997</b> |

\*Any figures are an approximate only and are based on the best available data at the time of analysis. Errors in calculation can arise due to in-accurate mapping of watermark boundaries of reserves.

### Section 5(1)(g) and 5(1)(h) reserves

Under the CALM Act, lands categorised as sections 5(1)(g) and 5(1)(h) reserve are lands reserved under the *Land Act 1933* and the *Land Administration Act 1997* respectively, for which care, control and management is issued to the Conservation Commission. Unlike national parks, conservation parks and nature reserves, they are not automatically vested in the Conservation Commission. Immediately before

the commencement of the CALM Act, some were vested in, or were under the control of, the National Parks Authority but not as a national park, e.g. Matilda Bay Reserve. Predominantly they have conservation/recreation purposes.

The area of sections 5(1)(g) and 5(1)(h) reserves at 30 June 2009 was 233,934 hectares. This represents a net increase of 443 hectares, largely due to the omission of 403 hectares from previous years' reporting.

### **Miscellaneous reserves**

There are some remaining reserves managed by the department, which do not fall within any of the above discrete categories. The purposes of reserves within this category are varied and may include settlements and offices for the department's operations.

The area of miscellaneous reserves at 30 June 2009 was 587,629 hectares. This represents an increase of two hectares for the year.

### **Other land**

The area of freehold land held by the Conservation and Land Management (CALM) Executive Body at 30 June 2009 was 25,582 hectares. There were no changes during the year. Softwood forests occupy the major portion of freehold land.

The area of leasehold land held by the CALM Executive Body at 30 June 2009 was 173,618 hectares. This represents a decrease of 49,731 hectares due to the incorrect inclusion in prior reports of a property not wholly owned by the CALM Executive Body.

The area of former pastoral lease land being held under an interim management arrangement prior to formal reservation is 5,896,423 hectares, representing an increase of about 115,677 hectares. This increase was due to the acquisition of Lakeside and Dirk Hartog Island Pastoral Leases for conservation purposes. See Conservation land acquisitions section for specific references.

Crown land placed under the management of the department under section 33(2) of the CALM Act as at 30 June 2009 totalled 118,632 hectares. There were no changes during the year. Of this, 385 hectares comprises unvested Crown reserves. The remainder is land proposed for addition to the conservation estate, which is managed accordingly under an interim arrangement.

Areas managed under section 16A of the CALM Act by agreement between the lessees and the department amount to 4,840 hectares. This decrease of 7,020 hectares was due to the termination of the Section 16A agreement over part of Boolardy Pastoral Lease as a result of change of ownership of the lease. A new agreement is being negotiated with the new lessees.

The area of freehold land managed by the department under section 16 of the CALM Act at 30 June 2009 was 8,064 hectares. There were no changes during the year. Most of this land falls within regional parks and is managed by agreement between the Western Australian Planning Commission and DEC.

### **Conservation land acquisitions**

DEC bought 12 parcels of land of high conservation value covering a combined total area of about 115,707 hectares during the year for future addition to the conservation reserve system.

The department's priorities for purchase are for those areas containing ecosystems that are not adequately represented in existing conservation reserves, areas containing threatened species and ecological communities, and for additions to existing reserves that would greatly improve their diversity or facilitate their management.

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**Table 24:** National parks vested in the Conservation Commission as at 30 June 2009

| Name                                       | Area (ha) | Name                                   | Area (ha) |
|--|-----------|--|-----------|
| Alexander Morrison                         | 8,500     | Leeuwin-Naturaliste                    | 19,092    |
| Avon Valley                                | 4,366     | Lesmurdie Falls                        | 56        |
| Badjingga                                  | 13,108    | Lesueur                                | 27,235    |
| Beelu (formerly <i>Mundaring</i> )         | 4,617     | Midgegooroo (formerly <i>Canning</i> ) | 2,492     |
| <i>Blackwood River</i>                     | 20,477    | Millstream-Chichester                  | 238,497   |
| Boorabbin                                  | 28,153    | <i>Milyeannup</i>                      | 18,692    |
| <i>Boorara Gardner</i>                     | 11,008    | <i>Mirima</i>                          | 2,068     |
| <i>Boyndaminup</i>                         | 5,439     | <i>Mitchell River</i>                  | 115,325   |
| <i>Bramley</i>                             | 3,892     | Moore River                            | 17,254    |
| Brockman                                   | 52        | Mount Augustus                         | 9,168     |
| Cape Arid                                  | 279,446   | Mount Frankland                        | 37,359    |
| Cape Le Grand                              | 31,801    | <i>Mount Frankland North</i>           | 22,053    |
| Cape Range                                 | 47,655    | <i>Mount Frankland South</i>           | 42,283    |
| Collier Range                              | 235,162   | <i>Mount Lindesay</i>                  | 39,541    |
| D'Entrecasteaux                            | 118,779   | <i>Mount Roe</i>                       | 127,726   |
| <i>Dalgarup</i>                            | 2,377     | Nambung                                | 18,613    |
| Drovers Cave                               | 2,681     | Neerabup                               | 943       |
| Drysdale River                             | 448,264   | Peak Charles                           | 39,959    |
| <i>Easter</i>                              | 2,985     | Porongurup                             | 2,621     |
| <i>Eucla</i>                               | 3,560     | Purnululu                              | 239,723   |
| Fitzgerald River                           | 329,882   | Scott                                  | 3,273     |
| <i>Forest Grove</i>                        | 1,379     | Serpentine                             | 4,387     |
| Francois Peron                             | 52,587    | Shannon                                | 52,598    |
| Frank Hann                                 | 67,550    | Sir James Mitchell                     | 247       |
| Geikie Gorge                               | 3,136     | Stirling Range                         | 115,920   |
| Gloucester                                 | 878       | Stokes                                 | 9,726     |
| <i>Goldfields Woodlands</i>                | 64,612    | Tathra                                 | 4,322     |
| Goongarrie                                 | 60,397    | Torndirrup                             | 3,936     |
| Gooseberry Hill                            | 33        | Tuart Forest                           | 2,049     |
| <i>Greater Beedelup</i>                    | 19,379    | <i>Tunnel Creek</i>                    | 91        |
| <i>Greater Dordagup</i>                    | 6,408     | <i>Un-named</i>                        | 1,571     |
| <i>Greater Hawke</i>                       | 14,004    | <i>Un-named</i>                        | 79        |
| <i>Greater Kingston</i>                    | 21,092    | Walpole-Nornalup                       | 19,448    |
| <i>Greater Preston</i>                     | 12,665    | Walyunga                               | 1,814     |
| Greenmount                                 | 202       | Wandoo                                 | 46,493    |
| <i>Gull Rock</i>                           | 2,104     | Warren                                 | 2,981     |
| Hassell                                    | 1,265     | Watheroo                               | 44,481    |
| <i>Helena</i>                              | 12,255    | <i>Waychinicup</i>                     | 3,982     |
| Hilliger                                   | 16,962    | Wellington                             | 17,420    |
| <i>Jane</i>                                | 6,863     | West Cape Howe                         | 3,605     |
| John Forrest                               | 2,678     | <i>Whicher</i>                         | 6,343     |
| Kalamunda                                  | 375       | William Bay                            | 1,734     |
| Kalbarri                                   | 183,005   | Wiltshire-Butler                       | 11,645    |
| Karijini                                   | 627,442   | Windjana Gorge                         | 2,050     |
| Karlamilyi (formerly <i>Rudall River</i> ) | 1,283,706 | Wolfe Creek Crater                     | 1,460     |
| Kennedy Range                              | 141,660   | Yalgorup                               | 13,141    |
| Korung (formerly <i>Pickering Brook</i> )  | 6,344     | Yanchep                                | 2,876     |
| <i>Lake Muir</i>                           | 9,625     | <i>Yelverton</i>                       | 729       |
| <i>Lawley River</i>                        | 17,572    |  |           |
|  |           | TOTAL                                  | 5,637,483 |

*Names shown in italics are unofficial*

The purchases were funded from a number of sources: DEC's annual capital allocation for acquiring conservation land; proceeds of asset sales; environmental offset funds (provided from a variety of sources including Western Power, Main Roads WA, Health Department, developers and mining companies as a result of approved development projects and land clearing); and the National Reserve System component of the Australian Government's *Caring for Our Country* initiative. The total expenditure from all funding sources for the financial year was more than \$3.7 million.

Purchases finalised during the year were:

- Lakeside Pastoral Lease in the Shire of Cue. The approximately 51,530-hectare property adjoins former pastoral lease land to the west acquired for conservation. The property comprises the lake bed of Lake Austin and supports a vegetation type that is unrepresented in the conservation reserve system and restricted in its distribution.
- Approximately 672 hectares of remnant vegetation on the Menai Hills south of Port Gregory within the Shire of Northampton.
- About 0.3 hectares for addition to Meelon Nature Reserve south-east of Pinjarra in the Shire of Murray. The property contains a threatened ecological community and threatened and priority flora species.
- About 45 hectares of remnant vegetation for addition to Clackline Nature Reserve within the Shire of Northam. The property contains vegetation that provides nesting hollows suitable for the endangered Carnaby's black-cockatoos.
- About 21 hectares for addition to Mogumber Nature Reserve within the Shire of Gingin. The property provides wetland and fringing habitat suitable for the translocation of the endangered western swamp tortoise (*Pseudemydura umbrina*). The vendors also kindly donated a further 13 hectares for addition to the nature reserve.
- A 654-hectare block wholly surrounded by Nambung National Park within the Shire of Dandaragan.
- A 40-hectare block in close proximity to Nambung National Park.
- Ninety-six hectares for addition to Wild Horse Swamp Nature Reserve located at the confluence of the Arthur, Blackwood and Balgarup Rivers south of Darkan, in the Shire of West Arthur. The addition of this land to the nature reserve will increase its resilience and ecological integrity in an area that has been largely cleared for agriculture.
- About 58 hectares of remnant vegetation within the Kalgan River corridor in the Shire of Plantagenet, between Stirling Range National Park and conservation reserves along the State's south coast. The property contains poorly reserved vegetation types and threatened and priority flora species.
- About three hectares for addition to Lake Warden Nature Reserve within the Shire of Esperance. The Lake Warden Nature Reserve forms part of the Lake Warden System Ramsar site.
- About 948 hectares for the creation of a new nature reserve within the Shire of Gingin. The property contains wetlands, Priority flora and under represented vegetation types and is a foraging site for the endangered Carnaby's black-cockatoos.

The purchase of the Dirk Hartog Island Pastoral Lease, covering 61,640 hectares, within the Shark Bay World Heritage Property was also finalised during the year. The purchase of the lease is a significant step towards the creation of a national park over most of the island. Establishment of the national park will fulfil longstanding commitments and result in conservation, historical and tourism benefits to the region and the State.

The department gratefully acknowledges the contribution made by the Australian Government through the National Reserve System component of the *Caring for Our Country* initiative to conservation land purchases. This year the contribution amounted to \$226,000. A further \$506,666 was also received towards the purchase of the Credo Pastoral Lease in the Goldfields and land acquired for addition to

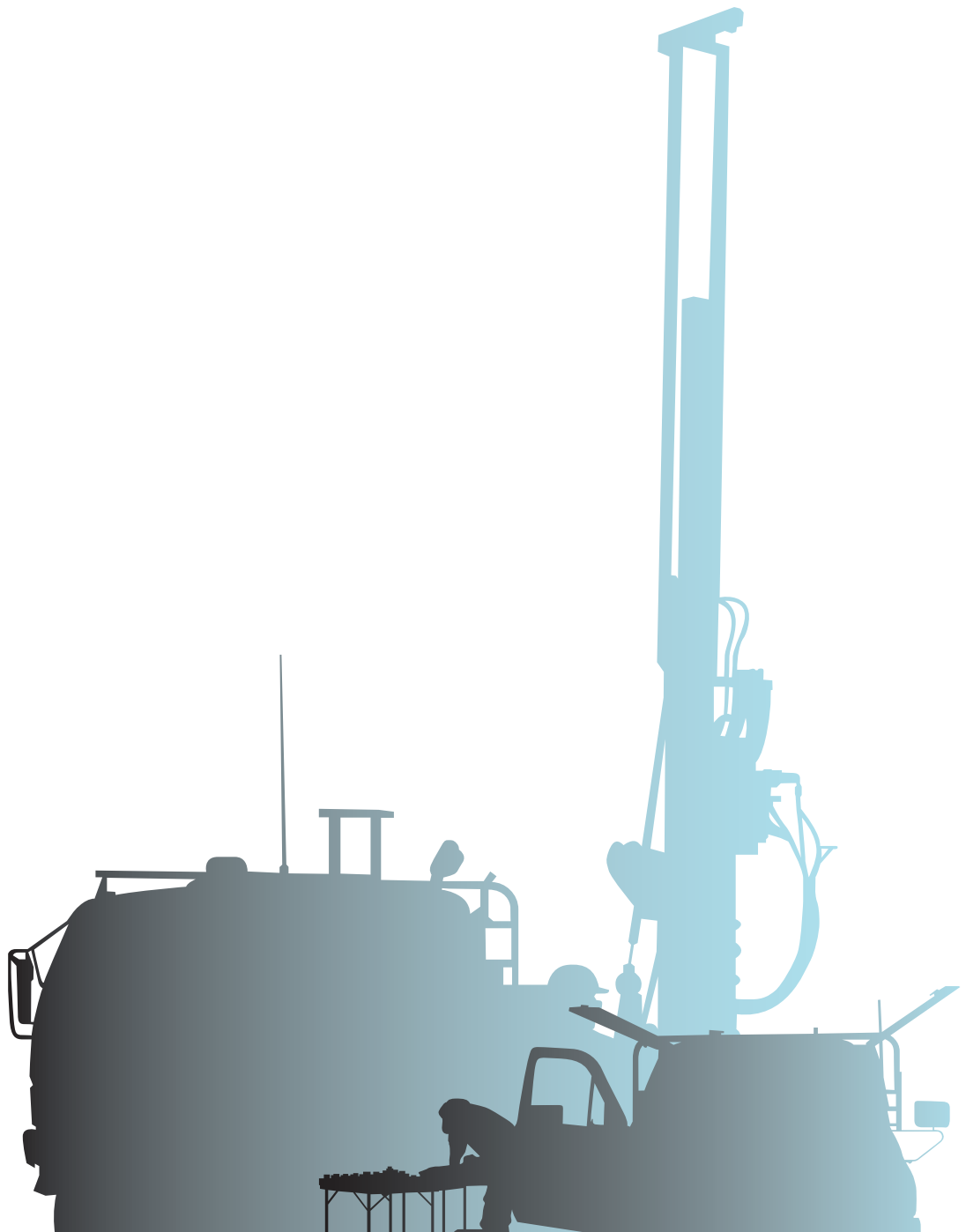
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Aerodrome Road Nature Reserve within the Shire of Ravensthorpe which were both purchased in the previous financial year. The support of the Australian Government continues to help with progress towards the establishment of a comprehensive, adequate and representative system of terrestrial conservation reserves in WA.

# 3

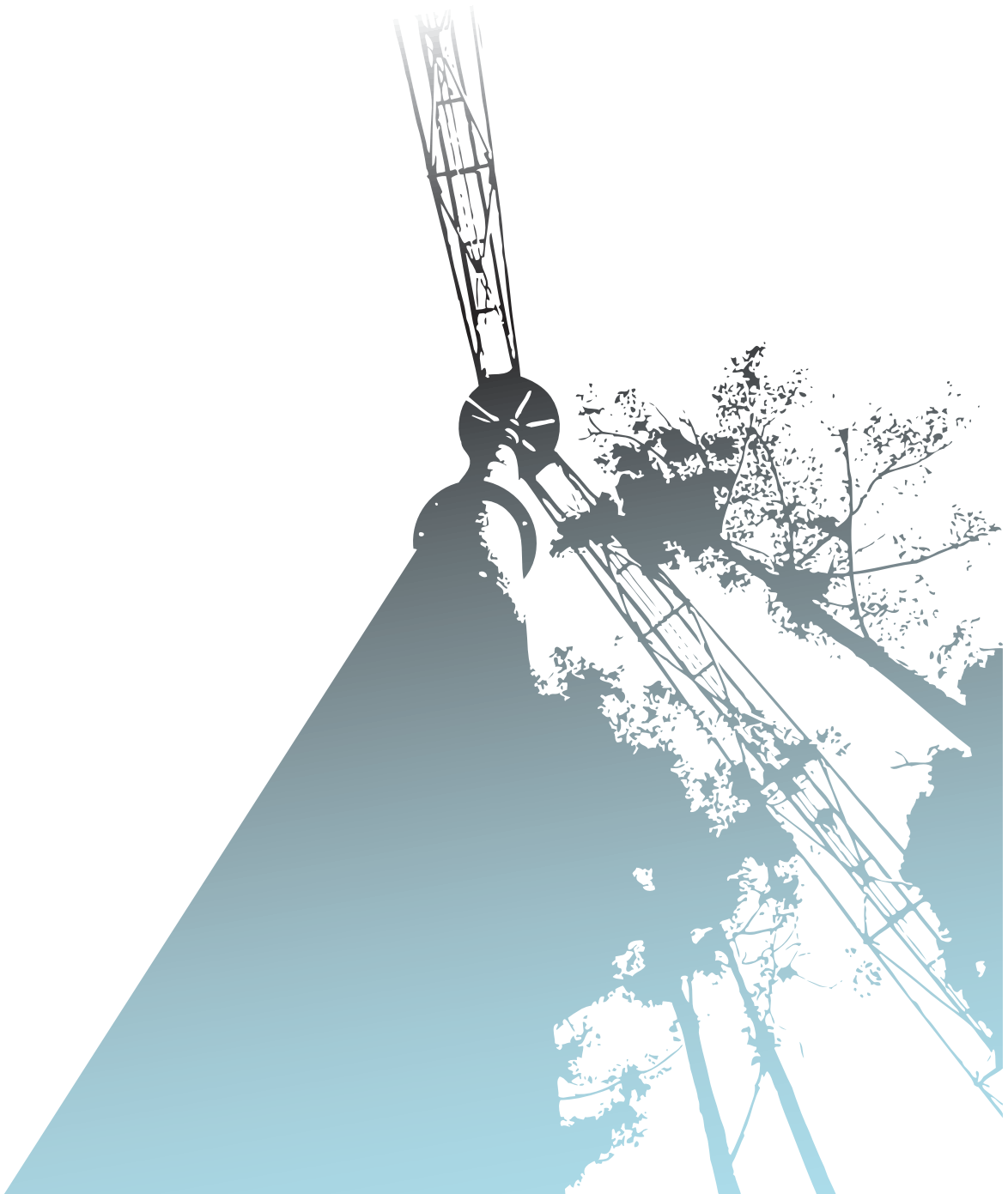
## SIGNIFICANT ISSUES AND TRENDS



- Large numbers of project proposals continue to be submitted for environmental impact assessment and there is continuing strong community focus on monitoring of industrial emissions and health protection in the Perth metropolitan area and regional centres. The department is participating in a review of assessment processes across government, is streamlining internal assessment and monitoring processes, and will allocate available resources on a priority basis to work to ensure that emissions and discharges meet acceptable criteria.
- Introduced animals, weeds, *Phytophthora* dieback, salinity, altered fire regimes and habitat loss, along with climate change, continue to threaten the biodiversity of WA's unique natural environment. The department will continue to develop and implement recovery actions for threatened plants, animals and ecological communities as well as establish and manage conservation reserves to promote opportunities for their survival.
- There are increasing expectations that terrestrial and marine parks will protect nature while providing for the growing recreational and tourist needs of the community. The department will manage parks with increasing engagement of volunteers, private conservation organisations, Indigenous communities and the private sector to provide quality facilities and services to the public and promote community enjoyment of park facilities and services, wildlife and the natural environment displayed in parks.
- There is increasing public expectation that the department will manage fire to protect life, property and community assets and to protect and enhance the natural environment. The department will continue to undertake an active fire management program with an emphasis on maximising the achievement of its annual target for prescribed burning and maintaining adequate numbers of well trained and equipped fire management personnel to enable the control of multiple large fires in the south-west of the State.
- Changes to the *Waste Avoidance and Resource Recovery Act 2007* and significant increases in the landfill levy have been proposed to reduce the amount of waste going to landfill and support the adoption of environmentally sustainable management practices.
- The community continues to expect that State forests will be managed for biodiversity protection, water production, recreation and other public uses, as well as supporting a sustainable timber industry. The department will continue to manage State forests for their full range of values by implementing the *Forest Management Plan 2004-2013* and continuing to increase our knowledge and understanding of forests to refine management practices.
- The development of national and international responses to climate change continues. The department is developing a Climate Change Adaptation Strategy for WA.

# 4

## DISCLOSURES AND LEGAL COMPLIANCE





### Certification of Financial Statements

The accompanying financial statements of the Department of Environment and Conservation have been prepared in compliance with the provisions of the *Financial Management Act 2006* from proper accounts and records to present fairly the financial transactions for the financial year ending 30 June 2009 and the financial position as at 30 June 2009.

At the date of signing we are not aware of any circumstances which would render any particulars included in the financial statements misleading or inaccurate.



John Byrne  
**Chief Finance Officer**  
8 September 2009



Keiran McNamara  
**Accountable Authority**  
8 September 2009



## Auditor General

### INDEPENDENT AUDIT OPINION

To the Parliament of Western Australia

#### DEPARTMENT OF ENVIRONMENT AND CONSERVATION FINANCIAL STATEMENTS AND KEY PERFORMANCE INDICATORS FOR THE YEAR ENDED 30 JUNE 2009

I have audited the accounts, financial statements, controls and key performance indicators of the Department of Environment and Conservation.

The financial statements comprise the Balance Sheet as at 30 June 2009, and the Income Statement, Statement of Changes in Equity, Cash Flow Statement, Schedule of Income and Expenses by Service, Schedule of Assets and Liabilities by Service, and Summary of Consolidated Account Appropriations and Income Estimates for the year then ended, a summary of significant accounting policies and other explanatory Notes.

The key performance indicators consist of key indicators of effectiveness and efficiency.

#### **Director General's Responsibility for the Financial Statements and Key Performance Indicators**

The Director General is responsible for keeping proper accounts, and the preparation and fair presentation of the financial statements in accordance with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Treasurer's Instructions, and the key performance indicators. This responsibility includes establishing and maintaining internal controls relevant to the preparation and fair presentation of the financial statements and key performance indicators that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; making accounting estimates that are reasonable in the circumstances; and complying with the Financial Management Act 2006 and other relevant written law.

#### **Summary of my Role**

As required by the Auditor General Act 2006, my responsibility is to express an opinion on the financial statements, controls and key performance indicators based on my audit. This was done by testing selected samples of the audit evidence. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion. Further information on my audit approach is provided in my audit practice statement. Refer [www.audit.wa.gov.au/pubs/AuditPracStatement\\_Feb09.pdf](http://www.audit.wa.gov.au/pubs/AuditPracStatement_Feb09.pdf).

An audit does not guarantee that every amount and disclosure in the financial statements and key performance indicators is error free. The term "reasonable assurance" recognises that an audit does not examine all evidence and every transaction. However, my audit procedures should identify errors or omissions significant enough to adversely affect the decisions of users of the financial statements and key performance indicators.

**Department of Environment and Conservation  
Financial Statements and Key Performance Indicators for the year ended 30 June 2009**

**Audit Opinion**

In my opinion,

- (i) the financial statements are based on proper accounts and present fairly the financial position of the Department of Environment and Conservation at 30 June 2009 and its financial performance and cash flows for the year ended on that date. They are in accordance with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Treasurer's Instructions;
- (ii) the controls exercised by the Department provide reasonable assurance that the receipt, expenditure and investment of money, the acquisition and disposal of property, and the incurring of liabilities have been in accordance with legislative provisions; and
- (iii) the key performance indicators of the Department are relevant and appropriate to help users assess the Department's performance and fairly represent the indicated performance for the year ended 30 June 2009.



COLIN MURPHY  
AUDITOR GENERAL  
10 September 2009

DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
INCOME STATEMENT  
FOR THE YEAR ENDED 30 JUNE 2009

|   | Note | 2009<br>\$'000 | 2008<br>\$'000 |
|---|------|----------------|----------------|
| <b>COST OF SERVICES</b>                                     |      |                |                |
| <b>Expenses</b>   |      |                |                |
| Employee benefits expense                                   | 5    | 168,071        | 144,171        |
| Supplies and services                                       | 6    | 88,551         | 92,287         |
| Depreciation and amortisation expense                       | 7    | 18,625         | 17,050         |
| Accommodation expenses                                      | 8    | 6,254          | 5,148          |
| Grants and subsidies  | 9    | 8,814          | 6,620          |
| Other expenses  | 10   | 25,638         | 21,740         |
| <b>Total cost of services</b>                               |      | <b>315,953</b> | <b>287,016</b> |
| <b>Income</b>   |      |                |                |
| <b>Revenue</b>  |      |                |                |
| User charges and fees                                       | 11   | 59,905         | 52,862         |
| Commonwealth grants and contributions                       | 12   | 8,217          | 9,404          |
| Other grants and contributions                              | 13   | 18,942         | 27,483         |
| Interest revenue  |      | 3,736          | 4,639          |
| Other revenue   | 15   | 8,845          | 7,420          |
| <b>Total revenue</b>  |      | <b>99,645</b>  | <b>101,808</b> |
| <b>Gains</b>  |      |                |                |
| Gain on disposal of non-current assets                      | 14   | <b>675</b>     | <b>1,244</b>   |
| <b>Total income other than income from State Government</b> |      | <b>100,320</b> | <b>103,052</b> |
| <b>NET COST OF SERVICES</b>                                 |      | <b>215,633</b> | <b>183,964</b> |
| <b>INCOME FROM STATE GOVERNMENT</b>                         | 16   |                |                |
| Service appropriation                                       |      | 215,641        | 202,280        |
| Assets assumed (transferred)                                |      | 395            | 111            |
| Resources received free of charge                           |      | 2,175          | 763            |
| <b>Total income from State Government</b>                   |      | <b>218,211</b> | <b>203,154</b> |
| <b>SURPLUS FOR THE PERIOD</b>                               |      | <b>2,578</b>   | <b>19,190</b>  |

See also the 'Schedule of Income and Expenses by Service' at page 154.

The Income Statement should be read in conjunction with the accompanying notes.

DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
BALANCE SHEET  
AS AT 30 JUNE 2009

|  | Note | 2009<br>\$'000   | 2008<br>\$'000   |
|--|------|------------------|------------------|
| <b>ASSETS</b>                                  |      |                  |                  |
| <b>Current Assets</b>                          |      |                  |                  |
| Cash and cash equivalents                      | 28   | 9,445            | 17,213           |
| Restricted cash and cash equivalents           | 17   | 58,328           | 52,057           |
| Inventories                                    | 18   | 351              | 376              |
| Receivables                                    | 19   | 19,694           | 18,622           |
| Amounts receivable for services                | 20   | 14,169           | 7,377            |
| Other current assets                           | 21   | 741              | 731              |
| Non-current assets classified as held for sale | 22   | 0                | 2                |
| <b>Total Current Assets</b>                    |      | <b>102,728</b>   | <b>96,378</b>    |
| <b>Non-Current Assets</b>                      |      |                  |                  |
| Restricted cash and cash equivalents           | 17   | 2,118            | 1,378            |
| Inventories                                    | 18   | 830              | 1,046            |
| Amounts receivable for services                | 20   | 65,636           | 61,766           |
| Property, plant and equipment                  | 23   | 4,635,340        | 3,998,445        |
| <b>Total Non-Current Assets</b>                |      | <b>4,703,924</b> | <b>4,053,635</b> |
| <b>TOTAL ASSETS</b>                            |      | <b>4,806,652</b> | <b>4,150,013</b> |
| <b>LIABILITIES</b>                             |      |                  |                  |
| <b>Current Liabilities</b>                     |      |                  |                  |
| Payables                                       | 25   | 15,196           | 17,024           |
| Provisions                                     | 26   | 27,101           | 22,022           |
| <b>Total Current liabilities</b>               |      | <b>42,297</b>    | <b>39,046</b>    |
| <b>Non-Current Liabilities</b>                 |      |                  |                  |
| Provisions                                     | 26   | 13,725           | 10,839           |
| <b>Total Non-Current liabilities</b>           |      | <b>13,725</b>    | <b>10,839</b>    |
| <b>TOTAL LIABILITIES</b>                       |      | <b>56,022</b>    | <b>49,885</b>    |
| <b>NET ASSETS</b>                              |      | <b>4,750,630</b> | <b>4,100,128</b> |
| <b>Equity</b>                                  |      |                  |                  |
| Contributed Equity                             | 27   | 2,822,376        | 2,791,647        |
| Reserves                                       |      | 1,901,326        | 1,284,131        |
| Accumulated surplus                            |      | 26,928           | 33,157           |
| <b>TOTAL EQUITY</b>                            |      | <b>4,750,630</b> | <b>4,100,128</b> |

See also the 'Schedule of Assets and Liabilities by Service' at page 155.

The Balance Sheet should be read in conjunction with the accompanying notes.

DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
STATEMENT OF CHANGES IN EQUITY  
FOR THE YEAR ENDED 30 JUNE 2009

|  | Note | 2009<br>\$'000   | 2008<br>\$'000   |
|--|------|------------------|------------------|
| Balance of equity at start of period                                 |      | 4,100,128        | 3,528,602        |
| <b>CONTRIBUTED EQUITY</b>  | 27   |                  |                  |
| Balance at start of period   |      | 2,791,647        | 2,779,619        |
| Capital contribution   |      | 16,597           | 9,862            |
| Other contributions by owners  |      | 14,132           | 2,166            |
| <b>Balance at end of period</b>                                      |      | <b>2,822,376</b> | <b>2,791,647</b> |
| <b>RESERVES</b>  | 27   |                  |                  |
| <b>Asset Revaluation Reserve</b>                                     |      |                  |                  |
| Balance at start of period   |      | 1,284,131        | 735,483          |
| Gains/(losses) from asset revaluation                                |      | 617,195          | 548,648          |
| <b>Balance at end of period</b>                                      |      | <b>1,901,326</b> | <b>1,284,131</b> |
| <b>ACCUMULATED SURPLUS</b>   | 27   |                  |                  |
| Balance at start of period   |      | 24,350           | 13,500           |
| Change in accounting policy or correction of prior period errors (b) |      | 0                | (8,340)          |
| Restated balance at start of period                                  |      | 24,350           | 5,160            |
| Surplus/(deficit) for the period                                     |      | 2,578            | 19,190           |
| <b>Balance at end of period</b>                                      |      | <b>26,928</b>    | <b>24,350</b>    |
| <b>Balance of equity at end of period</b>                            |      | <b>4,750,630</b> | <b>4,100,128</b> |
| <b>Total income and expense for the period (a)</b>                   |      | 619,773          | 568,305          |

(a) The aggregate net amount attributable to each category of equity is: surplus \$2,578,000 plus gains from asset revaluation \$617,195,000, (2008: surplus \$19,657,000 plus gains from asset revaluation \$548,648,000).

