


# DEPARTMENT OF ENVIRONMENT AND CONSERVATION ANNUAL REPORT 2006–2007



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Department of  
Environment and Conservation

Our environment, our future 

### **Acknowledgments**

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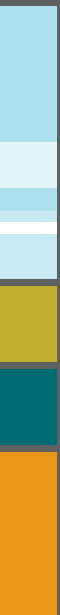
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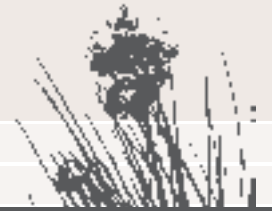
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30 August 2007





**Hon David Templeman MLA**

Minister for the Environment; Climate change; Peel

In accordance with section 61 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 2006 to 30 June 2007.

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

**Keiran McNamara**

Director General



This annual report is an historic document as it is the first such report of the Department of Environment and Conservation that came into being on 1 July 2006 through the amalgamation of the Department of Environment and the Department of Conservation and Land Management.

In announcing the creation of the new agency, the Government noted that it would 'be stronger and more robust with the resources to tackle priority and emerging issues related to protecting and conserving our environment and the nature of Western Australia'.

The amalgamation of government agencies presents many challenges, not the least of which is maintaining services to the community while implementing the changes necessary to achieve the Government's objectives.

These changes have involved combining human resources, financial and information technology systems; co-locating staff in metropolitan and regional centres; and merging areas of the former agencies that have common aims such as native vegetation and wetlands protection.

At the same time, it was important for the new agency to develop a corporate plan that identified our values and priorities as a department and provided a focus for staff in developing work plans to meet our objectives.

It is pleasing to be able to report that these challenges largely were met during DEC's first year of activity and a corporate plan was finalised. The department maintained and strengthened delivery of its core functions of protecting the environment and conserving the nature of Western Australia.

Challenges associated with the creation of the new department aside, the year in review also presented several challenges that required a whole-of-department approach. Perhaps the most significant of these was when lead dust contamination emerged as a major issue at Esperance. The department's response involved staff from several areas including Environmental Regulation, Nature Conservation, Strategic Development and Corporate Affairs, the Environmental Enforcement Unit and the South Coast region.

I acknowledge the efforts of all the staff who were involved in the Esperance lead issue. It has involved a lot of time and commitment in addition to their day-to-day work. I particularly acknowledge DEC's Esperance staff who dealt with this issue on a professional basis and, as members of the local community, understandably have their own concerns in relation to lead contamination.

A key focus for DEC is to provide leadership in implementing the Government's initiatives on sustainability and climate change. The department oversaw the development of the whole-of-government *Act Now for the Future* community awareness campaign on sustainability and climate change that was launched on 5 June, World Environment Day.

During the year, the department provided a more coordinated focus on the development and implementation of sustainability and climate change issues through the creation of a Sustainability Division (that brings together the Sustainability Policy Unit and the Waste Management Branch) and by establishing an Office of Climate Change.

From a legislative point of view, the new *Contaminated Sites Act* began operation on 1 December 2006. This significant legislation is regarded as the most progressive such law in Australia and will help keep us at the forefront when it comes to community and environmental health.

Conservation of the nature of Western Australia remains a critical part of DEC's core business. The past year saw the introduction of the *Saving our Species* initiative that involved more than 70 targeted projects to combat feral animals (including cane toads), weeds and *Phytophthora* dieback, to conserve threatened species and communities and to undertake biological surveys and research.

This is a \$15 million program over two years that focuses on areas where threats to native biodiversity can be overcome with targeted actions. Successes during the year included controlling tamarisk at Lake Boonderoo on the Nullarbor Plain; severely reducing populations of eastern long-billed corellas at Albany and Denmark; extensive feral pig control in Walyunga National Park and other areas in the Perth hills; and implementing innovative techniques to control a *Phytophthora* outbreak in Fitzgerald River National Park.



*Saving our Species* is further strengthening the department's biodiversity conservation programs which include implementing recovery plans for threatened species and ecological communities, developing a world-class parks and reserves network and fostering off-reserve conservation through DEC's Good Neighbour Policy, *Land for Wildlife* and convenancing programs.

Fire management is an integral part of the department's land management and biodiversity conservation activities and responsibilities. The department manages around 25 million hectares of conservation lands and State forest and has responsibility for wildfire preparedness on 89 million hectares of unallocated Crown lands and unmanaged reserves.

A special allocation of \$5.5 million from the State Government in 2006–07 has enabled the department to increase its resources to manage complex wildfires such as those between Dwellingup and Waroona in January and February in 2007. New resources include mobile command centres, satellite-based communications and tracking systems, a cache of accommodation facilities, and additional fire trucks and earth moving machinery.

Many of these new resources, particularly satellite communications equipment, also will enable department staff to undertake conservation work more safely and efficiently in remote areas, especially in the arid zone.

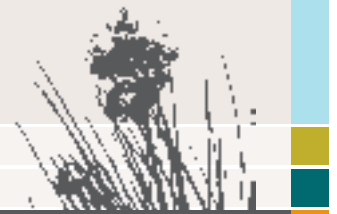
The department recognises that community support is vital if we are to achieve our mission and places a strong emphasis on community consultation and involvement in its activities. The department has more than 9,500 registered volunteers who collectively contribute more than 400,000 hours a year to projects that protect our environment and conserve our biodiversity. The contribution of these volunteers is truly remarkable and greatly appreciated by the department.

I also acknowledge the members of the Environmental Protection Authority, Conservation Commission of WA, Keep Australia Beautiful Council, Marine Parks and Reserves Authority, Swan River Trust, Waste Management Board and Contaminated Sites Committee, as well as the many hundreds of community members who provide their time as members of advisory committees and 'friends of' groups, who worked with the department during the year.

I particularly thank the department's 1,800 staff members based throughout the State and working alongside their local communities. They are a very dedicated team and met the challenge of creating a new department while maintaining the commitment to our environment, our future.

**Keiran McNamara**  
Director General

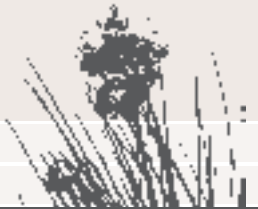
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# 1 OVERVIEW





2006–07 was a year of tremendous change for the Department of Environment and Conservation (DEC) with the amalgamation of two agencies into one while still ensuring that the core functions of protecting the environment and conserving the nature of WA were met.

The department rose to the challenge and numerous achievements and milestones were reached in this landmark year.

### **Protecting our biodiversity**

The protection of biodiversity continued to be a key priority for DEC operations during 2006–07 with the release of the Draft Biodiversity Conservation Strategy for WA. This document broke new ground by identifying a 100-year timeframe to restore biodiversity.

A two-year \$15 million *Saving our Species* biodiversity conservation initiative began in July 2006 to address dieback control, eradication and control of pest animals and weeds, expansion of biological survey and implementation of recovery plans for threatened species and ecological communities.

During the year, more than 3.9 million ha of conservation lands were baited under the wildlife recovery program, Western Shield, to control foxes and feral cats, using more than 950,000 poison baits.

The State Cane Toad Initiative remained at the forefront of biodiversity operations with the focus on keeping toads out of the State through field and awareness programs with community involvement.

Three-hundred and eighty-six species of threatened and priority flora were surveyed or monitored and 57 new populations or sub-populations of threatened flora and 55 populations of priority flora were located during the year.

A marine science program was established to support the department's marine programs and activities, and to represent DEC in its role as the leader for the Western Australian Marine Science Institution Node 3: Managing and Conserving the Marine State.

The year also saw the Minister for the Environment and Climate Change approve management plans for Jurien Bay Marine Park, Rowley Shoals Marine Park and the Montebello/Barrow Islands marine conservation reserves.

A State Marine Policy Stakeholder Group was formed and a draft State Policy Framework for regional marine planning commenced.

### **Ensuring the future of our forests**

Management of WA's forests continued with DEC progressing with the Forest Products Commission an integrated process for planning, approving and monitoring timber harvesting activities on State forest and timber reserves. A Timber Harvest Plan for 2007 was produced and the three-year rolling timber harvest plan for 2007–09 was progressed.

DEC also contributed data for Australia's continental State of the Forests Report and designed and established in the field the final locations of eight indicative fauna habitat zones associated with planned timber harvesting.

Significant progress also was made in providing data and support services for the preparation of the dieback atlas for the management of disease caused by *Phytophthora cinnamomi* in native vegetation.

### **Parks – places of nature for people to enjoy**

Ensuring the provision of innovative sustainable tourism facilities and services on conservation lands continued to be a key priority for the department during 2006–07.

Management plans for several areas including Lake McLarty Nature Reserve and Kennedy Range National Park were finalised during the year. Draft management plans for the Burrup Peninsula, the Walpole Wilderness Area and Cape Range and Wellington national parks were released, as was the draft Shark Bay World Heritage Property Strategic Plan.

DEC's highly successful Community Involvement program was expanded by increasing the range and scope of opportunities for volunteers to actively help the department in projects designed to protect and manage natural and cultural values and enhance visitor experiences. In particular, additional support was provided for volunteer initiatives such

Three-hundred and eighty-six species of threatened and priority flora were surveyed or monitored and 57 new populations or sub-populations of threatened flora and 55 populations of priority flora were located during the year.

The past year saw the proclamation of the hallmark *Contaminated Sites Act 2003*, the establishment of the Contaminated Sites Auditor Accreditation Scheme and a public database which will provide the State with the capacity to more effectively manage contaminated lands.

as the Campground and Homestead Hosts programs. DEC now has more than 9,500 registered volunteers who collectively contribute more than 400,000 hours a year.

Joint management arrangements also commenced with the Miriuwung-Gajerrong Corporation under the Ord Stage Two final agreement, and a regional park council and six sub-councils were established as part of the process of preparing management plans for six new conservation parks.

Establishing effective and meaningful liaison with Indigenous groups continued through the development of joint management agreements and the progression of employment and training opportunities for Aboriginal people under the department's Mentored Aboriginal Training and Employment Scheme (MATES) program.

Visitor facilities were significantly boosted with the continued planning and construction of the Munda Biddi bike trail in the State's south-west forests and the maintenance and improvement of the Bibbulmun Track.

DEC's *Healthy Parks, Healthy People* program provided the community with opportunities to enhance their physical and mental wellbeing while helping to maintain a healthy and well-managed network of regional parks within the Perth metropolitan area.

Construction also began on the Canning River Eco-Education Centre to increase community awareness of nature conservation values and enhance visitor experiences.

#### **Cleaner air, cleaner environment**

Efforts to achieve cleaner air were boosted during the year by the implementation of the Perth Air Quality Management Plan with major initiatives aimed at reducing smoke emissions, including the second phase of the *Wood Heater Buy Back* program.

The Diesel National Environment Protection Measure was also implemented, which included emissions testing of the public bus fleet, selected light and heavy diesel trucks and a technical training/education program.

Major air quality investigations were undertaken at Wagerup and air quality management plans were developed for the key regional centres of Port Hedland, Wedgefield and the Collie basin to provide a strategic context for addressing air quality issues.

DEC staff undertook targeted monitoring at selected regional and industrial locations and began an air toxics program in Perth and regional centres.

The past year also saw the proclamation of the hallmark *Contaminated Sites Act 2003*, the establishment of the Contaminated Sites Auditor Accreditation Scheme and a public database which will provide the State with the capacity to more effectively manage contaminated lands.

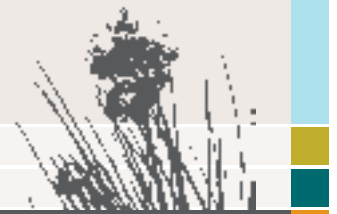
The Waste Avoidance and Resource Recovery Bill was released for public comment.

#### **Environmental assessments**

DEC staff continued to investigate and assess development projects throughout the State to determine any effects on our environment and ecosystems. During 2006–07 assessments were completed on the South West Yarragadee Water Source Development project, the major duplication of the Dampier to Bunbury Natural Gas Pipeline and progress was made on the consideration of mineral resource projects within improved regional contexts, particularly in the Midwest region.

During 2006–07, the department prepared and published the final State of the Environment Report on behalf of the Environmental Protection Authority and expanded the Indian Ocean Climate Initiative partnership with the CSIRO and the Australian Bureau of Meteorology to include climate change predictions for the north of the State and initiate a new program on adaptation to climate change.

DEC staff continued to work collaboratively with other State agencies to develop approaches for further advancing sustainability in respect of core business services and refine agency reporting on sustainability, and to progress relationships with the non-government sector to foster appropriate sustainability directions and initiatives.



World Environment Day, 5 June 2007, saw the launch of the public information and awareness campaign *Act Now for the Future*, aimed at changing behaviours for sustainability with an initial focus on climate change.

The State/Local Government Sustainability Partnership Agreement was finalised during the year. Existing partnerships with the cities of Swan, Wanneroo, Gosnells and Geraldton were advanced, and development of prospective agreements with the local governments of Esperance, Mandurah and Kwinana was progressed.

The department participated in national greenhouse policy development through membership on the Council of Australian Governments' climate change working group and the National Emissions Trading Taskforce.

It also established an Office of Climate Change to coordinate a whole-of-government response to climate change and to implementing the Western Australian Greenhouse Strategy.

### Environmental regulation

An Industry Licensing Quality Assurance and Audit program was implemented, prescribed premises categories were reviewed and an upgrade of the industry licensing database was completed.

The year saw the finalisation of the review of Schedule Two (Clearing in Existing Transport Corridors) of the *Environmental Protection Act* (Clearing of Native Vegetation) Regulations 2004 through a consultative working group and an educational, compliance and monitoring program for native vegetation clearing implemented.

Mass bird deaths in Esperance in December 2006 sparked a wide environmental investigation by the department to determine the cause. Other government agencies became involved when elevated levels of lead were found in the dead birds tested, and elsewhere around the town. A licence inspection of the Esperance port resulted in DEC serving Environmental Field Notices requiring the Esperance Port Authority to improve dust management of the loading facilities. The Port Authority was also directed to undertake additional environmental monitoring. The department served a prevention notice on the Port Authority in March to prevent it receiving and shipping lead carbonate and closely monitored all nickel ship loading from this date. An investigation into possible breaches of the *Environmental Protection Act 1986* commenced.

### Fire management

DEC attended and monitored 605 wildfires during the 2006–07 fire season. These fires covered an area of around 1.95 million hectares. Lightning-caused fires represented about 36 per cent of all wildfires attended by DEC staff, while deliberately lit or arson-caused fires started 36 per cent.

There were 408 wildfires attended by DEC staff within the three south-west forest regions. These fires burned about 31,700 hectares of which 19,000 hectares were on DEC-managed lands. The South Coast Region experienced one of its worst fire seasons on record, due to the combination of dry vegetation and a series of lightning storms from October to December 2006. Twenty-five large fires occurred in several of the coastal DEC-managed reserves including Fitzgerald River, Cape Arid, Cape Le Grand and Stokes national parks, and nature reserves at Lake Shaster and Middle Island. A fire that started on private property near the Porongurup National Park on 11 February 2007 burnt out most of the park and adjacent farmlands, including one house.