(b) Increase in the asset capitalisation threshold from \$1,000 to \$5,000.

The Statement of Changes in Equity should be read in conjunction with the accompanying notes.

DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
CASH FLOW STATEMENT  
FOR THE YEAR ENDED 30 JUNE 2009

|   | Note | 2009<br>\$'000   | 2008<br>\$'000   |
|---|------|------------------|------------------|
| <b>CASH FLOWS FROM STATE GOVERNMENT</b>                   |      |                  |                  |
| Service appropriation                                     |      | 197,602          | 183,741          |
| Capital contributions                                     |      | 16,597           | 9,862            |
| Holding account drawdowns                                 |      | 7,377            | 7,306            |
| <b>Net cash provided by State Government</b>              |      | <b>221,576</b>   | <b>200,909</b>   |
| <b>Utilised as follows:</b>                               |      |                  |                  |
| <b>CASH FLOWS FROM OPERATING ACTIVITIES</b>               |      |                  |                  |
| <b>Payments</b>   |      |                  |                  |
| Employee benefits   |      | (159,217)        | (142,478)        |
| Supplies and services                                     |      | (89,204)         | (93,829)         |
| Accommodation   |      | (6,308)          | (5,462)          |
| Grants and subsidies                                      |      | (6,217)          | (6,607)          |
| GST payments on purchases                                 |      | (14,946)         | (14,553)         |
| Other payments  |      | (26,596)         | (21,403)         |
| <b>Receipts</b>   |      |                  |                  |
| User charges and fees                                     |      | 60,040           | 51,089           |
| Commonwealth grants and contributions                     |      | 8,991            | 7,837            |
| Interest received   |      | 4,564            | 3,882            |
| GST receipts on sales                                     |      | 4,568            | 5,390            |
| GST receipts from taxation authority                      |      | 10,691           | 8,550            |
| Other receipts  |      | 25,041           | 37,549           |
| <b>Net cash used in operating activities</b>              | 28   | <b>(188,593)</b> | <b>(170,035)</b> |
| <b>CASH FLOWS FROM INVESTING ACTIVITIES</b>               |      |                  |                  |
| Proceeds from sale of non-current physical assets         |      | 1,013            | 1,851            |
| Purchase of non-current physical assets (a)               |      | (34,753)         | (31,835)         |
| <b>Net cash used in investing activities</b>              |      | <b>(33,740)</b>  | <b>(29,984)</b>  |
| Net increase in cash and cash equivalents                 |      | (757)            | 890              |
| Cash and cash equivalents at the beginning of the period  |      | 70,648           | 69,758           |
| <b>CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD</b> | 28   | <b>69,891</b>    | <b>70,648</b>    |

(a) Due to the change in capitalisation threshold where assets below \$5,000 are to be expensed, the cash flows under investing activities represents the extent to which expenditure has been made for resources that are initially recognised as an asset in the balance sheet. Therefore, expenditure on items below \$5,000 is to be classified as an operating activity.

The Cash Flow Statement should be read in conjunction with the accompanying notes.

DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
SCHEDULE OF INCOME AND EXPENSES BY SERVICE  
FOR THE YEAR ENDED 30 JUNE 2009

|   | Nature Conservation |                | Sustainable Forest Management |               | Parks and Visitor Services |               | Environmental Regulation |               | Environmental Sustainability |               | Environmental Impact Assessment and Policies for the Environmental Protection Authority |               | Coordinate the Response to Climate Change |              | Total          |                |
|---|---------------------|----------------|-------------------------------|---------------|----------------------------|---------------|--------------------------|---------------|------------------------------|---------------|---|---------------|---|--------------|----------------|----------------|
|   | 2009                | 2008           | 2009                          | 2008          | 2009                       | 2008          | 2009                     | 2008          | 2009                         | 2008          | 2009  | 2008          | 2009                                      | 2008         | 2009           | 2008           |
|   | \$'000              | \$'000         | \$'000                        | \$'000        | \$'000                     | \$'000        | \$'000                   | \$'000        | \$'000                       | \$'000        | \$'000  | \$'000        | \$'000                                    | \$'000       | \$'000         | \$'000         |
| <b>COST OF SERVICES</b>                                     |                     |                |                               |               |                            |               |                          |               |                              |               |   |               |   |              |                |                |
| <b>Expenses</b>   |                     |                |                               |               |                            |               |                          |               |                              |               |   |               |   |              |                |                |
| Employee benefits expense                                   | 67,658              | 60,571         | 27,275                        | 21,066        | 35,373                     | 33,717        | 21,048                   | 15,617        | 5,376                        | 4,707         | 9,604   | 7,337         | 1,737                                     | 1,156        | 168,071        | 144,171        |
| Supplies and services                                       | 34,274              | 38,878         | 13,202                        | 9,588         | 23,027                     | 22,458        | 9,629                    | 11,408        | 4,166                        | 3,787         | 2,377   | 2,315         | 1,876                                     | 3,853        | 88,551         | 92,287         |
| Depreciation and amortisation expense                       | 4,575               | 4,535          | 3,853                         | 3,534         | 9,239                      | 8,202         | 716                      | 591           | 105                          | 51            | 119   | 131           | 18  | 6            | 18,625         | 17,050         |
| Accommodation expenses                                      | 1,422               | 1,424          | 344                           | 272           | 918                        | 915           | 2,253                    | 1,289         | 592                          | 562           | 609   | 573           | 116                                       | 113          | 6,254          | 5,148          |
| Grants and subsidies  | 455                 | 452            | 2                             | 2             | 178                        | 165           | 2,823                    | 688           | 4,082                        | 4,262         | 3   | 64            | 1,271                                     | 987          | 8,814          | 6,620          |
| Other expenses  | 9,193               | 8,315          | 8,951                         | 5,875         | 5,354                      | 5,942         | 1,256                    | 903           | 372                          | 251           | 420   | 382           | 92  | 72           | 25,638         | 21,740         |
| <b>Total cost of services</b>                               | <b>117,577</b>      | <b>114,175</b> | <b>53,627</b>                 | <b>40,337</b> | <b>74,089</b>              | <b>71,399</b> | <b>37,725</b>            | <b>30,496</b> | <b>14,693</b>                | <b>13,620</b> | <b>13,132</b>   | <b>10,802</b> | <b>5,110</b>                              | <b>6,187</b> | <b>315,953</b> | <b>287,016</b> |
| <b>Income</b>   |                     |                |                               |               |                            |               |                          |               |                              |               |   |               |   |              |                |                |
| User charges and fees                                       | 3,070               | 4,059          | 11,456                        | 7,525         | 14,924                     | 12,699        | 16,802                   | 16,142        | 12,891                       | 12,247        | 742   | 190           | 20  | 0            | 59,905         | 52,862         |
| Commonwealth grants and contributions                       | 7,345               | 8,327          | 115                           | 201           | 198                        | 543           | 124                      | 516           | 408                          | (223)         | 25  | 40            | 2   | 0            | 8,217          | 9,404          |
| Other grants and contributions                              | 15,047              | 19,036         | 13                            | 2,005         | 3,243                      | 5,538         | 333                      | 282           | 220                          | 479           | 86  | 128           | 0   | 15           | 18,942         | 27,483         |
| Interest revenue  | 2,501               | 3,479          | 77                            | 97            | 173                        | 229           | 245                      | 93            | 740                          | 741           | 0   | 0             | 0   | 0            | 3,736          | 4,639          |
| Other revenue   | 2,890               | 2,624          | 2,598                         | 2,003         | 3,216                      | 2,525         | 112                      | 217           | 25                           | 51            | 4   | 0             | 0   | 0            | 8,845          | 7,420          |
| Gain on disposal of non-current assets                      | 98                  | 283            | 330                           | 721           | (351)                      | 240           | 111                      | 0             | 400                          | 0             | 31  | 0             | 56  | 0            | 675            | 1,244          |
| <b>Total income other than income from State Government</b> | <b>30,951</b>       | <b>37,808</b>  | <b>14,589</b>                 | <b>12,552</b> | <b>21,403</b>              | <b>21,774</b> | <b>17,727</b>            | <b>17,250</b> | <b>14,684</b>                | <b>13,295</b> | <b>888</b>  | <b>358</b>    | <b>78</b>                                 | <b>15</b>    | <b>100,320</b> | <b>103,052</b> |
| <b>NET COST OF SERVICES</b>                                 | <b>86,626</b>       | <b>76,367</b>  | <b>39,038</b>                 | <b>27,785</b> | <b>52,686</b>              | <b>49,625</b> | <b>19,998</b>            | <b>13,246</b> | <b>9</b>                     | <b>325</b>    | <b>12,244</b>   | <b>10,444</b> | <b>5,032</b>                              | <b>6,172</b> | <b>215,633</b> | <b>183,964</b> |
| <b>INCOME FROM STATE GOVERNMENT</b>                         |                     |                |                               |               |                            |               |                          |               |                              |               |   |               |   |              |                |                |
| Service appropriation                                       | 81,248              | 81,863         | 38,108                        | 36,157        | 47,818                     | 49,909        | 19,580                   | 17,513        | 9,503                        | 190           | 12,128  | 10,599        | 7,256                                     | 6,049        | 215,641        | 202,280        |
| Assets assumed (transferred)                                | 29                  | 42             | 12                            | 39            | 1                          | 30            | 326                      | 0             | 0                            | 0             | 27  | 0             | 0   | 0            | 395            | 111            |
| Resources received free of charge                           | 677                 | 172            | 380                           | 95            | 454                        | 115           | 279                      | 172           | 157                          | 95            | 197   | 95            | 31  | 19           | 2,175          | 763            |
| <b>Total income from State Government</b>                   | <b>81,954</b>       | <b>82,077</b>  | <b>38,500</b>                 | <b>36,291</b> | <b>48,273</b>              | <b>50,054</b> | <b>20,185</b>            | <b>17,685</b> | <b>9,660</b>                 | <b>285</b>    | <b>12,352</b>   | <b>10,694</b> | <b>7,287</b>                              | <b>6,068</b> | <b>218,211</b> | <b>203,154</b> |
| <b>Surplus/(deficit) for the period</b>                     | <b>(4,672)</b>      | <b>5,710</b>   | <b>(538)</b>                  | <b>8,506</b>  | <b>(4,413)</b>             | <b>429</b>    | <b>187</b>               | <b>4,439</b>  | <b>9,651</b>                 | <b>(40)</b>   | <b>108</b>  | <b>250</b>    | <b>2,255</b>                              | <b>(104)</b> | <b>2,578</b>   | <b>19,190</b>  |

The Schedule of Income and Expenses by Service should be read in conjunction with the accompanying notes.



DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
SCHEDULE OF ASSETS AND LIABILITIES BY SERVICE  
AS AT 30 JUNE 2009

|                          | Nature Conservation |                | Sustainable Forest Management |                  | Parks and Visitor Services |                | Environmental Regulation |               | Environmental Sustainability |               | Environmental Impact Assessment and Policies for the Environmental Protection Authority |              | Coordinate the Response to Climate Change |              | Total            |                  |
|--------------------------|---------------------|----------------|-------------------------------|------------------|----------------------------|----------------|--------------------------|---------------|------------------------------|---------------|---|--------------|---|--------------|------------------|------------------|
|                          | 2009                | 2008           | 2009                          | 2008             | 2009                       | 2008           | 2009                     | 2008          | 2009                         | 2008          | 2009  | 2008         | 2009                                      | 2008         | 2009             | 2008             |
|                          | \$'000              | \$'000         | \$'000                        | \$'000           | \$'000                     | \$'000         | \$'000                   | \$'000        | \$'000                       | \$'000        | \$'000  | \$'000       | \$'000                                    | \$'000       | \$'000           | \$'000           |
| <b>ASSETS</b>            |                     |                |                               |                  |                            |                |                          |               |                              |               |   |              |   |              |                  |                  |
| Current Assets           | 43,259              | 42,043         | 12,280                        | 8,497            | 14,846                     | 23,484         | 10,746                   | 5,547         | 20,096                       | 15,689        | 1,237   | 855          | 264                                       | 263          | 102,728          | 96,378           |
| Non-Current Assets       | 629,661             | 508,018        | 3,143,854                     | 2,699,812        | 912,647                    | 835,161        | 11,226                   | 7,813         | 3,206                        | 1,059         | 2,560   | 1,686        | 770                                       | 86           | 4,703,924        | 4,053,635        |
| <b>Total Assets</b>      | <b>672,920</b>      | <b>550,161</b> | <b>3,156,134</b>              | <b>2,708,309</b> | <b>927,493</b>             | <b>858,645</b> | <b>21,972</b>            | <b>13,360</b> | <b>23,302</b>                | <b>16,748</b> | <b>3,797</b>  | <b>2,541</b> | <b>1,034</b>                              | <b>349</b>   | <b>4,806,652</b> | <b>4,150,013</b> |
| <b>LIABILITIES</b>       |                     |                |                               |                  |                            |                |                          |               |                              |               |   |              |   |              |                  |                  |
| Current Liabilities      | 16,003              | 14,532         | 7,561                         | 6,900            | 9,216                      | 10,409         | 6,586                    | 3,607         | 1,055                        | 1,537         | 1,552   | 1,433        | 324                                       | 628          | 42,297           | 39,046           |
| Non-Current Liabilities  | 5,876               | 4,554          | 2,066                         | 2,535            | 3,279                      | 1,584          | 1,400                    | 1,174         | 362                          | 354           | 625   | 552          | 117                                       | 86           | 13,725           | 10,839           |
| <b>Total Liabilities</b> | <b>21,879</b>       | <b>19,086</b>  | <b>9,627</b>                  | <b>9,435</b>     | <b>12,495</b>              | <b>11,993</b>  | <b>7,986</b>             | <b>4,781</b>  | <b>1,417</b>                 | <b>1,891</b>  | <b>2,177</b>  | <b>1,985</b> | <b>441</b>                                | <b>714</b>   | <b>56,022</b>    | <b>49,885</b>    |
| <b>NET ASSETS</b>        | <b>651,041</b>      | <b>531,075</b> | <b>3,146,507</b>              | <b>2,698,874</b> | <b>914,998</b>             | <b>846,652</b> | <b>13,986</b>            | <b>8,579</b>  | <b>21,885</b>                | <b>14,857</b> | <b>1,620</b>  | <b>556</b>   | <b>593</b>                                | <b>(365)</b> | <b>4,750,630</b> | <b>4,100,128</b> |

The Schedule of Assets and Liabilities by Service should be read in conjunction with the accompanying notes.

## 4.1 FINANCIAL STATEMENTS

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### DEPARTMENT OF ENVIRONMENT AND CONSERVATION SUMMARY OF CONSOLIDATED ACCOUNT APPROPRIATIONS AND INCOME ESTIMATES FOR THE YEAR ENDED 30 JUNE 2009

|  | 2009<br>Estimate<br>\$'000 | 2009<br>Actual<br>\$'000 | Variance       | 2009<br>Actual<br>\$'000 | 2008<br>Actual<br>\$'000 | Variance      |
|--|----------------------------|--------------------------|----------------|--------------------------|--------------------------|---------------|
| <b>DELIVERY OF SERVICES</b>  |                            |                          |                |                          |                          |               |
| Item 109 Net amount appropriated to deliver services                                       | 202,044                    | 201,656                  | (388)          | 201,656                  | 0                        | 201,656       |
| Item 110 Net amount appropriated to deliver services                                       | 13,320                     | 13,320                   | 0              | 13,320                   | 0                        | 13,320        |
| Item 110 Net amount appropriated to deliver services                                       | 0                          | 0                        | 0              | 0                        | 188,566                  | (188,566)     |
| Item 111 Net amount appropriated to deliver services                                       | 0                          | 0                        | 0              | 0                        | 13,166                   | (13,166)      |
| Section 25 transfer of service appropriation   | 0                          | 0                        | 0              | 0                        | (72)                     | 72            |
| Amount Authorised by Other Statutes  |                            |                          |                |                          |                          |               |
| – <i>Salaries and Allowances Act 1975</i>  | 603                        | 665                      | 62             | 665                      | 620                      | 45            |
| <b>Total appropriations provided to deliver services</b>                                   | <b>215,967</b>             | <b>215,641</b>           | <b>(326)</b>   | <b>215,641</b>           | <b>202,280</b>           | <b>13,361</b> |
| <b>CAPITAL</b>   |                            |                          |                |                          |                          |               |
| Item 178 Capital Contribution  | 22,582                     | 16,597                   | (5,985)        | 16,597                   | 0                        | 16,597        |
| Item 181 Capital Contribution  | 0                          | 0                        | 0              | 0                        | 9,862                    | (9,862)       |
| <b>GRAND TOTAL</b>   | <b>238,549</b>             | <b>232,238</b>           | <b>(6,311)</b> | <b>232,238</b>           | <b>212,142</b>           | <b>20,096</b> |
| <b>Details of Expenses by Service</b>  |                            |                          |                |                          |                          |               |
| Nature Conservation  | 96,815                     | 117,577                  | 20,762         | 117,577                  | 114,175                  | 3,402         |
| Sustainable Forest Management  | 38,956                     | 53,627                   | 14,671         | 53,627                   | 40,337                   | 13,290        |
| Parks and Visitor Services   | 65,479                     | 74,089                   | 8,610          | 74,089                   | 71,399                   | 2,690         |
| Environmental Regulation   | 43,380                     | 37,725                   | (5,655)        | 37,725                   | 30,496                   | 7,229         |
| Environmental Sustainability   | 24,747                     | 14,693                   | (10,054)       | 14,693                   | 13,620                   | 1,073         |
| Environmental Impact Assessment and Policies<br>for the Environmental Protection Authority | 13,541                     | 13,132                   | (409)          | 13,132                   | 10,802                   | 2,330         |
| Coordinate the Response to Climate Change  | 15,233                     | 5,110                    | (10,123)       | 5,110                    | 6,187                    | (1,077)       |
| <b>Total Cost of Services</b>  | <b>298,151</b>             | <b>315,953</b>           | <b>17,802</b>  | <b>315,953</b>           | <b>287,016</b>           | <b>28,937</b> |
| Less total income  | (83,911)                   | (100,320)                | (16,409)       | (100,320)                | (103,052)                | 2,732         |
| <b>Net Cost of Services</b>  | <b>214,240</b>             | <b>215,633</b>           | <b>1,393</b>   | <b>215,633</b>           | <b>183,964</b>           | <b>31,669</b> |
| Adjustments (1)  | 1,727                      | 8                        | (1,719)        | 8                        | 18,316                   | (18,308)      |
| <b>Total appropriations provided to deliver services</b>                                   | <b>215,967</b>             | <b>215,641</b>           | <b>(326)</b>   | <b>215,641</b>           | <b>202,280</b>           | <b>13,361</b> |
| <b>Capital Expenditure</b>   |                            |                          |                |                          |                          |               |
| Purchase of non-current physical assets  | 35,468                     | 34,753                   | (715)          | 34,753                   | 31,835                   | 2,918         |
| Adjustment for other funding sources   | (12,886)                   | (18,156)                 | (5,270)        | (18,156)                 | (21,973)                 | 3,817         |
| <b>Capital Contribution (appropriation)</b>  | <b>22,582</b>              | <b>16,597</b>            | <b>(5,985)</b> | <b>16,597</b>            | <b>9,862</b>             | <b>6,735</b>  |
| <b>DETAIL OF INCOME ESTIMATES</b>  |                            |                          |                |                          |                          |               |
| Income disclosed as Administered Income  | <b>130</b>                 | <b>148</b>               | <b>18</b>      | <b>148</b>               | <b>161</b>               | <b>(13)</b>   |

(1) Adjustments comprise movements in cash balances and other accrual items such as receivables, payables and superannuation.

Note 32 "Explanatory statement" provides details of any significant variations between estimates and actual results for 2009 and between the actual result for 2008 and 2009.

## DEPARTMENT OF ENVIRONMENT AND CONSERVATION NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2009

### 1. DEC mission and funding

Working with the community, we will ensure that Western Australia's environment is valued, protected and conserved, for its intrinsic value, and for the appreciation and benefit of present and future generations.

In 2008–09 the Department of Environment and Conservation (DEC) was predominantly funded by Parliamentary appropriations supplemented by fees received for the provision of services to the public.

### 2. Australian equivalents to International Financial Reporting Standards

#### *General*

DEC's financial statements for the year ended 30 June 2009 have been prepared in accordance with Australian equivalents to International Financial Reporting Standards (AIFRS), which comprise a Framework for the Preparation and Presentation of Financial Statements (the Framework) and Australian Accounting Standards (including the Australian Accounting Interpretations).

In preparing these financial statements DEC has adopted, where relevant to its operations, new and revised Standards and the Interpretations from their operative dates issued by the AASB and formerly the Urgent Issues Group (UIG).

#### *Early adoption of standards*

DEC cannot early adopt an Australian Accounting Standard or Australian Accounting Interpretation unless specifically permitted by TI 1101 'Application of Australian Accounting Standards and Other Pronouncements'. No Standards and Interpretations that have been issued or amended but are not yet effective have been early adopted by the DEC for the annual reporting period ended 30 June 2009.

### 3. Summary of significant accounting policies

#### **(a) General Statement**

The financial statements constitute a general purpose financial report which has been prepared in accordance with the Australian Accounting Standards, the Framework, Statements of Accounting Concepts and other authoritative pronouncements of the Australian Accounting Standards Board as applied by the Treasurer's Instructions. Several of these are modified by the Treasurer's Instructions to vary application, disclosure, format and wording.

The Financial Management Act and the Treasurer's Instructions are legislative provisions governing the preparation of financial statements and take precedence over the Accounting Standards, the Framework, Statements of Accounting Concepts and other authoritative pronouncements of the Australian Accounting Standards Board.

Where modification is required and has a material or significant financial effect upon the reported results, details of that modification and the resulting financial effect are disclosed in the notes to the financial statements.

#### **(b) Basis of Preparation**

The financial statements have been prepared on the accrual basis of accounting using the historical cost convention, modified by the revaluation of land, buildings and infrastructure which have been measured at fair value.

The accounting policies adopted in the preparation of the financial statements have been consistently applied throughout all periods presented unless otherwise stated.

The financial statements are presented in Australian dollars and all values are rounded to the nearest thousand dollars (\$'000).

### **(c) Reporting Entity**

DEC administers assets, liabilities, income and expenses on behalf of Government which are not controlled by, nor integral to the function of DEC. These administered balances and transactions are not recognised in the principal financial statements of DEC but schedules are prepared using the same basis as the financial statements and are presented at note 39 'Administered expenses and income'.

### **(d) Contributed Equity**

AASB Interpretation 1038 'Contributions by Owners Made to Wholly-Owned Public Sector Entities' requires transfers, other than as a result of a restructure of administrative arrangements, in the nature of equity contributions to be designated by the Government (the owner) as contributions by owners (at the time of, or prior to transfer) before such transfers can be recognised as equity contributions. Capital contributions (appropriations) have been designated as contributions by owners by TI 955 'Contributions by Owners made to Wholly Owned Public Sector Entities' and have been credited directly to Contributed Equity.

Transfer of net assets to/from other agencies, other than as a result of a restructure of administrative arrangements, are designated as contributions by owners where the transfers are non-discretionary and non reciprocal. See note 27 'Equity'.

### **(e) Income**

#### *Revenue recognition*

Revenue is measured at the fair value of consideration received or receivable. Revenue is recognised for the major business activities as follows:

#### *Sale of goods*

Revenue is recognised from the sale of goods and disposal of other assets when the significant risks and rewards of ownership control transfer to the purchaser and can be measured reliably.

#### *Rendering of services*

Revenue is recognised upon delivery of the service to the client or by reference to the stage of completion of the transaction.

#### *Interest*

Revenue is recognised as the interest accrues.

#### *Service Appropriations*

Service Appropriations are recognised as revenues in the period in which DEC gains control of the appropriated funds. DEC gains control of appropriated funds at the time those funds are deposited into DEC's bank account or credited to the holding account held at Treasury. See note 16 'Income from State Government' for further detail.

#### *Net appropriation determination*

The Treasurer may make a determination providing for prescribed receipts to be retained for services under the control of DEC. In accordance with the determination specified in the 2008–2009 Budget Statements, DEC retained \$100.320 million in 2009 (\$103.052 million in 2008) from the following:

- proceeds from fees and charges;
- sale of goods;
- Commonwealth specific purpose grants and contributions;
- sale of property, plant and equipment; and
- other departmental revenue.

### *Grants, donations, gifts and other non-reciprocal contributions*

Revenue is recognised at fair value when DEC obtains control over the assets comprising the contributions which is usually when cash is received.

Other non-reciprocal contributions that are not contributions by owners are recognised at their fair value. Contributions of services are only recognised when a fair value can be reliably determined and the services would be purchased if not donated.

### *Gains*

Gains may be realised or unrealised and are usually recognised on a net basis. These include gains arising on the disposal of non-current assets and some revaluations of non-current assets.

## **(f) Property, Plant and Equipment**

### *Capitalisation/Expensing of assets*

Items of property, plant and equipment costing \$5,000 or more are recognised as assets and the cost of utilising assets is expensed (depreciated) over their useful lives. Items of property, plant and equipment costing less than \$5,000 are immediately expensed direct to the Income Statement (other than where they form part of a group of similar items which are significant in total). This is the first year DEC has used \$5,000 as the threshold, previously it has been \$1,000.

### *Initial recognition and measurement*

All items of property, plant and equipment are initially recognised at cost.

For items of property, plant and equipment acquired at no cost or for nominal consideration, the cost is their fair value at the date of acquisition.

### *Subsequent measurement*

After recognition as an asset, DEC uses the revaluation model for the measurement of land and buildings and the cost model for all other property, plant and equipment. Land and buildings are carried at fair value less accumulated depreciation on buildings and accumulated impairment losses. All other items of property, plant and equipment are carried at historical cost less accumulated depreciation and accumulated impairment losses.

Where market-based evidence is available, the fair value of land and buildings is determined on the basis of current market buying values determined by reference to recent market transactions. When buildings are revalued by reference to recent market transactions, the accumulated depreciation is eliminated against the gross carrying amount of the asset and the net amount restated to the revalued amount.

Where market-based evidence is not available, the fair value of land and buildings is determined on the basis of existing use. This normally applies where buildings are specialised or where land use is restricted. Fair value for existing use assets is determined by reference to the cost of replacing the remaining future economic benefits embodied in the asset, i.e. the depreciated replacement cost. Where the fair value of buildings is dependent on using the depreciated replacement cost, the gross carrying amount and the accumulated depreciation are restated proportionately.

Independent valuations of land and buildings are provided annually by the Western Australian Land Information Authority (Valuation Services) and

recognised with sufficient regularity to ensure that the carrying amount does not differ materially from the asset's fair value at the balance sheet date.

The most significant assumptions in estimating fair value are made in assessing whether to apply the existing use basis to assets and in determining estimated useful life. Professional judgment by the valuer is required where the evidence does not provide a clear distinction between market type assets and existing use assets.

Refer to note 23 'Property, plant and equipment' for further information on revaluations.

### *Derecognition*

Upon disposal or derecognition of an item of property, plant and equipment, any revaluation reserve relating to that asset is retained in the asset revaluation reserve.

### *Asset Revaluation Reserve*

The asset revaluation reserve is used to record increments and decrements on the revaluation of non-current assets as described in note 23 'Property, plant and equipment'.

### *Depreciation*

All non-current assets having a limited useful life are systematically depreciated over their estimated useful lives in a manner that reflects the consumption of their future economic benefits.

Land is not depreciated. Depreciation on other assets is calculated using the straight-line method, using rates which are reviewed annually. Estimated useful lives for each class of depreciable asset are:

|                              |             |
|------------------------------|-------------|
| Buildings                    | 20–40 years |
| Furniture                    | 10 years    |
| Office equipment             | 6–7 years   |
| Computer equipment           | 4 years     |
| Software (i)                 | 2.5 years   |
| Aircraft                     | 5–6 years   |
| Boats                        | 5 years     |
| Plant and machinery          | 4–10 years  |
| Heavy fleet vehicles         | 5 years     |
| Parks and visitor facilities | 10–20 years |

(i) Software that is integral to the operation of related hardware.

### **(g) Impairment of Assets**

Property, plant and equipment are tested for any indication of impairment at each balance sheet date. Where there is an indication of impairment, the recoverable amount is estimated. Where the recoverable amount is less than the carrying amount, the asset is considered impaired and is written down to the recoverable amount and an impairment loss is recognised. As DEC is a not-for-profit entity, unless an asset has been identified as a surplus asset, the recoverable amount is the higher of an asset's fair value less costs to sell and depreciated replacement cost.

The risk of impairment is generally limited to circumstances where an asset's depreciation is materially understated, where the replacement cost is falling or where there is a significant change in useful life. Each relevant class of assets is reviewed annually to verify that the accumulated depreciation/amortisation reflects the level of consumption or expiration of asset's future economic benefits and to evaluate any impairment risk from falling replacement costs.

Intangible assets with an indefinite useful life and intangible assets not yet available for use are tested for impairment at each balance sheet date irrespective of whether there is any indication of impairment.

The recoverable amount of assets identified as surplus assets is the higher of fair value less costs to sell and the present value of future cash flows expected to be derived from the asset. Surplus assets carried at fair value have no risk of material impairment where fair value is determined by reference to market-based evidence. Where fair value is determined by reference to depreciated replacement cost, surplus assets are at risk of impairment and the recoverable amount is measured. Surplus assets at cost are tested for indications of impairment at each balance sheet date.

See note 24 'Impairment of assets' for the outcome of impairment reviews and testing. See also note 3 (o) 'Receivables' and note 19 'Receivables' for impairment of receivables.

### **(h) Non-Current Assets Classified as Held for Sale**

Non-current assets held for sale are recognised at the lower of carrying amount and fair value less costs to sell and are presented separately in the Balance Sheet. Assets classified as held for sale are not depreciated or amortised.