DEC and Forest Products Commission fire fighting resources, supported by local government volunteer bushfire brigades, the Fire and Emergency Services Authority and emergency support agencies, were heavily involved in the suppression and post-fire recovery operations on a wildfire that occurred between Dwellingup and Pijnjarra and north of Waroona. This fire burned from 26 January to 11 February 2007 and burnt 13,376 hectares, of which 7,625 hectares were on private property. The fire destroyed 14 homes and 35 sheds and outbuildings, and about 100 kilometres of fencing.

Due to concerns about the impacts of the predicted long, dry and hot summer, the State Government provided an additional \$5.5 million at the start of the 2006–07 fire season to bolster DEC's fire fighting resources.

World Environment Day, 5 June 2007, saw the launch of the public information and awareness campaign *Act Now for the Future*.

### 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 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

The Department of Environment and Conservation's responsibility during the reporting period was to the Minister for the Environment, who exercised authority under the *Environmental Protection Act 1986* and the *Conservation and Land Management Act 1984* and other legislation. A Ministerial portfolio for Climate Change was established for the first time in Western Australia in December 2006. This portfolio was allocated to the Minister for the Environment and was also serviced by the department.

#### 1.2.3 The role of the department

The Department of Environment and Conservation is in the portfolio of the Minister for the Environment and Climate Change. The department is also part of a greater environmental community and has responsibilities for implementing 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 Western Australia. This includes managing the State's national parks, marine parks, conservation parks, State forests and timber reserves, 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.

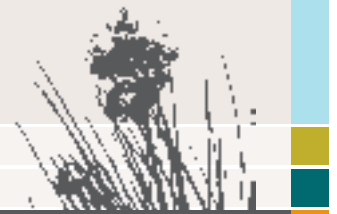
The department provides support or assists the following portfolio authorities and boards to carry out their functions, which are integral to the department achieving its vision and mission:

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

#### 1.2.4 Legislation administered by DEC as at 30 June 2007

##### 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 (Swan and Canning Rivers) Policy 1998



### Other written laws on which DEC officers assist

- *Litter Act 1979*
- Litter Regulations 1981
- *Swan River Trust Act 1988*
- Swan River Trust Regulations 1989

### Changes made in 2006–07 to legislation administered

During the period 1 July 2006 to 30 June 2007, several important changes and additions were made to the legislation listed above. The *Swan and Canning Rivers Management Act 2006* (and its transitional legislation) was passed, and assented to, although the substantive provisions of this legislation did not come into force during 2006–07.

On 27 June 2006, Notice of Proclamation of the commencement of the *Machinery of Government (Miscellaneous Amendments) Act 2006* was published in the *Government Gazette* (Special, pp. 2347-48). This Act was proclaimed to commence on 1 July 2006. It includes amendments to the *Conservation and Land Management Act*, the *Sandalwood Act* and the *Wildlife Conservation Act*. Two Notices under the *Public Sector Management Act 1994* in the same issue of the Gazette enabled the amalgamation of the Department of Conservation and Land Management and the Department of Environment from 1 July 2006.

On 27 April 2007, the Environmental Protection (NEPM-UPM) Regulations 2007 were published.

Amendments were made to the following regulations:

- Conservation and Land Management Regulations 2002
- Environmental Protection (Controlled Waste) Regulations 2004
- Environmental Protection Regulations 1987
- Environmental Protection (Clearing of Native Vegetation) Regulations 2004
- Forest Management Regulations 1993
- Sandalwood Regulations 1993.

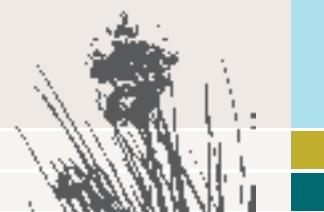
Copies of legislation relevant to the department are available on the State Law Publisher's website at < <http://www.slp.wa.gov.au/statutes/av.nsf/dec>>.

### 1.2.5 Performance management framework

The Department of Environment and Conservation supports broad, high level government goals by more specific desired outcomes. We deliver 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: State government goal, desired outcome and Department of Environment and Conservation services**

Government goal	Desired outcome	DEC services
Protecting and enhancing the unique Western Australian lifestyle and ensuring sustainable management of the environment.	Conservation of biodiversity (the variety of life forms: the different plants, animals and micro-organisms, the genes they contain, and the ecosystems they form).	Nature conservation Sustainable forest management Performance of statutory functions by the Conservation Commission of Western Australia
	Community understanding, enjoyment and appreciation of parks, wildlife and the natural environment and involvement in their management.	Parks and visitor services Astronomical services
	Emissions and discharges meet approved environmental criteria.	Air quality management plans and air quality monitoring Regulation of discharges to the environment Regulation of contaminated sites
	Waste management practices meet approved performance targets.	Administration of the Waste Management Recycling Fund Policies and strategies to reduce and recycle waste
	Environmental policy and environmental impact assessment that protects, conserves and enhances the environment in accordance with accepted long term plans.	Environmental impact assessments of development proposals and planning schemes Environmental policies and report on the state of the environment

### Service 1: Nature conservation

The development and implementation of programs for the conservation of biodiversity, 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 sustainable management of State forest and timber reserves while maintaining or enhancing nature conservation, water, recreation, landscape and other values in the long term and encouraging public awareness, understanding and support for sustainable forest management, services and policies.

### Service 3: Performance of statutory functions by the Conservation Commission of Western Australia

The undertaking of statutory functions by the Conservation Commission of Western Australia which include:

- having vested in it the State's national parks, conservation parks, nature reserves, State forest and timber reserves
- policy development for the preservation and community enjoyment of the State's natural environment, and promoting the appreciation of flora, fauna and the natural environment

- advice to the Minister for the Environment on the development of policies for the conservation and management of biodiversity throughout the State and on the ecologically sustainable management of State forest, timber reserves and forest produce, and
- audit of the department's and the Forest Products Commission's performance against management plans.

#### **Service 4: 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, 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, nature-based tourism and recreation services and policies.

#### **Service 5: Astronomical services**

Through the Perth Observatory, providing public information and awareness directly beneficial to the Western Australian community, and contributing to scientific research in astronomy by cooperating with national and international institutions in the acquisition, analysis, interpretation and dissemination of information.

#### **Service 6: Air quality management plans and air quality monitoring**

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).

#### **Service 7: Regulation of discharges to the environment**

Regulate emissions and discharges to the environment and the transport of hazardous wastes.

#### **Service 8: Regulation of contaminated sites**

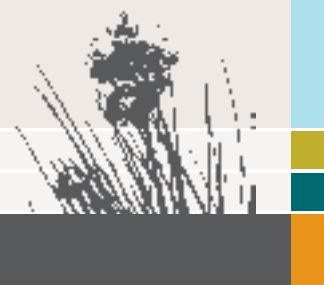
Regulate the investigation, classification and management of contaminated sites.

#### **Service 9: Administration of the Waste Management Recycling Fund**

Administer the Waste Management and Recycling Fund (WMRF) on behalf of the Waste Management Board, to promote the diversion of waste from landfills.

#### **Service 10: Policies and strategies to reduce and recycle waste**

Develop and implement policies and strategies that promote waste avoidance and minimisation in industry, government and the community.



### Service 11: Environmental impact assessments of development proposals and planning schemes

Manage the environmental impact assessment process for the Environmental Protection Authority to enable sound environmental advice on development proposals and planning schemes/amendments to be provided to the Government, developers and the public to ensure the environment is protected for the community.

### Service 12: Environmental policies and report on the state of the environment

Coordinate the development and analysis of environmental policy, ensure its effective implementation, manage the Environmental Protection Authority's formulation of statutory Environmental Protection Policies and State Environmental Policies, coordinate State of the Environment reporting and provide sound, accurate and timely information about the environment to the community to promote positive environmental behaviours.

In 2006–07 the Department of Environment and Conservation contributed to whole-of-government reform initiatives, including procurement reform and corporate services reform.

## 1.2.6 Changes from the 2005–06 reporting year

The Department of Environment and Conservation was formed on 1 July 2006. It performs the functions previously carried out by the former Department of Conservation and Land Management and the former Department of Environment, both of which ceased to exist on 30 June 2006. The Outcome Based Management Framework for the Department of Environment and Conservation for the year ended 30 June 2007 is a combination of the Outcome Based Management Frameworks previously adopted by the two former departments.

During 2006–07 the performance indicators previously adopted for Service 5: Astronomical services were simplified. A Key Efficiency Indicator, the 'Cost of providing astronomical services per head of Western Australian population', is now reported for this service.

## 1.2.7 Joint delivery of services with other agencies

In 2006–07 the Department of Environment and Conservation 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 2006–07
Responding to climate change	Department of Environment and Conservation (lead agency), Office of Energy, Department of Treasury and Finance, Department for Planning and Infrastructure	Whole-of-government integrated response to climate change
Salinity	Department of Agriculture and Food (lead agency), Department of Environment and Conservation, Department of Water	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.

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

- 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 Western Australia, 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
- improving the way we do business.

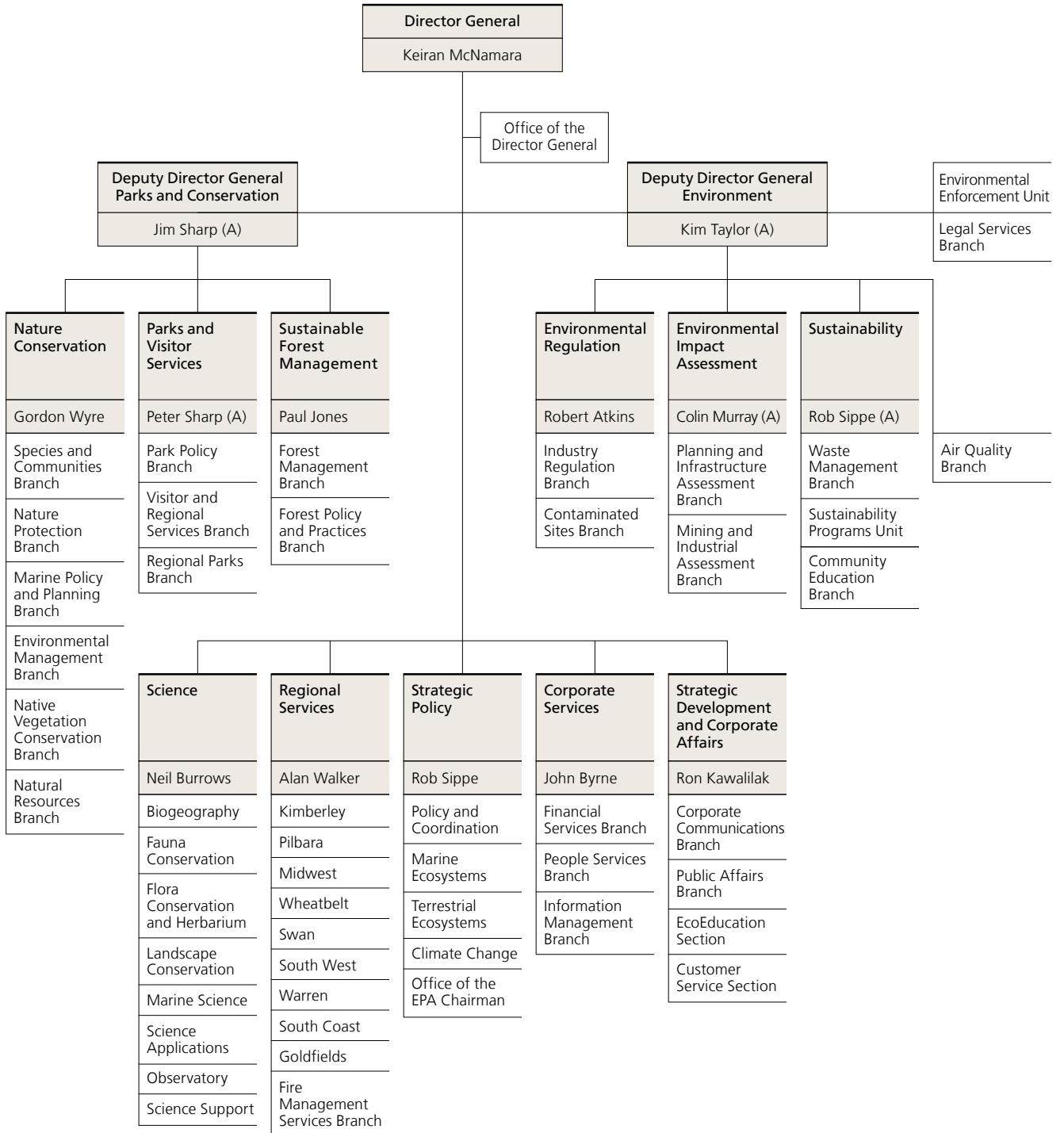


Figure 1: Operating structure of the Department of Environment and Conservation as at 30 June 2007

# 2

## AGENCY PERFORMANCE





### 2.1.1 Service 1: Nature conservation

**Service Description:** The development and implementation of programs for the conservation of biodiversity, 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.

Steps to conserve Australia's most threatened mammal, Gilbert's potoroo, continued with successful translocations being undertaken to Bald Island, off the south coast of WA.

#### Performance summary

	2006–07 Estimate \$'000	2006–07 Actual \$'000	Variance \$'000
Expense by service	87,363	107,423	20,060

KEI	2006–07 Target	2006–07 Actual	Variance
Wildlife habitat management – cost per hectare managed	\$3.31	\$3.98	\$0.67

#### Performance highlights

- A draft Biodiversity Conservation Strategy for Western Australia released by the Minister for the Environment on 7 December 2006 for public comment until 30 March 2007.
- DEC's Land for Wildlife Scheme celebrated its tenth anniversary in February 2007. A detailed report on the program's achievements, *With Wildlife in Mind*, was published.
- Drafting of the proposed Biodiversity Conservation Bill continued.
- Saving our Species launched by the Minister for the Environment on 7 December 2006. The initiative received an allocation of \$12.75 million for two years which is supplemented with existing recurrent DEC funds. The initiative funded over 70 projects across the key themes of invasive and pest animal control, environmental weed control, threatened species and ecological communities recovery, *Phytophthora* dieback management, biological survey and research and the State Cane Toad Initiative.
- The State Cane Toad Initiative continued to focus on keeping toads out of Western Australia through field and awareness programs with community involvement.
- More than 3.9 million ha of conservation lands baited under the *Western Shield* program to control foxes and feral cats, using more than 950,000 poison baits.
- The Good Neighbour Policy was finalised, following extended public consultation requested by stakeholders.
- 386 species of threatened and priority flora surveyed or monitored and 57 new populations or sub-populations of threatened flora and 55 populations of priority flora located.
- Steps to conserve Australia's most threatened mammal, Gilbert's potoroo, continued with successful translocations being undertaken to Bald Island, off the south coast of WA. Dibblers, numbats, banded hare-wallabies, black-flanked rock-wallabies, greater stick-nest rats, noisy scrub-birds, quenda and tammar wallabies were translocated to locations around the south-west under the *Western Shield* program.
- Four Interim Recovery Plans for three flora species and one threatened ecological community, and two Recovery Plans covering three species of birds, were approved.
- Seed collections made from 221 taxa including threatened flora, priority flora and other poorly known Western Australian species (259 collections). Through the *ex situ* seed conservation program Western Australia has now reached the goals of Target

The area of terrestrial conservation reserves increased by 14,308 ha during the year (2,205 ha in national parks, 11,351 ha in nature reserves and 752 ha in conservation parks).