Most land holdings are Crown land vested in DEC by the Government. The Department for Planning and Infrastructure (DPI) is the only agency with the power to sell Crown land. DEC transfers Crown land and any attaching buildings to DPI when the land becomes available for sale.

### **(i) Leases**

DEC holds operating leases for buildings, office equipment and motor vehicles. Lease payments are expensed on a straight-line basis over the lease term as this represents the pattern of benefits derived from the leased assets.

### **(j) Financial Instruments**

In addition to cash, DEC has two categories of financial instrument:

- Loans and receivables; and
- Financial liabilities measured at amortised cost.

These have been disaggregated into the following classes:

#### Financial Assets

- Cash and cash equivalents
- Restricted cash and cash equivalents
- Receivables
- Amounts receivable for services

#### Financial Liabilities

- Payables

Initial recognition and measurement of financial instruments is at fair value which normally equates to the transaction cost or the face value. Subsequent measurement is at amortised cost using the effective interest method.

The fair value of short-term receivables and payables is the transaction cost or the face value because there is no interest rate applicable and subsequent measurement is not required as the effect of discounting is not material.

### **(k) Cash and Cash Equivalents**

For the purpose of the Cash Flow Statement, cash and cash equivalents includes restricted cash and cash equivalents. These are comprised of cash on hand and short-term deposits with original maturities of three months or less that are readily convertible to a known amount of cash and which are subject to insignificant risk of changes in value.

### **(l) Accrued Salaries**

The accrued salaries suspense account (refer note 17 'Restricted cash and cash equivalents') consists of amounts paid annually into a suspense account over a period of 10 financial years to largely meet the additional cash outflow in each eleventh year when 27 pay days occur instead of the normal 26. No interest is received on this account.

Accrued salaries (refer note 25 'Payables') represent the amount due to staff but unpaid at the end of the financial year, as the pay date for the last pay period for that financial year does not coincide with the end of the financial year. Accrued salaries are settled within a fortnight of the financial year end. DEC considers the carrying amount of accrued salaries to be equivalent to its net fair value.

### **(m) Amounts Receivable for Services (Holding Account)**

DEC receives appropriation funding on an accrual basis that recognises the full annual cash and non-cash cost of services. The appropriations are paid partly in cash and partly as an asset (Holding Account receivable) that is accessible on the emergence of the cash funding requirement to cover items such as leave entitlements and asset replacement.

See also note 16 'Income from State Government' and note 20 'Amounts receivable for services'.

### **(n) Inventories**

Inventories are measured at the lower of cost and net realisable value. Costs are assigned by the method most appropriate to each particular class of inventory, with the majority being valued on a first in first out basis.

See note 18 'Inventories'

### **(o) Receivables**

Receivables are recognised and carried at original invoice amount less an allowance for uncollectible amounts (i.e. impairment). The collectability of receivables is reviewed on an ongoing basis and any receivables identified as uncollectible are written-off against the allowance account. The allowance for uncollectible amounts (doubtful debts) is raised when there is objective evidence that DEC will not be able to collect the debts. The carrying amount is equivalent to fair value as it is due for settlement within 30 days. See note 3(j) 'Financial Instruments' and note 19 'Receivables'.

### **(p) Payables**

Payables are recognised when DEC becomes obliged to make future payments as a result of a purchase of assets, goods or services. The carrying amount is equivalent to fair value, as they are generally settled within 30 days. See note 3(j) 'Financial Instruments' and note 25 'Payables'.

### **(q) Provisions**

Provisions are liabilities of uncertain timing and amount and are recognised where there is a present legal, equitable or constructive obligation as a result of a past event and when the outflow of resources embodying economic benefits



is probable and a reliable estimate can be made of the amount of the obligation. Provisions are reviewed at each balance sheet date. See note 26 'Provisions'.

### (i) Provisions – Employee Benefits

#### *Annual Leave and Long Service Leave*

The liability for annual and long service leave expected to be settled within 12 months after the end of the balance sheet date is recognised and measured at the undiscounted amounts expected to be paid when the liabilities are settled. Annual and long service leave expected to be settled more than 12 months after the end of the balance sheet date is measured at the present value of amounts expected to be paid when the liabilities are settled. Leave liabilities are in respect of services provided by employees up to the balance sheet date.

When assessing expected future payments consideration is given to expected future wage and salary levels including non-salary components such as employer superannuation contributions. In addition, the long service leave liability also considers the experience of employee departures and periods of service.

The expected future payments are discounted using market yields at the balance sheet date on national government bonds with terms to maturity that match, as closely as possible, the estimated future cash outflows.

All annual leave and unconditional long service leave provisions are classified as current liabilities as DEC does not have an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

#### *Sick Leave*

Liabilities for sick leave are recognised when it is probable that sick leave paid in the future will be greater than the entitlement that will accrue in the future.

Past history indicates that on average, sick leave taken each reporting period is less than the entitlement accrued. This is expected to continue in future periods. Accordingly, it is unlikely that existing accumulated entitlements will be used by employees and no liability for unused sick leave entitlements is recognised. As sick leave is non-vesting, an expense is recognised in the income statement for this leave as it is taken.

#### *Superannuation*

The Government Employees Superannuation Board (GESB) administers the following superannuation schemes.

Employees may contribute to the Pension Scheme, a defined benefit pension scheme now closed to new members or the Gold State Superannuation Scheme (GSS), a defined benefit lump sum scheme also closed to new members. DEC has no liabilities for superannuation charges under the Pension or the GSS Schemes as the liability has been assumed by the Treasurer.

Employees commencing employment prior to 16 April 2007 who were not members of either the Pension or the GSS Schemes became non-contributory members of the West State Superannuation Scheme (WSS). Employees commencing employment on or after 16 April 2007 became members of the GESB Super Scheme (GESBS). Both of these schemes are accumulation schemes. DEC makes concurrent contributions to GESB on behalf of employees in compliance with the Commonwealth Government's Superannuation Guarantee (Administration) Act 1992. These contributions extinguish the liability for superannuation charges in respect of the WSS and GESBS Schemes.

The GESB makes all benefit payments in respect of the Pension and GSS Schemes, and is recouped by the Treasurer for the employer's share.

See also note 3(r) 'Superannuation expense'.

**(ii) Provisions – Other***Employment On-Costs*

Employment on-costs, including workers' compensation insurance, are not employee benefits and are recognised separately as liabilities and expenses when the employment to which they relate has occurred. Employment on-costs are included as part of 'Other expenses' and are not included as part of DEC's 'Employee benefits expense'. The related liability is included in 'Employment on-costs provision'. See note 10 'Other Expenses' and note 26 'Provisions'.

**(r) Superannuation Expense**

The following elements are included in calculating the superannuation expense in the Income Statement:

- (a) Defined benefit plans – For 2007-08, the change in the unfunded employer's liability (i.e. current service cost and actuarial gains and losses) assumed by the Treasurer in respect of current employees who are members of the Pension Scheme and current employees who accrued a benefit on transfer from that Scheme to the Gold State Superannuation Scheme (GSS); and
- (b) Defined contribution plans – Employer contributions paid to the GSS (concurrent contributions), the West State Superannuation Scheme (WSS), and the GESB Super Scheme (GESBS).

Defined benefit plans – For 2007-08, the movements (i.e. current service cost and, actuarial gains and losses) in the liabilities in respect of the Pension Scheme and the GSS Scheme transfer benefits are recognised as expenses directly in the Income Statement. As these liabilities are assumed by the Treasurer (refer note 3(q)(i)), a revenue titled 'Liabilities assumed by the Treasurer' equivalent to the expense is recognised under Income from State Government in the Income Statement. See note 16 'Income from State Government'. Commencing in 2008–09, the reporting of annual movements in these notional liabilities has been discontinued and is no longer recognised in the Income Statement.

The superannuation expense does not include payment of pensions to retirees, as this does not constitute part of the cost of services provided in the current year.

Defined contribution plans – in order to reflect DEC's true cost of services, DEC is funded for the equivalent of employer contributions in respect of the GSS Scheme (excluding transfer benefits). These contributions were paid to the GESB during the year and placed in a trust account administered by the GESB on behalf of the Treasurer. The GESB subsequently paid these employer contributions in respect of the GSS Scheme to the Consolidated Account.

The GSS Scheme is a defined benefit scheme for the purposes of employees and whole-of-government reporting. However, apart from the transfer benefit, it is a defined contribution plan for agency purposes because the concurrent contributions (defined contributions) made by the agency to GESB extinguishes the agency's obligations to the related superannuation liability.

**(s) Resources Received Free of Charge or for Nominal Cost**

Resources received free of charge or for nominal cost that can be reliably measured are recognised as income and as assets or expenses as appropriate, at fair value.

**(t) Comparative Figures**

Comparative figures are, where appropriate, reclassified to be comparable with the figures presented in the current financial year.

### 4. Disclosure of changes in accounting policy and estimates

#### Initial application of an Australian Accounting Standard

DEC has applied the following Australian Accounting Standards and Australian Accounting Interpretations effective for annual reporting periods beginning on or after 1 July 2008 that impacted on DEC:

Review of AAS 27 'Financial Reporting by Local Governments', AAS 29 'Financial Reporting by Government Departments and AAS 31 'Financial Reporting by Governments'. The AASB has made the following pronouncements from its short term review of AAS 27, AAS 29 and AAS 31:

AASB 1004 'Contributions';

AASB 1050 'Administered Items';

AASB 1051 'Land Under Roads';

AASB 1052 'Disaggregated Disclosures';

AASB 2007-9 'Amendments to Australian Accounting Standards arising from the review of AASs 27,29 and 31 [AASB 3, AASB 5, AASB 8, AASB 101, AASB 114, AASB 116, AASB 127 and AASB 137];

Interpretation 1038 'Contributions by Owners Made to Wholly-Owned Public Sector Entities'.

The existing requirements in AAS 27, AAS 29 and AAS 31 have been transferred to the above new and revised topic-based Standards and Interpretation. These requirements remain substantively unchanged. The new and revised Standards and Interpretation make some modifications to disclosures and provide additional guidance, otherwise there is no financial impact.

#### **Voluntary changes in Accounting Policy**

Effective from 1 July 2008, DEC has increased its asset capitalisation threshold from \$1,000 to \$5,000 for property, plant and equipment.

Retrospective application of the change in accounting policy has resulted in assets below the \$5,000 threshold amounting to \$8,340,000 being expensed against the opening balance of accumulated surplus as at 1 July 2007. The amounts of adjustments for each of the financial periods prior to 2007–08 have not been disclosed, as it is impracticable to track back acquisitions, disposals, depreciation and amortisation of those assets.

The comparatives for property, plant and equipment, depreciation and amortisation expense and supplies and services expense have been restated to disclose the effect of the policy change, the reconciliation can be seen at note 40.

The Key Performance Indicators for 2007–08 have not been recalculated as comparatives are not provided in the annual report.

#### **Future impact of Australian Accounting Standards not yet operative**

DEC cannot early adopt an Australian Accounting Standard or Australian Accounting Interpretation unless specifically permitted by TI 1101 'Application of Australian Accounting Standards and Other Pronouncements'. Consequently, DEC has not applied the following Australian Accounting Standards and Australian Accounting Interpretations that have been issued and which may impact DEC but are not yet effective. Where applicable, DEC plans to apply these Standards and Interpretations from their application date: but are not yet effective. These will be applied from their application date:

| Title  | Operative for reporting periods beginning on/after |
|--|--|
| AASB 101 'Presentation of Financial Statements' (September 2007). This Standard has been revised and will change the structure of the financial statements. These changes will require that owner changes in equity are presented separately from non-owner changes in equity. The Department does not expect any financial impact when the Standard is first applied.   | 1 January 2009                                     |
| AASB 2008-13 'Amendments to Australian Accounting Standards arising from AASB Interpretation 17 – Distribution of Non-cash Assets to Owners [AASB 5 and AASB 110]. This Standard amends ASSB 5 'Non-current Assets Held for Sale and Discontinued Operations' in respect of the classification, presentation and measurement of non-current assets held for distribution to owners in their capacity as owners. This may impact on the presentation and classification of Crown land held by DEC where the Crown is to be sold by the Department for Planning and Infrastructure. DEC does not expect any financial impact when the Standard is first applied prospectively. | 1 July 2009  |
| AASB 2009-2 'Amendments to Australian Accounting Standards – Improving Disclosures about Financial Instruments [AASB 4, AASB 7, AASB 1023 and AASB 1038]'. This Standard amends AASB 7 and will require enhanced disclosures about fair value measurements and liquidity risk with respect to financial instruments. The Department does not expect any financial impact when the Standard is first applied.   | 1 January 2009                                     |

|   | 2009<br>\$'000 | 2008<br>\$'000 |
|---|----------------|----------------|
| <b>5. Employee benefits expense</b>             |                |                |
| Wages and salaries (a)                          | 140,434        | 118,566        |
| Superannuation – defined contribution plans (b) | 12,967         | 11,535         |
| Superannuation – defined benefit plans (c)(d)   | 0              | 0              |
| Long service leave (e)                          | 2,770          | 3,012          |
| Annual leave (e)                                | 11,900         | 11,058         |
|   | <b>168,071</b> | <b>144,171</b> |

(a) Includes the value of the fringe benefits to the employee plus the fringe benefits tax component.

(b) Defined contribution plans include West State and Gold State (contribution paid).

(c) Defined benefit plans include Pension scheme and Gold State (pre-transfer benefit).

(d) An equivalent notional income is also recognised (see note 16 'Income from State Government'). Commencing in 2008–09, the reporting of notional superannuation expense and equivalent notional income has been discontinued.

(e) Includes a superannuation contribution component.

Employment on-costs such as workers' compensation insurance are included at note 10 'Other Expenses'. The employment on-costs liability is included at note 26 'Provisions'.

|   | 2009<br>\$'000 | 2008<br>\$'000 |
|---|----------------|----------------|
| <b>6. Supplies and Services</b>                 |                |                |
| Communications                                  | 4,206          | 3,840          |
| Consultants and contractors                     | 14,146         | 16,754         |
| Services and contracts                          | 35,082         | 33,948         |
| Materials                                       | 15,656         | 18,472         |
| Repairs and maintenance                         | 5,275          | 4,805          |
| Travel  | 5,253          | 5,506          |
| GROH rental expense                             | 3,459          | 3,031          |
| Other   | 5,474          | 5,931          |
|   | <b>88,551</b>  | <b>92,287</b>  |
| <b>7. Depreciation and amortisation expense</b> |                |                |
| Depreciation                                    |                |                |
| Plant, equipment and vehicles                   | 7,617          | 6,708          |
| Software  | 555            | 515            |
| Buildings                                       | 10,453         | 9,827          |
| Total depreciation                              | <b>18,625</b>  | <b>17,050</b>  |
| <b>8. Accommodation expenses</b>                |                |                |
| Lease rentals                                   | 4,971          | 3,919          |
| Electricity, power and water                    | 1,283          | 1,229          |
|   | <b>6,254</b>   | <b>5,148</b>   |
| <b>9. Grants and subsidies</b>                  |                |                |
| <i>Recurrent</i>                                |                |                |
| The Perth Mint                                  | 2,700          | 100            |
| Department for Planning and Infrastructure      | 750            | 1,050          |
| Keep Australia Beautiful Council (WA)           | 640            | 764            |
| CSIRO   | 500            | 10             |
| Southern Metropolitan Regional Council          | 342            | 458            |
| Kimberley Toad Busters                          | 309            | 0              |
| Conservation Council of WA Inc                  | 190            | 223            |
| Motor Trade Association of WA                   | 161            | 0              |
| Department of Water                             | 160            | 168            |
| Western Australian Local Government Assoc       | 137            | 2              |
| Earthcare Consulting                            | 132            | 68             |
| Rivers Regional Council                         | 131            | 0              |

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|   | 2009<br>\$'000 | 2008<br>\$'000 |
|---|----------------|----------------|
| Cleanaway                                     | 117            | 32             |
| Amcor Recycling Australasia                   | 110            | 55             |
| Mindarie Regional Council                     | 91             | 174            |
| South East Metropolitan Regional Council      | 91             | 95             |
| Department of Fisheries                       | 80             | 0              |
| Shire of Wagin                                | 72             | 113            |
| Shire of Ashburton Tom Price and Paraburdoo   | 69             | 16             |
| Pioneer Road Services Pty Ltd                 | 67             | 60             |
| WA Chip and Pulp Co Pty Ltd                   | 66             | 102            |
| C & D Recycling                               | 66             | 172            |
| Shire of Augusta Margaret River               | 65             | 22             |
| City of Rockingham                            | 64             | 1              |
| Xearth Pty Ltd                                | 63             | 0              |
| Bibbulmun Track Foundation                    | 60             | 110            |
| Geocatch                                      | 60             | 84             |
| Manjimup Land Conservation District Committee | 59             | 43             |
| Sunset Events                                 | 59             | 15             |
| Eastern Metropolitan Regional Council         | 58             | 137            |
| Direct Recycling                              | 51             | 0              |
| Shire of Busselton                            | 50             | 26             |
| Rottnest Island Authority                     | 0              | 400            |
| Department of Agriculture and Food            | 0              | 360            |
| City of Wanneroo                              | 0              | 152            |
| Wildflower Country                            | 0              | 98             |
| Shire of Roebourne                            | 0              | 80             |
| City of Albany                                | 0              | 79             |
| Shire of York                                 | 0              | 79             |
| Printing Industries Association               | 0              | 75             |
| Heady Enterprises                             | 0              | 73             |
| Shire of Merredin                             | 0              | 71             |
| City of Geraldton - Greenough                 | 0              | 68             |
| City of Nedlands                              | 0              | 65             |
| Housing Industry Association                  | 0              | 61             |
| Vintec Corporation Pty Ltd                    | 0              | 55             |
| Agsafe Ltd                                    | 0              | 50             |
| Shire of Victoria Park                        | 0              | 50             |
| Shire of Kent                                 | 0              | 50             |
| Various grants under \$50,000                 | 1,244          | 654            |
|   | <u>8,814</u>   | <u>6,620</u>   |

|                                       | 2009<br>\$'000 | 2008<br>\$'000 |
|---------------------------------------|----------------|----------------|
| <b>10. Other expenses</b>             |                |                |
| Employment on-costs (a)               | 880            | 268            |
| Operating lease – motor vehicle       | 13,124         | 11,472         |
| Other lease, rental and hire expenses | 11,634         | 10,000         |
|                                       | 25,638         | 21,740         |

(a) Includes workers' compensation insurance and other employment on-costs. The on-costs liability associated with the recognition of annual and long service leave liability is included at note 26 'Provisions'. Superannuation contributions accrued as part of the provision for leave are employee benefits and are not included in employment on-costs.

|                                  |        |        |
|----------------------------------|--------|--------|
| <b>11. User charges and fees</b> |        |        |
| User charges                     | 12,197 | 10,795 |
| Fees                             | 19,319 | 14,255 |
| Landfill levy revenue            | 12,618 | 12,155 |
| Emission and discharge licences  | 13,499 | 13,750 |
| Waste control permits            | 2,272  | 1,907  |
|                                  | 59,905 | 52,862 |

**12. Commonwealth grants and contributions**

|           |       |       |
|-----------|-------|-------|
| Capital   | 733   | 401   |
| Recurrent | 7,484 | 9,003 |
|           | 8,217 | 9,404 |

At 30 June 2009 \$3,768,605 relates to outstanding commitments.

**13. Other grants and contributions**

|           |        |        |
|-----------|--------|--------|
| Capital   | 520    | 1,307  |
| Recurrent | 18,422 | 26,176 |
|           | 18,942 | 27,483 |

At 30 June 2009 \$14,499,337 relates to outstanding commitments.

**14. Net gain/(loss) on disposal of non-current assets**

|   |     |       |
|---|-----|-------|
| <i>Costs of Disposal of Non-Current Assets</i>      |     |       |
| Plant, property, equipment and vehicles             | 221 | 129   |
| Buildings   | 0   | 10    |
| <i>Proceeds from Disposal of Non-Current Assets</i> |     |       |
| Plant, property, equipment and vehicles             | 896 | 1,383 |
|   | 675 | 1,244 |

See also note 3(h) 'Non current assets classified as held for sale' and note 22 ' Non current assets classified as held for sale' and note 23 'Property, plant and equipment'.

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|  | 2009<br>\$'000 | 2008<br>\$'000 |
|--|----------------|----------------|
| <b>15. Other revenue</b>   |                |                |
| Publications revenue   | 524            | 489            |
| Mining compensation revenue  | 5,420          | 4,708          |
| Other revenues   | 2,901          | 2,223          |
|  | <u>8,845</u>   | <u>7,420</u>   |
| <b>16. Income from State Government</b>  |                |                |
| Appropriation revenue received during the year:  |                |                |
| Service appropriations (a)   | 201,656        | 188,494        |
| Services provided to EPA   | 13,320         | 13,166         |
| Salaries and Allowances Act 1975   | 665            | 620            |
| Total appropriations   | <u>215,641</u> | <u>202,280</u> |
| The following assets have been assumed from other State government agencies during the financial year: (b) |                |                |
| – Plant, equipment and vehicles  | 395            | 94             |
| – Buildings  | 0              | 17             |
| Total assets assumed   | <u>395</u>     | <u>111</u>     |
| Resources received free of charge (c)  |                |                |
| Determined on the basis of the following estimates provided by agencies:                                   |                |                |
| – Landgate   | 1,506          | 209            |
| – State Solicitor's Office   | 310            | 305            |
| – Department of Water  | 5              | 0              |
| – Department of Treasury and Finance   | 160            | 249            |
| – Department of Agriculture  | 192            | 0              |
| – Department of Planning and Infrastructure  | 2              | 0              |
| Total resources received free of charge  | <u>2,175</u>   | <u>763</u>     |
|  | <u>218,211</u> | <u>203,154</u> |

- (a) Service appropriations are accrual amounts reflecting the full cost of services delivered. The appropriation revenue comprises a cash component and a receivable (asset). The receivable (holding account) comprises the depreciation expense for the year and any agreed increase in leave liability during the year.
- (b) Discretionary transfers of assets between State Government agencies are reported as assets assumed/(transferred) under Income from State Government. Non-discretionary non-reciprocal transfers of net assets, other than those resulting from a restructure of administrative arrangements, have been classified as Contributions by Owners (CBOs) under TI 955 and are taken directly to equity.
- (c) Where assets or services have been received free of charge or for nominal cost, DEC recognises revenues equivalent to the fair value of the assets and/or the fair value of those services that can be reliably determined and which would have been purchased if not donated, and those fair values shall be recognised as assets or expenses, as applicable. Where the contribution of assets or services are in the nature of contributions by owners, DEC makes an adjustment direct to equity.



|  | 2009<br>\$'000 | 2008<br>\$'000 |
|--|----------------|----------------|
| <b>17. Restricted cash and cash equivalents</b>  |                |                |
| <i>Current</i>   |                |                |
| Cash amounts in suspense account (a)   | 58,328         | 52,057         |
| <i>Non Current</i>   |                |                |
| Accrued salaries suspense account (b)  | 2,118          | 1,378          |
| (a) Cash held in the account is to fund the four special purpose accounts disclosed at note 37 and a range of specific purpose accounts.           |                |                |
| (b) Amount held in the suspense account is only to be used for the purpose of meeting the 27th pay in a financial year that occurs every 11 years. |                |                |
| <b>18. Inventories</b>   |                |                |
| <i>Current</i>   |                |                |
| Inventories held for resale:   |                |                |
| Publications   | 249            | 288            |
| Souvenirs  | 102            | 88             |
|  | 351            | 376            |
| <i>Non-current</i>   |                |                |
| Publications   | 995            | 1,152          |
| Impairment of publications   | (575)          | (460)          |
| Souvenirs  | 410            | 354            |
|  | 830            | 1,046          |
| See also note 3(n) 'Inventories'.  |                |                |
| <b>19. Receivables</b>   |                |                |
| <i>Current</i>   |                |                |
| Receivables  | 13,935         | 11,606         |
| Allowance for impairment of receivables  | (100)          | (223)          |
| GST receivable   | 1,920          | 2,621          |
| Accrued revenue  | 3,939          | 4,618          |
|  | 19,694         | 18,622         |
| Balance at start of year   | 223            | 72             |
| Doubtful debts expense recognised in the income statement  | 0              | 200            |
| Amounts recovered during the year  | (21)           | 0              |
| Amounts written off during the year  | (102)          | (49)           |
| Balance at end of year   | 100            | 223            |
| DEC does not hold any collateral as security or other credit enhancements relating to receivables.   |                |                |
| See also note 3(o) 'Receivables' and note 33 'Financial Instruments'.  |                |                |

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|  | 2009<br>\$'000 | 2008<br>\$'000 |
|--|----------------|----------------|
| 20. Amounts receivable for services  |                |                |
| Current  | 14,169         | 7,377          |
| Non-current  | 65,636         | 61,766         |
|  | <u>79,805</u>  | <u>69,143</u>  |
| <p>Represents the non-cash component of service appropriations. See note 3(m) 'Amounts receivable for services (Holding Account)'. It is restricted in that it can only be used for asset replacement or payment of leave liability.</p> |                |                |
| 21. Other assets   |                |                |
| <i>Current</i>   |                |                |
| Prepayments  | <u>741</u>     | <u>731</u>     |
| 22. Non-current assets classified as held for sale   |                |                |
| <i>Opening balance</i>   |                |                |
| Plant, equipment and vehicles  | 2              | 0              |
| Less write-down from cost to fair value less selling costs   | <u>0</u>       | <u>0</u>       |
|  | <u>2</u>       | <u>0</u>       |
| <i>Assets reclassified as held for sale</i>  |                |                |
| Plant, equipment and vehicles  | 0              | 2              |
| Less write-down from cost to fair value less selling costs   | <u>0</u>       | <u>0</u>       |
|  | <u>0</u>       | <u>2</u>       |
| <i>Total assets classified as held for sale</i>  |                |                |
| Plant, equipment and vehicles  | 2              | 2              |
| Less write-down from cost to fair value less selling costs   | <u>0</u>       | <u>0</u>       |
|  | <u>2</u>       | <u>2</u>       |
| <i>Less assets sold</i>  |                |                |
| Plant, equipment and vehicles  | 2              | 0              |
| Less write-down from cost to fair value less selling costs   | <u>0</u>       | <u>0</u>       |
|  | <u>2</u>       | <u>0</u>       |
| <i>Closing balance</i>   |                |                |
| Plant, equipment and vehicles  | 0              | 2              |
| Write-down from cost to fair value less selling costs  | <u>0</u>       | <u>0</u>       |
|  | <u>0</u>       | <u>2</u>       |

|  | 2009<br>\$'000 | 2008<br>\$'000 |
|--|----------------|----------------|
| <b>23. Property, plant and equipment</b> |                |                |
| <i>Land</i>                              |                |                |
| At fair value (a)                        | 4,427,134      | 3,800,519      |
| Accumulated impairment losses            | 0              | 0              |
|  | 4,427,134      | 3,800,519      |
| <i>Buildings</i>                         |                |                |
| At fair value (a)                        | 83,220         | 76,937         |
| Accumulated depreciation                 | (11)           | (3,879)        |
| Accumulated impairment losses            | 0              | 0              |
|  | 83,209         | 73,058         |
| <i>Plant and equipment</i>               |                |                |
| At cost                                  | 112,479        | 102,334        |
| Accumulated depreciation                 | (29,387)       | (18,838)       |
| Accumulated impairment losses            | 0              | 0              |
|  | 83,092         | 83,496         |
| <i>Vehicles</i>                          |                |                |
| At cost                                  | 19,279         | 16,735         |
| Accumulated depreciation                 | (9,457)        | (6,051)        |
| Accumulated impairment losses            | 0              | 0              |
|  | 9,822          | 10,684         |
| <i>Assets under construction</i>         | 32,083         | 21,688         |
|  | 4,635,340      | 3,989,445      |

(a) Land and buildings were revalued as at 1 July 2008 by the Western Australian Land Information Authority (Valuation Services). The valuations were performed during the year ended 30 June 2009 and recognised at 30 June 2009. In undertaking the revaluation, fair value was determined by reference to market values for land: \$2,497,025,450 and buildings: \$6,713,500. For the remaining balance, fair value of land and buildings was determined on the basis of existing use or depreciated replacement cost. See note 3(f) Property, Plant and Equipment.

In accordance with AASB 116.35 DEC credits accumulated depreciation to the asset account prior to revaluation and restates the net amount to the revalued amount.

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Reconciliations of the carrying amounts of property, plant, equipment and vehicles and assets under construction at the beginning and end of the reporting period are set out below:

|                                  | Land      | Buildings | Plant and equipment | Vehicles | Assets under construction | Total     |
|----------------------------------|-----------|-----------|---------------------|----------|---------------------------|-----------|
| 2009                             | \$'000    | \$'000    | \$'000              | \$'000   | \$'000                    | \$'000    |
| Carrying amount at start of year | 3,800,519 | 73,058    | 83,496              | 10,684   | 21,688                    | 3,989,445 |
| Additions                        | 3,355     | 6,507     | 10,028              | 2,734    | 10,395                    | 33,019    |
| Assets not previously identified | 0         | 0         | 395                 | 0        | 0                         | 395       |
| Transfers (a)                    | 14,132    | 0         | 0                   | 0        | 0                         | 14,132    |
| Disposals                        | 0         | (71)      | (118)               | (32)     | 0                         | (221)     |
| Classified as held for sale      | 0         | 0         | 0                   | 0        | 0                         | 0         |
| Revaluation increments           | 609,128   | 8,067     | 0                   | 0        | 0                         | 617,195   |
| Depreciation                     | 0         | (4,352)   | (10,709)            | (3,564)  | 0                         | (18,625)  |
| Carrying amount at end of year   | 4,427,134 | 83,209    | 83,092              | 9,822    | 32,083                    | 4,635,340 |

|                                  | Land      | Buildings | Plant and equipment | Vehicles | Assets under construction | Total     |
|----------------------------------|-----------|-----------|---------------------|----------|---------------------------|-----------|
| 2008                             | \$'000    | \$'000    | \$'000              | \$'000   | \$'000                    | \$'000    |
| Carrying amount at start of year | 3,251,302 | 65,992    | 81,448              | 11,269   | 14,547                    | 3,424,558 |
| Additions                        | 4,056     | 5,367     | 11,724              | 2,867    | 7,141                     | 31,155    |
| Assets not previously identified | 0         | 17        | 94                  | 0        | 0                         | 111       |
| Transfers (a)                    | 1,991     | 175       | 0                   | 0        | 0                         | 2,166     |
| Disposals                        | 0         | (10)      | (128)               | (2)      | 0                         | (140)     |
| Classified as held for sale      | 0         | 0         | (2)                 | 0        | 0                         | (2)       |
| Revaluation increments           | 543,170   | 5,477     | 0                   | 0        | 0                         | 548,647   |
| Depreciation                     | 0         | (3,960)   | (9,640)             | (3,450)  | 0                         | (17,050)  |
| Carrying amount at end of year   | 3,800,519 | 73,058    | 83,496              | 10,684   | 21,688                    | 3,989,445 |

(a) DEC has received assets from other agencies, this is accounted for as a contribution by owners.

### 24 Impairment of assets

There were no indications of material impairment to property, plant and equipment at 30 June 2009.

DEC held no goodwill or intangible assets with an indefinite useful life during the reporting period and at balance sheet date there were no intangible assets not yet available for use. All surplus assets at 30 June 2009 have been written off.

|                        | <b>2009</b>   | <b>2008</b>   |
|------------------------|---------------|---------------|
|                        | \$'000        | \$'000        |
| <b>25. Payables</b>    |               |               |
| <i>Current</i>         |               |               |
| Trade payables         | 8,268         | 10,082        |
| Accrued expenses       | 1,839         | 3,285         |
| Accrued salaries       | 1,979         | 1,150         |
| Accrued superannuation | 157           | 95            |
| Unearned revenue       | 2,953         | 2,412         |
|                        | <u>15,196</u> | <u>17,024</u> |

See also note 3(p) 'Payables' and note 33 'Financial Instruments'.

|                             |               |               |
|-----------------------------|---------------|---------------|
| <b>26. Provisions</b>       |               |               |
| <i>Current</i>              |               |               |
| Employee benefits provision |               |               |
| Annual leave (a)            | 15,155        | 11,751        |
| Long service leave (b)      | 11,704        | 10,075        |
|                             | <u>26,859</u> | <u>21,826</u> |
| Other provisions            |               |               |
| Employment on-costs (c)     | 242           | 196           |
|                             | <u>27,101</u> | <u>22,022</u> |
| <i>Non-current</i>          |               |               |
| Employee benefits provision |               |               |
| Long service leave (b)      | 13,596        | 10,742        |
| Other provisions            |               |               |
| Employment on-costs (c)     | 129           | 97            |
|                             | <u>13,725</u> | <u>10,839</u> |

(a) Annual leave liabilities have been classified as current as there is not an unconditional right to defer settlement for at least 12 months after reporting date. Assessments indicate that actual settlement of the liabilities will occur as follows:

|  |        |        |
|--|--------|--------|
| Within 12 months of balance sheet date | 15,155 | 11,751 |
|--|--------|--------|

(b) Long service leave liabilities have been classified as current where there is no unconditional right to defer settlement for at least 12 months after reporting date. Assessments indicate that actual settlement of the liabilities will occur as follows:

|   |               |               |
|---|---------------|---------------|
| Within 12 months of balance sheet date    | 11,704        | 10,075        |
| More than 12 months of balance sheet date | 13,596        | 10,742        |
|   | <u>25,300</u> | <u>20,817</u> |

(c) The settlement of annual and long service leave liabilities gives rise to the payment of employment on-costs including workers' compensation insurance. The provision is the present value of expected future payments. The associated expense apart from the unwinding of the discount (finance cost), is included in note 10 'Other expenses'.

|   | 2009<br>\$'000 | 2008<br>\$'000 |
|---|----------------|----------------|
| <i>Movements in Other Provisions</i>  |                |                |
| Movements in each class of provisions during the financial year, other than employee benefits, are set out below. |                |                |
| <i>Employment on-cost provision</i>   |                |                |
| Carrying amount at start of year  | 293            | 286            |
| Additional provisions recognised  | 880            | 268            |
| Payments/other sacrifices of economic benefits  | (802)          | (261)          |
| Carrying amount at end of year  | 371            | 293            |

## 27. Equity

Equity represents the residual interest in the net assets of DEC. The Government holds the equity interest in DEC on behalf of the community. The asset revaluation reserve represents that portion of equity resulting from the revaluation of non-current assets.

### Contributed equity

|                                  |           |           |
|----------------------------------|-----------|-----------|
| Balance at the start of the year | 2,791,647 | 2,779,619 |
|----------------------------------|-----------|-----------|

### Contributions by owners

|   |           |           |
|---|-----------|-----------|
| Capital contribution (a)  | 16,597    | 9,862     |
| Transfer of net assets from other agencies (b)                                |           |           |
| Main Roads  | 10,500    | 0         |
| Land and Building transferred from Department for Planning and Infrastructure | 5,172     | 2,166     |
| Total contributions by owners   | 2,823,916 | 2,791,647 |

### Distributions to owners

|   |           |           |
|---|-----------|-----------|
| Transfer of net assets to other agencies and Government (b) (c) | (1,540)   | 0         |
| Balance at the end of the year                                  | 2,822,376 | 2,791,647 |

- (a) Under the Treasurer's instruction TI 955 'Contribution by Owners Made to Wholly Owned Public Sector Entities' Capital Contributions (appropriations) have been designated as contributions by owners in accordance with AASB Interpretation 1038 'Contributions by Owners Made to Wholly Owned Public Sector Entities'.
- (b) Under TI 955, non-discretionary (non-reciprocal) transfers of net assets between State government agencies have been designated as contributions by owners in accordance with AASB Interpretation 1038, where the transferee agency accounts for a non-discretionary (non-reciprocal) transfer of net assets as a contribution by owners and the transferor agency accounts for the transfer as a distribution to owners.
- (c) TI 955 requires non-reciprocal transfers of net assets to Government to be accounted for as distribution to owners in accordance with AASB Interpretation 1038.

### Reserves

#### Asset revaluation reserve:

|  |           |           |
|--|-----------|-----------|
| Balance at the start of the year         | 1,284,131 | 735,483   |
| Net revaluation increments/(decrements): |           |           |
| Land                                     | 609,128   | 543,170   |
| Buildings                                | 8,067     | 5,478     |
| Balance at the end of the year           | 1,901,326 | 1,284,131 |

|                                  | <b>2009</b>   | <b>2008</b>   |
|----------------------------------|---------------|---------------|
|                                  | \$'000        | \$'000        |
| <b>Accumulated surplus</b>       |               |               |
| Balance at the start of the year | 24,350        | 13,500        |
| Result for the period            | 2,578         | 19,190        |
| Change in accounting policy      | 0             | (8,340)       |
| Balance at the end of the year   | <u>26,928</u> | <u>24,350</u> |

## 28. Notes to the Statement of Cash Flows

### *Reconciliation of cash*

Cash at the end of the financial year as shown in the Cash Flow Statement is reconciled to the related items in the Balance Sheet as follows:

|  |               |               |
|--|---------------|---------------|
| Cash   | 9,445         | 17,213        |
| Restricted cash and cash equivalents (see note 17) | 60,446        | 53,435        |
|  | <u>69,891</u> | <u>70,648</u> |

Reconciliation of net cost of services to net cash flows used in operating activities

|  |                  |                  |
|--|------------------|------------------|
| Net cost of services                                     | (215,633)        | (183,964)        |
| Non-cash items:  |                  |                  |
| Depreciation and amortisation expense                    | 18,625           | 17,050           |
| Superannuation expense                                   | 0                | 0                |
| Resources received free of charge                        | 2,175            | 763              |
| Net (gain)/loss on sale of property, plant and equipment | (675)            | (1,244)          |
| (Increase)/decrease in assets:                           |                  |                  |
| Current receivables (b)                                  | (2,228)          | (1,392)          |
| Inventories  | 242              | 298              |
| Prepayments  | (32)             | 8                |
| Other current assets                                     | 554              | (338)            |
| Increase/(decrease) in liabilities:                      |                  |                  |
| Current payables (b)                                     | 100              | (1,316)          |
| Provisions   | 7,966            | 712              |
| Net GST receipts/(payments) (a)                          | 313              | (612)            |
| Net cash used in operating activities                    | <u>(188,593)</u> | <u>(170,035)</u> |

(a) This is the net GST paid/received, i.e. cash transactions.

(b) Note that Australian Taxation Office (ATO) receivable/payable in respect of GST and receivable/payable in respect of the sale/purchase of non-current assets are not included in these items as they do not form part of the reconciling items.

## 29. Resources provided free of charge

During the year DEC did not provide to other agencies free of charge for functions outside the normal operation of DEC:

## 30. Commitments

### *Capital expenditure commitments*

Capital expenditure commitments, being contracted capital expenditure additional to the amounts reported in the financial statements, are payable as follows:

|  | 2009<br>\$'000 | 2008<br>\$'000 |
|--|----------------|----------------|
| Within 1 year                                | 14,287         | 21,543         |
| Later than 1 year and not later than 5 years | 0              | 4,388          |
|  | 14,287         | 25,931         |

The capital commitments include amounts for:

|                     |        |        |
|---------------------|--------|--------|
| Buildings           | 14,069 | 24,743 |
| Plant and Equipment | 218    | 1,188  |
|                     | 14,287 | 25,931 |

### *Non-cancellable operating lease commitments*

Commitments for minimum lease payments are payable as follows:

|  |        |        |
|--|--------|--------|
| Within 1 year                                | 7,434  | 9,197  |
| Later than 1 year and not later than 5 years | 13,174 | 13,343 |
| Later than 5 years                           | 7,330  | 12,107 |
|  | 27,938 | 34,647 |

DEC's fleet leases account for the majority of the non cancellable operating lease commitments. The lease term varies depending on the vehicle. The lease payments are fixed for the term of the lease and are payable monthly. There is no option to renew the lease at the end of the lease term.

These commitments are all exclusive of GST.

## 31. Contingent liabilities and contingent assets

### *Contingent liabilities*

In addition to the liabilities included in the financial statements, DEC has the following contingent liabilities:

#### (a) Litigation in progress

DEC has various pending litigation that may affect the financial position to the value of \$668,297, of which \$565,915 is fire related. DEC has denied liability and any legal claim will be defended.

#### (b) Native title claims

DEC's land is subject to a number of native title claims that have yet to be assessed by the National Native Title Tribunal. The financial effect should these claims be successful cannot be estimated at this time.



(c) Contaminated sites

Under the Contaminated Sites Act, 2003 DEC is required to report known and suspected contaminated sites to DEC. In accordance with the Act, DEC classifies these sites on the basis of the risk to human health, the environment and environmental values. Where sites are classified as *contaminated – remediation required* or possibly contaminated – investigation required, DEC may have a liability in respect of investigation or remediation expenses.

In May 2007 DEC submitted a programme for reporting known or suspected sites to itself under section 12 of the Contaminated Sites Act 2003. The programme provides for the identification and reporting of sites over an 18 month period (i.e. to be completed by 30 November 2009). During 2008–09, DEC made significant progress with the identification of sites, but has not yet finalised the selection of sites that require reporting. As a result, the financial effect cannot be estimated at this time.

Two of DEC’s sites have been classified possibly contaminated – investigation required, while the former Waste Control site in Bellevue (an “orphan” site) has been classified contaminated - remediation required. DEC also has some responsibility for investigating and, where necessary, remediating the former Brookdale Liquid Waste Treatment Facility and land near the former Pemberton Timber Mill, although these sites have not yet been classified under the Act. The financial effect of these liabilities cannot be reliably estimated at this time. DEC may apply for funding from the Contaminated Sites Management Account to undertake future investigation and/or remediation at these sites.

## 32. Explanatory statement

Significant variations between estimates and actual results for income and expense as presented in the financial statement titled “Summary of Consolidated Account Appropriations and Income Estimates” are shown below. Significant variations are considered to be those greater than 10% or \$5 million.

### (i) Significant variances between estimate and actual for 2009

#### **Total appropriation to deliver services and Total income**

|   | 2009<br>Estimate<br>\$'000 | 2009<br>Actual<br>\$'000 | Variance<br>\$'000 |
|---|----------------------------|--------------------------|--------------------|
| Total appropriations provided to deliver services | 215,967                    | 215,641                  | (326)              |
| Total income                                      | (83,911)                   | (100,320)                | (16,409)           |

#### **Total appropriation to deliver services**

Although there was no significant variance in the total appropriation, there were significant offsetting variances in the following service expenditures:

|   |        |         |          |
|---|--------|---------|----------|
| Nature Conservation                       | 96,815 | 117,577 | 20,762   |
| Sustainable Forest Management             | 38,956 | 53,627  | 14,671   |
| Parks and Visitor Services                | 65,479 | 74,089  | 8,610    |
| Environmental Regulation                  | 43,380 | 37,725  | (5,655)  |
| Environmental Sustainability              | 24,747 | 14,693  | (10,054) |
| Coordinate the Response to Climate Change | 15,233 | 5,110   | (10,123) |

#### Nature Conservation

The variance is a result of increased specific purpose grants funded activity, unbudgeted wildfire expenditure and increased leave liability provisions.

#### Sustainable Forest Management

The variance is due to unbudgeted wildfire expenditure incurred on DEC managed lands and assistance provided to external agencies in wildfire suppression, principally for the Forest Products Commission.

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### Parks and Visitor Services

The variance is a result of unbudgeted wildfire expenditure, increased leave liability provisions and depreciation expense.

### Environmental Regulation

The variance is principally due to the re-cash flow of funding provided for the investigation or remediation of contaminated sites.

### Environmental Sustainability

The variance is principally a result of smaller than anticipated payments from the Waste Avoidance and Resource Recovery Account for waste management initiatives.

### Coordinate the Response to Climate Change

The variance is due to the re-cash flow of funding provided for payments from the Low Emissions Energy Development (LEED) Fund.

### Total income

The variance is a result of increased specific purpose grants received.

### (ii) Significant variances between actuals for 2008 and 2009

#### Total appropriation to deliver services

| 2009<br>Actual<br>\$'000 | 2008<br>Actual<br>\$'000 | Variance<br>\$'000 |
|--------------------------|--------------------------|--------------------|
|--------------------------|--------------------------|--------------------|

#### Total appropriations provided to deliver services

|         |         |        |
|---------|---------|--------|
| 215,641 | 202,280 | 13,361 |
|---------|---------|--------|

The variance in the appropriation is due to a number of adjustments of which the significant items are; increases for payroll and general cost escalation \$9.7M; contaminated sites \$5.8M; fire management \$4.7M and major development approvals processes \$2.2M. Offsetting these increases to the appropriation were reductions for the 3% Efficiency Dividend and other savings measures minus \$4.3M and completion of finite funding provided for the Biodiversity Conservation Initiative minus \$3.7M. Further explanation of significant variations in service expenditure is provided below.

#### Service expenditure

|   |        |        |        |
|---|--------|--------|--------|
| Sustainable Forest Management   | 53,627 | 40,337 | 13,290 |
| Environmental Regulation  | 37,725 | 30,496 | 7,229  |
| Environmental Impact Assessment and Policies for the Environmental Protection Authority | 13,132 | 10,802 | 2,330  |

#### Sustainable Forest Management

The variance is due largely to increased wildfire suppression activities and increased payroll and general costs.

#### Environmental Regulation

The variance is a result of increased payroll and general costs.

#### Environmental Impact Assessment and Policies for the Environmental Protection Authority

The variance is due to the increase in resources assigned to major development approvals processes.

### (iii) Significant variances between estimate and actual for 2009

|  | <b>2009<br/>Estimate</b><br>\$'000 | <b>2009<br/>Actual</b><br>\$'000 | <b>Variance</b><br>\$'000 |
|--|------------------------------------|----------------------------------|---------------------------|
| Capital Contribution   |                                    |                                  |                           |
| <b>Capital Contribution</b>  | 22,582                             | 16,597                           | (5,985)                   |
| Actual expenditure for 2008/09 incurred on the Biodiversity Conservation Science Centre and Herbarium building was less than forecast. |                                    |                                  |                           |

### (iv) Significant variances between actuals for 2008 and 2009

|                             | <b>2009<br/>Actual</b><br>\$'000 | <b>2008<br/>Actual</b><br>\$'000 | <b>Variance</b><br>\$'000 |
|-----------------------------|----------------------------------|----------------------------------|---------------------------|
| Capital Contribution        |                                  |                                  |                           |
| <b>Capital Contribution</b> | 16,597                           | 9,862                            | 6,735                     |

Expenditure on the Biodiversity Conservation Science Centre and Herbarium building increased during 2008/09.

## 33. Financial instruments

### (a) Financial Risk Management Objectives and Policies

Financial instruments held by DEC are cash and cash equivalents, restricted cash and cash equivalents, receivables and payables. All of DEC's cash is held in the public bank account (interest bearing) apart from restricted cash held in a special purpose account. DEC has limited exposure to financial risks. DEC's overall risk management program focuses on managing the risks identified below.

#### *Credit risk*

Credit risk arises when there is the possibility of DEC's receivables defaulting on their contractual obligations resulting in financial loss to DEC.

The maximum exposure to credit risk at balance sheet date in relation to each class of recognised financial assets is the gross carrying amount of those assets inclusive of any provisions for impairment, as shown the table at Note 33(c) 'Financial Instruments Disclosures' and Note 19 'Receivables'.

Credit risk associated with DEC's financial assets is minimal because the main receivable is the amounts receivable for services (holding account). For receivables other than government, DEC trades only with recognised, creditworthy third parties. DEC has policies in place to ensure that sales of products and services are made to customers with an appropriate credit history. In addition, receivable balances are monitored on an ongoing basis with the result that DEC's exposure to bad debts is minimal. There are no significant concentrations of credit risk

Allowance for impairment of financial assets is calculated based on objective evidence such as observable data indicating changes in client credit ratings. For financial assets that are either past due or impaired, refer to Note 33(c) 'Financial Instruments Disclosures'

### *Liquidity risk*

Liquidity risk arises when DEC is unable to meet its financial obligations as they fall due. DEC is exposed to liquidity risk through its trading in the normal course of business.

DEC has appropriate procedures to manage cash flows including drawdowns of appropriations by monitoring forecast cash flows to ensure that sufficient funds are available to meet its commitments.

### *Market risk*

Market risk is the risk that changes in market prices such as foreign exchange rates and interest rates will affect DEC's income or the value of its holdings of financial instruments.

DEC does not trade in foreign currency and is not materially exposed to other price risks. Other than as detailed in the Interest rate sensitivity analysis table at Note 33(c), DEC is not exposed to interest rate risk because DEC has no borrowings.

### **(b) Categories of Financial Instruments**

In addition to cash, the carrying amounts of each of the following categories of financial assets and financial liabilities at the balance sheet date are as follows

|  | 2009<br>\$'000 | 2008<br>\$'000 |
|--|----------------|----------------|
| <b>Financial Assets</b>                          |                |                |
| Cash   | 9,445          | 17,213         |
| Restricted cash                                  | 60,446         | 53,435         |
| Loans and receivables (a)                        | 97,579         | 85,144         |
| <b>Financial Liabilities</b>                     |                |                |
| Financial liabilities measured at amortised cost | 15,196         | 17,024         |

(a) The amount of loans and receivables excludes GST recoverable from the ATO (statutory receivable).

### **(c) Financial Instrument Disclosures**

#### *Credit Risk and Interest Rate Risk Exposures*

The following tables disclose DEC's maximum exposure to credit risk, interest rate exposures and the ageing analysis of financial assets. The DEC's maximum exposure to credit risk at the balance sheet date is the carrying amount of financial assets as shown below. The table discloses the ageing of financial assets that are past due but not impaired and impaired financial assets. The table is based on information provided to senior management of DEC.

DEC does not hold any collateral as security or other credit enhancements relating to the financial assets it holds.

DEC does not hold any financial assets that had to have their terms renegotiated that would have otherwise resulted in them being past due or impaired.

## Interest rate exposures and ageing analysis of financial assets (a)

|                                      | Weighted average effective interest rate | Carrying amount | Interest rate exposure |                      | Past due but not impaired |             |           |           |           |           |                   | Impaired financial assets |
|--------------------------------------|--|-----------------|------------------------|----------------------|---------------------------|-------------|-----------|-----------|-----------|-----------|-------------------|---------------------------|
|                                      |  |                 | Variable interest rate | Non-interest bearing | Up to 3 months            | 3–12 months | 1–2 years | 2–3 years | 3–4 years | 4–5 years | More than 5 years |                           |
|                                      |  |                 | \$'000                 | \$'000               | \$'000                    | \$'000      | \$'000    | \$'000    | \$'000    | \$'000    | \$'000            |                           |
| <i>Financial Assets</i>              |  |                 |                        |                      |                           |             |           |           |           |           |                   |                           |
| <b>2009</b>                          |  |                 |                        |                      |                           |             |           |           |           |           |                   |                           |
| Cash and cash equivalents            | 5.4                                      | 9,445           | 9,445                  | 0                    | 0                         | 0           | 0         | 0         | 0         | 0         | 0                 | 0                         |
| Restricted cash and cash equivalents | 5.4                                      | 60,446          | 60,446                 | 0                    | 0                         | 0           | 0         | 0         | 0         | 0         | 0                 | 0                         |
| Receivables (a)                      |  | 17,774          | 0                      | 17,774               | 4,311                     | 1,008       | 0         | 106       | 0         | 0         | 0                 | 99                        |
| Amounts receivable for services      |  | 79,805          | 0                      | 79,805               | 0                         | 0           | 0         | 0         | 0         | 0         | 0                 | 0                         |
|                                      |  | 167,470         | 69,891                 | 97,579               | 4,311                     | 1,008       | 0         | 106       | 0         | 0         | 0                 | 99                        |
| <b>2008</b>                          |  |                 |                        |                      |                           |             |           |           |           |           |                   |                           |
| Cash and cash equivalents            | 6.9                                      | 17,213          | 17,213                 | 0                    | 0                         | 0           | 0         | 0         | 0         | 0         | 0                 | 0                         |
| Restricted cash and cash equivalents | 6.9                                      | 53,435          | 53,435                 | 0                    | 0                         | 0           | 0         | 0         | 0         | 0         | 0                 | 0                         |
| Receivables (a)                      |  | 16,001          | 0                      | 16,001               | 5,235                     | 0           | 106       | 0         | 0         | 0         | 0                 | 223                       |
| Amounts receivable for services      |  | 69,143          | 0                      | 69,143               | 0                         | 0           | 0         | 0         | 0         | 0         | 0                 | 0                         |
|                                      |  | 155,792         | 70,648                 | 85,144               | 5,235                     | 0           | 106       | 0         | 0         | 0         | 0                 | 223                       |

(a) The amount of receivables excludes the GST recoverable from the ATO (statutory receivable).

*Liquidity Risk*

The following table details the contractual maturity analysis for financial liabilities. The contractual maturity amounts are representative of the undiscounted amounts at the balance sheet date. The table includes both interest and principal cash flows. An adjustment has been made where material.

**Interest rate exposure and maturity analysis of financial liabilities**

|                              | Weighted<br>average<br>effective<br>interest<br>rate | Interest rate exposure |                              |                             |                                  |                            | Maturity dates    |                |           |           |           |           |                      |
|------------------------------|--|------------------------|------------------------------|-----------------------------|----------------------------------|----------------------------|-------------------|----------------|-----------|-----------|-----------|-----------|----------------------|
|                              |  | Carrying<br>amount     | Variable<br>interest<br>rate | Non-<br>interest<br>bearing | Adjustment<br>for<br>discounting | Total<br>Nominal<br>Amount | Up to 3<br>months | 3–12<br>months | 1–2 years | 2–3 years | 3–4 years | 4–5 years | More than<br>5 years |
|                              |  | \$'000                 | \$'000                       | \$'000                      | \$'000                           | \$'000                     | \$'000            | \$'000         | \$'000    | \$'000    | \$'000    | \$'000    | \$'000               |
| <i>Financial Liabilities</i> |  |                        |                              |                             |                                  |                            |                   |                |           |           |           |           |                      |
| <b>2009</b>                  |  |                        |                              |                             |                                  |                            |                   |                |           |           |           |           |                      |
| Payables                     |  | 15,196                 | 0                            | 15,196                      | 0                                | 0                          | 0                 | 0              | 0         | 0         | 0         | 0         | 0                    |
|                              |  | 15,196                 | 0                            | 15,196                      | 0                                | 0                          | 0                 | 0              | 0         | 0         | 0         | 0         | 0                    |
| <b>2008</b>                  |  |                        |                              |                             |                                  |                            |                   |                |           |           |           |           |                      |
| Payables                     |  | 17,024                 | 0                            | 17,024                      | 0                                | 0                          | 0                 | 0              | 0         | 0         | 0         | 0         | 0                    |
|                              |  | 17,024                 | 0                            | 17,024                      | 0                                | 0                          | 0                 | 0              | 0         | 0         | 0         | 0         | 0                    |

The amounts disclosed are the contractual undiscounted cash flows of each class of financial liabilities.

### Interest rate sensitivity analysis

The following table represents a summary of the interest rate sensitivity of DEC's financial assets and liabilities at the balance sheet date on the surplus for the period and equity for a 1% change in interest rates. It is assumed that the change in interest rates is held constant throughout the reporting period.

|                                      | Carrying amount<br>\$'000 | -1% change       |                  | +1% change       |                  |
|--------------------------------------|---------------------------|------------------|------------------|------------------|------------------|
|                                      |                           | Profit<br>\$'000 | Equity<br>\$'000 | Profit<br>\$'000 | Equity<br>\$'000 |
| <b>2009</b>                          |                           |                  |                  |                  |                  |
| <i>Financial Assets</i>              |                           |                  |                  |                  |                  |
| Cash and cash equivalents            | 9,445                     | (94)             | (94)             | 677              | 677              |
| Restricted cash and cash equivalents | 60,446                    | (604)            | (604)            | 604              | 604              |
| Total Increase/(Decrease)            |                           | (698)            | (698)            | 698              | 698              |
|                                      |                           |                  |                  |                  |                  |
|                                      | Carrying amount<br>\$'000 | -1% change       |                  | +1% change       |                  |
|                                      |                           | Profit<br>\$'000 | Equity<br>\$'000 | Profit<br>\$'000 | Equity<br>\$'000 |
| <b>2008</b>                          |                           |                  |                  |                  |                  |
| <i>Financial Assets</i>              |                           |                  |                  |                  |                  |
| Cash and cash equivalents            | 17,213                    | (172)            | (172)            | 172              | 172              |
| Restricted cash and cash equivalents | 53,435                    | (534)            | (534)            | 534              | 534              |
| Total Increase/(Decrease)            |                           | (706)            | (706)            | 706              | 706              |

### Fair Values

All financial assets and liabilities recognised in the balance sheet, whether they are carried at cost or fair value, are recognised at amounts that represent a reasonable approximation of fair value unless otherwise stated in the applicable notes.