- 8 of the Global Strategy for Plant Conservation for 2010 (60 per cent of threatened flora in accessible *ex situ* collections and 10 per cent of these used in recovery).
- Fieldwork for the Pilbara Biological Survey completed. Preliminary results revealed taxa new to science and new records for declared rare flora and priority species.
- A Marine Science Program was established to support the department's marine conservation responsibilities, and to represent the department in its role as the lead agency for the Western Australian Marine Science Institution Node 3: Managing and Conserving the Marine State.
- The Minister for the Environment and Climate Change approved management plans for Beelii Regional Park, Jurien Bay Marine Park, Rowley Shoals Marine Park and the Montebello/Barrow Islands Marine Conservation Reserves. This brings the total number of management plans under the CALM Act to 51.
- A State Marine Policy Stakeholder Group was formed and a draft State Policy Framework for regional marine planning commenced.
- The area of terrestrial conservation reserves increased by 14,308 ha during the year (2,205 ha in national parks, 11,351 ha in nature reserves and 752 ha in conservation parks). In addition 636,410 ha were purchased for future addition to the conservation reserve system.
- Significant progress made towards the establishment of new marine parks and reserves at Dampier Archipelago/Regnard, Geographe Bay/Leeuwin-Naturaliste/Hardy Inlet and Walpole and Nornalup Inlets.
- Twenty new species of plants identified in the first two years of the Yilgarn Banded Ironstone Formation (BIF) Survey. The survey confirmed that the BIF ranges are flora rich and often contain plant species and / or vegetation communities that are restricted in distribution to individual ranges.
- The vascular flora (flowering plants, ferns, cycads and conifers) of the State now comprises 13,089 species, subspecies and varieties (11,932 native plants and 1,157 alien species), after the addition in 2006–07 of 86 newly published native species and 16 new alien species.
- The number of fungi specimens held by the WA Herbarium was close to doubled due to incorporation of the CSIRO macrofungi collection.
- Finalised the review of Schedule Two (Clearing in Existing Transport Corridors) of the *Environmental Protection Act* (Clearing of Native Vegetation) Regulations 2004 through a consultative working group.
- Reviewed the *Environmental Protection Act* (Clearing of Native Vegetation) Regulations 2004.
- Worked with the Office of Development Approvals Coordination to review processes for clearing native vegetation for resource development projects.
- Implemented an educational, compliance and monitoring program for native vegetation clearing.

### 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 significant species and ecosystems
5. conserving landscapes and seascapes: integrating off- and on-reserve conservation and managing threatening processes, and
6. encouraging public understanding and support of biodiversity conservation and other DEC programs and activities.





### 2.1.1.2 Building biodiversity knowledge

#### Biological inventory

All fieldwork associated with the Pilbara Bioregion Biological Survey was completed in 2006. This encompassed sampling terrestrial fauna and flora at 304 and 422 sites respectively; freshwater aquatic flora and invertebrates from 96 wetlands; and stygofauna from 445 bore holes. The sorting and identification of specimens are well advanced. To date, many new records for threatened flora and priority species have been documented and numerous taxa new to science have been recorded, particularly among the terrestrial and aquatic invertebrate groups and for plants.

Site selection was completed in preparation for the Kimberley Island Biological Survey. Traditional owners and the Kimberley Land Council have been consulted to ensure this survey achieves biodiversity outcomes while building capacity in local Aboriginal communities to better manage biodiversity.

Floristic and vegetation surveys of the banded ironstone formation (BIF) of the Yilgarn Craton continued. In the first two years of the BIF survey 20 new species of plants were identified. The survey has confirmed that the BIF ranges are rich in flora and often contain plant species and / or vegetation communities that are found only on individual ranges. The floristic and vegetation associations of these BIF ranges have been documented and reported; and advice on the botanical values of these habitats has been provided for management and regulatory purposes, and to a public forum in May 2007.

A major synthesis of existing vegetation mapping for the Avon Catchment is nearing completion, in a digital format. This contains information that has not previously been accessible and will be a significant step in understanding the ecosystems in this large Wheatbelt catchment.

#### *Climate change and biodiversity*

The Australian Greenhouse Office commissioned DEC to review a report on the implications of climate change for land-based nature conservation. The critical assessment of this global report resulted in improved understanding of the limitations of bioclimatic models of potential climate change impacts on species. The DEC review provided useful background for the development of better models for predicting changes in species distributions caused by climate change. WA will share its expertise in biodiversity monitoring and management of digital biodiversity information with the South African National Biodiversity Institute as part of a new partnership focusing on global climate change and effects on biodiversity.

#### *Marine science*

A Marine Science Program was established in May 2006 to support the department's marine parks and other marine conservation responsibilities, and to represent the department in its role as the lead agency for the Western Australian Marine Science Institution Node 3: Managing and Conserving the Marine State. The Node 3 research program focuses mainly on the Ningaloo Marine Park and involves collaboration with CSIRO (the *Wealth from Oceans* program) and other research institutions. It brings together over 100 scientists who are undertaking or proposing to undertake research in the Ningaloo Marine Park over the next four years. The department continues to ensure that results of this research translate into more effective management of the marine park.

Research has also been conducted into the recovery of coral reef communities near Coral Bay following a catastrophic natural disturbance in 1989<sup>1</sup>. This study has important implications regarding potential responses of reef communities in Ningaloo Marine Park to global climate change. A further survey of the coral-eating marine snail, *Drupella* sp., was undertaken in Ningaloo Marine Park and two field surveys of

All fieldwork associated with the Pilbara Bioregion Biological Survey was completed in 2006.

<sup>1</sup> The coincidence of coral spawning with minimal flushing (due to low tidal movement and low swell) resulted in deoxygenation of the water.

The Reference Herbarium reached 13,993 specimens representing approximately 11,000 taxa in 2007, and was used by over 3,000 visitors.

the recently created Montebello/Barrow islands marine conservation reserves were also undertaken to develop a better understanding of the distribution and health of the major benthic communities. During 2006–07 seed-funding grants were provided for 13 research projects including work on sea lions and little penguins.

#### Taxonomy and biotic collection management

At June 2007 the collection at the Western Australian Herbarium within DEC comprised the following specimens, from all major groups of plants, algae and fungi.

**Table 3: Specimens held at the Western Australian Herbarium**

Taxonomic Group	Number of specimens (June 2007)	Increase since June 2006	
		Number	%
Myxomycetes	567	90	18.8
Fungi	22,117	11,412	106
Lichens	14,253	1841	14.8
Algae	21,284	620	3.0
Liverwort and hornworts	1,829	-1	0
Mosses	6,293	-295	-4.5
Ferns and fern allies	3,355	100	3.1
Gymnosperms	1,902	28	1.5
Flowering plants	598,744	12,931	2.2
<b>Total number</b>	<b>670,344</b>	<b>26,726</b>	<b>4.6</b>

There was an approximate doubling in the number of fungi specimens due to incorporation of the CSIRO macrofungi collection into the Western Australian Herbarium. This increase has made the Herbarium's holdings amongst the most significant in Australia. Algae specimen numbers did not increase significantly in 2006–07, as effort concentrated on curation of the collections and preparation of a census of marine algae of Western Australia.

Numbers of collections of liverworts and mosses decreased slightly due to improved curation of collections and removal from the specimen database of some fragmentary collection records.

During the year, 2,335 specimens were loaned to other institutions, and 787 specimens were received on loan from other herbaria. The Western Australian Herbarium received 801 exchange specimens and distributed 3,246 exchange specimens to other Australian and international herbaria.

In addition to the main research collection, the Herbarium maintains a public-access Reference Herbarium of vascular plants, which is used extensively for flora identification and verification by DEC staff and professional and amateur botanists, including consultants and members of the Wildflower Society, Landcare and Bushcare groups. The Reference Herbarium reached 13,993 specimens representing approximately 11,000 taxa in 2007, and was used by over 3,000 visitors.

Records of all specimens incorporated in the Western Australian Herbarium are entered into the Herbarium Specimen Database (WAHERB). During the year, 16,951 records were added to WAHERB, including 1,322 priority flora and 244 threatened flora. The total collection of priority and threatened flora comprises 38,441 specimens.

The vascular flora (flowering plants, ferns, cycads and conifers) of the State now comprises 13,089 species, subspecies and varieties (11,932 native and 1,157 alien species), after the addition in 2006–07 of 86 newly published native species and 16 new alien species.



The Census of Western Australian Plants maintained by the Herbarium as the authoritative reference for all plants of the State, contained 20,251 names at the end of the year, representing 15,898 currently recognised species, subspecies and varieties of plants, algae and fungi (14,608 native and 1,290 alien). These figures include names for the vascular flora as well as the bryophytes, algae and fungi. Additions comprised 51 unpublished manuscript names, 139 new phrase names and 302 published names.

A new project, the Australian Plant Census, under the auspices of the Council of Heads of Australasian Herbaria, is working towards consensus among the Australian State herbarium censuses, to create a unified view of the Australian flora.

Extra investment in taxonomic capacity resulted in fast tracking the description of many new species, particularly species currently only known by phrase and manuscript names, in the Yilgarn BIFs and the Ravensthorpe Range. Achievements during the year include:

- preparation of draft descriptions for approximately 85 new taxa
- preparation of 42 manuscripts for publication in refereed journals, particularly *Nuytsia*, with the Saving Our Species botanists as lead authors on 19 manuscripts and co-authors on four manuscripts
- correspondence with 50 local and interstate botanists, leading to 15 manuscript contributions and 21 taxonomic collaborations to date, and
- identification and annotation (correction of names) of 732 herbarium specimens since the start of the project.

FloraBase, the Herbarium's web information system for Western Australia's flora and fungi, continues to be widely used as the authoritative source for botanical taxonomic information for Western Australia. Initiatives during 2006–07 include the planning and initial implementation of substantial improvements to FloraBase, such as the incorporation of richer and more extensive descriptive information; the development of a platform for deploying identification keys; inclusion of extensive literature references; better handling of taxon images; and finer-scale geographic queries.

The Herbarium image collection database continued to grow through the assistance of volunteers. At the end of 2006–07, 31,200 photographs had been scanned, and composite images illustrating habitat, habit and detail of 6,340 species were available on-line via FloraBase.

In 2006–07, 15 public and contract events including fungi workshops and forays were conducted in 14 urban bushlands as part of the Perth Urban Bushland Fungi Project. Details of 935 fungi were recorded and 155 fungi specimens were vouchered for permanent reference at the Herbarium. Several species were published as new to science. Fungi reports with photos, maps and a list of fungi surveyed were produced for each bushland surveyed.

The first two stages of the Western Australian Marine Plant project, part funded by the Natural Heritage Trust, brought three significant herbarium collections (from CSIRO, Murdoch University and the University of Western Australia) into the State Collection. Permission was granted from the Australian Biological Resources Study (ABRS) to use the Australian Algal Name Index as a basis for the first Western Australian census of marine macro algae. The census will provide an important basis for agencies and researchers contributing to the conservation of Western Australia's marine biodiversity. Funding has been received through an ABRS grant for the next three years, to add 1,000 detailed species descriptions and images of macroalgae to FloraBase.

An extensive volunteer program at the Herbarium continues to provide critically important skills and assist in many curation activities. During the year, volunteer participation was significant, totalling 10,471 hours (equivalent to 5.8 full-time positions).

#### **Resource condition monitoring**

A research project that arose from the State Salinity Strategy aims to monitor trends in the ecological condition of wetlands of the agricultural zone of

**During the year, volunteer participation was significant, totalling 10,471 hours (equivalent to 5.8 full-time positions).**

south-western Western Australia. This ongoing project monitors 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.

As part of this program, 25 wetlands have been surveyed for fauna and water chemistry over the past 10 years. To date, 757 invertebrate species have been recorded from 172 samples and a total of 190,000 birds, belonging to 60 species, have been counted from 315 surveys. In spring 2006, an intensive survey of biodiversity in wetlands of the Lake Bryde Recovery Catchment and an amphibian survey of the Drummond Recovery Catchment were undertaken.

During 2006–07 flora and fauna data from two representative wetlands were analysed and the research accepted for publication in an international journal. Trends in rainfall, water levels, salinity and pH were analysed for 64 wetlands monitored for more than 20 years and the analysis published as a DEC report during the year.

In spring 2006 the full range of monitoring data collection was completed for the 2006 sampling round, and further maintenance work on the depth gauge network was undertaken. Detailed bathymetric mapping of monitored wetlands is ongoing, with 21 wetlands and wetland systems mapped to date.

Other activities during 2006–07 included contribution of waterbird data from this project to an analysis of desired shoreline area in the Lake Warden Recovery Catchment, and provision of monitoring data to assist in preparation of drainage submissions. Current and historical physico-chemical data and bathymetric charts have been supplied to departmental and external managers and researchers to assist in a variety of tasks including hydrological modelling and ecological investigation.

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

#### Terrestrial conservation

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

The area of terrestrial conservation reserves increased by 14,308 ha during the year (2,205 ha in national parks, 11,351 ha in nature reserves and 752 ha in conservation parks). Details of significant reservations are provided elsewhere in this report (see Section 2.3.4).

Arrangements to purchase land have been finalised with a second property owner under the Biodiversity Adjustment Scheme. This scheme seeks to purchase high quality bushland from landholders who have been refused permission to clear the land. This property contains 786 ha of bushland and is located between Dandaragan and Moora in the northern Wheatbelt. The property contains kwongan and woodland vegetation, and a series of wetlands. Land purchase negotiations under the scheme are continuing with a number of other landholders.

The department's program of buying freehold land for conservation included the purchase of about 130 hectares between Eneabba and Three Springs, which contains mound springs and is adjacent to an existing nature reserve. A vegetated area of about 132 hectares north-west of Gingin was also acquired, which will consolidate boundaries of two existing nature reserves.

Other processes also led to the acquisition of land, such as land ceded to the State as a condition of subdivision, land acquired from negotiated exchanges and reserves no longer required by other organisations.

Work also continued on the implementation of tenure changes proposed in the Forest Management Plan 2004–2013 with proposed boundaries being referred to local governments, public utilities, government agencies and persons and bodies concerned with native title.



The department undertook actions necessary for excisions from the State's conservation and forest estates to accommodate proposals that have a community benefit (e.g. the excision from State forest of areas required for the construction of the Peel deviation in connection with the Perth-Bunbury Highway).

DEC also 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 such as the use or disposal of unallocated Crown land and surplus Crown reserves.

Work also continued on the implementation of outstanding tenure recommendations in the department's management plans for regions and specific areas.

### **Marine conservation reserve system**

There was steady progress towards creation of a representative marine conservation reserve system for the State.

Following the approval of the Minister for Resources and the Minister for Fisheries, indicative management plans were released for public comment for the proposed Walpole and Nornalup Inlets Marine Park and the proposed Geographe Bay/Leeuwin-Naturaliste/Hardy Inlet Marine Park in August and October 2006, respectively.

Analysis of the public submissions received on these two plans progressed through early 2007. The respective Focus Group and Advisory Committee were reconvened to consider the public comments and provide further advice to the Marine Parks and Reserves Authority (MPRA). Resolution of matters relating to jetties, zoning schemes, boundaries of and activities undertaken in the proposed marine parks was progressed in the first half of 2007.