## 34. Remuneration of senior officers

### Remuneration

The number of senior officers, whose total of fees, salaries, superannuation, non-monetary benefits and other benefits for the financial year, fall within the following bands are:

| \$  | 2009   | 2008 | 2009   | 2008   |
|---|--------|------|--------|--------|
|   | Number |      | \$'000 | \$'000 |
| 90,000–100,000                                | 0      | 1    |        |        |
| 100,001–110,000                               | 1      | 1    |        |        |
| 120,001–130,000                               | 0      | 3    |        |        |
| 130,001–140,000                               | 1      | 5    |        |        |
| 140,001–150,000                               | 6      | 2    |        |        |
| 150,001–160,000                               | 3      | 1    |        |        |
| 160,001–170,000                               | 2      | 1    |        |        |
| 180,001–190,000                               | 0      | 1    |        |        |
| 220,000–230,000                               | 1      | 0    |        |        |
| 340,001–350,000                               | 0      | 1    |        |        |
| 360,000–370,000                               | 1      | 0    |        |        |
| The total remuneration of senior officers is: |        |      | 2,481  | 2,390  |

The total remuneration includes the superannuation expense incurred by DEC in respect of senior officers. Three senior officers are members of the Pension Scheme.

|   | 2009<br>\$'000 | 2008<br>\$'000 |
|---|----------------|----------------|
| <b>35. Remuneration of Auditor</b>  |                |                |
| Remuneration payable to the Auditor General in respect of the audit for the current financial year is as follows:   |                |                |
| Auditing the accounts, financial statements and performance indicators  | 128            | 125            |
| The expense is included at note 6 'Supplies and services'.  |                |                |
| <b>36. Affiliated bodies</b>  |                |                |
| The Environmental Protection Authority, Conservation Commission and Marine Parks and Reserves Authority are government affiliated bodies that received administrative support from DEC, they are not subject to operational control by DEC.   |                |                |
| Environmental Protection Authority  | 1,206          | 1,073          |
| Conservation Commission   | 913            | 831            |
| Marine Parks and Reserves Authority   | 201            | 201            |
|   | <u>2,320</u>   | <u>2,105</u>   |
| <b>37. Special Purpose Accounts</b>   |                |                |
| <i>Special Purpose Account section 16 1(b) of FMA</i>   |                |                |
| Nature Conservation and National Parks Trust Account  |                |                |
| The purpose of the trust account is for scientific research relating to flora and fauna.  |                |                |
| Balance at the start of the year  | 1,350          | 1,053          |
| Receipts  | 362            | 422            |
| Payments  | (457)          | (125)          |
| Balance at the end of the year  | <u>1,255</u>   | <u>1,350</u>   |
| Waste Avoidance and Resource Recovery Account   |                |                |
| The purpose of the trust account is to: encourage the conservation of resources and energy through waste reduction and recycling; to promote, support and encourage viable alternatives to landfill disposal of waste; to encourage applied research and the development of appropriate waste management, waste reduction and recycling infrastructure and markets. The Fund will be used to fund nominated programs and other waste management initiatives established by the Minister for Environment on the advice of the Waste Authority. |                |                |
| Balance at the start of the year  | 11,470         | 7,072          |
| Receipts  | 13,441         | 12,857         |
| Payments  | (8,937)        | (8,459)        |
| Balance at the end of the year  | <u>15,974</u>  | <u>11,470</u>  |



|   | 2009<br>\$'000 | 2008<br>\$'000 |
|---|----------------|----------------|
| Contaminated Sites Management Account   |                |                |
| The purpose of the trust account is to enable investigation or remediation of any site where the State or a public authority (excluding Local Government) is responsible for remediation. The Account also funds DEC costs of investigation and ensuring compliance with notices. |                |                |
| Balance at the start of the year  | 3,197          | 3,847          |
| Receipts  | 5,703          | 302            |
| Payments  | (3,994)        | (952)          |
| Balance at the end of the year  | 4,906          | 3,197          |

#### Barrow Island Net Conservation Benefit Account

The purpose of the account is for the funding of ongoing programs that will provide demonstrable and sustainable additions to or improvements in biodiversity conservation values of Western Australia targeting, where possible, the biodiversity conservation values affected or occurring in similar bioregions to Barrow Island.

|                                  |       |   |
|----------------------------------|-------|---|
| Balance at the start of the year | 0     | 0 |
| Receipts                         | 3,681 | 0 |
| Payments                         | 0     | 0 |
| Balance at the end of the year   | 3,681 | 0 |

### 38. Supplementary financial information

#### *Write-offs*

During the financial year \$101,643.69 was written off as bad debts and nil off DEC's asset register under the authority of:

|                           |     |    |
|---------------------------|-----|----|
| The Accountable Authority | 102 | 56 |
| The Minister              | 0   | 0  |
| Executive Council         | 0   | 0  |
|                           | 102 | 56 |

#### *Losses Through Theft, Defaults and Other Causes*

|   |    |   |
|---|----|---|
| Losses of public money and, public and other property through theft or default. | 41 | 0 |
| Amounts recovered   | 26 | 0 |
|   | 15 | 0 |

## 39. Disclosures of Administered Income and Expenses

|                                    | Nature Conservation |                | Sustainable Forest Management |                | Parks and Visitor Services |                | Environmental Regulation |                | Environmental Sustainability |                | Environmental Impact Assessment and Policies for the Environmental Protection Authority |                | Coordinate the Response to Climate Change |                | Total          |                |
|------------------------------------|---------------------|----------------|-------------------------------|----------------|----------------------------|----------------|--------------------------|----------------|------------------------------|----------------|---|----------------|---|----------------|----------------|----------------|
|                                    | 2009<br>\$'000      | 2008<br>\$'000 | 2009<br>\$'000                | 2008<br>\$'000 | 2009<br>\$'000             | 2008<br>\$'000 | 2009<br>\$'000           | 2008<br>\$'000 | 2009<br>\$'000               | 2008<br>\$'000 | 2009<br>\$'000  | 2008<br>\$'000 | 2009<br>\$'000                            | 2008<br>\$'000 | 2009<br>\$'000 | 2008<br>\$'000 |
| <b>Cost of Services</b>            |                     |                |                               |                |                            |                |                          |                |                              |                |   |                |   |                |                |                |
| <b>Expenses</b>                    |                     |                |                               |                |                            |                |                          |                |                              |                |   |                |   |                |                |                |
| Transfer payment                   | 148                 | 234            | 0                             | 0              | 0                          | 0              | 0                        | 0              | 0                            | 0              | 0   | 0              | 0   | 0              | 148            | 234            |
| <b>Total administered expenses</b> | 148                 | 234            | 0                             | 0              | 0                          | 0              | 0                        | 0              | 0                            | 0              | 0   | 0              | 0   | 0              | 148            | 234            |
| <b>Income</b>                      |                     |                |                               |                |                            |                |                          |                |                              |                |   |                |   |                |                |                |
| Regularly fees and charges         | 24                  | 20             | 0                             | 0              | 0                          | 0              | 58                       | 61             | 0                            | 0              | 0   | 0              | 0   | 0              | 82             | 81             |
| Other revenue                      | 66                  | 80             | 0                             | 0              | 0                          | 0              | 0                        | 0              | 0                            | 0              | 0   | 0              | 0   | 0              | 66             | 80             |
| <b>Total administered income</b>   | 90                  | 100            | 0                             | 0              | 0                          | 0              | 58                       | 61             | 0                            | 0              | 0   | 0              | 0   | 0              | 148            | 161            |

## 40. Voluntary changes in accounting policies.

Effective from 1 July 2008, DEC increased its asset capitalisation threshold from \$1,000 to \$5,000 for property, plant and equipment, see note 4. The adjustments relating to the 2007–08 financial year are as follows:

|  | Before policy<br>change<br>30 June 2008<br>\$'000 | Adjustment<br>\$'000 | After policy<br>change<br>30 June 2008<br>\$'000 |
|--|---|----------------------|--|
| <b>Reconciliation of equity at the end of the last reporting period under previous asset capitalisation policy: 30 June 2007</b> |   |                      |  |
| <b>Assets</b>  |   |                      |  |
| Current Assets   | 96,378  | 0                    | 96,378   |
| Non-Current Assets (a)   | 4,062,442   | (8,807)              | 4,053,635  |
| <b>Total Assets</b>  | <b>4,158,820</b>                                  | <b>(8,807)</b>       | <b>4,150,013</b>                                 |
| <b>Liabilities</b>   |   |                      |  |
| Current Liabilities  | 39,046  | 0                    | 39,046   |
| Non-Current Liabilities  | 10,839  | 0                    | 10,839   |
| <b>Total Liabilities</b>   | <b>49,885</b>                                     | <b>0</b>             | <b>49,885</b>                                    |
| <b>Total Equity (b)</b>  | <b>4,108,935</b>                                  | <b>(8,807)</b>       | <b>4,100,128</b>                                 |
| <b>Accumulated surplus/(deficiency)</b>  |   |                      |  |
| Opening Balance  | 13,500  | (8,340)              | 5,160  |
| Surplus/(Deficit) for the period   | 19,657  | (467)                | 19,190   |
| <b>Closing Balance</b>   | <b>33,157</b>                                     | <b>(8,807)</b>       | <b>24,350</b>                                    |
| (a) Property, plant and equipment  | 3,998,252   | (8,807)              | 3,989,445  |
| (b) Accumulated Surplus/(Deficiency)   | 33,157  | (8,807)              | 24,350   |
| <b>Reconciliation of income statement for the year ended 30 June 2007</b>  |   |                      |  |
| Expenses (a)   | 286,548   | 468                  | 287,016  |
| Total income other than income from State Government   | 103,051   | 1                    | 103,052  |
| <b>Net cost of services</b>  | <b>183,497</b>                                    | <b>467</b>           | <b>183,964</b>                                   |
| <b>Income from State Government</b>  | <b>203,154</b>                                    | <b>0</b>             | <b>203,154</b>                                   |
| <b>Surplus/(Deficit) for the period</b>  | <b>19,657</b>                                     | <b>(467)</b>         | <b>19,190</b>                                    |
| (a) Depreciation Expense   | 19,471  | (2,421)              | 17,050   |
| Supplies and Services  | 89,398  | 2,889                | 92,287   |
|  | 108,869   | 468                  | 109,337  |
| <b>Reconciliation of cash flow statement for the year ended 30 June 2007</b>   |   |                      |  |
| <b>Cash flows from State Government</b>  | <b>200,909</b>                                    | <b>0</b>             | <b>200,909</b>                                   |
| <b>Utilised as follows:</b>  |   |                      |  |
| <b>Net cash (used in)/provided by</b>  |   |                      |  |
| Operating activities (a)   | (167,146)   | (2,889)              | (170,035)  |
| Investing activities (b)   | (32,873)  | 2,889                | (29,984)   |
| <b>Net increase/(decrease) in cash and cash equivalent</b>   | <b>890</b>  | <b>0</b>             | <b>890</b>                                       |
| <b>Cash and cash equivalents at the beginning of period</b>  | <b>69,758</b>                                     | <b>0</b>             | <b>69,758</b>                                    |
| <b>Cash and cash equivalents at the end of the period</b>  | <b>70,648</b>                                     | <b>0</b>             | <b>70,648</b>                                    |
| (a) Payment for supplies and services  | (90,940)  | (2,889)              | (93,829)   |
| (b) Payment for purchases of non-current physical assets   | (34,724)  | 2,889                | 31,835   |

### Certification of Key Performance Indicators

I hereby certify that the performance indicators are based on proper records, are relevant and appropriate for assisting users to assess the Department of Environment and Conservation's performance, and fairly represent the performance of the Department of Environment and Conservation for the financial year ended 30 June 2009.



Keiran McNamara  
**Accountable Authority**  
8 September 2009

### Performance Indicators

#### Vision

A healthy, diverse and well managed Western Australian environment.

#### Mission Statement

Working with the community, we will ensure that Western Australia's environment is valued, protected and conserved, for its intrinsic value, and for the appreciation and benefit of present and future generations.

#### Funding Objectives

Funding for the year was received in accordance with the following Outcomes and Services.

#### Outcome 1

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##### **Conservation and sustainable utilisation of biodiversity.**

##### **Service 1 Nature Conservation**

The development and implementation of programs for the conservation of biodiversity (the variety of life forms: the different plants, animals and microorganisms, the genes they contain, and the ecosystems they form), including threatened species and ecological communities, and for sustainable use of commercially exploited species; the acquisition, conservation and protection of representative ecosystems; and encouraging public awareness, understanding and support for nature conservation.

##### **Service 2 Sustainable Forest Management**

The provision of economic, social and cultural benefits from State forest and timber reserves while conserving biodiversity, maintaining soil and water values and sustaining the health, vitality and productive capacity of the forest for current and future generations.

#### Outcome 2

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##### **Community enjoyment of park facilities and services, wildlife and the natural environment displayed in parks.**

##### **Service 3 Parks and Visitor Services**

Management of land and waters; dealing with public involvement, visitation and appreciation of the natural environment on lands and waters managed by the department, including preparing and implementing management and recreation site development plans; providing, managing and maintaining appropriate access, recreation opportunities and visitor facilities; protecting natural areas, visitors and facilities from wildfire; training departmental staff and volunteers, working with local tourist bureaus and commercial tour operators; involving Indigenous people in park management and the provision of visitor facilities and services; providing visitor information and designing and initiating educational and interpretive activity programs which enrich visitor experience and help develop greater community awareness and support for parks, natural areas, astronomy, nature-based tourism and recreation services and policies; undertaking scientific, visitor and social research, including astronomy in cooperation with other research institutions. Provision of services to, and performance of Statutory functions by the Conservation Commission of Western Australia.

### Outcome 3

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#### **Emissions and discharges meet acceptable criteria.**

##### **Service 4 Environmental Regulation**

Regulate emissions and discharges to the environment and the transport of hazardous wastes. Regulate the investigation, classification and management of contaminated sites. Monitor ambient air quality and develop air quality management plans for priority air sheds (the air canopy surrounding population centres, industrial and other facilities, within which the impacts of air pollutants need to be considered from health and environmental viewpoints).

### Outcome 4

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#### **Adoption of environmentally sustainable practices to protect, manage and restore the State's natural resources.**

##### **Service 5 Environmental Sustainability**

Develop and implement policies and strategies that promote environmentally sustainable practices in industry, government and the community.

##### **Service 6 Environmental Impact Assessment and Policies for the Environmental Protection Authority**

Manage the environmental impact assessment process and coordinate the development of policy for the Environment Protection Authority to enable sound environmental advice to be provided to the Government, developers and the public in accordance with statutory functions.

##### **Service 7 Coordinate the Response to Climate Change**

To provide leadership in the development and implementation of strategies to reduce greenhouse gas emissions, and adaptation initiatives to reduce the impact of climate change for Western Australia.

## Outcomes and Key Effectiveness Indicators

### Outcome: Conservation and sustainable utilisation of biodiversity

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
| Total number of listed threatened taxa and ecological communities (a)  | 727               | 701               | (26)      |
| Number of threatened taxa and ecological communities with improved conservation status (b)                   | 1                 | 1                 | 0         |
| Number of threatened taxa and ecological communities with declining conservation status (c)                  | 5                 | 0                 | (5)       |
| Proportion of critically endangered and endangered taxa and ecological communities that have a recovery plan | 60%               | 59%               | (1%)      |
| Proportion of terrestrial sub-bioregions with greater than 15% reservation (d)                               | 24.1%             | 20.4%             | (3.7%)    |
| Proportion of marine bioregions with marine conservation reserves  | 42.1%             | 42.1%             | 0         |

**Note to the indicators:** (a) The reduction in the number of listed threatened taxa and ecological communities from the 2008/09 targets is due primarily to unavoidable delays in progressing recommended changes to the list of threatened ecological communities; (b) One species of flora (*Philotheca falcata* from the Yellowdine area) had an increased conservation status in 2008/09 due to the rediscovery of this species which was presumed to be extinct; (c) Fewer threatened taxa and ecological communities had a decline in conservation status due to none meeting the criteria for elevated threat categories during the report period; and (d) The lower than expected level of reservation is due to ongoing delays in achieving formal reservation status of lands acquired by the Department. This is due to native title considerations and other Government processes.

#### Percentage of Forest Management Plan performance indicators where defined annual targets are met

The department aims to achieve a high level of compliance with standards for management of forests.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | 75%               | 78%               | 3%        |

## 4.2 KEY PERFORMANCE INDICATORS

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Outcome: Community enjoyment of park facilities and services, wildlife and the natural environment displayed in parks

### Average level of visitor satisfaction with their visit

The average level of customer satisfaction with their visit is a key indicator of the department's effectiveness in delivering parks and other natural areas that allow the community to understand, enjoy and appreciate the natural environment. Visitor satisfaction levels are consistently high.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | 85%               | 88.1%             | 3.1%      |

### Park visitation (annual number of visits)

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | 12,300,000        | 14,179,806        | 1,879,806 |

### Annual percentage change in park visitation

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | 0.4%              | 12.9%             | 12.5%     |

**Note to the indicator:** The initial target was conservative because of predictions that tourism across the State would be affected by the economic crisis. Furthermore, 10 additional sites were included in the monitoring program, and there was increased visitation at existing parks particularly in the Midwest and Northwest.



### Outcome: Emissions and discharges meet acceptable criteria

#### Number of exceedances of approved environment criteria by regulated activities

The number of exceedances of approved environment criteria is a key indicator of the department's effectiveness in setting and monitoring environmental standards.

|  | 2008-09<br>Target | 2008-09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | 50                | 37                | (13)      |

**Note to the indicator:** The variance between the target and actual exceedances is due to improved industry practices.

#### Number of air National Environment Protection Measure (NEPM) exceedances per annum of criteria pollutants

The monitoring of air quality for criteria pollutants against national health standards and goals specified under the National Environment Protection Measure (NEPM) for air quality is a vital tool to enable the effective monitoring and management of emissions and discharges to air sheds. Monitoring of air quality against criteria pollutants enables: assessment of compliance with NEPM standards and goals set to protect human health, the effectiveness of long term air quality management strategies and tools to be evaluated, effectiveness of industry emission controls and management strategies to be evaluated and reporting on the State of the Environment.

|  | 2008-09<br>Target | 2008-09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | 11                | 25                | 14        |

**Note to the indicator:** Significant earthworks activities near the Geraldton station have contributed to the increase in exceedances reported.

Outcome: Adoption of environmentally sustainable practices to protect, manage and restore the State's natural resources

### Percentage of waste in the metropolitan area diverted from landfill through recycling

Developing strategies to reduce and recycle the volume of waste produced remains a significant challenge. Diverting waste that is currently being disposed of via landfill to recycling is an important component or reducing the impact of waste on our environment.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | 25%               | 31%               | 6%        |

**Note to the indicator:** The percentage of waste recovered is estimated using the best data available. While some improvement in recycling rates was anticipated due to improvements in recycling collection services and recycling infrastructure, there may be a slight over-reporting of material recovered due to inconsistencies in data collection systems. DEC is working to improve its data collection in this area.

### Number of approved projects with environmental impacts significantly exceeding those assessed

The number of projects with impacts significantly exceeding those assessed is a key indicator for the community.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | 0                 | 0                 | 0         |

### Percentage of Low Emissions Energy Development Fund milestones achieved within the targeted timeframe

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | 100%              | 75%               | (25%)     |

**Note to the indicator:** Three out of the four milestones were achieved in the targeted timeframe. The project is at the early commercialisation/demonstration phase and there have been delays in the achievement of the milestone tasks. Future milestones have been re-scheduled. This is not considered likely to significantly impact the timing of the overall project delivery.

## Key Efficiency Indicators

### Service 1 Nature Conservation

#### Average Cost per Hectare of Managing Wildlife Habitat

The cost per hectare of wildlife habitat management is an indirect indicator for the department's efficiency in delivering nature conservation. Increases in the indicator generally reflect increases in funding.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | \$3.44            | \$4.30            | \$0.86    |

**Note to the indicator:** Higher expenditure relative to increase in area managed is due mainly to considerable increase in the level of grants and other contributions.

### Service 2 Sustainable Forest Management

#### Average Cost per Hectare of Managing State Forest and Timber Reserves

The figure used is the accrual basis average gross cost per hectare of managing State forest and timber reserves in accordance with the relevant management plan. The area managed is less than the area gazetted State forest and timber reserve because areas of State forest and timber reserve proposed to become part of the formal conservation reserve system in the Forest Management Plan 2004–2013 are being managed as if the land category change had already occurred.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | \$30.13           | \$41.33           | \$11.20   |

**Note to the indicator:** The large variation is due to increases in employee entitlements due to pay increases in the Award, Specified Calling backpays and leave accruals. Wildfire costs increased by almost double from last year due to fire fighting in Victoria, USA and the large FPC plantation fires last summer in WA.

### Service 3 Parks and Visitor Services

#### Cost per Visit

The cost per visit is affected by changes in both visitor numbers and levels of funding for park management.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | \$5.34            | \$5.23            | (\$0.11)  |

### Service 4 Environmental regulation

#### Average Cost per Air Monitoring Station

The monitoring of air quality for criteria pollutants against national health standards and goals specified under the National Environmental Protection Measure (NEPM) for air quality is a vital tool to enable the effective monitoring and management of emissions and discharges to air sheds. Monitoring of air quality against criteria pollutants enables: assessment of compliance with NEPM standards and goals set to protect human health, the effectiveness of long term air quality management strategies and tools to be evaluated, effectiveness of industry emission controls and management strategies to be evaluated and reporting on the State of the Environment.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | \$454,875         | \$468,375         | \$13,500  |

#### Average Cost per Industry Licence

The department increased the level of resourcing applied to management of regulation of discharges to the environment. The increased resource level to achieve improved performance outcomes will result in increase costs per licence.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | \$16,977          | \$21,686          | \$4,709   |

**Note to the indicator:** The global economic crisis has contributed to the actual number of licences being lower than anticipated. There have also been numerous premises which were previously licensed either closing down or going onto a care and maintenance basis.

#### Average Cost per Contaminated Site Assessment

This indicator is affected by the number of contaminated site assessments carried out each year.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | \$6,667           | \$7,190           | \$523     |

#### Average Cost of Remediating State Sites

This indicator reflects average costs in remediating State contaminated sites. Costs can be affected by a range of variables but mainly reflect the extent of contamination on sites.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation     |
|--|-------------------|-------------------|---------------|
|  | \$2,989,600       | \$1,436,000       | (\$1,533,600) |

**Note to the indicator:** DEC estimated that 5 State sites would be investigated or remediated during 2008/09. Funding was approved for 7 State sites, however funding had only been transferred for 2 of those sites by 30 June 2009, in addition to the ongoing expenditure on the former Waste Control site in Bellevue.

### Service 5 Environmental sustainability

#### Cost of Administering Waste Avoidance and Resource Recovery Account as a Percentage of Total Funds

The Waste Avoidance and Resource Recovery Account includes programs which provide grants to a range of waste reduction and recycling activities. Managing the administration costs associated with the fund is important so as to ensure that maximum levels of funding are available for waste reduction and recycling initiatives.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | 17.1%             | 8.1%              | (9.0%)    |

**Note to the indicator:** Overall expenditure remains relatively unchanged. Administration expenditure has fallen, especially in the areas of data collection and legislation. The 2008–09 target was set based on the 2007–08 expenditure figure which included considerable one-off expenses involved in supporting the development of the WARR Bill.

### Service 6 Environmental impact assessment and policies for the Environmental Protection Authority

#### Cost per Environmental Assessment

The cost per environmental assessment largely reflects the number of significant development proposals considered each year.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | \$40,531          | \$36,865          | (\$3,666) |

#### Cost for Number of Environmental Policies Developed

This indicator is an indirect measure of efficiency and is largely impacted by the number of environmental policies developed.

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation   |
|--|-------------------|-------------------|-------------|
|  | \$475,333         | \$191,833         | (\$283,500) |

**Note to indicator:** The number of less complex policies developed has increased resulting in a reduced actual cost per policy.

### Service 7 Coordinate the response to climate change

#### Cost of Administering Low Emissions Energy Development Fund as a Percentage of Total Funds

|  | 2008–09<br>Target | 2008–09<br>Actual | Variation |
|--|-------------------|-------------------|-----------|
|  | 0.30%             | 0.25%             | (0.05%)   |

**Note to indicator:** The difference in the target and actual figure is due to the LEED Fund Project Manager position being vacant for three months longer than expected.

## 4.3 MINISTERIAL DIRECTIVES

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No Ministerial directives were received during the financial year.

### 4.4.1 Pricing policies of services provided

The department is largely funded by appropriations, however, fees are charged for a range of goods, services and licensing arrangements where government has determined that full or partial cost recovery is appropriate. Fees are determined in accordance with guidelines on 'Costing and Pricing Government Services' published by the Department of Treasury and Finance. Fees are appropriately set and reasonably relate to the cost of providing the goods or services. Fees are reviewed on an annual basis.

### 4.4.2 Major capital projects

The department's planned capital works program of \$35.5 million for 2008–09 provided funds for buildings, including the Biodiversity Conservation Science Centre and Herbarium, tourism roads and park facilities, plant and equipment, conservation estate land purchase and fire fighting fleet replacement.

**Table 25: Summary of major capital works 2008–09**

| Details of major capital projects undertaken                     |                             |   |  |
|--|-----------------------------|---|--|
| Works in progress  | Expected year of completion | Estimated expenditure remaining<br>\$'000 | Estimated total project cost<br>\$'000 |
| Biodiversity Conservation Science Centre and Herbarium – Stage 1 | 2009–10                     | 13,953                                    | 29,390                                 |
| Walpole and Nornalup Inlets Marine Park                          | 2009–10                     | 101                                       | 240                                    |
| Recurring capital programs                                       | Expected year of completion |   | 2008–09 expenditure                    |
| Conservation land acquisition                                    | Ongoing                     |   | 3,355                                  |
| Fire fighting fleet and equipment                                | Ongoing                     |   | 2,616                                  |
| Plant and equipment purchase and replacement                     | Ongoing                     |   | 6,056                                  |
| Tourism road improvements  | Ongoing                     |   | 2,175                                  |
| Gnangara park development  | Ongoing                     |   | 376                                    |
| Parks improvement program  | Ongoing                     |   | 9,364                                  |

### 4.4.3 Employment and industrial relations

**Table 26: Staff profile 2008–09**

|                               | FTE            | Head count     |
|-------------------------------|----------------|----------------|
| Full-time permanent employees | 1,354.0        | 1,354          |
| Full-time contract employees  | 408.0          | 408            |
| Part-time measured by FTE     | 171.2          | 287            |
| On secondment                 | 5.6            | 7              |
| <b>Totals</b>                 | <b>1,938.8</b> | <b>2,056.0</b> |

Note: The figures include DEC employees deployed to the Keep Australia Beautiful Council.

#### Workers' compensation

DEC recognises that there is a direct relationship between occupational safety and health and workers' compensation and injury management. If there is an increase in the number or severity of incidents then there are automatically increased costs. Equally relevant is the strong link between a safe and healthy workplace and performance. Although the major objective is caring for employees and looking after their safety and health, it also translates into a return on investment by implementing an effective workers' compensation and injury management system and related procedures to minimise premium and associated costs.

In 2008–09 DEC's workers' compensation contribution was \$962,173 compared with \$860,670 for the previous year. The number of lost time injuries in 2008–09 was 30 (up from 28 in 2007–08) with 65 medical treatment injuries (down from 93 in 2007–08).

#### Contracts with senior officers

At the date of reporting, senior officers of the department held no contracts with the department other than normal employment contracts. No senior officers of the department had substantial interests in entities with existing or proposed contracts or agreements with the department.



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At the date of reporting, senior officers of the department held no contracts with the department other than normal employment contracts. No senior officers of the department had substantial interests in entities with existing or proposed contracts or agreements with the department.

## 4.6 OTHER LEGAL REQUIREMENTS

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### 4.6.1 The *Electoral Act 1907* – Section 175ZE

In accordance with Section 175ZE of the Western Australian *Electoral Act 1907*, DEC incurred the following expenditures in advertising, market research, polling, direct mail and media advertising.

**Total expenditure for 2008–09 was: \$906,142.93**

Expenditure was incurred in the following areas:

|  |                     |              |
|--|---------------------|--------------|
| <b>Advertising agencies</b>            | <b>\$5,866.56</b>   |              |
| Marketforce Communications             |                     | \$5,866.56   |
| <b>Direct mail organisations</b>       | <b>NIL</b>          |              |
| <b>Market research organisations</b>   | <b>\$18,040.00</b>  |              |
| Patterson Market Research              |                     | \$18,040.00  |
| <b>Polling organisations</b>           | <b>NIL</b>          |              |
| <b>Media advertising organisations</b> | <b>\$882,236.37</b> |              |
| ACP Magazines Ltd                      |                     | \$105,380.00 |
| ADCORP Australia Ltd                   |                     | \$367,625.71 |
| Australia's Golden Outback             |                     | \$1,955.00   |
| Australia's South West                 |                     | \$15,776.00  |
| Britel Enterprises Pty Ltd             |                     | \$2,315.00   |
| Cambridge Media                        |                     | \$499.99     |
| Community Newspaper Group              |                     | \$428.07     |
| Cooks Tours Pty Ltd                    |                     | \$2,500.00   |
| Corporate Sports Australia             |                     | \$25,000.00  |
| Countrywide Publications               |                     | \$2,520.00   |
| Denamrk Bulletin and Media Services    |                     | \$6,001.95   |
| Denmark Visitor Centre                 |                     | \$4,400.00   |
| Department of the Premier and Cabinet  |                     | \$3,715.59   |
| Derby Visitor Centre                   |                     | \$399.00     |
| Email Media                            |                     | \$3,300.00   |
| Hallmark Editions Pty Ltd              |                     | \$4,895.00   |
| Market Creations                       |                     | \$23,326.00  |
| Marketforce Express                    |                     | \$181,318.17 |
| Media Decisions WA                     |                     | \$44,133.53  |
| Northcliffe Tourist Centre Inc         |                     | \$803.00     |
| Penguin and Seal Island Cruises        |                     | \$12,572.77  |
| Rural Press Regional Media WA Pty Ltd  |                     | \$385.59     |
| Wagin Woodanilling Landcare Zone Inc   |                     | \$71,500.00  |
| Walpole Community Resource Telecentre  |                     | \$1,486.00   |
| <b>Polling organisations</b>           | <b>NIL</b>          |              |

### 4.6.2 Disability Access and Inclusion Plan outcomes

DEC is committed to providing access to people with disabilities. It strives to develop a culture where there is awareness of the requirement to take the needs of people with disabilities into account.

DEC continued to be a leading proponent of the Universal Access philosophy, which is based on the fundamental principles of equal opportunity and equity. DEC's policy on access seeks to ensure that everyone in the community, including older persons and people with disabilities, can gain access to, use and enjoy the facilities, services and programs provided by the department. The department's *Disability Access and Inclusion Plan 2007–12* continues with DEC's ongoing program of improving access, facilities, and services to ensure they meet the needs of our customers and staff. The plan is monitored by the Disability Access and Inclusion Committee which has representatives from various divisions and Corporate Executive.

Some of the more noteworthy access improvement works undertaken during the year included:

- Redevelopment of the Pinnacles Desert Discovery centre providing access to a new visitor centre, toilets and new walk track to a viewing area overlooking the Pinnacles Desert.
- New accessible toilets at Tunnel Creek in the Kimberley, in camping areas in Francois Peron National Park and Yardie Creek in Cape Range National Park.
- Improved access from the parking area to a lookout at Buffalo Beach in Leschenault Conservation Park.
- New site developments at Cockleshell Gully and Drummonds in Lesueur National Park that provide access to toilets, picnic areas and a lookout with spectacular views to Mt Lesueur.
- New accessible campsites at Sue's Bridge with hardened surfaces for easier use and access to toilets.
- Construction of accessible toilet and coastal shade shelter at Natural Bridge in Kalbarri National Park.
- Works continued on the Cape to Cape Track in Leeuwin-Naturaliste National Park. The track has been designed to ensure a wider variety of people can enjoy the experience. This 'Access for More' track is wider at parts, has even gradients and is sealed, with new boardwalks (at locations to protect fragile areas), seats, signs and lookouts at strategic locations.

Additional key initiatives and achievements from the Disability Access and Inclusion Plan include:

- Managers were supplied with a copy of the DVD *You can make a difference to customer relations for people with disabilities* for their staff to view and implement.
- An assessment was carried out of access to reception counters in regional buildings to ensure that people in wheelchairs can access the reception from the car park.
- DEC is involved with the Australian Standards working group that is developing guidelines for access in natural areas.
- DEC is an affiliate of the Companion Card Program, providing a fair ticketing system for people with a disability and their carers to access attractions and facilities administered by DEC.
- All publications from the department's internet site are available in alternative formats on request.
- DEC is aiming to increase the recruitment of people with disabilities and has continued to email advertised vacancies to disability employment agencies.
- DEC continues to take part in the 'You're Welcome Access Initiative' coordinated by the Disability Services Commission which promotes accessible facilities and services for all members of the community including people with disabilities.
- Recognition of the needs of people with disabilities in public consultation activities.

### 4.6.3 Equal employment opportunity and diversity management outcomes

The department is working towards achieving a corporate culture that embraces and values a diverse workforce and an inclusive environment that is free from discrimination and harassment. The department's *Equity and Diversity Management Plan 2007–12* details specific strategies that help achieve diversity targets, the improved management of diversity and also maximise the potential and well-being of all employees.

The plan is managed by the Equity and Diversity Management Committee that oversees the implementation of the plan including monitoring, reporting on progress and keeping up to date on equity and diversity issues. The committee consists of members from various divisions across the department.

Some of the noteworthy initiatives and achievements this year have included:

- The graduation of three MATES trainees in Certificate IV, six in Certificate III and five in Certificate II of Conservation and Land Management.
- Five DEC staff were among the participants at the Executive Women's Leadership Symposium. This supports DEC's Women in Management project which aims to develop and implement strategies to encourage attraction, appointment and retention of women in senior management positions.
- Training of Corporate Executive in ethical and accountable decision-making.
- Inaugural DEC Aboriginal staff conference was held from which the interim Aboriginal Staff Reference Group was formed.
- The department now has 25 Good Working Relations Contact Officers, all trained in DEC's grievance resolution procedure and EEO legislation.
- Code of Ethics and Code of Conduct awareness-raising sessions for employees and volunteers were held regularly.
- The number of Bush Ranger cadets rose to 1,407, which includes 158 Indigenous cadets.
- A DEC employee received the Australian Multicultural Community Service Award in recognition of achievements in excellence and innovation in advancing multiculturalism, inclusiveness and participation.
- Aboriginal cultural protocol workshops were conducted for 23 employees and 20 volunteer Campground Hosts.
- Ninety-seven employees took part in Nyoongar acknowledgment training sessions.
- International Women's Day was celebrated by women and men around the department through participation in various workshops and functions.
- Staff from different nationalities, ethnicities and ideologies celebrated cultural diversity during Harmony Week with 'a taste of harmony' lunch.
- Updating employee EEO data continued through staff surveys.
- Ongoing training of employees including all Good Working Relations Contact Officers, Peer Supporters and Occupational Safety and Health representatives in Workplace Discrimination and Sexual Harassment via online training continued.
- Promotion of work-life balance to employees via guidelines and awareness raising sessions.
- Ongoing targeted recruitment such as advertising in disability, international and Indigenous media.
- The department continues to employ school-based trainees.

### 4.6.4 Compliance with Public Sector Standards and Ethical Codes

**Table 27: Office of the Public Sector Standard Commissioner reporting under section 31 of the *Public Sector Management Act 1994* for 2008–09.**

| Compliance issue  | Significant action taken to monitor and ensure compliance   |
|---|---|
| <b>Public Sector Standards</b>  |   |
| Five breach claims were lodged in 2008–09.  | The department's People Services Branch intranet site has information on the Public Sector Standards including a hyperlink to the Office of Public Sector Standards Commissioner's (OPSSC) internet site.   |
| Two were against the Recruitment, Selection and Appointment Standard (RSAS). No breach of this standard was found.                                | The department made direct contact with Regional Managers when advised that the OPSSC was having a Public Sector Standards awareness raising workshop in their region. This was followed by a general email broadcast to all personnel.   |
| Two were against the Grievance Resolution Standard (GRS). No breach of this standard was found. Breach claims were resolved through conciliation. | Ongoing training is provided to grievance officers and made available to officers required to participate on recruitment panels to ensure that the relevant standard are complied with.   |
| One was against the Temporary Deployment Standard (TDS). No breach of this standard was found.  | Development and presentation of Human Resources Awareness Raising session at both metropolitan and regional locations.  |
|   | Management Audit has completed an internal audit of the Department's compliance with the Public Sector Standards and its opinion was <i>"Management Audit is of the opinion that the Department is continuing to take appropriate action to ensure compliance with the Public Sector Standards"</i> . |
| <b>WA Code of Ethics</b>  |   |
| There were no reports of non-compliance with the WA Code of Ethics  | The department's Code of Conduct continues to incorporate references to the WA Code of Ethics including a hyperlink to the OPSSC internet site for "Western Australia Public Sector Code of Ethics".  |
| <b>Department's Code of Conduct</b>   |   |
| Two allegations raised in 2007–08 were carried into 2008–09.  | Of the two outstanding alleged breaches, one has been finalised. The other allegation has been carried over.  |
| Three allegations of breaches of the code of conduct were raised in 2008–09.  | Two of the three alleged breaches in 2008–09 were finalised in 2008–09 with one resignation being accepted and the other employee being demoted.  |
|   | The other alleged breach has been carried over to 2009–10.  |
|   | The department is holding Conflict of Interest and Code of Conduct awareness briefings for all staff and has developed and will deliver accountable and ethical decision-making training to staff.  |

### 4.6.5 Recordkeeping plans

During 2008–09 the department's Recordkeeping Plan (RKP 2007087) was formally approved by the State Records Commission.

### 4.7.1 Corruption prevention

The department continued to promote its Code of Conduct with seminars being held in metropolitan and regional areas. A DVD titled *Accountability and Ethical Behaviour* was produced by the department and made available to all work sites. Staff were reminded of the Code of Conduct and its specific requirements at staff meetings and workshops and through broadcast emails.

### 4.7.2 Substantive equality

DEC's commitment to implementing the *Policy Framework for Substantive Equality* continued in 2008–09.

Progress was made on the implementation of the policy framework in the first service area – the preparation of management plans, including community consultation strategies and processes for national parks, regional parks and other reserves managed by the department. A review to assess this was completed and a report was in progress to make recommendations for further improvements in the community consultation process.

### 4.7.3 Sustainability

The *DECcrease* project was developed to ensure that DEC leads by example through incorporating sustainability principles into its diverse range of activities, operations and decision-making processes across WA. The project's key intent is to encourage the consideration of sustainability principles when decisions are made and actions undertaken across the organisation.

The *DECcrease* Committee was established from a diverse range of staff that reflected the breadth of DEC's main functional areas and workplaces. Using input from staff from across the agency, the committee developed a draft *DECcrease* policy statement along with two formally endorsed management plans focusing on energy and water efficiency in the workplace. The rollout of initiatives within these plans will be the initial focus for the committee.

In line with the principles of the *DECcrease* project, a number of sustainability-related initiatives were undertaken across DEC. These included staff involvement in Business Clean-Up Day; ongoing reductions in energy consumption at the Exmouth office; establishment of organic waste recycling at the Donnelly District and Booragoon offices; improvement of cardboard recycling at the Atrium office; trialing battery recycling in selected workplaces; promotion of e-waste recycling for the metropolitan area; and continued promotion and use of video conferencing to minimise the need for staff travel.

### 4.7.4 Occupational safety and health and injury management

DEC is committed to providing a safe and hygienic working environment for its employees and assisting injured workers to return to work as soon as medically appropriate.

The importance of incident prevention is recognised as the major contributor to a safe and healthy working environment. This approach, in conjunction with an effective injury management system, contributes to our overall strategy.

Occupational safety and health team leader positions and committees have been established across the State to coordinate and assist in all matters relating to the safety and health of workers and to monitor compliance with the relevant occupational safety and health legislation and the department's systems and procedures.

**Table 28: Occupational safety and health performance indicators<sup>1</sup>**

|   | 2007–08 | 2008–09 <sup>2</sup> |
|---|---------|----------------------|
| Fatalities  | 1       | 0                    |
| Lost time injury/disease (LTI/D) incident rate  | 7       | 1.54                 |
| LTI/D severity rate <sup>2</sup>  |         | 3.33                 |
| Percentage of injured workers returned to work within 28 weeks  |         | 100                  |
| Percentage of managers trained in occupational safety and health and injury management responsibilities |         | > 50%                |

<sup>1</sup> The figures for 2007–08 were calculated in accordance with Australian Standard 1885.1 – 1990. The figures for 2008–09 have been calculated in accordance with the Premier’s Circular 2007/12.

<sup>2</sup> LTI/D severity rate was previously reported as average days lost per LTI. In 2007–08 this figure was 16.

## Metropolitan locations

### Atrium

– Director General and Environmental Services Divisions  
168 St Georges Terrace, Perth

*Postal address*  
Locked Bag 104  
Bentley Delivery Centre WA 6983  
  
Phone (08) 6467 5000  
Fax (08) 6467 5562

### Crawley

– Parks and Conservation Services and Regional Services Divisions: Executive  
Australia II Drive, Crawley

*Postal address*  
Locked Bag 104  
Bentley Delivery Centre WA 6983  
  
Phone (08) 9442 0300  
Fax (08) 9386 1578

### Kensington

17 Dick Perry Avenue, Kensington

*Postal address*  
Locked Bag 104  
Bentley Delivery Centre WA 6983  
  
Phone (08) 9219 8000  
Fax (08) 9334 0498

### – Fire Management Services Branch

17 Dick Perry Avenue, Kensington

*Postal address*  
Locked Bag 104  
Bentley Delivery Centre WA 6983  
  
Phone (08) 9334 0375  
Fax (08) 9367 9913

### – Forest Management Branch

7 Turner Avenue, Bentley

*Postal address*  
PO Box 1167  
Bentley Delivery Centre WA 6983  
  
Phone (08) 9368 4399  
Fax (08) 9423 2901

### – WA Herbarium

George Street, Kensington

*Postal address*  
Locked Bag 104  
Bentley Delivery Centre WA 6983  
  
Phone (08) 9334 0500  
Fax (08) 9334 0515

### Booragoon

Cnr Davey St and Marmion St, Booragoon

*Postal address*  
Locked Bag 104  
Bentley Delivery Centre WA 6983  
  
Phone (08) 9333 7400

### – Air Quality Branch

Phone (08) 9333 7436  
Fax (08) 9333 7450

### – Booragoon Work Centre (Swan Region)

Phone (08) 9333 7510  
Fax (08) 9333 7550

### Strategic Development and Corporate Affairs

Cygnets Hall, Corner Stirling Highway and Mounts Bay Road, Crawley

*Postal address*  
Locked Bag 104  
Bentley Delivery Centre WA 6983  
  
Phone (08) 9389 8644  
Fax (08) 9389 8296

### Regional Parks

Level 1, 4–6 Short Street, Fremantle

*Postal address*  
PO Box 1535  
Fremantle WA 6959  
  
Phone (08) 9431 6500  
Fax (08) 9431 6599

### Marine Policy and Planning Branch

Suite 3, Level 3, Queensgate Building  
10 William Street  
Fremantle WA 6160

Phone (08) 9336 0100  
Fax (08) 9430 5408

### Woodvale Research

Wildlife Place  
(Ocean Reef Road), Woodvale

*Postal address*  
PO Box 51  
Wanneroo WA 6946  
  
Phone (08) 9405 5100  
Fax (08) 9306 1641

### Perth Observatory

337 Walnut Road  
Bickley WA 6076

Phone (08) 9293 8255  
Fax (08) 9293 8138



## Goldfields Region

### **Kalgoorlie (regional headquarters)**

32 Brookman Street, Kalgoorlie

*Postal address*

PO Box 10173  
Kalgoorlie WA 6433

Phone (08) 9080 5555

Fax (08) 9021 7831

## Kimberley Region

### **Kununurra (regional headquarters)**

Lot 248 Ivanhoe Road, Kununurra

*Postal address*

PO Box 942  
Kununurra WA 6743

Phone (08) 9168 4200

Fax (08) 9168 2179

### **Broome Work Centre**

111 Herbert Street, Broome

*Postal address*

PO Box 65  
Broome WA 6725

Phone (08) 9195 5500

Fax (08) 9193 5027

### **– Derby Work Zone**

Senior Ranger Residence

*Postal address*

PO Box 694  
Derby WA 6728

Phone (08) 9193 1411

Fax (08) 9193 1415

### **– Fitzroy Crossing Work Zone**

180 Emanuel Way, Fitzroy Crossing

*Postal address*

PO Box 37  
Fitzroy Crossing WA 6765

Phone (08) 9191 5121

Fax (08) 9191 5165

## Midwest Region

### **Geraldton (regional headquarters)**

1st Floor, The Foreshore Centre

201 Foreshore Drive, Geraldton

*Postal address*

PO Box 72  
Geraldton WA 6531

Phone (08) 9921 5955

Fax (08) 9921 5713

### **– Casablanca Complex**

81 Forrest Street, Geraldton

*Postal address*

PO Box 72  
Geraldton WA 6531

Phone (08) 9920 7500

Fax (08) 9964 5983

### **– Geraldton District**

1st Floor, The Foreshore Centre

201 Foreshore Drive, Geraldton

*Postal address*

PO Box 72  
Geraldton WA 6531

Phone (08) 9921 5955

Fax (08) 9921 5713

### **– Carnarvon Work Centre**

211 Robinson Street, Carnarvon

*Postal address*

PO Box 500  
Carnarvon WA 6701

Phone (08) 9941 3754

Fax (08) 9941 1801

### **Shark Bay District**

89 Knight Terrace

Denham WA 6537

Phone (08) 9948 1208

Fax (08) 9948 1024

### **Moora District**

Lot 124 Bashford Street, Jurien Bay

*Postal address*

PO Box 638  
Jurien Bay WA 6516

Phone (08) 9652 1911

Fax (08) 9652 1922

### **– Cervantes Work Centre**

Bradley Loop, Light Industrial Area,

Cervantes

*Postal address*

PO Box 62  
Cervantes WA 6511

Phone (08) 9652 7043

Fax (08) 9652 7340

## Pilbara Region

### **Karratha (regional headquarters)**

Lot 3, Anderson Road

Karratha Industrial Estate, Karratha

*Postal address*

PO Box 835  
Karratha WA 6714

Phone (08) 9143 1488

Fax (08) 9144 1118

### **Exmouth District**

20 Nimitz Street, Exmouth

*Postal address*

PO Box 201  
Exmouth WA 6707

Phone (08) 9947 8000

Fax (08) 9947 8050

## South Coast Region

### **Albany (regional headquarters)**

120 Albany Highway

Albany WA 6330

Phone (08) 9842 4500

Fax (08) 9841 7105

### **– Albany District**

120 Albany Highway

Albany WA 6330

Phone (08) 9842 4500

Fax (08) 9841 7105

– **Ravensthorpe Office**  
 Tourist Bureau Building  
 Lot 13, Morgan Street, Ravensthorpe

*Postal address*  
 PO Box 307  
 Ravensthorpe WA 6349

Phone (08) 9838 1967  
 Fax (08) 9838 1965

**Esperance District**  
 92 Dempster Street, Esperance

*Postal address*  
 PO Box 234  
 Esperance WA 6450

Phone (08) 9083 2100  
 Fax (08) 9071 3657

## South West Region

**Bunbury (regional headquarters)**  
 South West Highway, Bunbury

*Postal address*  
 PO Box 1693  
 Bunbury WA 6231

Phone (08) 9725 4300  
 Fax (08) 9725 4351

**Blackwood District**  
 14 Queen Street  
 Bunbury WA 6280

Phone (08) 9752 5555  
 Fax (08) 9752 1432

– **Kirup Work Centre**  
 South Western Highway, Kirup

*Postal address*  
 14 Queen Street  
 Busselton WA 6280

Phone (08) 9731 6232  
 Fax (08) 9731 6366

– **Nannup Work Centre**  
 Warren Road, Nannup

*Postal address*  
 14 Queen Street  
 Busselton WA 6280

Phone (08) 9756 0211  
 Fax (08) 9756 0233

– **Margaret River Work Centre**  
 Bussell Highway, Margaret River

*Postal address*  
 14 Queen Street  
 Busselton WA 6280

Phone (08) 9780 5500  
 Fax (08) 9757 2930

**Wellington District**  
 147 Wittenoom Street, Collie

*Postal address*  
 PO Box 809  
 Collie WA 6225

Phone (08) 734 1988  
 Fax (08) 9734 4539

– **Harvey Work Centre**  
 64 Weir Road, Harvey

*Postal address*  
 PO Box 809  
 Collie WA 6225

Phone (08) 9729 1505  
 Fax (08) 9729 1868

## Swan Region

**Bentley (regional headquarters)**  
 7 Turner Avenue, Technology Park

*Postal address*  
 PO Box 1167  
 Bentley Delivery Centre WA 6983

Phone (08) 9368 4399  
 Fax (08) 9423 2901

– **Nearer to Nature**  
 Perth Hills National Parks Centre  
 Allen Road  
 Mundaring WA 6073

Phone (08) 9295 2244  
 Fax (08) 9295 3247

– **Booragoon Work Centre**  
 See Booragoon in Metropolitan Locations

– **Kwinana Work Centre**  
 2 Stidworthy Court, Kwinana

*Postal address*  
 PO Box 454  
 Kwinana WA 6966

Phone (08) 9411 1777  
 Fax (08) 9419 5897

**Perth Hills District**  
 51 Mundaring Weir Road  
 Mundaring WA 6073

Phone (08) 9295 9100  
 Fax (08) 9295 9101

– **Dwellingup Work Centre**  
 Banksiadale Road  
 Dwellingup WA 6213

Phone (08) 9538 1078  
 Fax (08) 9538 1203

– **Jarrahdale Work Centre**  
 398 George Street  
 Jarrahdale WA 6124

Phone (08) 9526 1209  
 Mobile 0427 449 267

**Swan Coastal District**  
 5 Dundobar Road  
 Wanneroo WA 6065

*Postal address*  
 PO Box 459  
 Wanneroo WA 6946

Phone (08) 9405 0700  
 Fax (08) 9405 0777

– **Yanchep National Park**  
 Yanchep National Park  
 Yanchep WA 6035

Phone (08) 9561 1004  
 Fax (08) 9561 2316

– **Marine Parks Work Centre**  
 Unit 1A/8 Calabrese Avenue, Wanneroo

*Postal address*  
 PO Box 459  
 Wanneroo WA 6946

Phone (08) 9206 4795  
 Fax (08) 9405 1460

– Mandurah Work Centre  
423 Pinjarra Road, Mandurah

*Postal address*  
PO Box 1266  
Mandurah WA 6210  
Phone (08) 9582 9333  
Fax (08) 9582 9725

– Cockburn Sound Management  
Council

Shop 1, 15 Railway Terrace,  
Rockingham Beach

*Postal address*  
PO Box 5161  
Rockingham Beach WA 6969  
Phone (08) 9591 3837  
Fax (08) 9528 5387

– Kwinana Work Centre  
2 Stidworthy Court, Kwinana

*Postal address*  
PO Box 454  
Kwinana WA 6966  
Phone (08) 9411 1777  
Fax (08) 9419 5897

– Peel Work Centre  
Peel Waterways Centre  
Suite 6, 21 Sholl Street, Mandurah

*Postal address*  
PO Box 332  
Mandurah WA 6120  
Phone (08) 9550 4222  
Fax (08) 9581 4269

## Warren Region

**Manjimup (regional headquarters)**

Brain Street, Manjimup

*Postal address*  
Locked Bag 2  
Manjimup WA 6258  
Phone (08) 9771 7988  
Fax (08) 9771 2677

**Donnelly District**

Kennedy Street, Pemberton

*Postal address*  
PO Box 20  
Pemberton WA 6260  
Phone (08) 9776 1207  
Fax (08) 9776 1410

– Manjimup Work Centre

Brain Street, Manjimup

*Postal address*  
PO Box 20  
Pemberton WA 6260  
Phone (08) 9771 7988  
Fax (08) 9771 2677

– Northcliffe Work Centre  
Wheatley coast Rd, Northcliffe

*Postal Address*  
PO Box 20  
Pemberton WA 6280  
Phone (08) 9776 7095  
Fax (08) 9776 7258

**Denmark Office**

Suite 1, 59 Strickland Street, Denmark

*Postal address*  
PO Box 353  
Denmark WA 6333  
Phone (08) 9848 1445  
Fax (08) 9848 1419

## Wheatbelt Region

**Narrogin (regional headquarters)**

7 Wald Street, Narrogin

*Postal address*  
PO Box 100  
Narrogin WA 6312

Phone (08) 9881 9222  
Fax (08) 9881 3297

**Great Southern District**

Hough Street, Narrogin

*Postal address*  
PO Box 100  
Narrogin WA 6312

Phone (08) 9881 9200  
Fax (08) 9881 1645

– Katanning Work Centre

56 Clive Street, Katanning

*Postal address*  
PO Box 811  
Katanning WA 6317

Phone (08) 9821 1296  
Fax (08) 9821 2633

**Yilgarn District**

33 Bates Street, Merredin

*Postal address*  
PO Box 332  
Merredin WA 6415

Phone (08) 9041 2488  
Fax (08) 9041 2454

**Avon-Mortlock District**

54 Fitzgerald Street, Northam

*Postal address*  
PO Box 354  
Northam WA 6401

Phone (08) 9622 8940  
Fax (08) 9622 8947

## APPENDIX B – TRANSLOCATIONS UNDERTAKEN AS PART OF THE IMPLEMENTATION OF RECOVERY AND INTERIM RECOVERY PLANS IN 2008–09

◀ Back Contents Forward ▶

| Taxa   | Translocated from | Translocated to  |
|--|-------------------|--|
| <b>Flora</b>   |                   |  |
| <i>Acacia subflexuosa</i> subsp. <i>capillata</i>  |                   | Seedlings were added to an existing translocation site in Charles Gardner Nature Reserve.  |
| <i>Acacia aprica</i>   |                   | Further seedlings added to a translocation site at Winchester East Recreation Reserve.   |
| <i>Acacia cochlocarpa</i> subsp. <i>cochlocarpa</i>  |                   | Seedlings were added to an existing translocation site at Gunyidi Nature Reserve.  |
| <i>Banksia brownii</i>   |                   | Seedlings of the Coastal Range were added to the existing seed orchard site at Benmore Tree Farm east of Albany.   |
| <i>Banksia anatona</i>   |                   | Additional seedlings were added to the seed orchard site on private property east of Kamballup.  |
| <i>Calytrix breviseta</i> subsp. <i>breviseta</i>  |                   | Seedlings were added to an existing Bush Forever translocation site in Langford.   |
| <i>Chorizema humile</i>  |                   | Seedlings grown from the southern populations were added to the translocation site previously established at Waddington Nature Reserve and additional seedlings grown from northern populations were planted at the translocation site on private property east of Coorow. |
| <i>Daviesia cunderdin</i>  |                   | Seedlings were added to an existing translocation site on private property north of Cunderdin.   |
| <i>Gastrolobium luteifolium</i>  |                   | A new seed orchard site was established with seedlings on a recently acquired DEC reserve east of Kamballup.   |
| <i>Grevillea acropogon</i>   |                   | Seedlings were introduced to the Tone-Perup Nature Reserve east of Manjimup.   |
| <i>Hemigenia ramosissima</i>   |                   | Additional seedlings were added to a translocation site in a water reserve north of Kojonup and a second translocation site was established with seedlings and cuttings in another water reserve north of Kojonup.   |
| <i>Lambertia fairallii</i>   |                   | Further seedlings added to the seed orchard site on private property east of Albany.   |
| <i>Lysiosepalum abollatum</i>  |                   | A translocation site was established using seedlings and cuttings in Wongan Nature Reserve.  |
| <i>Banksia brownii</i> , <i>Banksia anatona</i> , <i>Calytrix breviseta</i> subsp. <i>breviseta</i> , <i>Chorizema humile</i> , <i>Gastrolobium luteifolium</i> , <i>Grevillea acropogon</i> , <i>Hemigenia ramosissima</i> , <i>Lambertia fairallii</i> and <i>Lysiosepalum abollatum</i> |                   | Various locations.   |

## APPENDIX B – TRANSLOCATIONS UNDERTAKEN AS PART OF THE IMPLEMENTATION OF RECOVERY AND INTERIM RECOVERY PLANS IN 2008–09

◀ Back Contents Forward ▶

| Taxa   | Translocated from                             | Translocated to  |
|--|---|--|
| <b>Fauna</b>   |   |  |
| Gilbert's potoroo  | Six animals born on Bald Island.              | Taken to the mainland captive colony at Two Peoples Bay Nature Reserve, in preparation for establishment of a second mainland population at Waychinicup National Park. |
| bilby and mala   |   | Reintroduction to the former pastoral station Lorna Glen.  |
| dibbler  | Perth Zoo and Fitzgerald River National Park. | Peniup Nature Reserve.   |
| numbat   | Perth Zoo and Dryandra Woodland.              | Cocanarup Timber Reserve.  |
| western ringtail possum  | Busselton area.                               | Leschenault Conservation Park.   |
| black-flanked rock-wallaby   | Wheatbelt.                                    | Avon Valley National Park  |
| black-flanked rock-wallaby   | Mt Stirling and Mt Caroline nature reserves.  | Querekin Rock.   |
| banded hare-wallaby<br>( <i>Lagostrophus fasciatus fasciatus</i> ) | Peron Captive Breeding Centre.                | Faure Island<br>(managed by Australian Wildlife Conservancy).  |
| western swamp tortoise   | Perth Zoo.                                    | Mogumber Nature Reserve and Moore River National Park.   |
| quenda   | Sites on the Swan Coastal Plain.              | Julimar State Forest and Francois Peron National Park.   |
| tammar wallaby   | Tone Perup Nature Reserve.                    | Palgarup State Forest.   |
| brush-tail possum  | Sites on the Swan Coastal Plain.              | Julimar State Forest.  |

## Offences under the *Wildlife Conservation Act 1950* and Regulations and *Agriculture and Related Resources Protection Act 1976* that occurred in 2008–09

| Charges   | Reported offences | Convictions | Fines \$           | Costs \$          | Dismissed | Letter of warning | Caution notice | No further action | Pending   |
|---|-------------------|-------------|--------------------|-------------------|-----------|-------------------|----------------|-------------------|-----------|
| <i>Wildlife Conservation Act</i>  |                   |             |                    |                   |           |                   |                |                   |           |
| Illegal taking or possession of protected fauna                                 | 74                | 30          | \$19,800.00        | \$1,583.80        |           | 13                | 18             | 3                 | 10        |
| Illegal importation, selling or taking for sale of fauna                        | 33                | 4           |                    |                   |           |                   | 29             |                   |           |
| Use of illegal devices in taking fauna  | 5                 |             |                    |                   |           | 2                 | 1              | 2                 |           |
| Illegal taking of protected flora   | 13                |             |                    |                   |           | 3                 | 7              | 3                 |           |
| Offences relating to the sale of protected flora                                | 2                 |             |                    |                   |           | 1                 | 1              |                   |           |
| Taking declared rare flora without the Minister's consent                       | 10                |             |                    |                   |           | 7                 |                | 3                 |           |
| Offences against wildlife officers  | 2                 |             |                    |                   |           | 1                 |                |                   | 1         |
| Failing to comply with licence conditions                                       | 168               |             |                    |                   |           | 5                 | 160            | 1                 | 2         |
| <i>Wildlife Conservation Regulations</i>  |                   |             |                    |                   |           |                   |                |                   |           |
| Offences relating to the acquisition, possession, control and disposal of fauna | 61                | 12          | \$4,000.00         | \$661.20          |           | 3                 | 39             |                   | 7         |
| <i>Wildlife Conservation Reptile and Amphibian Regulations</i>                  |                   |             |                    |                   |           |                   |                |                   |           |
| Offences relating to reptiles and amphibians                                    | 9                 |             |                    |                   |           |                   | 9              |                   |           |
| <i>Agriculture and Related Resources Protection Act</i>                         |                   |             |                    |                   |           |                   |                |                   |           |
| Illegal keeping/import of declared animals                                      | 8                 |             |                    |                   |           | 1                 | 7              |                   |           |
| <b>Totals</b>   | <b>385</b>        | <b>46</b>   | <b>\$23,800.00</b> | <b>\$2,245.00</b> | <b>0</b>  | <b>36</b>         | <b>271</b>     | <b>12</b>         | <b>20</b> |

## Offences under the *Conservation and Land Management Act 1984* and Regulations that occurred in 2008–09

| Charges  | Reported offences | Convictions | Fines \$           | Costs \$        | Dismissed | Infringement notice | Letter of warning | Caution notice | No further action | Pending   |
|--|-------------------|-------------|--------------------|-----------------|-----------|---------------------|-------------------|----------------|-------------------|-----------|
| <i>Conservation and Land Management Act</i>  |                   |             |                    |                 |           |                     |                   |                |                   |           |
| Illegal taking or possession of forest produce                                       | 29                | 4           | \$2,800.00         | \$114.20        |           | 4                   | 1                 | 13             |                   | 7         |
| Offences relating to the occupation of CALM land                                     | 1                 |             |                    |                 |           |                     |                   | 1              |                   |           |
| Offences relating to Marine Parks and Reserves                                       | 3                 |             | \$200.00           |                 |           | 1                   |                   | 2              |                   |           |
| Offences against officers  | 2                 |             |                    |                 |           |                     | 2                 |                |                   |           |
| Offences relating to disease risk areas  | 31                |             |                    |                 |           |                     | 1                 | 29             | 1                 |           |
| Offences relating to activities on State Forests, Nature Reserves and National Parks | 700               | 10          | \$31,320.00        | \$330.60        |           | 375                 | 16                | 274            | 12                | 13        |
| <b>Totals</b>  | <b>766</b>        | <b>14</b>   | <b>\$34,320.00</b> | <b>\$444.80</b> | <b>0</b>  | <b>380</b>          | <b>20</b>         | <b>319</b>     | <b>13</b>         | <b>20</b> |