Planning for the proposed Dampier Archipelago Marine Park and Regnard Marine Management Area is well advanced. Agreement was reached on adjusted port boundaries for two adjacent port areas, with the revised boundary of the Dampier Port gazetted in May 2007.

**There was steady progress towards creation of a representative marine conservation reserve system for the State.**

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

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

During 2006–07, the Minister for the Environment approved management plans for Beeliam Regional Park, Jurien Bay Marine Park, Rowley Shoals Marine Park and the Montebello/Barrow Islands Marine Conservation Reserves. This brings the total number of management plans under the CALM Act to 51. A further 27 plans are currently in various stages of completion.

During the year, the Government provided an increase in recurrent funding for the management of the marine conservation reserve system. This complemented the increases in the area and number of marine conservation areas, and allowed for the management arrangements for those reserves that were extended to be reviewed and updated.

The final management plans for Rowley Shoals Marine Park and the Montebello/Barrow Islands Marine Conservation Reserves were gazetted in April 2007. The zoning schemes have now been established through the publication of classified waters notices in the Government Gazette. These will allow the preparation of complementary legislation under the *Fish Resources Management Act 1994*.

A draft management plan for Shoalwater Islands Marine Park was released for public comment in July 2006. Analysis of the public submissions progressed through late 2006. The Focus Group was reconvened to consider the public comments and provided further advice to the MPRA in December 2006.

DEC undertook its fourth year of performance assessment reporting to the MPRA for all of Western Australia's marine conservation reserves. The assessments covered progress in implementing the management plan actions as detailed in annual 'marine work plans' for

In total, there are 51 final management plans, 17 final management plans in preparation and 10 draft management plans in preparation.

each marine conservation reserve; the current status of key ecological and social values; and progress in achieving the strategic management objectives for social benefits such as science and education, public participation, and recreational and commercial uses.

DEC prepared the following draft management plans for public comment: Walpole Wilderness Area and Adjacent Parks and Reserves; Wellington National Park and Westralia Conservation Park; Proposed Burrup Peninsula Conservation Reserve<sup>2</sup>; and Shark Bay World Heritage Property Strategic Plan. Also released were the Shoalwater Islands Marine Park Draft Management Plan; Proposed Walpole and Nornalup Inlets Marine Park Indicative Management Plan; and Proposed Geographe Bay/Leeuwin–Naturaliste/Hardy Inlet Marine Park Indicative Management Plan.

During 2006–07, public consultation on terrestrial management plans included four meetings with public and peak stakeholders, 38 meetings for 17 different advisory committees, and eight meetings with four different Aboriginal park councils (excluding marine reserves).

The tables below list the status of plans approved or in preparation during 2006–07 and the area of each tenure category managed by DEC as at 30 June 2007. Appendix C lists all final management plans completed in previous years. In total, there are 51 final management plans, 17 final management plans in preparation and 10 draft management plans in preparation.

**Table 4: Final management plans (completed and approved during 2006–07)**

	Region	Gazettal date
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

**Table 5: Final management plans (being prepared)**

	Region	Submission period
Woodman Point Regional Park	Swan	30.08.02–30.11.02
Rockingham Lakes Regional Park	Swan	27.10.03–27.02.04
Jandakot Regional Park	Swan	24.11.04–24.02.05
Proposed Dampier Archipelago Marine Park and Regnard Marine Management Area Indicative Management Plan	Pilbara	11.01.05–10.05.05
Proposed St John Brook and Jarrahwood Conservation Parks	South West	04.01.05–11.03.05
Shannon and D’Entrecasteaux National Parks	Warren	21.05.05–31.08.05
Kennedy Range National Park and Proposed Additions	Midwest	19.08.05–28.10.05
Dryandra Woodland	Wheatbelt	02.12.05–6.02.06
Lake McLarty Nature Reserve	South West	10.01.06–10.03.06
Cape Range National Park	Pilbara	14.02.06–14.05.06
Proposed Burrup Peninsula Conservation Reserve <sup>2</sup>	Pilbara	11.07.06–11.09.06
Shoalwater Islands Marine Park Draft Management Plan	Swan	22.07.06–27.10.06
Wellington National Park and Westralia Conservation Park	South West	08.09.06–10.11.06
Walpole Wilderness Area and Adjacent Parks and Reserves	Warren	27.08.06–01.12.06
Proposed Walpole and Nornalup Inlets Marine Park Indicative Management Plan	Warren	27.08.06–01.12.06
Shark Bay World Heritage Property Strategic Plan <sup>2</sup>	Midwest	20.10.06–15.12.06
Proposed Geographe Bay/Leeuwin Naturaliste/Hardy Inlet Marine Park Indicative Management Plan	South West	06.09.06–15.12.06

<sup>2</sup> Non CALM Act management plan prepared by DEC

**Table 6: Draft management plans (in preparation)**

	Region
Conservation Reserves of the Albany Coast	South Coast
Dampier Archipelago Terrestrial Reserves	Pilbara
Esperance Coastal Reserves	South Coast
Lane Poole Reserve	Swan and South West
Millstream-Chichester National Park and Mungarooona Range Nature Reserve	Pilbara
Northern Yilgarn Conservation Reserves	Goldfields
Parks of the Leeuwin-Naturaliste Ridge, Scott National Park and Gingilup Swamps Nature Reserve	South West
Shark Bay Terrestrial Reserves and Proposed Reserve Additions	Midwest
Tuart Forest National Park	South West
Yanchep and Neerabup National Parks and Neerabup Nature Reserve	Swan

**Table 7: Area covered by management plans\***

Tenure classification	Area covered by management plan (ha)	Total tenure area (ha)	Per cent covered (by area)
National Park	1,751,553	5,591,090	31.3
Nature Reserve	361,956	10,856,529	3.3
Marine Reserve	1,489,461	1,536,418	96.9
Other Recreational/Conservation Reserves	94,110	892,271	10.5
Total DEC-managed estate	3,473,080	18,876,308	18.4

\* Figures exclude (a) some Regional Park management plan areas and (b) the area covered by the Forest Management Plan except those reserves with specific area management plans.

### Good Neighbour Policy

The draft Good Neighbour Policy was released in September 2005 for a 12-month public comment period, closing in September 2006. During the 12 months, a comprehensive engagement process was undertaken involving regional forums held at five key rural locations, and 14 WA Farmers Federation and Pastoralists and Graziers Association zone meetings across the State.

A statewide benchmarking survey was sent out to more than 7,000 neighbours who share a common boundary with DEC managed lands. The responses highlighted key areas of concern for DEC neighbours and were used in conjunction with the regional forum outcomes and the formal written responses in finalising the Good Neighbour Policy.

The Auditor General completed a review of public participation in government decision making and commented favourably on the process of development of the Good Neighbour Policy.

*Subsequent events: The Good Neighbour Policy was released by the Minister for the Environment and Climate Change on 3 July 2007.*

### Fire management for biodiversity

Fire management is required to conserve biodiversity and reduce the occurrence and impacts of large, intense wildfires. The department applies a range of scientifically derived fire regimes to optimise and conserve biodiversity values. This is achieved through the creation and maintenance of a range of fire frequencies and intervals, seasons, fire intensities and scales. Prescribed burns that are applied to protect and



### Twenty draft Fire Biodiversity Management Guidelines have been developed during 2006–07.

conserve natural values are required to incorporate the available scientific and operational knowledge of the fire responses and life histories of native plants and animals.

Each DEC region has initiated the development of five-year regional scale fire management plans that are aimed at conserving and maintaining biodiversity values and ecosystems. The plans are to be based on current knowledge and research findings and encourage an adaptive management approach to the development and application of fire regimes.

The department has drafted a series of Fire Biodiversity Management Guidelines to assist managers and fire operations staff to manage fires to protect and maintain biodiversity values and ecosystem functions. The following draft Fire Biodiversity Management Guidelines have been developed by scientists, nature conservation and fire officers during 2006–07:

- Organic-rich soils and peatlands
- Swamps and lakes
- Watercourses with reed and rushes
- Granite outcrops in south west forests
- Geophytes
- Tuart woodlands
- Tingle forests
- Mulga woodlands
- South west coastal heaths and woodlands
- Cypress pine in Kimberley
- Nornalup white-bellied and orange-bellied frogs
- Sunset frog
- Black cockatoos
- Mainland quokka
- Honey possum
- Tammar wallaby
- Ringtail possum
- Malleefowl
- Noisy scrub-bird
- Fireline rehabilitation.

The recommendations in each of the Fire Biodiversity Management Guidelines are to be considered in conjunction with other land management objectives in the use of prescribed fire and wildfire suppression operations on DEC-managed lands.

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

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

Nominations for consideration by the Commonwealth Threatened Species Scientific Committee were finalised for 10 species of flora and two of fauna. The department also prepared 28 species information sheets for listed threatened species under a contract focusing on the southern Swan Coastal Plain. These datasheets will help the Commonwealth Department of the Environment and Water Resources in a new project to develop policy statements under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The State Threatened Species Scientific Committee's (TSSC) 2006 recommendations for changes to the lists of threatened flora and fauna under the *Wildlife Conservation Act 1950* were endorsed by the Minister for the Environment and gazetted during the year. Details of the gazetted changes are provided in the section below.





The TSSC also met during the first half of 2007 and made further recommendations for changes to the threatened flora and fauna lists. These changes have yet to be referred to the Minister for endorsement.

#### Flora

The Minister for the Environment endorsed five additions to the list of Declared Rare Flora (DRF; known as threatened flora). One species (*Latrobea obovata*) was listed as Critically Endangered, one (*Reedia spathacea*) as Endangered and three (*Lepidosperma* sp. Mt Gibson, *Acacia caesariata* and *Laxmannia grandiflora* subsp. *brendae*) were listed as Vulnerable, with *Lepidosperma* sp. Mt Gibson being potentially at higher risk if mining proceeds at Mt Gibson.

The currently listed *Tetradlea aphylla* has been reclassified into two subspecies: *Tetradlea aphylla* subsp. *aphylla* ms and *Tetradlea aphylla* subsp. *megacarpa* ms, which have been separately listed as DRF.

These changes were published in the Wildlife Conservation (Rare Flora) Notice 2006(2) on 1 December 2006. Currently there are 378 extant DRF and 14 listed as Presumed to be Extinct.

Three flora taxa were upgraded to Critically Endangered: *Drakaea elastica* was reclassified due to a reduction in populations; *Pityrodia scabra* due to a taxonomic division in the species leaving one extant naturally occurring wild plant and four translocated plants as the total known occurrence of the species; and *Hydatella leptogyne* due to decline of the species' habitat.

A further 52 taxa were added to DEC's priority flora list, and 20 taxa were deleted from the list on the basis of further survey and taxonomic review. A total of 2,273 taxa were listed as priority flora at 30 June 2007.

DEC has continued a joint project with the Commonwealth to prepare information sheets as the first stage in nominating changes to the list of threatened species under the EPBC Act, to bring those lists in line with the State lists under the *Wildlife Conservation Act 1950*. One species was listed under the EPBC Act, one was de-listed and one was re-categorised from Extinct to Endangered. In total, the information sharing partnership between the Australian and State governments has resulted in the following changes to the list of nationally threatened species under the EPBC Act: 10 species have been listed as threatened; 19 species no longer considered nationally threatened have been delisted; and eight species have been transferred from the Extinct category to another threatened category because of recent rediscoveries.

Recovery actions were implemented for a suite of threatened flora. Highlights are listed below.

- 386 species of threatened and priority flora were surveyed or monitored. A continuation of the *Caladenia huegelii* surveys focused on reserves in the Banjup to Mandurah vicinity. Members of the local community participated with over 60 volunteers present over the three survey weeks. Articles published in local newspapers resulted in an additional population being recorded.
- 57 new populations or sub-populations of threatened flora and 55 populations of priority flora were located. Of note was the discovery of *Stawellia dimorphantha* south-east of Dongara, where the species is thought to be locally abundant, and four new populations of *Darwinia chapmaniana* in Pinjarrega Nature Reserve.
- *Daviesia euphorbioides* recruitment trials were conducted with 15 seedlings appearing and surviving the first summer.
- Large new populations of *Daviesia pseudoplumosa* and *Hibbertia priceana* discovered on a private property remnant have been fenced to protect them from grazing.
- Fencing to protect plants from rail maintenance, stock movement and rabbit activity was put in place for *Cyphanthera odgersii* subsp. *occidentalis* and *Grevillea dryandroides* subsp. *Hirsute*.

57 new populations or sub-populations of threatened flora and 55 populations of priority flora were located.

The implementation of recovery actions for other threatened fauna such as the numbat, dibbler, chuditch, greater stick-nest rat and south coast threatened birds continued.

- Rare flora gardens were set up or had supplemental plantings in Dowerin, Goomalling, Mukinbudin, Westonia and Wongan Hills.
- Weed control was undertaken for 22 species including the Critically Endangered *Acacia aprica*, *Caladenia elegans* and *Eremophila scaberula*.
- Rabbit control was undertaken in the vicinity of many populations of threatened flora.
- Two rounds of phosphite spraying were completed for *Lambertia echinata* subsp. *echinata* populations to protect them from *Phytophthora cinnamomi*.
- A Wildlife Management Plan for Threatened and Priority Flora was approved for the Warren Region. A draft plan is in preparation for the Goldfields Region.
- DEC's Great Southern District and Species and Communities Branch, the Botanic Gardens and Parks Authority and The University of Western Australia's Ecosystem Research Group are continuing to conduct scientific investigations on *Rhizanthella gardneri* and its habitat requirements.
- Lotterywest funding was obtained by the WA Native Orchid Study and Conservation Group (WANOSCG) to conduct research on six threatened Wheatbelt orchid species. This project is being jointly supervised by WANOSCG, The University of Western Australia, Botanic Gardens and Parks Authority and DEC.
- Broad-area threatened flora surveys continued in the Bremer Range, Norseman, Grass Patch and Salmon Gums areas and around Mount Ragged, to clarify the conservation status of threatened and priority flora.
- The book *Threatened, Poorly Known and Other Flora of Wongan-Ballidu*, a joint project between DEC, Avon Catchment Council, Shire of Wongan-Ballidu and Wongan-Ballidu Bushcare Group, was published in December 2006.

#### Fauna

The Wildlife Conservation (Specially Protected Fauna) Notice 2006(2) was published on 1 December 2006. Six fauna taxa (northern quoll, south-western taxon of the brush-tailed phascogale, black browed albatross, green sawfish, mud minnow and Balston's pygmy perch) were added to the list of threatened species. The Boullanger Island dunnart was removed from the list of threatened fauna following studies which showed it to be the same species as that found on the mainland. Currently there are 204 extant threatened fauna and 18 Presumed to be Extinct.

Steps to conserve Australia's most threatened mammal, Gilbert's potoroo, continued with successful translocations being undertaken to Bald Island, off the south coast of Western Australia. Some of the cross-fostering breeding trials were also successful. The implementation of recovery actions for other threatened fauna such as the numbat, dibbler, chuditch, greater stick-nest rat and south coast threatened birds also continued. Preliminary rapid survey techniques for detection of quokkas in the southern forests were developed and are now being implemented before logging or prescribed burning activities. Further research into the extent of use of swamp and adjacent habitat by quokkas, and their ability to move between suitable habitat refuges, has begun.