## Wildlife licences issued in 2008–09

| Fauna licences                         | Licences issued |
|--|-----------------|
| SCIENTIFIC                             |                 |
| Scientific collection (Reg 17)         | 514             |
| Bird/Bat banding (Reg 23)              | 131             |
| EDUCATION AND PUBLIC                   |                 |
| To take (Reg 15)                       |                 |
| Marine interaction                     | 290             |
| Other                                  | 668             |
| EDUCATION AND PUBLIC                   |                 |
| To hold (Reg 16)                       | 99              |
| AVIAN FAUNA                            |                 |
| Keep and breed in captivity (Reg 12)   | 3,061           |
| Deal (Reg 13)                          | 36              |
| Breed for commercial purposes (Reg 14) | 0               |
| Trap (Reg 11)                          | 2               |
|  |                 |
| <b>Species trapped commercially</b>    | <b>Number</b>   |
| Twenty-eight parrot                    | 207             |
| Red-capped parrot                      | 62              |
| Western rosella                        | 170             |
| Galah                                  | 26              |
| Long-billed corella (Eastern sp)       | 72              |
| Little corella                         | 28              |
| FAUNA                                  |                 |
| Keep in captivity (Reg 12A)            | 94              |
| HERPETOFAUNA (Reptiles and Amphibians) |                 |
| Keeping                                | 1,967           |
| Dealing                                | 20              |
| Farming                                | 2               |
| Taking                                 | 6               |
| EMUS                                   |                 |
| Emu farming (Reg 14)                   | 8               |
| Dealing (Reg 8)                        | 2               |
| Dealing (Emu eggshells Reg 13)         | 3               |
| Processing (Reg 7)                     | 0               |
| CROCODILES                             |                 |
| Crocodile farming (Reg 14)             | 2               |
| Skin dealing (Reg 10)                  | 0               |
| Processing (Reg 7)                     | 2               |



| <b>Fauna licences</b>                         | <b>Licences issued</b> |
|---|------------------------|
| <b>KANGAROO</b>                               |                        |
| Take kangaroos for sale (Reg 6)               | 417                    |
| Deal in carcasses (Reg 8)                     | 22                     |
| Skin dealing (Reg 10)                         | 12                     |
| Processing (Reg 7)                            | 22                     |
| <b>EXPORTS INTERSTATE</b>                     |                        |
| Skins of fauna (or other dead fauna)          | 56                     |
| Fauna (live)                                  | 308                    |
| Herpetofauna (reptiles and amphibians)        | 48                     |
|   | <b>412</b>             |
| <b>EXPORT OVERSEAS</b>                        |                        |
| Skins of fauna (or other dead fauna) from WA  | 22                     |
| Emu eggs or products (personal items) from WA | 1                      |
| Fauna (avian) from WA (live)                  | 0                      |
|   | <b>23</b>              |
| <b>IMPORTS INTERSTATE</b>                     |                        |
| Skins of fauna (or other dead fauna) into WA  | 10                     |
| Australian fauna (live)                       | 305                    |
| Live exotic birds and other animals           | 175                    |
| Herpetofauna (reptiles and amphibians)        | 16                     |
|   | <b>506</b>             |
| <b>Total fauna licences</b>                   | <b>8,321</b>           |
| <b>Flora licences</b>                         |                        |
| Commercial purposes                           | 369                    |
| Sandalwood (from Crown land)                  | 0                      |
| Forest produce (from Crown land)              | 2                      |
| Commercial producers                          | 281                    |
| Sandalwood (from private land)                | 31                     |
| Scientific/prescribed purposes                | 1,078                  |
| Permits to take declared rare flora           | 211                    |
| <b>Total flora licences</b>                   | <b>1,972</b>           |

| <b>Damage licences</b>      | <b>No. of licences issued</b> | <b>Total no. of each species authorised to be taken</b> |
|-----------------------------|-------------------------------|---|
| <b>OTHER AVIAN FAUNA</b>    |                               |   |
| Australian raven            | 10                            | 175 destroy   |
| Little corella              | 9<br>2                        | 2,510 destroy<br>300 scare                              |
| Galah                       | 3                             | 104 destroy   |
| Carnaby's black-cockatoo    | 1                             | 50 scare  |
| Emu                         | 11<br>1                       | 975 destroy<br>20 scare                                 |
| Red-capped (WA King) parrot | 2                             | 70 destroy  |
| Sacred ibis                 | 1                             | 1 trap and relocate                                     |
| Welcome swallow             | 2<br>2                        | 3 destroy<br>21 trap and relocate                       |
| Western long-billed corella | 13                            | 8,240 destroy   |
| Black kite                  | 1                             | 20 scare  |
| Twenty-eight parrot         | 18                            | 1,690 destroy   |
| Long-billed corella (ES Sp) | 4                             | 350 destroy   |
| Pied cormorant              | 1                             | 10 destroy  |
| <b>WATERFOWL</b>            |                               |   |
| Australian shelduck         | 1                             | 20 scare  |
| Maned geese                 | 11<br>2                       | 360 destroy<br>70 scare                                 |
| Pacific black duck          | 1                             | 2 trap and relocate                                     |
| <b>MAMMALS</b>              |                               |   |
| Agile wallaby               | 3                             | 700 destroy   |
| Australian sea-lion         | 1                             | 1 scare   |
| Euro                        | 7                             | 394 destroy   |
| Little red flying-fox       | 1                             | 15 destroy  |
| New Zealand fur seal        | 1                             | 1 scare   |
| Red kangaroo                | 4                             | 1,200 destroy   |
| Western grey kangaroo       | 390<br>2                      | 19,260 destroy<br>100 scare                             |

| <b>Damage licences</b>         | <b>No. of licences issued</b> | <b>Total no. of each species authorised to be taken</b> |
|--------------------------------|-------------------------------|---|
| DANGEROUS FAUNA                |                               |   |
| Saltwater crocodile            | 2                             | 2 destroy   |
| Gould's monitor                | 1                             | 2 trap and relocate                                     |
| Magpie                         | 23                            | 24 destroy  |
|                                | 1                             | 20 scare  |
|                                | 1                             | 1 trap and relocate                                     |
| Magpie lark                    | 1                             | 10 scare  |
|                                | 1                             | 1 trap and relocate                                     |
| Pelican                        | 1                             | 10 scare  |
| Australian raven               | 1                             | 100 destroy   |
| Australian shelduck            | 2                             | 40 destroy  |
| Banded lapwing (banded plover) | 1                             | 10 destroy  |
| Carnaby's black-cockatoo       | 1                             | 50 scare  |
| Galah                          | 2                             | 200 destroy   |
| Little eagle                   | 1                             | 5 trap and relocate                                     |
| Long-billed corella            | 1                             | 100 destroy   |
| Long-billed corella (ES sp)    | 1                             | 100 destroy   |
| Maned duck                     | 2                             | 320 destroy   |
| Pacific black duck             | 3                             | 240 destroy   |
| Purple swamphen                | 1                             | 10 destroy  |
| Richard's pipit                | 1                             | 20 scare  |
| Sacred ibis                    | 1                             | 50 destroy  |
| Straw-necked ibis              | 1                             | 50 destroy  |
| Tree martin                    | 1                             | 50 scare  |
|                                | 1                             | 50 trap and relocate                                    |
| Wedge-tailed eagle             | 1                             | 5 trap and relocate                                     |
| Welcome swallow                | 1                             | 50 scare  |
|                                | 1                             | 50 trap and relocate                                    |
| White-faced heron              | 1                             | 10 scare  |
| Willie wagtail                 | 1                             | 10 scare  |
| Western grey kangaroo          | 11                            | 289 destroy   |

|                  |  |
|------------------|--|
| <b>AQMP</b>      | Air Quality Management Plan  |
| <b>AUSSI</b>     | Australian Sustainable Schools Initiative                            |
| <b>BIF</b>       | Banded Iron Formation  |
| <b>CALM Act</b>  | <i>Conservation and Land Management Act 1984</i>                     |
| <b>CALM Regs</b> | Conservation and Land Management Regulations 2002                    |
| <b>CRC</b>       | Cooperative Research Centre  |
| <b>CSIRO</b>     | Commonwealth Scientific and Industrial Research Organisation         |
| <b>CVA</b>       | Conservation Volunteers Australia                                    |
| <b>DEC</b>       | Department of Environment and Conservation                           |
| <b>EEU</b>       | Environmental Enforcement Unit                                       |
| <b>EPA</b>       | Environmental Protection Authority                                   |
| <b>EPBC Act</b>  | <i>Environment Protection and Biodiversity Conservation Act 1999</i> |
| <b>FACET</b>     | WA Forum Advocating Cultural and Eco Tourism                         |
| <b>FESA</b>      | Fire and Emergency Services Authority                                |
| <b>FMP</b>       | Forest Management Plan 2004–2013                                     |
| <b>GIS</b>       | Geographic Information Systems                                       |
| <b>ICTSC</b>     | Information Communications Technology Service Centre                 |
| <b>IOCI</b>      | Indian Ocean Climate Initiative                                      |
| <b>IR</b>        | Incident Report  |
| <b>KABC</b>      | Keep Australia Beautiful Council                                     |
| <b>LFW</b>       | Land for Wildlife  |
| <b>LEED</b>      | Low Emissions Energy Development                                     |
| <b>MATES</b>     | Mentored Aboriginal Training and Employment Scheme                   |
| <b>ML</b>        | Management Letter  |
| <b>MoU</b>       | Memorandum of Understanding  |
| <b>NEPM</b>      | National Environment Protection Measure                              |
| <b>NHT</b>       | Natural Heritage Trust   |
| <b>NPI</b>       | National Pollutant Inventory   |
| <b>NRM</b>       | Natural Resource Management  |
| <b>OCC</b>       | Office of Climate Change   |
| <b>PEC</b>       | Priority Ecological Community  |
| <b>RCC</b>       | Roadside Conservation Committee                                      |
| <b>ROTC</b>      | Regulatory Officers Training Course                                  |
| <b>SDCA</b>      | Strategic Development and Corporate Affairs Division                 |
| <b>SLIP</b>      | Shared Land Information Platform                                     |
| <b>SoE</b>       | State of the Environment   |
| <b>TAFE</b>      | Technical and Further Education                                      |
| <b>TEC</b>       | Threatened Ecological Community                                      |
| <b>TSSC</b>      | Threatened Species Scientific Committee                              |
| <b>WA</b>        | Western Australia  |
| <b>WAERN</b>     | Western Australian Emergency Radio Network                           |
| <b>WAHERB</b>    | Western Australian Herbarium database                                |
| <b>WIN</b>       | Works Improvement Notice   |
| <b>WWF</b>       | World Wildlife Fund  |

## Management plans

The tables below list the status of plans approved or in preparation during 2008–09 and the area of each tenure category managed by DEC as at 30 June 2009.

| <b>Final management plans (completed and approved during 2008–09)</b>                 | <b>Region</b> | <b>Gazettal date</b> |
|---|---------------|----------------------|
| Wellington National Park, Westralia Conservation Park and Wellington Discovery Forest | South West    | 17.04.09             |

| <b>Final management plans (completed and approved as at 30 June 2009)</b>            | <b>Region</b>    | <b>Gazettal date</b> |
|--|------------------|----------------------|
| Mooradung Nature Reserve   | Swan             | 21.02.86             |
| Nature Reserves in the Shire of Wyalkatchem  | Wheatbelt        | 21.02.86             |
| Nature Reserves of the Shires of York and Northam                                    | Swan             | 10.07.87             |
| Shannon National Park and D'Entrecasteaux National Park                              | Warren           | 08.01.88             |
| Benger Swamp Nature Reserve  | South West       | 12.02.88             |
| Leeuwin-Naturaliste National Park  | South West       | 21.04.89             |
| Yanchep National Park  | Swan             | 29.09.89             |
| Waroona Reservoir and Catchment Area   | South West       | 16.03.90             |
| Logue Brook Reservoir and Catchment Area   | South West       | 16.03.90             |
| Cape Range National Park   | Pilbara          | 23.03.90             |
| Dampier Archipelago Nature Reserves  | Pilbara          | 31.08.90             |
| Lane Poole Reserve   | Swan, South West | 14.12.90             |
| Fitzgerald River National Park   | South Coast      | 19.07.91             |
| South Coast Region   | South Coast      | 13.03.92             |
| Marmion Marine Park  | Swan             | 15.05.92             |
| Walpole-Nornalup National Park   | Warren           | 03.07.92             |
| Shoalwater Islands Nature Reserve  | Swan             | 20.10.92             |
| Matilda Bay Reserve  | Swan             | 21.05.93             |
| John Forrest National Park   | Swan             | 19.08.94             |
| West Cape Howe National Park   | South Coast      | 04.08.95             |
| Yalgorup National Park   | Swan             | 15.08.95             |
| Lesueur National Park and Coomaloo Nature Reserve                                    | Midwest          | 13.10.95             |
| Purnululu National Park  | Kimberley        | 05.03.96             |
| Two Peoples Bay Nature Reserve   | South Coast      | 07.06.96             |
| Wanjarri Nature Reserve  | Goldfields       | 02.07.96             |
| Goldfields Region  | Goldfields       | 09.08.96             |
| Dryandra Woodland  | Wheatbelt        | 09.08.96             |
| Shark Bay Marine Reserves  | Midwest          | 07.03.97             |
| Canning River Regional Park  | Swan             | 05.12.97             |
| Nambung National Park and Wanagarren, Nilgen and Southern Beekeepers Nature Reserves | Midwest          | 11.09.98             |
| Leschenault Peninsula  | South West       | 08.01.99             |
| Esperance Lakes Nature Reserves  | South Coast      | 11.05.99             |
| Karijini National Park   | Pilbara          | 15.06.99             |
| Stirling Range and Porongurup National Parks   | South Coast      | 03.12.99             |

| <b>Final management plans (completed and approved as at 30 June 2009)</b>             | <b>Region</b>               | <b>Gazettal date</b> |
|---|-----------------------------|----------------------|
| Swan Estuary Marine Park and Adjacent Nature Reserves                                 | Swan                        | 07.04.00             |
| Jurabi and Bundegi Coastal Parks and Muiron Islands                                   | Pilbara                     | 25.08.00             |
| Serpentine National Park  | Swan                        | 03.10.00             |
| Shark Bay Terrestrial Reserves  | Midwest                     | 03.10.00             |
| Rowles Lagoon Conservation Park and Clear and Muddy Lakes Nature Reserve              | Goldfields                  | 19.01.01             |
| Yellagonga Regional Park  | Swan                        | 15.07.03             |
| Carnac Island Nature Reserve  | Swan                        | 07.10.03             |
| Forest Management Plan  | Swan, Warren and South West | 01.01.04             |
| Herdsmen Lake Regional Park   | Swan                        | 03.12.04             |
| Ningaloo Marine Park and Muiron Islands Marine Management Area                        | Pilbara                     | 14.01.05             |
| Turquoise Coast Island Nature Reserves  | Midwest                     | 24.03.05             |
| Thomsons Lake Nature Reserve  | Swan                        | 27.05.05             |
| Forrestdale Lake Nature Reserve   | Swan                        | 27.05.05             |
| Jurien Bay Marine Park  | Midwest                     | 01.07.05             |
| Beeliar Regional Park   | Swan                        | 20.10.06             |
| Rowley Shoals Marine Park   | Kimberley                   | 10.04.07             |
| Montebello/Barrow Islands Marine Conservation Reserves                                | Pilbara                     | 10.04.07             |
| Shoalwater Islands Marine Park  | Swan                        | 30.10.07             |
| Kennedy Range National Park and Proposed Additions                                    | Midwest                     | 02.05.08             |
| Lake McLarty Nature Reserve   | Swan                        | 06.06.08             |
| Wellington National Park, Westralia Conservation Park and Wellington Discovery Forest | South West                  | 17.04.09             |
| <b>Draft management plans (being prepared)</b>  | <b>Region</b>               |                      |
| Albany Coastal Reserves   | South Coast                 |                      |
| Barrow Island Nature Reserve  | Pilbara                     |                      |
| Dampier Archipelago Terrestrial Reserves  | Pilbara                     |                      |
| Esperance and Recherche Parks and Reserves  | South Coast                 |                      |
| Lane Poole Reserve  | Swan, South and West        |                      |
| Leeuwin-Naturaliste Capes Area Parks and Reserves                                     | South West                  |                      |
| Miriuwung-Gajerrong (Ord Stage 2) Conservation Areas                                  | Kimberley                   |                      |
| Northern Yilgarn (Mt Manning, Jaurdi, Mt Elvire) Conservation Reserves                | Goldfields                  |                      |
| Ord River and Parry Lagoons Nature Reserves   | Kimberley                   |                      |
| Parks and Reserves of the Lake Muir, Perup, Kingston, Tone and Unicup Area            | Warren                      |                      |
| Parks and Reserves of Yanchep and Neerabup  | Swan                        |                      |
| Proposed marine parks of the Pilbara and West Kimberley (Eighty Mile Beach) Area      | Pilbara and Kimberley       |                      |
| Tuart Forest National Park  | South West                  |                      |
| Yalgorup National Park  | Swan                        |                      |
| Purnululu National Park and Purnululu Conservation Reserve                            | Kimberley                   |                      |

| <b>Area covered by management plans<sup>1</sup></b>                 |                           |                               |   |                         |
|---|---------------------------|-------------------------------|---|-------------------------|
| <b>Tenure classification</b>  | <b>Number of reserves</b> | <b>Total tenure area (ha)</b> | <b>Area covered by management plan (ha)<sup>4</sup></b> | <b>Per cent covered</b> |
| National parks  | 97                        | 5,637,483                     | 1,856,518   | 32.9                    |
| Conservation parks  | 51                        | 847,586                       | 12,317  | 1.5                     |
| Other reserves with recreation/conservation in purpose <sup>2</sup> | 39                        | 729,803                       | 126,239   | 17.4                    |
| Nature reserves   | 1,275                     | 10,872,105                    | 190,678   | 1.8                     |
| Total terrestrial reserves  | 1,462                     | 18,083,977                    | 2,185,752   | 12.1                    |
| Marine parks and reserves <sup>3</sup>                              | 13                        | 1,536,551                     | 1,536,551   | 100                     |

<sup>1</sup> Figures exclude (a) Goldfields and South Coast Regional Plans, (b) some regional park management areas, (c) State forest covered by the Forest Management Plan (d) section 33(2) lands, (e) former pastoral lands, and (f) any proposed additions identified in plans but not yet vested with the Conservation Commission. Includes section 5(1)(g) and 5(1)(h) reserves (e.g. Lane Poole) and miscellaneous reserves with conservation and/or recreation in its purpose (e.g. Purnululu Conservation Reserve).

<sup>2</sup> Marine parks and reserves require a management plan before they can be created, hence 100 per cent. Areas should be regarded as approximate due to standard of coastline mapping of high and low water marks and may be subject to change.

<sup>3</sup> Figures vary from the 2007–08 Annual Report because areas covered by management plans have been recalibrated to include reserve additions as recommended in the plans.

<sup>4</sup> Percentage covered by management plans will vary from year to year as new parks and reserves are created.

## Appendix H1: Type of prescribed burns for all DEC regions 2006–07 to 2008–09

|  | 2006–07        | 2007–08        | 2008–09          |
|--|----------------|----------------|------------------|
| <b>Indigenous vegetation – hand burning (ha)</b>         |                |                |                  |
| State forest   | 3,687          | 2,434          | 4,759            |
| National parks   | 17,534         | 8,062          | 4,483            |
| Nature reserves  | 2,192          | 3,218          | 4,092            |
| Other Crown land and private property *                  | 13,449         | 13,880         | 3,549            |
| <b>Total</b>   | <b>36,862</b>  | <b>27,594</b>  | <b>16,883</b>    |
| <b>Indigenous vegetation – aerial burning (ha)</b>       |                |                |                  |
| State forest   | 35,282         | 38,894         | 23,630           |
| National parks   | 341,174        | 401,143        | 504,309          |
| Nature reserves  | 41,579         | 239,775        | 208,222          |
| Other Crown land and private property *                  | 240,738        | 199,854        | 253,868          |
| <b>Total</b>   | <b>658,773</b> | <b>879,666</b> | <b>990,029</b>   |
| <b>Indigenous vegetation – silviculture burning (ha)</b> |                |                |                  |
| – Jarrah dominant forests                                | 21,491         | 17,527         | 34,007           |
| – Karri, karri/marri, marri forests                      | 403            | 505            | 543              |
| – Other forest   | -              | 4              | 426              |
| <b>Total</b>   | <b>21,894</b>  | <b>18,036</b>  | <b>34,976</b>    |
| <b>Softwood plantation – burning (ha)</b>                |                |                |                  |
| – Strategic protection                                   | 13,160         | 5,199          | 11,043           |
| – Clearing burns   | 180            | 1,688          | 676              |
| – Logging debris removal, silviculture                   | 3,346          | 778            | 39               |
| <b>Total</b>   | <b>16,686</b>  | <b>7,665</b>   | <b>11,758</b>    |
| <b>Grand total</b>                                       | <b>734,215</b> | <b>932,961</b> | <b>1,053,646</b> |

Only includes data from 09.06.2008 to 12.06.2009

For data specific to south-west forest regions see Appendices H4 and H5.

\* Includes other Crown land, other DEC reserve and private property



**Appendix H2: Area of prescribed burns for all DEC regions 2006–07 to 2008–09**

| <b>South-west forest regions</b> |                  | <b>2006–07</b> | <b>2007–08</b> | <b>2008–09</b>   |
|----------------------------------|------------------|----------------|----------------|------------------|
| Swan                             | Area (ha)        | 37,509         | 27,335         | 33,482           |
|                                  | Number           | 2              | 52             | 39               |
| South West                       | Area (ha)        | 45,496         | 53,152         | 56,233           |
|                                  | Number           | 42             | 51             | 36               |
| Warren                           | Area (ha)        | 55,597         | 63,194         | 62,103           |
|                                  | Number           | 65             | 51             | 64               |
| <b>Sub total</b>                 | <b>Area (ha)</b> | <b>138,602</b> | <b>143,681</b> | <b>151,818</b>   |
|                                  | <b>Number</b>    | <b>179</b>     | <b>154</b>     | <b>139</b>       |
| <b>Other regions</b>             |                  | <b>2006–07</b> | <b>2007–08</b> | <b>2008–09</b>   |
| Kimberley                        | Area (ha)        | 302,800        | 533,454        | 717,794          |
|                                  | Number           | 10             | 8              | 6                |
| Pilbara                          | Area (ha)        | 231,165        | 136,230        | 62,211           |
|                                  | Number           | 8              | 8              | 12               |
| Midwest                          | Area (ha)        | 19,451         | 942            | 4,398            |
|                                  | Number           | 39             | 14             | 24               |
| Goldfields                       | Area (ha)        | 11,500         | 115,232        | 116,224          |
|                                  | Number           | 8              | 3              | 16               |
| Wheatbelt                        | Area (ha)        | 2,250          | 466            | 22               |
|                                  | Number           | 5              | 7              | 1                |
| South Coast                      | Area (ha)        | 28,447         | 2,956          | 1,179            |
|                                  | Number           | 26             | 20             | 14               |
| <b>Sub total</b>                 | <b>Area (ha)</b> | <b>595,613</b> | <b>789,280</b> | <b>901,828</b>   |
|                                  | <b>Number</b>    | <b>96</b>      | <b>60</b>      | <b>73</b>        |
| <b>Grand total (All regions)</b> | <b>Area (ha)</b> | <b>734,215</b> | <b>932,961</b> | <b>1,053,646</b> |
|                                  | <b>Number</b>    | <b>275</b>     | <b>214</b>     | <b>212</b>       |

Only includes data from 09.06.2008 to 12.06.2009

**Appendix H3: Wildfires in all regions 2006–07 to 2008–09**  
 Number and area by land category  
 Number and percent by cause

| ALL REGIONS            | Number **  |            |            | Area burnt (ha) * |                  |                  |
|------------------------|------------|------------|------------|-------------------|------------------|------------------|
|                        | 2006–07    | 2007–08    | 2008–09    | 2006–07           | 2007–08          | 2008–09          |
| State forest           |            |            |            |                   |                  |                  |
| native hardwood        | 96         | 76         | 150        | 8,079             | 5,426            | 4,663            |
| softwood plantation    | 89         | 64         | 138        | 183               | 325              | 3,191            |
| National parks         | 117        | 73         | 112        | 326,124           | 100,425          | 454,481          |
| Nature reserves        | 43         | 41         | 35         | 104,268           | 691,258          | 321,140          |
| Other DEC reserves     | 61         | 50         | 57         | 139,702           | 314,908          | 497,419          |
| Other Crown lands      | 22         | 13         | 19         | 711,857           | 83,721           | 243,598          |
| Private property       | 112        | 87         | 100        | 202,361           | 5,139            | 51,364           |
| Unallocated Crown land | 65         | 40         | 37         | 453,058           | 224,603          | 167,134          |
| <b>Total</b>           | <b>605</b> | <b>444</b> | <b>648</b> | <b>1,945,633</b>  | <b>1,425,806</b> | <b>1,742,991</b> |

| ALL REGIONS                   | CAUSES     |            |            |            |            |            |
|-------------------------------|------------|------------|------------|------------|------------|------------|
|                               | Number **  |            |            | Per cent   |            |            |
|                               | 2006–07    | 2007–08    | 2008–09    | 2006–07    | 2007–08    | 2008–09    |
| Deliberately/illegally lit    | 219        | 217        | 371        | 36         | 49         | 57         |
| Escapes - DEC burns           | 9          | 6          | 9          | 1          | 1          | 1          |
| Escapes - non DEC burning     | 22         | 26         | 31         | 4          | 6          | 5          |
| Accidental - timber industry  | 3          | 3          | 6          | 0          | 1          | 1          |
| Accidental - other industries | 26         | 20         | 24         | 4          | 5          | 4          |
| Accidental - recreationists   | 26         | 21         | 35         | 4          | 5          | 5          |
| Lightning                     | 219        | 82         | 76         | 36         | 18         | 12         |
| Unknown                       | 52         | 51         | 57         | 9          | 11         | 9          |
| Other causes                  | 29         | 18         | 39         | 5          | 4          | 6          |
| <b>Total</b>                  | <b>605</b> | <b>444</b> | <b>648</b> | <b>100</b> | <b>100</b> | <b>100</b> |

Only includes data from 09.06.2008 to 12.06.2009

\* Area (ha) burnt by wildfires in the tenure type

\*\* Number of wildfires that started in each tenure type and fire cause

**Appendix H4: Area and number of wildfires attended and monitored by DEC for all regions 2008–09**

| Region                               |                    | State forest<br>native<br>hardwood | State forest<br>softwood<br>plantation | National<br>parks | Nature<br>reserves | Other DEC<br>reserves | Other Crown<br>land | Private<br>property | Unallocated<br>Crown land | Total            |
|--------------------------------------|--------------------|------------------------------------|--|-------------------|--------------------|-----------------------|---------------------|---------------------|---------------------------|------------------|
| <b>South-west forest regions</b>     |                    |                                    |  |                   |                    |                       |                     |                     |                           |                  |
| Swan                                 | Area (ha) *        | 3,562                              | 3,134                                  | 2,064             | 93                 | 106                   | 3                   | 4,073               | 1,023                     | 14,058           |
|                                      | Number **          | 95                                 | 131                                    | 56                | 15                 | 16                    | 9                   | 54                  | 15                        | 391              |
| South West                           | Area (ha) *        | 847                                | 57                                     | 247               | 432                | 3,505                 | 2                   | 4,211               | 245                       | 9,547            |
|                                      | Number **          | 45                                 | 6                                      | 29                | 3                  | 24                    | 2                   | 26                  | 3                         | 138              |
| Warren                               | Area (ha) *        | 110                                | 0                                      | 126               | 0                  | 12                    | 0                   | 25                  | 32                        | 305              |
|                                      | Number **          | 8                                  | 1                                      | 6                 | 1                  | 2                     | 0                   | 9                   | 2                         | 29               |
| <b>Sub total</b>                     | <b>Area (ha) *</b> | <b>4,520</b>                       | <b>3,191</b>                           | <b>2,436</b>      | <b>526</b>         | <b>3,624</b>          | <b>5</b>            | <b>8,309</b>        | <b>1,300</b>              | <b>23,910</b>    |
|                                      | <b>Number **</b>   | <b>148</b>                         | <b>138</b>                             | <b>91</b>         | <b>19</b>          | <b>42</b>             | <b>11</b>           | <b>89</b>           | <b>20</b>                 | <b>558</b>       |
| <b>Other regions</b>                 |                    |                                    |  |                   |                    |                       |                     |                     |                           |                  |
| Kimberley                            | Area (ha) *        | 0                                  | 0                                      | 438,370           | 250,134            | 455,649               | 208,426             | 0                   | 160,970                   | 1,513,549        |
|                                      | Number **          | 0                                  | 0                                      | 7                 | 2                  | 5                     | 3                   | 0                   | 6                         | 23               |
| Pilbara                              | Area (ha) *        | 0                                  | 0                                      | 1,894             | 0                  | 38,144                | 5,462               | 42,611              | 0                         | 88,111           |
|                                      | Number **          | 0                                  | 0                                      | 4                 | 1                  | 8                     | 1                   | 1                   | 0                         | 15               |
| Midwest                              | Area (ha) *        | 0                                  | 0                                      |                   | 25,933             | 0                     | 29,704              | 152                 | 2,762                     | 58,552           |
|                                      | Number **          | 0                                  | 0                                      |                   | 2                  | 1                     | 2                   | 2                   | 5                         | 12               |
| Goldfields                           | Area (ha) *        | 0                                  | 0                                      | 0                 | 31,920             | 0                     | 0                   | 0                   | 100                       | 32,020           |
|                                      | Number **          | 0                                  | 0                                      | 0                 | 5                  | 0                     | 0                   | 0                   | 1                         | 6                |
| Wheatbelt                            | Area (ha) *        | 3                                  | 0                                      | 0                 | 301                | 2                     | 2                   | 93                  | 1,232                     | 1,633            |
|                                      | Number **          | 2                                  | 0                                      | 0                 | 2                  | 1                     | 2                   | 1                   | 1                         | 9                |
| South Coast                          | Area (ha) *        | 140                                | 0                                      | 11,781            | 12,326             | 0                     | 0                   | 199                 | 770                       | 25,216           |
|                                      | Number **          | 0                                  | 0                                      | 10                | 4                  | 0                     | 0                   | 7                   | 4                         | 25               |
| <b>Sub total</b>                     | <b>Area (ha) *</b> | <b>143</b>                         | <b>0</b>                               | <b>452,045</b>    | <b>320,615</b>     | <b>493,795</b>        | <b>243,594</b>      | <b>43,055</b>       | <b>165,835</b>            | <b>1,719,081</b> |
|                                      | <b>Number **</b>   | <b>2</b>                           | <b>0</b>                               | <b>21</b>         | <b>16</b>          | <b>15</b>             | <b>8</b>            | <b>11</b>           | <b>17</b>                 | <b>90</b>        |
| <b>Grand total<br/>(All regions)</b> | <b>Area (ha) *</b> | <b>4,663</b>                       | <b>3,191</b>                           | <b>454,481</b>    | <b>321,140</b>     | <b>497,419</b>        | <b>243,598</b>      | <b>51,364</b>       | <b>167,134</b>            | <b>1,742,991</b> |
|                                      | <b>Number **</b>   | <b>150</b>                         | <b>138</b>                             | <b>112</b>        | <b>35</b>          | <b>57</b>             | <b>19</b>           | <b>100</b>          | <b>37</b>                 | <b>648</b>       |

Only includes data from 09.06.2008 to 12.06.2009

\* Area (ha) burnt by wildfires in the tenure type

\*\* Number of wildfires originating in the tenure type

**Appendix H5: Area prescribed burnt within south-west forest regions for 2008–09**

| Dominant purpose                       | Region     | Area<br>(hectares) |                |               |               | Year of<br>last fire * |
|--|------------|--------------------|----------------|---------------|---------------|------------------------|
|  |            | Winter             | Spring         | Summer        | Autumn        |                        |
| Community/<br>strategic<br>protection  | Swan       | 2,442              | 7,852          | -             | 79            | 1978–2001              |
|  | South West | -                  | 3,226          | -             | 12,497        | 1982–1998              |
|  | Warren     | -                  | 10,702         | 11,881        | 21,067        | 1978–2002              |
| Biodiversity conservation              | Swan       | -                  | -              | -             | 10,247        | 1980–1998              |
|  | South West | -                  | 2,951          | -             | 8             | 1981–2005              |
|  | Warren     | -                  | 378            | 739           | 6,213         | 1986–2004              |
| Hardwood silviculture                  | Swan       | 861                | 4,792          | -             | -             | 1976–1995              |
|  | South West | -                  | 22,104         | -             | 4,920         | 1981–2001              |
|  | Warren     | -                  | 98             | 57            | 2,122         | 1978–2004              |
| Plantation silviculture/<br>protection | Swan       | 1,017              | 1,206          | -             | 83            | 1986–1998              |
|  | South West | -                  | 9,452          | -             | -             | 1984–2003              |
|  | Warren     | -                  | -              | -             | -             | -                      |
| Tourism and recreation/<br>protection  | Swan       | -                  | 4,903          | -             | -             | 1988–2002              |
|  | South West | -                  | 547            | -             | 528           | 1981–1998              |
|  | Warren     | -                  | 410            | -             | 8,436         | 1986–2004              |
| <b>Grand total by season (ha)</b>      |            | <b>4,320</b>       | <b>68,621</b>  | <b>12,677</b> | <b>66,200</b> |                        |
| <b>Seasonal percentage</b>             |            | <b>3</b>           | <b>45</b>      | <b>8</b>      | <b>44</b>     |                        |
| <b>Grand total (ha)</b>                |            |                    | <b>151,818</b> |               |               |                        |

Only includes data from 09.06.2008 to 12.06.2009

\* Range of vegetation/fuel ages as at July 2008

**Appendix H6:** Number of prescribed burns conducted within south-west forest regions in each season for various purposes in 2008–09

| Dominant purpose                          | Region     | Winter   |          | Spring    |           | Summer   |          | Autumn    |           | Total number of burns | Number of escapes |
|---|------------|----------|----------|-----------|-----------|----------|----------|-----------|-----------|-----------------------|-------------------|
|   |            | Aerial   | Hand     | Aerial    | Hand      | Aerial   | Hand     | Aerial    | Hand      |                       |                   |
| Community/<br>strategic<br>protection     | Swan       | 4        | 3        | 5         | 4         | -        | -        | -         | 1         | 17                    | -                 |
|   | South West | -        | -        | 1         | 3         | -        | -        | 3         | -         | 7                     | -                 |
|   | Warren     | -        | -        | 6         | 3         | 4        | -        | 11        | 8         | 32                    | 5                 |
| Biodiversity<br>conservation              | Swan       | -        | -        | -         | -         | -        | -        | 5         | 2         | 7                     | -                 |
|   | South West | -        | -        | 1         | -         | -        | -        | -         | 1         | 2                     | -                 |
|   | Warren     | -        | -        | -         | 1         | 1        | 1        | 1         | 2         | 6                     | 1                 |
| Hardwood<br>Silviculture                  | Swan       | 1        | -        | 2         | -         | -        | -        | -         | -         | 3                     | 2                 |
|   | South West | -        | -        | 14        | 2         | -        | -        | 1         | -         | 17                    | -                 |
|   | Warren     | -        | -        | 1         | 1         | -        | 2        | 1         | 16        | 21                    | -                 |
| Plantation<br>silviculture/<br>protection | Swan       | -        | 4        | -         | 1         | -        | -        | -         | 2         | 7                     | -                 |
|   | South West | -        | -        | 4         | 1         | -        | -        | -         | -         | 5                     | -                 |
|   | Warren     | -        | -        | -         | -         | -        | -        | -         | -         | -                     | -                 |
| Tourism and<br>recreation/<br>protection  | Swan       | -        | -        | 1         | 4         | -        | -        | -         | -         | 5                     | -                 |
|   | South West | -        | -        | 1         | 2         | -        | -        | 1         | 1         | 5                     | -                 |
|   | Warren     | -        | -        | -         | 2         | -        | -        | 2         | 1         | 5                     | -                 |
| <b>Total</b>                              |            | <b>5</b> | <b>7</b> | <b>36</b> | <b>24</b> | <b>5</b> | <b>3</b> | <b>25</b> | <b>34</b> | <b>139</b>            | <b>8</b>          |

Only includes data from 09.06.2008 to 12.06.2009

Please note this table counts carryover burns (same Burn ID done over multiple seasons) as different records (e.g. burn started in spring and finished in autumn is counted as two burns).