A comprehensive study into the reasons for the decline of woylies in the Upper Warren area east of Manjimup was undertaken and showed that predation by feral cats was a significant factor. A collaborative study with Murdoch University into the role of disease in the decline of woylies and other native mammals was begun in July 2006 and has shown some differences in parasite burdens between populations that have declined and those that are still abundant. In collaboration with the Invasive Animals Cooperative Research Centre, the reasons for possible declines in other native species despite ongoing fox control programs are also being investigated at sites in the jarrah forest, wheatbelt and rangelands. The conservation status of two marsupials, the woylie and chuditch, was reviewed with a recommendation that the woylie be reinstated to State and Commonwealth threatened fauna lists and that the chuditch remains as a threatened species.

Thirty bird species are specially protected because of their listing under Migratory Bird Agreements between Australia and Japan and China (respectively), and 11 taxa are



specially protected for other reasons, including high values for poaching or competition with commercial industries. The priority fauna list included 193 taxa at 30 June 2007.

Recovery actions were implemented for many threatened fauna. Highlights are listed below.

- With the assistance of the department, Perth Zoo developed a program to research captive husbandry and reproductive technology for threatened frogs.
- The department maintained a Memorandum of Understanding with Perth Zoo for the captive breeding and release of the central rock rat, western swamp tortoise and dibbler as part of recovery programs.
- A grower survey of damage to apples by Baudin's cockatoo and effective non-lethal damage control techniques was conducted by the department in cooperation with the Western Australian Fruit Growers' Association.
- Educational materials promoting control of damage to apple crops by Baudin's cockatoo using non-lethal methods were produced. These were distributed and non-lethal techniques were demonstrated during a series of field days.
- A technique to remove feral honeybee hives from the nest trees of threatened species was developed and tested.
- The habitats critical to the survival of a range of nationally threatened species were identified and mapped. This information was used to formulate guidelines for decision makers regarding assessment of significant impacts on these species in cooperation with the Australian Government Department of the Environment and Water Resources.
- Research into the distribution, movements, feeding ecology and nesting biology of three threatened black cockatoo species and Muir's corella was conducted in conjunction with the Western Australian Museum.
- Research into the feeding and breeding biology of the critically endangered western ground parrot was undertaken in Fitzgerald River National Park.
- Surveys were conducted for the orange-bellied frog and white-bellied frog. The distribution of these species is highly restricted and patchy, occurring near the junction of the Leeuwin-Naturaliste Ridge and Blackwood Plateau in the State's south west.

More than 3.9 million ha of conservation lands were baited to control foxes and feral cats, using more than 950,000 poison baits under the Western Shield program.

### *Western Shield*

*Western Shield* aims to achieve the recovery of native wildlife populations by reducing the impacts of introduced predators and, where necessary, reintroducing native animals.

During 2006–07, more than 3.9 million ha of conservation lands were baited to control foxes and feral cats, using more than 950,000 poison baits under the *Western Shield* program. Corporate sponsorship was contributed by ongoing sponsors Alcoa Australia Limited and Tiwest Pty Ltd, and by new sponsors BHP Billiton and Worsley Alumina Pty Ltd.

Approval was given for the broadscale use of the salami-style fox bait, Pro-bait, across the whole *Western Shield* area following research trials that demonstrated the baiting had no negative impact on non-target animals.

Trials for feral cat eradication continued at the former Lorna Glen pastoral station, investigating the most appropriate timing and frequency of baiting determined by cat reinvasion. Operational research into feral cat control on Peron Peninsula (*Project Eden*) continued and a new strategic plan was completed in November 2006.

Work continues with the Australasian Invasive Animal Cooperative Research Centre to investigate long-term sustained control of feral cats and foxes in the Mt Gibson and Karara-Lochada areas.

Rock wallaby management continued across the Pilbara with baiting programs on the Burrup Peninsula, Cape Range National Park and Calvert Range. Survey work conducted at Calvert Range confirms a significant increase in the number of wallabies in the area at the same time as a virtual absence of cats and foxes.

24 transects were sampled and 15 previously established plots in occurrences of Critically Endangered TECs were rescored. Another 42 new plots were established in TECs.

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 and Water Resources.

Although *Western Shield* has produced an increase in the trap success of native species in many areas, it appears that the woylie has not recovered despite continued fox baiting. DEC committed \$5.9 million funding over four years to investigate the effectiveness of fox and cat baiting regimes and the role of feral cats and native predators, including chuditch, pythons and wedge tailed eagles. The impact of these other predators may increase when foxes are controlled. An external review panel was established to advise on the research so that conservation benefits from the project are maximised.

### *Threatened Ecological Communities*

The State Threatened Ecological Community Scientific Committee (TECSC) met twice during the year and provided recommendations for a series of communities to be added or deleted from the State list of Threatened Ecological Communities (TECs). Recovery actions were implemented for a suite of TECs, and other areas that are likely to be considered for future nomination to the threatened list were investigated. Some highlights are listed below.

- A project to identify unique ecological communities in deep pools of the Avon River is part of the State Salinity Strategy funded project for identifying TECs, and the Back from the Edge Natural Heritage Trust project part funded through the Avon Catchment Council.
- Water monitoring was undertaken at western swamp tortoise sites and at Forrestdale Lake Nature Reserve. These water-monitoring sites coincide with occurrences of TECs and populations of threatened flora.
- The mapping and updating of data for all communities listed on the TEC database continued. Information about 49 occurrences of six newly recognised priority ecological communities and a further 61 occurrences of existing TECs and priority ecological communities were added to the database. Regular updates of TEC data are supplied to relevant State Government departments to assist with assessment of development proposals.
- A program has been developed to monitor changes in the condition of a number of TECs across the Swan Coastal Plain. Quadrats and transects were placed in occurrences of Critically Endangered, Endangered and Vulnerable ecological communities. This long-term project will assist our understanding of the status, threats and condition of these communities. During the year, 24 transects were sampled and 15 previously established plots in occurrences of Critically Endangered TECs were rescored. Another 42 new plots were established in TECs.

### *Recovery teams and recovery plans*

Annual Reports on Recovery Team progress for the 2006 calendar year were received from:

- Avon–Yilgarn District Threatened Flora and Communities Recovery Team;
- Swan Region Threatened Flora and Communities Recovery Team;
- Great Southern District Threatened Flora and Communities Recovery Team;
- Geraldton District Threatened Flora and Communities Recovery Team;
- Moora District Threatened Flora and Communities Recovery Team;
- Sedgeland in Holocene Dune Swales Recovery Team; and
- Lake Clifton Recovery Team.

Four Interim Recovery Plans for three flora species and one TEC, and two Recovery Plans covering three species of birds, were approved by the Director Nature Conservation.



### Fauna Recovery Plans

- Forest Black Cockatoo (Baudin's Cockatoo and Forest Red-tailed Black Cockatoo) Recovery Plan 2007–2016
- Muir's Corella (*Cacatua pastinator pastinator*) Recovery Plan 2007–2016

### Interim Flora Recovery Plans

- Slender Andersonia, *Andersonia gracilis*
- Rose Mallee, *Eucalyptus rhodantha* (updated)
- Saltmat, *Roycea pycnophylloides*

### Threatened Ecological Communities

- Shrublands and Woodlands on the Eastern Side of the Swan Coastal Plain (Community Type 20C) (updated)

#### Translocations of plants and animals

Translocation of plants and animals has continued throughout the year for the augmentation of existing populations of threatened species, or the establishment of new populations in secure areas.

### Fauna

Efforts in 2006–07 focused on adding additional animals to previously approved translocation programs. New translocations were:

- Greater stick-nest rats, from St Peter Island (SA) and Salutation Island to Faure Island
- Noisy scrub-birds from Mt Taylor to Porongurup National Park and Gull Rock National Park
- Numbat from Perth Zoo to Cocanarup Timber Reserve, and
- Tammar wallaby from sites on the Tutanning Nature Reserve to Paruna Sanctuary.

### Flora

Translocations or seed orchards were established or supplemented for nine threatened plant taxa: *Acacia volubilis*, *Darwinia carnea*, *Daviesia cunderdin*, *Dryandra anatona*, *Eremophila resinosa*, *Lambertia echinata* subsp. *echinata*, *Lasiopetalum pterocarpum*, *Symonanthus bancroftii* and *Verticordia spicata* subsp. *squamosa*.

Translocations of *Dryandra montana*, *Persoonia micranthera* and *Leucopogon gnaphalioides* have survived well in seed orchards. *Lambertia orbifolia* subsp. *orbifolia* has recruited successfully and the offspring have now flowered. Translocated *Dryandra ionthocarpa* plants have had a good survival rate (88 per cent) over summer months.

### Threatened Flora Seed Centre

During 2006–07 seed collections were made from 221 taxa including threatened, priority and other poorly known Western Australian species (259 collections). This included 73 threatened and 83 priority flora as well as 103 general collections of flora associated with TECs. These collections were undertaken in partnership with an international seed conservation program, the Millennium Seed Bank (MSB) Project, and were supported by funding from the Natural Heritage Trust through South Coast Natural Resource Management Inc. A further 83 collections were donated to the Threatened Flora Seed Centre for processing and storage. These collections included 30 threatened flora, four priority flora and 49 general collections. Duplicates were made of 128 collections (59 genera in 30 families) and sent for safe keeping to the MSB at the Royal Botanic Gardens, Kew, UK. Seedlings have been provided to enable an assessment of species response to *Phytophthora cinnamomi* in greenhouse pot trials.

Seeds of seven species collected and stored by the Threatened Flora Seed Centre were used in translocations in the past year including *Lambertia fairallii*, *Banksia*

Seed collections were made from 221 taxa in partnership with the international Millennium Seed Bank Project.

DEC staff were involved in the training of other conservation agency staff in disentanglement techniques at a national workshop in Tasmania in April 2007.

*brownii*, *Dryandra anaton*, *Calytrix breviseta* subsp. *breviseta*, *Hemigenia ramossissima*, *Acacia subflexuosa* subsp. *capillata* and *Chorizema humile*. Through the *ex situ* seed conservation program Western Australia has now reached the goals of Target 8 of the Global Strategy for Plant Conservation for 2010 (60 per cent of threatened flora in accessible *ex situ* collections and 10 per cent of these used in recovery).

#### Management of marine fauna

DEC officers attended 26 reported whale and dolphin strandings throughout the year, involving live and dead animals. One pygmy blue whale was struck by HMAS Ballarat and died. There were two mass strandings, one involving five sperm whales and the second involving 10 sperm whales. All 15 animals died. Three bottlenose dolphins stranded in two separate incidents and were successfully returned to open water. Overall the strandings involved 50 individual animals, representing seven species – humpback whale, bottlenose dolphin, sperm whale, pygmy sperm whale, pygmy blue whale, common dolphin and minke whale. The most commonly stranded cetacean was the bottlenose dolphin.

One leathery turtle (*Dermodochelys coriacea*) was entangled in fishing gear and was successfully disentangled by DEC. Twelve cetacean entanglements in fishing gear were reported during the year. Ten of these reports were humpback whales, six of which were located and successfully disentangled by DEC's large whale disentanglement team. Four whales eluded intervention attempts due to distance and inability to relocate the animals overnight. One minke whale was stranded in a very poor condition with a rope entanglement through the mouth and was euthanased. One common dolphin was entangled in fishing gear and drowned. DEC staff were involved in the training of other conservation agency staff in disentanglement techniques at a national workshop in Tasmania in April 2007 and national accreditation training was conducted in Victoria and Western Australia (March 2007). DEC produced and distributed a DVD to the fishing industry to assist the West Coast Rock Lobster Managed Fishery promote a code of practice for reducing whale entanglements.

Officers also attended 20 reported pinniped stranding incidents throughout the year, comprising nine sub-antarctic fur seals, seven Australian sea lions, 27 New Zealand fur seals and one leopard seal. After a severe unseasonal storm along the Esperance coast, 25 New Zealand fur seal pups were recovered in one incident. Thirteen of the pups washed off breeding islands were successfully returned to the islands, two were transferred to Sea World Queensland for hand raising and 10 died. Two other New Zealand fur seals were successfully returned to sea. Four sub-antarctic fur seals were taken into short-term captive management, but did not survive. Five sub-antarctic fur seals were successfully returned to sea.

The *Draft Dugong Management Plan for Western Australia 2007–2016* was produced. A number of dugong management projects are underway in cooperation with Edith Cowan University, James Cook University and the Kimberley Land Council. These include aerial population surveys in Shark Bay, Ningaloo Reef and Exmouth Gulf, satellite tagging and other methods to study abundance, distribution and habitat use from Shark Bay to the Northern Territory border; workshops on the traditional use of dugong; and the drafting of public education materials. Also under the actions in the management program, information on dugong distribution was provided for the National Oil Spill Response Atlas and comment was made on proposed developments that may impact on dugong populations.

#### Wetland conservation

The department continues to chair the State's Wetland Coordinating Committee and is actively involved in the implementation of the *Wetlands Conservation Policy for Western Australia (1997)*. The committee is reviewing this policy with the aim of implementing the reviewed policy in 2007. The department is represented on the working groups for Wetland Status, Wetland Buffers, Drainage Evaluation and the Wetland Restoration and Management Manual Project, all of which were established to address actions under the policy.



The committee is also coordinating the development of key State initiatives to improve the protection of wetlands. Initiatives progressed during 2006–07 include:

- development of a framework for evaluating biological impacts of drainage projects
- liaison with the Department for Planning and Infrastructure to enable completion of the draft Guideline for the Determination of Wetland Buffer Requirements, and to establish a whole-of-government approach to wetland buffers through the Wetland Buffers Working Group
- preparation of the framework for mapping, classification and evaluation of wetlands in Western Australia for publication in the second half of 2007, and
- A Guide to Managing and Restoring Wetlands in Western Australia was commenced. The aim of the manual is to consolidate best practice wetland restoration and management techniques into a comprehensive, accessible and practical format that a wide range of people can use.

Under DEC's *Wetland Mapping, Classification and Evaluation Program for Priority Areas, South West WA* project, wetlands of the Margaret River area have been mapped, classified and evaluated, and spatial data prepared for public use. Through this project, the baseline condition of eight Swan Coastal Plain wetlands has also been established. The department is conducting an ongoing review of wetland evaluation methodologies of the Swan Coastal Plain.

DEC continues to maintain and update the statewide wetlands database which became publicly available at the beginning of 2006. WetlandBase has been developed with assistance from the Department of Agriculture and Food, Natural Heritage Trust, Coastwest, Murdoch University and Edith Cowan University. Coastwest support has expanded the scope of WetlandBase to include coastal areas in the Kimberley and upper Gascoyne regions as two pilot regions.

Work continued on developing ecological character descriptions for Ramsar sites around the State. The descriptions help the department in monitoring and reporting on the health of the wetlands. During the year, an ecological character description was drafted for the Vasse–Wonnerup Ramsar site and work has begun on one for the Peel–Yalgorup Ramsar site.

The department is preparing nominations for nine new Ramsar wetlands. Candidate areas are Cape Range Subterranean Waterways, Ellen Brook Swamps, the northern portion of Lake MacLeod, Spearwood Creek, Lake Ballard, Lake Gregory/Paruka, Millstream Pools, Shark Bay East/Hamelin Pool and Fortescue Marshes. Ramsar information sheets have been developed for each. An ecological character description and a full management plan have been developed for Lake MacLeod.

#### **Management of wildlife use**

DEC ensures that wildlife-based activities are licensed in accordance with the *Wildlife Conservation Act 1950*. The department conducts monitoring and investigations to ensure compliance with legislation and with the licences issued.

There were 110 whale-watch boat-tour operators licensed in Western Australia during 2006–07 (the same number as for the previous year) and one fixed wing aircraft licensed for whale interactions. These tours were primarily based on humpback whales, although southern right whales were the focus in the lower south west, particularly off Albany, Augusta and Esperance.

There were 90 boat-based dolphin interaction licences and three in-water dolphin interaction licences issued during the year. A range of other boat-based marine fauna interaction licences were also issued: two issued for dugong interaction, 46 for Australian sea lion and New Zealand fur seal interaction and 14 for whale shark interaction within Ningaloo Marine Park.

Management of the commercial harvesting of kangaroos continued throughout the year, with input from the Kangaroo Management Advisory Committee. Under the

The department is preparing nominations for nine new Ramsar wetlands and information sheets have been designed for each.



*Saving our Species* was launched by the Minister for the Environment on 7 December 2006.

2003–07 management plans, commercial harvest quotas were set for each species for the 2007 calendar year. During 2006, aerial kangaroo population surveys were undertaken over parts of the central survey zones as part of the triennial survey program, and the south-western forest areas were surveyed to provide a more accurate population estimate for western grey kangaroos. These surveys and submissions endorsed by the State Kangaroo Management Advisory Committee resulted in the Commonwealth Minister for the Environment increasing the 2007 western grey kangaroo quota to 197,780 (up from 193,800). The 2007 red kangaroo quota was approved at 126,585 (down from 174,495) in light of the reduced population following several years of drought conditions over the range of this species.

Commercial harvests of live crocodiles for farm breeding stock development, and limited harvest of eggs and hatchlings, can be approved under the *Saltwater Crocodile and Freshwater Crocodile Management Plan 2004-2008* (as approved under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*). For management purposes, these harvests are primarily restricted to the Cambridge Gulf area, where monitoring ensures that the wild crocodile populations are conserved. The data obtained from the survey, when combined with the data from a survey carried out in 1989 over the same areas, will provide a baseline against which to monitor any changes in the population size and distribution of both crocodile species in the event that cane toads become established in the Kimberley Region.

The Western Australian Flora Industry Advisory Committee provides flora industry management advice to DEC and the Minister for the Environment. The committee did not meet during the year. Following the expiry of the period of appointment of members, nominations were sought for new membership to the committee. The new membership was endorsed by the Minister.

The department is represented on the National Flora Management Network. A guideline for harvesting *Xanthorrhoea* sp. plants was produced during the year.

### ***Saving Our Species: The Biodiversity Conservation Initiative***

*Saving our Species* was launched by the Minister for the Environment on 7 December 2006. The initiative received an allocation of \$12.75 million for two years which is supplemented with recurrent DEC funds to bring the overall budget to \$15 million over the two years.

In 2006–07 *Saving our Species* funded over 70 projects across the key themes of pest and 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 2006–07 by theme were:

#### *Pest Animal Control*

- more than 14.5 million hectares of Little Sandy, Great Victoria and Gibson deserts surveyed for feral camels
- more than 6,000 pest animals (goats, camels, pigs and donkeys) destroyed across the south west and pastoral rangelands
- closure of 19 artificial water sources on former pastoral leasehold land
- more than 130 kilometres of boundary fencing constructed on DEC-managed former pastoral leasehold land, in partnership with neighbouring pastoral lessees
- 108 person-days of support given to the Department of Agriculture and Food for the starling surveillance and control program
- more than 350 feral pigs destroyed in south-western forests and national parks, and
- 102 wild dogs destroyed through control programs in the eastern Wheatbelt.





### *Environmental Weed Control*

- weed control operations on more than 50 species of environmental weed over more than 6,000 ha of conservation reserves, unallocated Crown land and leasehold land
- involvement with 40 different stakeholder groups and 67 volunteer days supporting weed control across the State
- 15 new populations of *Asparagus scandens* (asparagus fern) identified and treated for removal near Albany
- 1,000 ha treated for removal of *Senecio glastifolius* (holly-leaved senecio) throughout Albany and Denmark
- 300 tonnes of prickly pear removed in the vicinity of the Ravensthorpe Range
- more than 3,000 ha treated to control neem around the Kununurra townsite
- 1,000 ha treated to control prickly acacia in the Durack River area, and
- 10 ha of *Dipogon lignosus* (dolichos pea) infestation in the Leeuwin–Naturaliste National Park reduced by 90 per cent.

### *Threatened species and ecological communities recovery*

- 1280 plants propagated for translocation
- 108 surveys of threatened flora/fauna populations
- three Gilbert's potoroo translocated from the mainland to Bald Island on the south coast
- 81 threatened flora plants translocated
- 12 Interim Recovery Plans drafted
- more than 80 tonnes of rubbish removed from Bush Forever sites in the Perth metropolitan region
- extensive woylie monitoring of the upper Warren region involving more than 40 volunteers, and
- detailed habitat and threatened fauna monitoring on Bernier and Dorre Islands in the Shark Bay World Heritage Property.

### *Phytophthora dieback management*

- 13 km of fence constructed to prevent animals from spreading *Phytophthora* from the Bell Track infection in Fitzgerald River National Park
- *Phytophthora* survey undertaken over 20,000 ha in Bell Track area
- 1,000 soil samples from the Bell Track area analysed using new DNA (polymerase chain reaction) technique
- 325 ha of low intensity phosphite sprayed over the Bell Track infestation
- 15 ha of high intensity phosphite spraying at the Bell Track infestation
- three experimental study sites established for novel phosphate application trial at Gull Rock, Stirling Range and Fitzgerald River national parks
- weather monitoring stations established at Gull Rock, Stirling Range and Fitzgerald River national parks to determine disease activation triggers
- 25 ha in Cape Le Grand National Park covered in low intensity phosphite application to four populations of the Critically Endangered *Lambertia* sp.
- 25 ha covered in low intensity phosphite application to the listed Threatened Ecological Community 'Busselton Ironstone' community that contains six threatened flora species, and
- 340,000 ha of new information on likely *Phytophthora* disease status within the Swan and Avon natural resource management regions, to combine with 880,000 ha of existing data (and 90,000 ha under SCRIPT funding for non-DEC lands). These data are being used in the modelling of disease spread and then in the risk analysis to biodiversity assets. Operational mapping of approximately 500 ha at Mt Lindsay.

DEC is working cooperatively with the Northern Territory Government and community groups such as Kimberley Toad Busters and the Stop the Toad Foundation to fight the westward expansion of the pest.

### *Biological survey and research*

- 200 flora plots established in the Ravensthorpe Range
- in the first two years of the banded ironstone formation (BIF) survey, 20 new species of plants were identified. The survey confirmed that the BIF ranges are species-rich areas which often contain plant species and / or vegetation communities that are found only on specific individual ranges, and
- FloraBase, DEC's online plant identification website, and NatureMap, DEC's interactive biodiversity information website, have been upgraded and improved. NatureMap is a new facility developed with the assistance of DEC's Western Australian Herbarium and the Western Australian Museum to provide online information about the distribution of plants and vertebrate animals in the State. The system incorporates data from the Herbarium Collection, the Museum (fauna), agricultural zone and Swan Coastal Plain surveys, Banksia Atlas and Orchid Atlas.

### *State Cane Toad Initiative*

DEC is the lead agency responsible for cane toad management in Western Australia. The Department of Agriculture and Food and the Agriculture Protection Board (APB) are also involved in implementing the *State 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*. Four key programs are being implemented under the State initiative:

1. fighting the entry and establishment of cane toads in WA
2. identifying and protecting biodiversity assets at greatest risk from cane toads
3. raising public awareness of the cane toad threat, and
4. ensuring effective statewide coordination of cane toad initiatives.

DEC has established a five-member surveillance and control team based in Kununurra to undertake on-ground operations, mostly in the Victoria River District of the Northern Territory. In 2006–07 the team has:

- deployed and serviced cane toad traps, and collected cane toads by hand
- undertaken surveillance to identify the extent and spread of cane toads in the Victoria River District, and
- responded to reported sightings of cane toads in Western Australia and the Northern Territory.

DEC is also working cooperatively with the Northern Territory Government and community groups such as Kimberley Toad Busters and the Stop the Toad Foundation to fight the westward expansion of the pest.

The 2006–07 wet season resulted in below average rainfall across the region and cane toad breeding and dispersal was much reduced in comparison with the previous wet season. DEC contracted the Invasive Animals Cooperative Research Centre to review on-ground cane toad control operations to inform decision-making on future investment in on-ground activities. The review should be completed early in the 2007–08 financial year.

Research into the potential impacts of cane toads on the vertebrate fauna of the Kimberley has begun with particular emphasis on species likely to be at greatest risk such as frog-eating reptiles (pythons and goannas) and the carnivorous northern quoll. This research, in collaboration with the University of Sydney, The University of Western Australia and the Western Australian Museum, is modelling the spread of cane toads in the Northern Territory and Western Australia, and establishing monitoring sites in wetlands to examine the response of native frog populations to the arrival of cane toads. DEC is also contributing to the establishment of a cane toad genome research program in collaboration with The University of Western Australia.



## Regulation

### *Flora and fauna licensing*

There were 7,376 fauna licences (other than damage, but including non-commercial) issued during the year, an increase of one per cent from the previous year (see Appendix D). While continued interest in pet herpetofauna (reptiles) resulted in a 28 per cent increase in licensing with more than 1,622 people licensed to keep reptiles as pets, small declines in other licence types, such as a five per cent decline in avian fauna licences, kept the overall licensing picture steady. The total number of flora licences and permits issued was 1,809, a decrease of 21 per cent from the previous year. DEC issued 386 commercial purposes licences and 281 commercial producer licences and nurseryman licences in 2006–07.

### *Damage and dangerous fauna licences*

The department received eight reports of problem crocodiles in the Kimberley Region. Licences to remove eight saltwater crocodiles from the wild were issued because of the threat they posed to public safety. Forty-three dangerous fauna licences were issued for magpies and a licence was issued to remove euros from Learmonth airport.

Licences issued for the control of fauna causing damage included 28 licences issued for emus (a decrease of 24 per cent); 425 licences for western grey kangaroos; 31 licences for little corellas; 13 licences for western long-billed corellas; 19 licences for twenty-eight parrots; seven licences for galahs; and 18 licences for Australian ravens. One licence was issued to destroy welcome swallows. Such licences are issued only after trapping and exclusion methods have failed and where the birds are causing health or security concerns. The total number of damage licences issued for birds was 176, a decrease of 29 per cent from 2005–06.

### *Offences*

During the year, DEC staff provided guidance regarding the legal requirements of conservation legislation. There were 521 caution notices issued for minor offences and 344 infringement notices. Written reports were prepared for 179 offences under the *Wildlife Conservation Act 1950* and its Regulations, and the *Conservation and Land Management Act 1984* and its Regulations. Action in 117 matters under both statutes was completed.

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

#### **Biodiversity Conservation Strategy**

The draft *A 100-year Biodiversity Conservation Strategy for Western Australia. Phase One: Blueprint to the Bicentenary in 2029* was released on 7 December 2006 by the Minister for the Environment for a four-month public comment period. Seventy-seven submissions were received from a range of stakeholders, including State government agencies, local government authorities, industry groups and community-based groups. The department is preparing a summary and analysis of submissions as well as finalising the strategy.

The Biodiversity Strategy will help provide priorities and a framework for conservation actions and decisions at local and regional levels, as well as guidance for national and international initiatives. The goal is to recover and conserve Western Australia's biodiversity – along with representative landscapes and ecosystems – within 100 years.

The strategy will focus on species and ecosystems known to be under significant pressure and on the brink of extinction. Simultaneously, it will aim to prevent a decline of biodiversity in ecosystems and landscapes that are ecologically intact and in relatively good condition.

#### **Regional Marine Planning**

DEC is the lead agency for a whole-of-government initiative, Regional Marine Planning (RMP), announced in September 2006. RMP is a collaborative process between Government and stakeholders which aims to better

The first Regional Marine Planning process in WA is being conducted for State waters of the South Coast and coordinated by DEC.

coordinate planning and management of the State's marine waters in order to protect and maintain ecological integrity and biological diversity and to ensure sustainable benefits are derived from the marine environment.

A State Marine Policy Stakeholder Group comprising representatives of peak organisations was formed and is helping Government develop a State Policy Framework for RMP. The first RMP process in Western Australia is being conducted for State waters of the South Coast from Cape Leeuwin to the South Australian border, led by a multi-agency working group with DEC as coordinator. A cross-sector stakeholder advisory group was formed to advise on the preparation of the South Coast Regional Marine Strategic Plan. DEC is also a member of the intergovernmental working group facilitating integration between State and Commonwealth marine planning processes.

### Managing threatening processes

#### *Management of environmental weeds*

Weed management actions on DEC-managed lands are prioritised within each region according to the policy outlined in the *Environmental Weed Strategy of WA (1999)*. During the year DEC spent more than \$1.69 million on weed management, including the control of arum lily, bridal creeper, blackberry, rubber vine, athel pine (tamarisk), cacti and other significant environmental weeds.

DEC was successful in securing funding from the 2006–07 and 2007–08 allocation of the Federal *Defeating the Weed Menace* program, administered by the Commonwealth Department of Agriculture, Forestry and Fisheries and the Department of the Environment and Water Resources. \$65,000 has been provided to continue a three-year eradication program in the west Kimberley, focusing on rubber vine, a weed of national significance.

DEC continued as a member of the WA Weeds Committee, which met three times in 2006–07. During the year, the committee appointed a policy officer to provide executive support, develop strategic policy documentation and communication, and help coordinate the State Weed Plan. The WA Landcare Awards Working Group accepted the committee's proposal for an Invasive Plants (Weeds) Award to be held in conjunction with the WA Landcare Awards in April 2008.

#### *Salinity management*

The *Salinity Investment Framework Phase 2* report, prepared with the State Salinity Investment Committee on behalf of the then Natural Resource Management Council of Western Australia, was published in December 2006 and is being distributed to key stakeholders. The report uses feasibility assessment to provide a systematic and outcomes-based procedure for selecting salinity investments for biodiversity conservation. Complex natural resource management decision tools received further research in conjunction with the University of Melbourne. Their value was demonstrated in important decisions concerning two recovery catchments, at the Esperance Lakes and Toolibin Lake. They will be developed further, along with hydrological modelling work, into a decision support system in collaboration with the Future Farm Industries Cooperative Research Centre, which begins on 1 July 2007.

A 10-year review of the department's salinity program to 30 June 2006 was initiated and is due for completion in 2007–08. The review will make recommendations for the future of the department's program.

#### *Natural diversity recovery catchments*

There are currently six natural diversity recovery catchments – areas in the south west that are representative of biodiversity values and under threat from secondary salinity.