Please note an additional escape occurred in South Coast Region

The Department of Environment and Conservation provided administrative support to the following boards and committees.

### **Statutory authorities**

Conservation Commission of Western Australia  
Contaminated Sites Committee  
Environmental Protection Authority  
Keep Australia Beautiful Council  
Marine Parks and Reserves Authority  
Marine Parks and Reserves Scientific Advisory Committee  
Swan River Trust  
Waste Authority

### **Advisory committees**

Air Quality Coordinating Committee  
Animal Ethics Committee  
Avon Nature Conservation Advisory Committee  
Beekeepers Consultative Committee  
Beeliar Regional Park Community Advisory Committee  
Bellevue Community Consultative Committee  
Brookdale Community Reference Group  
Canning River Regional Park Community Advisory Committee  
Cockburn Sound Management Council  
Coral Coast Park Council  
Coral Coast Parks Advisory Committee  
Core Consultative Committee on Waste (3C)  
Dampier Archipelago Cape Preston Marine Conservation Reserve Advisory Committee  
Darling Range Regional Park Community Advisory Committee  
Dieback Consultative Council  
Dieback Response Group  
Drummond Recovery Catchment Advisory Committee  
Environmental Education Advisory Committee  
Environmental Regulation Stakeholder Reference Group  
Esperance Parks and Reserves Community Advisory Committee  
Fitzgerald River National Park Advisory Committee  
Fitzgerald River National Park Fire Advisory Group  
Gibson Desert Working Together Group (Park Council)  
Goldfields Land and Sea Council Joint Management Working Group  
Herdsman Lake Regional Park Community Advisory Committee  
Independent Expert Advisory Group – Low Emission Energy Development Fund

Jandakot Regional Park Community Advisory Committee  
Kangaroo Management Advisory Committee  
Karijini Park Council  
Keep Australia Beautiful Council Litter Prevention Taskforce  
Lane Poole Reserve Advisory Committee  
Lorna Glen (Matuwa) and Earraheedy (Kurrara Kurrara) Joint Management Working Group  
Marine Scientific Panel  
Millstream Park Council  
Miriuwung-Gajerrong Regional Council  
Murujuga-Burrup Park Council  
Purnululu Park Council  
Roadside Conservation Committee  
Rockingham Lakes Regional Park Community Advisory Committee  
Shark Bay Terrestrial Reserves Community Advisory Committee  
Shark Bay World Heritage Property Community Consultative Committee  
Shark Bay Work Heritage Property Scientific Advisory Committee  
Shoalwater Islands Marine Park Focus Group  
South Coast Regional Marine Planning Advisory Group  
State/Local Government Climate Change and Sustainability Council  
State Marine Policy Stakeholders Group  
Talbot Road Nature Reserve Management Team  
Threatened Ecological Communities Scientific Committee  
Threatened Species Scientific Committee  
Tuart Forest National Park Community Advisory Committee  
Tuart Response Group  
WA Flora Industry Advisory Committee  
Walpole Wilderness Area  
Wandoo Recovery Group  
Waste Management Board  
Western Australian Threatened Species and Communities Consultative Committee  
Western Australian Weeds Committee  
Wetlands Coordinating Committee  
Wetland Restoration and Management Manual Project Steering Committee  
Wetland Status Working Group  
Woodman Point Regional Park Community Advisory Committee  
Yanchep Community Advisory Committee  
Yanchep National Park Advisory Committee  
Yellagonga Regional Park Community Advisory Committee

## General publications

Most new publications are available to download in PDF format from DEC's website at [www.dec.wa.gov.au](http://www.dec.wa.gov.au). Many publications are also available on CD.

| Title  | Type             |
|--|------------------|
| 2006 Western Australia Air Quality report  | Report           |
| 2007 Air Quality Monitoring Report   | Report           |
| 2009 Sustainable cities awards presentation  | Invitation       |
| 50 years of service  | Certificate      |
| <b>A</b>   |                  |
| A guide to Bin-your-Butt   | Flyer            |
| A guide to buying and selling wood heaters in WA   | Brochure         |
| Adopt-a-Spot adoption certificate  | Certificate      |
| Adopt-a-Spot and Litter prevention strategy launch   | Invitation       |
| Air quality management for particulate matter in Collie 2004–2007                                | Report           |
| Air quality monitoring for sulphur dioxide in Collie   | Report           |
| Air Watch – What's up with our air?  | CD               |
| Aircraft noise and its effects   | Brochure         |
| Ambient monitoring of particulate matter in Kalgoorlie 2006–2007                                 | Report           |
| Animals of Shark Bay   | Information tags |
| Annual all parks pass  | Sticker          |
| Anoxic impacts at Bill's Bay: Ningaloo Marine Park associated with the 2008 coral spawning event | Report           |
| Application for commercial operations licence – Commercial events                                | Form             |
| Assessing the effectiveness of sanctuary zones in the proposed Dampier Archipelago Marine Park   | Report           |
| <b>B</b>   |                  |
| Back from the Brink – teachers' resource   | Booklet          |
| Barna Mia Brochure   |                  |
| Behaviour change for combating climate change  | Booklet          |
| Bellevue acid sulfate soils fact sheet   | Flyer            |
| Bibbulmun Track end-to-end walker  | Certificate      |
| Bibbulmun Track Foundation   | Banner           |
| Bibbulmun Track map pack   | Map              |
| Bibbulmun Track WA Tourism Awards 2008   | Award submission |
| Biodiversity Incentive Programs in WA  | PDF              |
| Book that bird   | Book             |
| Buntine Marchagee Catchment Draft Recovery Plan  | Report           |



|   |                  |
|---|------------------|
| Buntine Marchagee Catchment Draft Recovery Plan – supporting document | Report           |
| Bush Rangers commemorative pin  | Pin and card     |
| Bush Rangers WA   | Display banners  |
| Bush Rangers WA – Introduction to the Bush Rangers WA program         | Teacher resource |
| Bush Rangers WA – Level 1   | Teacher resource |
| Bush Rangers WA – Level 2   | Teacher resource |
| Bush Rangers WA – Level 3   | Teacher resource |
| Bush Rangers WA 2008 Annual Report                                    | Report           |
| Bush Rangers WA – Logbook   | Booklet          |
| Bush Rangers WA – Animal sounds                                       | CD               |
| Bush Rangers WA – Photo display                                       | CD               |
| Bushland News – Autumn 2009   | Newsletter       |
| Bushland News – Spring 2008   | Newsletter       |
| Bushland News – Summer 2008–09  | Newsletter       |
| Bushland News – Winter 2009   | Newsletter       |
| Bushland weeds: Golden crownbeard                                     | Brochure         |
| Butterflies of the South-West   | Book             |
| <b>C</b>  |                  |
| Cane toads  | Display          |
| Cane toad disposal point  | Poster           |
| Cane toad identification  | Poster           |
| Cane toad identification data sheet                                   | Flyer            |
| Cane toad kit' plastic bags   | Plastic bags     |
| Cane toad Stakeholder Reference Group newsletter                      | Newsletter       |
| Cane toad update householder envelopes                                | Envelopes        |
| Cape Arid National Park   | Brochure         |
| Cape Range National Park Management Plan                              | Report           |
| Catchment Carers' Trail   | Booklet          |
| Certificate of identification – Volunteer animal control agent        | Card             |
| Clean Beach Challenge 2008–09 entrants information                    | Brochure         |
| Clean Beach Challenge 2008–09 program                                 | Brochure         |
| Clean Beach Challenge 2008–09 winners certificate                     | Certificates     |
| CleanRun behavioural change initiative evaluation of phase II         | Report           |
| Climate change competition material notes and lessons                 | Flyer            |
| Climate change survey report  | Report           |

|  |                    |
|--|--------------------|
| Common marine life of Rottnest Island  | Book               |
| Community forest inspection  | Flyer              |
| Community Marine Reserve   | Posters            |
| Comparative marine biodiversity of Rowley Shoals 2007: Benthic assemblages   | Report             |
| Compost activity guide – Waste Wise Schools program  | Guideline          |
| Concession annual all parks pass   | Sticker            |
| Conservation Science WA, Vol 7, No 1   | Report             |
| Controlling feral animals  | LANDSCOPE brochure |
| Coral communities in Dampier Marine Park   | Report             |
| Corporate presentation folder for KABC   | Folder             |
| Crocodiles Brochure  |                    |
| Cultural Planning Framework – Miriuwung and Gajerrong Peoples' Guidelines for Developing Management Plans for Conservation Parks and Nature Reserves under the Ord Final Agreement | Report             |
| <b>D</b>   |                    |
| DEC bookmarks  | Bookmark           |
| DEC Graduate Development Program   | Brochure           |
| DEC Graduation and Awards Ceremony   | Booklet            |
| DEC Graduation and Awards Ceremony   | Certificates       |
| DEC MATES program  | Brochure           |
| DEC Science Division Brochure packs  |                    |
| D'Entrecasteaux National Park  | Souvenir ticket    |
| Department of Environment and Conservation Display banner  |                    |
| Discovering caves of Western Australia   | Book               |
| Discovering Two Peoples Bay Nature Reserve   | Book               |
| Discovering Valley of the Giants   | Book               |
| Dog owners beware  | Flyer              |
| Draft Cane Toad Strategy for Western Australia 2009–2019   | Report             |
| Draft Cane Toad Strategy for Western Australia 2009–2019: Have your say  | Brochure           |
| Draft Government guidelines for construction and demolition waste recycling facilities   | Report             |
| Draft Sulphur Dioxide in Collie  | Report             |
| Draft Treatment and management of acid sulfate soils   | Report             |
| Dryandra Woodland Management Plan  | Report             |
| <b>E</b>   |                    |
| Earth from Above   | Flyer              |
| EcHO News  | eNewsletter        |

|  |                 |
|--|-----------------|
| EcoEducation   | Display banners |
| EcoEducation – Discover ecosystem diversity                            | Flyer           |
| EcoEducation – Dryandra  | Flyer           |
| EcoEducation – Fire: A force of life                                   | Flyer           |
| EcoEducation – Geography/Earth Environmental Science                   | Flyer           |
| EcoEducation – Investigate your natural heritage                       | Flyer           |
| EcoEducation – Investigating tuart woodlands                           | Flyer           |
| EcoEducation – Margaret River Eco Discovery Centre                     | Flyer           |
| EcoEducation – Resources   | Flyer           |
| EcoEducation – Threatened species program                              | Flyer           |
| EcoEducation – Wellington Discovery Forest                             | Flyer           |
| EcoEducation News (South West) – October 2008                          | eNewsletter     |
| EcoEducation News (Statewide) – December 2008                          | eNewsletter     |
| EcoEducation News (Statewide) – March 2009                             | eNewsletter     |
| EcoEducation News (Statewide) – September 2008                         | eNewsletter     |
| EcoEducation programs 2009   | Booklet         |
| E-Invitation for Earth from Above                                      | Invitation      |
| Entry ticket – Concession day pass                                     | Ticket          |
| Entry ticket – National park day pass                                  | Ticket          |
| Environment and Conservation News – April/May/June 2009                | Newsletter      |
| Environment and Conservation News – January/February/March 2009        | Newsletter      |
| Environment and Conservation News – July/August 2008                   | Newsletter      |
| Environment and Conservation News – June 2008                          | Newsletter      |
| Environment and Conservation News – November/December 2008             | Newsletter      |
| Environment and Conservation News – October 2008                       | Newsletter      |
| Environment and Conservation News – September 2008                     | Newsletter      |
| Environmental community grants 2009 – Application form                 | Form            |
| Environmental community grants 2009 – Environmental sustainability     | Form            |
| Environmental community grants 2009 – Fauna rescue and rehabilitation  | Form            |
| Environmental community grants 2009 – Major conservation organisations | Form            |
| Environmental community grants 2009 – Nature appreciation              | Form            |
| Environmental community grants 2009 application guidelines             | Booklet         |
| Environmental enforcement Unit note books                              | Booklet         |
| Environmental guidelines for organic waste recycling facilities        | Guideline       |
| Environote 6 – Halt the Haze   | Brochure        |
| Environote 7 – Halt the Haze – Results of 2008 wood heater program     | Newsletter      |
| Esperance community information update                                 | Fact sheets     |
| Esperance community information update                                 | Posters         |

|  |                 |
|--|-----------------|
| Esperance lead and nickel community update   | Newsletter      |
| Esperance lead and nickel information sheets   | Flyers          |
| Esperance National Parks   | Brochure        |
| Esperance workshop   | Flier           |
| Establishing long-term coral community monitoring sites in the Montebello/Barrow Islands marine protected areas: Data collected in December 2006 | Report          |
| Experiencing whale sharks in Ningaloo Marine Park  | Brochure        |
| <b>F</b>   |                 |
| Fees and changes – A visitor’s guide   | Brochure        |
| Fire: A force of life – Volume 1   | LANDSCOPE book  |
| Fire: A force of life – Volume 2   | LANDSCOPE book  |
| <b>G</b>   |                 |
| Geikie Gorge National Park   | Souvenir ticket |
| Goldfields Conservation Reserves   | Posters         |
| Goldstar national park pass  | Sticker         |
| Greenhouse 2009 International Conference   | Display         |
| Greenhouse 2009 case studies   | Flyers          |
| Guidelines for facilities claiming commercial confidentiality for data reported to NPI   | Report          |
| Guidelines to preparing a wetland management plan  | Booklet         |
| <b>H</b>   |                 |
| Halt the Haze – Wood smoke   | Brochure        |
| Have your say: Parry Lagoons and Ord River   | Brochure        |
| Healthy Parks, Healthy People  | Bookmark        |
| Healthy Parks, Healthy People  | Brochure        |
| Healthy Wetlands Habitats  | Brochure        |
| Honorary CALM Officers handbook  | Report          |
| Hydrology investigations of the Buntine-Marchagee Recovery Catchment   | Report          |
| <b>I</b>   |                 |
| ICMS incident reporting form   | Form            |
| Identification and investigation of acid sulfate soils   | Report          |
| Into the wild<br>LANDSCOPE brochure  |                 |
| Invitation to DEC’s Graduation and Awards Ceremony   | Invitation      |
| Invitation to Munda Bididi Trail section opening   | Invitation      |
| Invitation to the launch of Rescuing the Rangelands  | Invitation      |
| Invitation to the launch of the Miriuwung-Gajerrong cultural planning framework  | Invitation      |

|  |            |
|--|------------|
| Invitation to the launch of Shark Bay: Twin bays on the edge | Invitation |
| Invitation to the launch of Tuart Dwellers                   | Invitation |
| Invitation to the opening of the Pinnacles Desert Discovery  | Invitation |
| Invitation to Vincent Serventy tribute                       | Invitation |
| Invite to Esperance community information session            | Flyer      |
| Invite to the wandoo forum                                   | Invitation |
| Invite to Wagerup community information session              | Invitation |
| Is it a cane toad?   | Brochure   |
| <b>J</b>   |            |
| Job safety analysis form book                                | Folder     |
| John Forrest National Park<br>Souvenir ticket                |            |
| Jurien Bay Marine Park                                       | Brochure   |
| <b>K</b>   |            |
| KABC – Do you want a litter free WA?                         | Poster     |
| KABC - Litter and illegal dumping                            | Brochure   |
| KABC and WA schools  | Flyer      |
| KABC display banner  | Banner     |
| KABC litter prevention toolkit for schools                   | Booklet    |
| KABC Telecentre  | Poster     |
| KABC Trash my ad   | Flyer      |
| Kalbarri National Park                                       | Brochure   |
| Kalgoorlie Boulder home heating survey findings              | Report     |
| Karijini National Park                                       | Brochure   |
| Karri Forest Explorer Drive                                  | Brochure   |
| Keep Australia Beautiful Council seeded information card     | Card       |
| Keeping toads out of your backyard                           | Brochure   |
| Kerbside waste and recycling audit manual                    | Report     |
| <b>L</b>   |            |
| Land for Wildlife  | Sign       |
| Land for Wildlife – information and application form         | Brochure   |
| LANDSCOPE 2009 calendar                                      | Calendar   |
| LANDSCOPE 2010 calendar                                      | Calendar   |
| LANDSCOPE Expeditions 2009 Program                           | Booklet    |
| LANDSCOPE gift card  | Card       |
| LANDSCOPE magazine – Autumn 2009                             | Magazine   |
| LANDSCOPE magazine – Spring 2008                             | Magazine   |
| LANDSCOPE magazine – Summer 2008–09                          | Magazine   |

|   |                     |
|---|---------------------|
| LANDSCOPE magazine – Winter 2009  | Magazine            |
| LANDSCOPE subscription renewal  | Form                |
| Lane Poole Reserve Draft Management Plan  | Report              |
| Learning about litter – A teacher’s guide   | DVD                 |
| Litter prevention strategy for WA 2009–2014   | Booklet             |
| Living with possums   | Brochure            |
| <b>M</b>  |                     |
| Mammals of the Avon Region  | Book                |
| Mammals of the South West   | Book                |
| Managing your bushland  | Book                |
| Mapping coral reef communities at Shark Bay   | Report              |
| Mapping the coral reef communities of Shark Bay marine protected areas:<br>Data collected during the February 2008 field survey | Report              |
| Marine park stickers  | Stickers            |
| Marine turtles of the Pilbara coast   | Brochure            |
| Matilda Bay Reserve   | Brochure            |
| Montebello Islands Marine Park  | Brochure            |
| Mount Augustus National Park  | Brochure            |
| Munda Biddi Trail   | Certificate         |
| Munda Biddi Trail – track information and membership  | Brochure            |
| Munda Biddi Trail North Map Pack  | Map                 |
| Munda Biddi Trail WA Tourism Awards 2008  | Award<br>submission |
| <b>N</b>  |                     |
| National Indigenous Cadetship Program   | Poster              |
| National, marine and regional parks in Western Australia – A visitor’s guide to the State                                       | Brochure            |
| Native frogs  | Stickers            |
| Native timber   | Card                |
| Native vegetation fact sheet – A guide to burning under the native vegetation provisions  | Flyer               |
| Native vegetation fact sheet – Forestry on private property   | Flyer               |
| Nature Protection Caution Notice Books  | Logbook             |
| Nearer to Nature  | Display<br>banner   |
| Nearer to Nature – Australiana Experience   | Flyer               |
| Nearer to Nature – Autumn 2009  | Booklet             |
| Nearer to Nature – Spring 2008  | Booklet             |
| Nearer to Nature – Summer 2008–09   | Booklet             |
| Nearer to Nature – Winter 2009  | Booklet             |
| Ningaloo coastal world heritage nomination fact sheet   | Flyer               |

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|---|----------------|
| Ningaloo Marine Park Drupella long-term monitoring program: 2008 survey                                       | Report         |
| Ningaloo Marine Park Sanctuary Zones  | Brochure       |
| Nuytsia – Vol 18  | Book           |
| Nuytsia – Vol 19  | Book           |
| <b>O</b>  |                |
| Office of Climate: Consequences of the impacts of climate change in WA  | Flyer          |
| Office of Climate: Emission trading   | Flyer          |
| Office of Climate: Evidence of our changing climate   | Flyer          |
| Office of Climate: Projections for adoption to climate change   | Flyer          |
| Office of Climate: Reporting greenhouse gas emissions   | Flyer          |
| Office of Climate: What is adaptation?  | Flyer          |
| Our Environment, Our Future   | Brochure       |
| Outstanding Service Award   | Certificate    |
| Over the Horizon  | Booklet        |
| <b>P</b>  |                |
| Parks and Visitor Services  | Display        |
| Parks of the Coral Coast  | Brochure       |
| Parks of the Darling Range  | Flyer          |
| Passive sampling of ambient concentrations of VOCs in Collie, WA  | Report         |
| Personal fire arms logbook  | Logbook        |
| Perth Hills National Parks Centre camping   | Flyer          |
| Perth Hills National Parks Centre walk trails   | Brochure       |
| Pinnacles post cards  | Post cards     |
| Porongurup National Park  | Brochure       |
| Preliminary assessment of coral communities at selected sites in the proposed Dampier Archipelago Marine Park | Report         |
| Procedures and operations for LANDSCOPE Expeditions   | Booklet        |
| Protecting children and pets from cane toads  | Brochure       |
| Protecting marine mammals in WA marine parks  | Poster         |
| Protecting WA sea turtles   | Poster         |
| Public Participation Planning fact sheets   | PDF fact sheet |
| Purnululu National Park   | Brochure       |
| <b>R</b>  |                |
| Rare flora Posters  |                |
| Return of avian fauna bought and sold   | Report         |
| Ribbons of Blue 20th Anniversary postcards for state-wide   | Postcard       |
| Ribbons of Blue 20th Anniversary postcards for the south-west region  | Postcard       |

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|---|--------------------|
| Ribbons of Blue 20th Anniversary T-shirt  | T-shirt            |
| Ribbons of Blue 20th Anniversary yearly planner for the south-west  | Planner            |
| Ribbons of Blue In and out of the classroom   | CD                 |
| Ribbons of Blue In and out of the classroom   | Manual             |
| Ribbons of Blue stormwater snapshot   | Flyer              |
| <b>S</b>  |                    |
| Safe handling of cane toads   | Brochure           |
| Safety in Bushfire Control  | Book               |
| Saving Our Species – Biodiversity Conservation Initiative   | Booklet            |
| Saving the Giants   | LANDSCOPE brochure |
| Science Division Annual Research Activity Report  | Report             |
| Serpentine National Park  | Souvenir ticket    |
| Shark Bay Marine Park and Hamelin Pool Marine Nature Reserve  | Brochure           |
| Shark Bay Terrestrial Management Plan   | Report             |
| Shark Bay: Twin bays on the edge  | Book               |
| Shark Bay: Twin bays on the edge  | Brochure           |
| Shoalwater Islands Marine Park  | Brochure           |
| Southern Metropolitan Regional Council fact sheet   | Flyer              |
| St John Brook Conservation Park   | Brochure           |
| Standard operating procedures – Animal handling/restraint using soft containment                                    | Report             |
| Standard operating procedures – Cage traps for live capture of terrestrial vertebrates                              | Report             |
| Standard operating procedures – Care of evicted pouch young   | Report             |
| Standard operating procedures – Dry pitfall trapping for vertebrates and invertebrates                              | Report             |
| Standard operating procedures – Elliot traps  | Report             |
| Standard operating procedures – Nest boxes for monitoring arboreal mammals  | Report             |
| Standard operating procedures – Observing animals from secondary signs  | Report             |
| Standard operating procedures – Permanent marking of mammals using ear notching                                     | Report             |
| Standard operating procedures – Permanent marking of vertebrates using microchip                                    | Report             |
| Standard operating procedures – Semi-permanent marking of mammals using ear tags                                    | Report             |
| Standard operating procedures – Soft cage traps from capture of micropods   | Report             |
| Standard operating procedures – Transport and temporary holding of wildlife   | Report             |
| Stirling Range National Park  | Brochure           |
| Stop the illegal removal of our reptiles  | Posters            |
| Submission and responses – Guideline dust management program  | Report             |
| Subscribe to LANDSCOPE magazine   | Flyer              |
| Summary of marine research and monitoring applicable to the management of Jurien Bay Marine Park: 2000 to June 2008 | Report             |



Swimming with whale sharks – code of conduct

Poster

## T

Talking Rubbish Newsletter x 4

Newsletter

The Protector + Landfill and you

DVD

The Waste Wise Schools program

Report

Threatened and poorly known flora of the Yilgarn Region

Book

Threatened flora seed centre

Brochure

Tidy Towns promotional brochure

Brochure

Tidy Towns winners book

Booklet

Tidy Towns winners certificates

Certificate

Tour Operator Handbook – Terrestrial

Handbook

TravelSmart workplace

Brochure

## V

Valley of the Giants

Flyer

Valley of the Giants activity program – Easter 2009

Brochure

Valley of the Giants activity program – Summer 2008–09

Brochure

Visitor survey: tell us about your experience

Brochure

Visual air quality monitoring in Collie summary report

Report

Volunteer of the Year

Certificate

Volunteer Trail Maintenance Handbook

Booklet

## W

WA Cane Toad update

Newsletter

WA Environment Awards – Award certificates

Certificate

WA Environment Awards display

Display

WA Environment Awards promotional bag

Bag

WA Environment Awards promotional banner

Banner

WA Environment Awards Winners Book

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WA Guidelines for Biosolids Management

Report

WA Naturally Publications – issue 71

Brochure

WA Naturally Publications – issue 72

Brochure

WA Naturally Publications – order catalogue

Brochure

Wagerup community air sampling program – Observation log book

Booklet

Wagerup open day

Posters and  
fact sheets

Walpole and Nornalup Inlets Marine Park

Poster

Walpole Wilderness

LANDSCOPE  
brochure

Walpole Wilderness Area Management Plan

CD

|   |                    |
|---|--------------------|
| Walpole Wilderness Area Management Plan                       | Report             |
| Walyunga National Park  | Souvenir ticket    |
| Wandoo crown decline  | Brochure           |
| Wandoo in health and decline: a history                       | Booklet            |
| Wandoo Recovery Group Bulletin 5                              | Brochure           |
| WA's special places, plants and animals                       | Brochure           |
| Waste disposal day for the Shire of Kalamunda                 | Flyer              |
| Waste Wise Feedback Survey 2008                               | Form               |
| Waste Wise Schools program assembly kit                       | Kit                |
| Waste Wise Schools program banner                             | Banner             |
| Waste Wise Words Newsletter x 4                               | Newsletter         |
| Watching whales   | Brochure           |
| Water quality monitoring guidelines – April 2009              | Report             |
| WATSNU – December 2008  | eNewsletter        |
| WATSNU – June 2009  | eNewsletter        |
| Wattles of the Pilbara  | Book               |
| Wattles of the Pilbara  | LANDSCOPE brochure |
| Western Australian 2009 Calendar – staff discount             | Flyer              |
| Western Australian 2009 Calendar – volunteer discount         | Flyer              |
| Whale shark experience  | Poster             |
| Whale shark experience logbook                                | Logbook            |
| Whale shark experience pass                                   | Tickets            |
| Whales and dolphins of Western Australia                      | Book               |
| Winter 2006 study: Intensive air quality - Wagerup            | Report             |
| Wondering about wandoo  | Brochure           |
| Wood heater program information for Collie                    | Brochure           |
| Wood heater program information for Kalgoorlie                | Brochure           |
| <b>Y</b>  |                    |
| Yanchep National Park   | Banner             |
| Yanchep National Park – information and visitors guide        | Brochure           |
| Yanchep National Park – off-site information                  | Flyer              |
| Yanchep National Park WA Tourism Awards 2008 Award submission |                    |
| Yardie Creek boat cruise                                      | Brochure           |

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