Field verification of potential natural diversity recovery catchments has progressed, based on the recommendations from the Biological Survey of the Agriculture Zone, and following the completion of a consultant's report. Four priority sites and key actions to identify additional sites were recommended. Key achievements for 2006–07 in individual natural diversity recovery catchments are outlined below.



### *Buntine–Marchagee Natural Diversity Recovery Catchment*

A draft Buntine–Marchagee Natural Diversity Recovery Catchment Plan was developed. Water management planning was completed for 6,000 ha of sub-catchment, and is nearly complete for a further 19,000 ha. Hydrological investigations were completed at all priority biodiversity assets within the catchment.

Bird studies are underway to develop a monitoring and evaluation strategy to test the efficacy of the focal species approach to landscape planning.

Approximately 165,000 seedlings were planted in the catchment.

### *Lake Warden Natural Diversity Recovery Catchment*

A biological survey is underway to verify the mapping of wetland vegetation change undertaken by remote sensing. Other biological surveys have determined bird and invertebrate species inhabiting the wetland system.

Airborne laser scanning provided high resolution terrain mapping which will help to analyse the extent of flooding that occurred in January 2007.

Nearly 300 ha of land in the catchment has been revegetated, and 550 ha of remnant vegetation has been fenced.

The local community has been engaged in small landholder group meetings and workshops, school tree-planting days and Scitech presentations, and has ongoing interaction with the local Land Conservation District Committee, local government authority, natural resource management groups and other agencies.

Development of the draft Lake Warden Natural Biodiversity Recovery Catchment Recovery Plan 2007 to 2030 was begun.

### *Drummond Natural Diversity Recovery Catchment*

An eastern corridor is being established to link Drummond Nature Reserve to larger areas of revegetation and protected remnants. As part of this project, 30,000 seedlings of native plants were planted and 20 ha of remnant vegetation on farmland were fenced. Advice to local landowners focused on management of remnant vegetation providing breeding habitat for the endangered Carnaby's cockatoo.

The Drummond Recovery Catchment Management Plan is in preparation.

### *Toolibin Lake Natural Diversity Recovery Catchment*

Toolibin Lake was partially filled as a result of runoff generated by a storm in January 2006. During this period a large number of waterbirds began breeding at the lake and a fox baiting program was carried out through to September 2006 while juvenile birds were at risk from predation.

Groundwater pumping continued throughout the year with approximately 650 kilolitres per day extracted from beneath the lake. This maintained the groundwater table at more than two metres below the lake floor, resulting in a reduction in soil salinity.

A vegetation monitoring investigation carried out in December 2006–January 2007 suggests that some of the mature vegetation on the lake floor has declined in health. This may be due to a combination of factors including below average rainfall and senescence. However, new seedlings are continuing to germinate on the lake floor.

Approximately 500 ha were revegetated with oil mallee and a further 24 ha were revegetated using 34,000 mixed seedlings.

### *Lake Muir Unicap Natural Diversity Recovery Catchment*

A four-year program to obtain baseline data on groundwater chemistry at each of about 170 monitoring bores was completed.

Revegetation of cleared Crown land continued, with about 120 ha planted.

A four-year program to obtain baseline data on groundwater chemistry at each of about 170 monitoring bores was completed at Lake Muir Unicap.

The department contributed to a range of committees including the Engineering Evaluation Initiative, Catchment Demonstration Initiative and the Rural Towns Program Advisory Committee.

*Assessment of land use impacts on biodiversity*

In 2006–07, the environmental impact assessment process for the Gorgon Gas Field development on Barrow Island under the *Environmental Protection Act 1986* continued to require a significant contribution from the department in terms of staff time, provision of scientific expertise and other resources.

The Straits Resources Yannarie Solar Salt Project, on the eastern edge of the Exmouth Gulf, and the Water Corporation’s South West Yarragadee Water Supply Development east of Busselton, also required considerable departmental input, in terms of advice and recommendations for management of potential impacts on biodiversity values.

The department’s regional offices made significant contributions to the assessment and ongoing management of development projects, including a large number of new development proposals in the Midwest and Pilbara regions including contributing to the development and implementation of environmental conditions for the Dampier to Bunbury Natural Gas Pipeline duplication projects, the Pluto LNG project, and expansions of rail and other infrastructure by mining companies in the Pilbara.

DEC contributes to the whole-of-government process of implementation of the Integrated Project Approvals System (IPAS) for projects within the State Development portfolio. DEC is represented on the Inter-Agency IPAS Management Group which is responsible for monitoring and continuous improvement of IPAS.

As part of the implementation of the IPAS system, DEC is required to provide information on performance in relation to the timeliness of provision of conservation advice to approvals agencies for a range of government approvals processes in its annual reports – a summary of performance for the 2006–07 financial year is provided below.

**Table 8: Performance in relation to provision of advice for tasks subject to formal IPAS time limits (Advice requests received between 1 July 2006–30 June 2007)**

Approval Process	Stage	Number of advice tasks 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
<i>Environmental Protection Act Part IV – PER / ERMP</i>	Advice / comment on Environmental Scoping Document	4	7.5	4	100	-3
<i>Environmental Protection Act Part IV – PER / ERMP</i>	Advice / comment on Environmental Review Document	3	18	3	100	-1.4
<i>Environmental Protection Act Part IV – PER / ERMP</i>	Advice during Public Review Period	4	N/A	2	50	-1.8
<i>Environmental Protection Act Part IV – ARI / EPS</i>	Advice to EPA on Project Proposal	3	16	1	33	-4
<i>Environmental Protection Act Part IV</i>	Post Approval Environmental Management Plan / Issue Management Plan	6	10	5	83	-1.8
<i>Mining Act</i>	Advice on Notice of Intent / Mining Proposal	4	6	4	100	-10.25
<i>Petroleum Act</i>	Advice on Petroleum Development Proposal	5	16.8	4	80	-2.8
<b>TOTAL</b>	-	<b>29</b>	<b>NA</b>	<b>23</b>	<b>78</b> <small>Note 1 &amp; 2</small>	<b>-3.6</b>

Note 1: Only those tasks subject to formal time limits have been included.

Note 2: Average over all recorded IPAS related tasks was 90 per cent.



**Table 9:** Contributory factors in cases where formal time limits were not met (Advice requests received between 1 July 2006–30 June 2007)

Reason	Number of cases	Percentage of cases
Non-availability of documentation	2	33
Non-availability of expert staff	1	17
Non-availability of staff / time resources	2	33
Administrative error	1	17
<b>TOTAL</b>	<b>6</b>	<b>100</b>

DEC and the Department of Water undertook to evaluate the downstream impacts of drainage proposals in the Wheatbelt. The *Wheatbelt Drainage Evaluation* project proposes to use a wetlands characterisation scheme currently being developed by DEC for assessing wetlands in the Avon region. The project aims to establish the levels of environmental assessment required for the wetlands and produce a table of these for drainage proponents to use when planning drains. In July 2006 a technical advisory group was established to ensure full collaboration with the Avon baselining project. Following this, during February–April 2007 remote sensing techniques were developed to support mapping of the wetlands throughout the project area which began in May 2007.

*Applications to clear native vegetation: assessment and activity*

Five hundred applications were received to clear vegetation. One hundred and ten decisions were made by the Department of Industry and Resources, with 422 decisions made by DEC.

**Table 10:** Areas approved to clear under section 51C of the *Environmental Protection Act 1986*

Purpose	Total (ha)
Mineral production	4605
Horticulture	1344
Mineral exploration	748
Road construction or maintenance	746
State Agreement	510
Building or structure	394
Extractive industry	355
Infrastructure maintenance	332
Cropping	224
Petroleum production	156
Grazing and Pasture	77
Miscellaneous	102
Drainage	56
Railway construction or maintenance	54
Industrial	25
Plantation	133
Recreation	17
Dam construction or maintenance	14
Hazard reduction or fire control	12
Stockpile	11
Fence line maintenance	9
Petroleum exploration	9
Bore construction	1
Restoration	1
Aquaculture	1
<b>TOTAL</b>	<b>9943*</b>

\*Figures have been rounded up, so the total figure is approximate.

**Table 11: Areas refused a permit to clear under section 51C of the *Environmental Protection Act 1986***

Purpose	Area (ha)
Grazing and pasture	3,639
Cropping	1,149
Plantation	177
Horticulture	91
Extractive industry	43
Miscellaneous	6
Fence line maintenance	6
Total	5,110

*Review of native vegetation clearing processes and legislation*

In November 2006, the Minister for the Environment outlined to Parliament reforms to clearing controls that would streamline processes and improve environmental outcomes. Implementation of the key elements of the reforms is underway. This includes:

- adoption of a more risk-based and outcomes-focused application assessment process to ensure resources are applied to applications with higher environmental risks and greater priority
- establishment of target timelines and public reporting of timelines achieved
- removal of duplication of third party appeal provisions and reduced timelines for appeal periods
- increased clarity and certainty of exemptions for mineral and petroleum exploration and development activities where these are subject to approvals under Mining and Petroleum Acts
- extension of exemptions to State Agreement Act projects where the clearing is subject to another approval
- improved communication and information on clearing permit application requirements, and
- increased compliance monitoring of approved permits and process auditing.

Three amendments were made to the Environmental Protection (Clearing of Native Vegetation) Regulations 2004, including exemptions for clearing for exploration under the *Mining Act 1978* and various Petroleum Acts administered by the Department of Industry and Resources; reviewing Schedule 2 (Maintenance within existing transport corridors); and extending the transitional exemption for fire hazard reduction burning outside the restricted period under the *Bush Fires Act 1954* to enable a review to be completed.

**Invasive species control**

The department is working towards a more strategic and cooperative approach to the management of feral pigs, with a particular focus on the south west. DEC districts continued to conduct feral pig control activities, including trapping and poisoning, in the forests of the south west and in the Midwest. However, the effectiveness of feral pig control efforts continues to be hindered by illegal hunting, transport and release of pigs by recreational shooters.

Feral goat control activities continued on the Peron Peninsula and Nanga, to minimise the impacts of these animals on mangrove communities and fauna habitat. Goat control work was undertaken in the Midwest with significant numbers of animals being removed from the Kalbarri National Park along with goat control on pastoral leases acquired by DEC.

*European honey bees*

Trial work continued into the control of the European honey bee (*Apis mellifera*) using remote poisoning for large scale programs and in situations





where the location of feral hives cannot be determined or accessed. Baiting trials have been conducted at Garden Island and are continuing at Yellagonga Regional Park, with effective control of feral hives being observed.

The department has developed a Standard Operational Procedures manual for feral bee control based on the results of the trials conducted during the program. The manual considers the impact and risks to non-target species and the relevant occupational health and safety requirements for efficient baiting of feral bees using the pesticide.

#### *Fire research*

DEC is involved in collaborative research as part of the Bushfire Cooperative Research Centre. Grassland curing was monitored during the year at a number of locations in the Kimberley, Goldfields, Wheatbelt and Warren regions as part of a project to develop reliable methods for assessing fuel dryness from satellite imagery. Thirty monitoring sites were established in forest and heathland communities north-east of Walpole to study the response of flora and fauna to different fires regimes over the past 30 years. This study has used a comprehensive fire history database developed from annual records of prescribed burning and wildfires.

Work continued on an operational research project to implement a fine-grain mosaic of fuel ages in forest and shrubland north of Walpole. The study area had previously been burnt in spring 2002 and further ignition was carried out in late February 2006. Following this, monitoring of invertebrates was carried out in spring 2006 and autumn 2007, and frogs were monitored in autumn 2007.

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

Developing new, broadscale flora industries based on native plants, particularly as a means of controlling secondary salinisation in the wheatbelt, is a major focus of current work.

The *FloraSearch* project continues the process of selecting and developing native species as crops for agriculture and broadscale plantings to ameliorate secondary salinity. The project is supported by the Joint Venture Agroforestry Program and the Cooperative Research Centre (CRC) for Plant Based Management of Dryland Salinity. Three Western Australian native species are now under intensive development: *Acacia saligna*, *Atriplex nummularia* and *Eucalyptus loxophleba* subsp. *lissophloia*. Extensive collection of seed from across the range of natural occurrence of *Acacia saligna* and *Atriplex nummularia* was completed and used to establish large scale progeny testing experiments in July and August 2006. The work on *Atriplex* is conducted on a national scale with the help of the department's CRC partners.

The mallee breeding and seed production program began working on clonal propagation to establish second generation seed production orchards. Detailed studies on flowering period have commenced. Genetic gain experiments on first generation orchards are producing results that confirm the advantage of genetic improvement.

Adverse seasonal conditions saw mallee seed sales decline to about 11 million seeds in spring 2006 (to produce seedlings for field planting in winter 2007). Orchard seed production has also been slower than expected and is still below demand for smooth-barked York gum (*Eucalyptus loxophleba* subsp. *lissophloia*).

The CRC for Plant Based Management of Dryland Salinity terminated on 30 June 2007. Following a successful bid, it will be replaced by the Future Farm Industries CRC from 1 July 2007.

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

##### **Providing information to the public**

A new section of the NatureBase website, *Prevention and Control of Damage by Animals in Western Australia*, was developed and went online in December 2006. These webpages

Developing new, broadscale flora industries based on native plants, particularly as a means of controlling secondary salinisation in the wheatbelt, is a major focus of current work.

help DEC to work with the Western Australian community to minimise the damage caused by animals, while maintaining the welfare of the animals. To date, packages have been developed to provide information on frogs, ibis, possums, ravens, swallows and gulls.

#### Public participation programs

DEC provides administrative support for the Minister's Community Conservation Grants. Grants were provided to 52 community groups and individuals involved in voluntary community conservation.

*Bushland Benefits* is a tender-based financial incentive program to help private landholders in the south-west of the State to meet the initial management costs of bushland that is under voluntary protection. No new funding rounds were held this financial year, but the implementation of project tenders that were successful in the previous financial year has continued. Of the 58 successful tenders, 49 projects have been completed and five partially completed by the end of the year, receiving payments totalling \$698,008. The five partially completed projects will be completed early in 2007–08. Four landholders were not able to complete their projects, and withdrew their tenders.

#### *Urban Nature*

The *Urban Nature* program continued to work with landowners and managers and a wide range of stakeholders during 2006–07, and established field trials on control methods for regionally significant environmental weeds including Geraldton carnation weed, wavy gladiolus, sharp rush and watsonia. Investigations have also continued into managing weed invasion into Threatened Ecological Communities.

#### *Tuart Community Grants Scheme*

Applications to the Government's Tuart Community Grants Scheme were subscribed to the value of \$64,300.

**Table 12: 2006–07 Tuart Community Grants**

Applicant	Project title	Amount
Rotary Club of Scarborough	The Rotary Tuart Forest	\$6,250
Foundation Christian College	The Tuart Grove Environmental Study Area	\$9,000
Conservation Council of Western Australia	A Future for the Tuart Woodlands – Public Forum	\$12,100
Friends of Marlee Reserve	Tuart Rehabilitation – Marlee Reserve	\$10,000
Men of the Trees Rockingham Branch	The Restoration of Lake Coolongup in the Rockingham Lakes Regional Park	\$10,000
Lower Moore River Working Group	Investigating the Tuarts of the Lower Moore River	\$8,250
Friends of Trigg Bushland	Trigg Reserve Tuart Conservation	\$6,000
Busselton-Dunsborough Environment Centre	Ludlow Tuart Forest Awareness	\$2,700

#### *Woodland Decline Symposium*

In November 2006, DEC and Murdoch University convened a Woodland Decline Symposium to report on research into tuart decline at Yalgorup, and to refine future research and management directions, and priorities for tuart, wandoo and other woodland and tree declines in south-western Western Australia. The symposium was attended by 263 delegates with representatives from the State Government, local authorities, natural resource management groups and landcare groups, landholders, universities and the general community. The findings of tuart decline research are reported at <<http://www.tuarthealth.murdoch.edu.au>>.



### Roadside conservation

During the year the Roadside Conservation Committee, supported by DEC, provided training in roadside vegetation management for works crews of the shires of Augusta-Margaret River and Wyalkatchem. The shires of Chapman Valley, Geraldton-Greenough, Mullewa, Morawa, Mingenew, Three Springs, Perenjori, Coorow, Dandaragan and Moora sent representatives to training that was provided in conjunction with the Northern Agricultural Catchments Council and aimed at involving local government in natural resource management. The shires of Narembeen, Brookton, Kondinin, Pingelly, Wandering, Wickipin, Narrogin, West Arthur and Wagin were represented, principally by works managers, at a workshop on revegetation held in conjunction with Main Roads WA.

Roadside conservation value maps were completed for the shires of Serpentine-Jarrahdale and Goomalling during the year. A further three shires, Katanning, Westonia and Koorda, completed roadside surveys and the data are being processed.

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

#### *Land for Wildlife*

DEC's *Land for Wildlife* scheme is a voluntary program that aims to increase the area of wildlife habitat on lands under private management. During the year, 97 new properties were registered in the scheme. The total area of the 117 properties visited during the year was 37,851 ha, with a total area of 5,868 ha dedicated wildlife habitat. In addition, 37 properties were formally revisited for stewardship matters, raising the total number of on-site property visits to 154.

2006-07 was *Land for Wildlife's* tenth year, during which time 1,596 property owners applied to join with a total area over the 1,452 properties registered of 1,082,437 ha. This includes 249,400 ha of land where the primary management purpose is nature conservation. Special events included weekend excursions, field days, seminars, workshops and informal coffee mornings, culminating in an official birthday party and launch of the tenth-year report *With Wildlife in Mind* in Perth. Over 500 people attended these events.

Four editions of *Western Wildlife* were produced during the year. *Land for Wildlife* staff wrote 15 articles for the print media, and gave three radio interviews and 63 talks at workshops, seminars, schools and other groups. This includes 20 events that were specifically promoting *Land for Wildlife*. In addition, 19 displays were erected at agricultural shows or other venues.

#### *Nature Conservation Covenant Program*

The voluntary *Nature Conservation Covenant Program* assists 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 established covenants in perpetuity over four titles, protecting 270 ha of native vegetation. The program now has covenants registered on 86 titles and 6,065 ha of land, including a number of threatened species and ecological communities. A further 30 covenants are under negotiation to protect an additional 5,379 ha of native vegetation.

The program works with other State agencies and non-government organisations to improve the delivery of the covenant service, for example, the WWF-Australia Healthy Ecosystems project in the Avon Natural Resource Management region which aims to deliver 10 covenants in the Avon region over a two-year period.

The department participates in the State's revolving fund program, *BushBank*, that is administered by the National Trust of Australia (WA). *BushBank* seeks to purchase private land of conservation value, protect it under a conservation covenant, and on-sell the land to a conservation buyer. The funds 'revolved' from the on-sale are available to purchase another property. The State's contribution of \$1 million was matched by the Commonwealth to provide a total revolving fund of \$2 million.

2006-07 was *Land for Wildlife's* tenth year, during which time 1,596 property owners applied to join with a total area over the 1,452 properties registered of 1,082,437 ha.

DEC chairs the Technical Advisory Committee, provides advice on prospective properties and makes its covenanting program available to protect the properties.

### *Healthy Wetland Habitats*

The *Healthy Wetland Habitats* program began in December 2006 to provide technical and financial help to private land managers for wetlands of high conservation value on the Swan Coastal Plain. Expressions of interest for management assistance and/or information from conservation category wetland managers on the Swan Coastal Plain were reviewed by a technical advisory committee and ranked according to priority for management support. Eighteen site assessments have been undertaken. Management action plans and funding offers will be developed for properties in association with the landowners.

An information seminar for 15 private land managers was conducted, incorporating presentations on wetland ecosystems, threats, management options, available funding and other support options. Further information seminars will be run as part of the program.

### **Animal ethics**

Applications and annual reports were assessed by the Animal Ethics Committee at six meetings over the year. The committee reviewed 96 annual reports and assessed and approved 63 new applications, with the majority of applications addressing translocations of native fauna; fauna surveying and monitoring; and introduced predator control research. Of these 43 were renewals of projects older than three years.

The Animal Ethics Committee maintains a register of projects in accordance with the conditions of its licence to use animals for scientific purposes.

A comprehensive database of applications has been developed with details of each project, its staff affiliations and competencies.

An independent review of the committee was conducted during the year to fulfil the requirement of the Code of Practice for an external review at least every three years. The review concluded that the committee is constituted properly, functioning efficiently and fulfilling an important role in ensuring that DEC research complies with community standards of animal ethics. There were no serious cases of non-compliance with the Code.

The department is continuing to improve the Standard Operations Procedures which document the minimum standards for all techniques that have been considered and approved by the committee.



## 2.1.2 Service 2: Sustainable Forest Management

**Service description:** The sustainable management of State forests and timber reserves while maintaining or enhancing nature conservation, water, recreation, landscape and other values in the long term, and encouraging public awareness, understanding and support for sustainable forest management, services and policies.

### Performance summary

	2006–07 Estimate \$'000	2006–07 Actual \$'000	Variance \$'000
Expense by service	39,074	48,981	9,907

KEI	2006–07 Target	2006–07 Actual	Variance
Average cost per hectare of managing State forest and timber reserves	\$30.11	\$37.74	\$7.63

### Performance highlights

- Continued implementation of the Forest Management Plan 2004-2013 (FMP).
- Further review and revision of the FMP requirements for the management of soil disturbance in native forest timber harvesting following the third year of operation.
- Development and implementation of guidance documents on aspects of the management of informal reserves and the use of compliance instruments.
- Further development of biodiversity assessment and ecological modelling tools to predict the spread of the plant pathogen *Phytophthora cinnamomi* and conduct analysis of the risk to biodiversity associated with the spread.
- Designed and established in the field the final locations of 10 indicative fauna habitat zones associated with planned disturbance.
- Worked with the Forest Products Commission (FPC) to progress the three-year rolling Timber Harvest Plan 2008-10.
- Provided data for Australia's continental State of the Forests Report.
- Maintained the spatial and measurement datasets required to sustainably manage State forest and timber reserves.
- Facilitated implementation of the Wungong Catchment Environment and Water Management Project for the Water Corporation.

#### 2.1.2.1 Overview

Consistent with the statutory purpose of State forest and timber reserves as defined in the *Conservation and Land Management Act 1984* (CALM Act), Service 2: Sustainable forest management provides for their management on an ecologically sustainable basis, including:

- implementing the Protecting our old-growth forests and other 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.

Members of the voluntary conservation movement, staff from the FPC, the Conservation Commission and DEC inspected harvest coupes in the Warren Region in March 2007 and the South West Region in April 2007.

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

#### Protecting our old-growth forests policy

Action has continued on the implementation of the remaining land category changes that are proposed in the FMP. The boundaries of the proposed reserves have been progressively mapped at a fine scale and referral of the proposals to a range of Government and other bodies for comment has occurred. Once the consultation process has been completed, it is proposed to create the new reserves via the passage of a Reserves Act.

#### Forest Management Plan 2004–2013

The FMP set times for the development of a number of guideline documents. The documents whose time for completion has expired are *Guidelines for the Management of Informal Reserves* and *Guidelines for the Selection and Management of Fauna Habitat Zones* (end 2004) and *Soil and Water Conservation Guidelines* and *Goals for Understorey Structural Diversity and Forest Monitoring Guideline* (end 2005). Considerable work was undertaken on development of the contents of guidelines, however, they were not completed and implementation continues in accordance with the appendices in the FMP and existing guidelines.

To provide guidance on areas not covered by existing guidelines, DEC developed interim guidance documents in the form of advisory notes and a manual. Advisory notes were published for management of access in informal reserves, the salvage of logs in association with informal reserves, and the use of Works Improvement Notices and Management Letters. Advisory notes were progressed for a pre-operations checklist, an approval matrix for operations on State forest, and rehabilitation of soil following timber harvesting. The *Interim Manual of Procedures for the Management of Soils Associated With Timber Harvesting in Native Forests* was reviewed and a revised version was published in June 2007 for the wet-soil period of 2007.

DEC published protocols for collecting data and reporting on 20 of the 33 key performance indicators of the FMP.

#### Community forest inspection program

The program of community forest inspections continued. The inspections provide community representatives with the opportunity to inspect first-hand the systems and processes that are in place to manage sustainably 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, staff from the FPC, the Conservation Commission and DEC inspected harvest coupes in the Warren Region in March 2007 and the South West Region in April 2007.

### 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 internally within DEC and to the FPC, Conservation Commission and external clients. Major areas of activity are listed below.



- The acquisition and analysis of timber inventory data to assist the FPC, DEC and the Conservation Commission in the planning, management and monitoring of timber production in State forest and timber reserves. Pilot projects were assessed to evaluate new technologies to update the strategic timber inventory across State forest, improve the stratification of regrowth forests, and to examine new methodologies for forest growth estimation.
- Vegetation mapping was undertaken to inform silvicultural decisions, old-growth forest assessments, disease impact predictions, and the protection of poorly represented vegetation complexes.
- Vegetation mapping on the Swan Coastal Plain was progressed to facilitate improved biodiversity planning and modelling at the strategic level.
- A major project was undertaken as part of the Biodiversity Conservation Initiative, concurrently with similar work for natural resource management groups across the south west, to provide an analysis of the threat from *Phytophthora* dieback to biodiversity assets.
- Field measurement programs to monitor the yields and silvicultural standards realised in timber harvest operations were increased. Considerable work was undertaken to migrate computer systems to the new DEC IT infrastructure and to provide additional functionality and security.
- Specialist services were provided to DEC divisions, the FPC, other Government agencies, natural resource management groups and external clients. Services included aerial photography, photo-interpretation, photogrammetry, vegetation and disease mapping surveys, mathematical modelling and systems analysis.

A major project to undertake *Phytophthora* dieback threat assessment and risk analyses for vegetation in the Swan and Avon natural resource management regions on non-DEC managed lands continued.

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

Activities under the Sustainable Forest Management Service 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 the mapping of *Phytophthora* dieback occurrence to enable operations to be undertaken with the lowest risk of spreading *Pyhytophthora*. Staff are also responsible for establishing and implementing an approvals, monitoring and compliance management system and setting standards for the management of a range of forest values.

Regional Services Division delivers other sustainable forest management outcomes and 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 21,233 ha was mapped to assist the planning of roading and timber harvesting operations undertaken by the FPC. This included 6,710 ha of previous mapping that was checked for further spread. Mapping and hygiene planning were undertaken on a further 4,462 ha for the Parks and Visitor Services, Nature Conservation Service and Sustainable Forest Management Service of DEC, and 2,615 ha for external parties. Mapping for the Nature Conservation Service included help to revise the boundary of infestation in the Fitzgerald River National Park after a significant summer rain event, and helped to model predicted spread of *Phytophthora* from point infestations. 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 Swan and Avon natural resource management regions on non-DEC managed lands continued with the South Coast Natural Resource Management group. This included the collation of biological assets, strategic disease mapping, predictive modelling of the future spread of *Phytophthora*, and estimation of threat and risk



A major initiative of the FMP is the introduction of approximately 280 indicative fauna habitat zones of a minimum of 200 ha each in State forest and timber reserves.

categories within an area of approximately 0.8 million ha. This work was undertaken concurrently with funding for the *Saving Our Species* program on DEC-managed lands.

The development of a forest health and vitality surveillance and monitoring program was progressed during the year.

### **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 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 shires and DEC's Terrestrial Ecosystems Branch to revise target figures for reservation and maintenance of native vegetation within vegetation complex units. Target figures are used in the assessment of the potential impact of development and clearing proposals on native vegetation.

### **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 Soil Trafficability Index and prescribing measures to be applied in each risk period to protect soil during timber harvesting. Recognising that some elements of the soil protection requirements were new, the FMP provided discretion to DEC's Director of Sustainable Forest Management in certain aspects of their application and made provision for review and revision of the requirements.

The FPC and the timber harvesting industry again experienced difficulty in harvesting sufficient sawlogs to adequately supply sawmills over winter and spring 2006 because of the FMP restriction on heavy machinery access to the forest in order to protect moist soils. The supply of timber for sawmills was maintained by using discretion provided in the FMP to select the most appropriate areas for moist soil harvesting and authorising access to them based on a soil management plan.

The soil provisions of the FMP were again reviewed after the third full year of operation using the operational experience gained during operations on wet soils in 2004, 2005 and 2006. The revised requirements for soil management in 2006 are set out in Appendix 6 to the FMP, *Protection of Soil in Native Forest Harvesting*, and an updated version of the *Interim Manual of Procedures for the Management of Soils Associated With Timber Harvesting in Native Forests*. The revised requirements for management of soils associated with timber harvesting were implemented from late June 2007.

### **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 ha each in State forest and timber reserves. Design, analysis, survey and/or liaison work was undertaken for 17 indicative fauna habitat zones adjacent to proposed disturbance activities and the location of 10 indicative fauna habitat zones was finalised.

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

All operations on State forest require consideration and approval from DEC before they can occur. Monitoring the compliance of operations with the conditions of approval and with environmental management standards is carried out by DEC staff. Where significant non-compliance in timber harvesting operations is identified, DEC may issue the proponent with 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 2006–07, staff issued 15 WINs and 16 MLs, each of which covered one or two issues. Ten related to biodiversity issues, eight to systems and process issues, seven to ecosystem health and vitality issues,





seven to productive capacity issues and four to soil and water issues. DEC has released an advisory note outlining the procedures for issuing and managing WINs and MLs.

### **Forest monitoring**

Data collected from 48 sites established during the initial five years of the *ForestCheck* monitoring program have been analysed in preparation for publication in scientific journals in 2008. Accredited interpreters assessed all sites for the presence of symptoms of disease caused by *Phytophthora cinnamomi*. The *ForestCheck* program is partially funded by the FPC.

Monitoring of groundwater levels and stream flow continued in three experimental catchments east of Dwellingup. These catchments form part of a study of the hydrologic impacts of timber harvesting and associated silvicultural treatments in the forest of the intermediate rainfall zone (900 to 1,100 mm/yr) of the northern jarrah forest. Groundwater levels have continued to rise, relative to the control catchment, and do not appear to have reached a peak six years after harvesting and four years following burn treatments. The average rise in groundwater level was 1.38 m in the intensive treatment and 0.96 m in the standard treatment catchment. Neither the intensive nor the standard treatment had any measurable effect on stream water quantity and quality.

In 2006, results were published from a study testing the efficacy of using electromagnetic induction to estimate and map soil salinity associated with forest streams.

A second year of sampling was completed for the project to monitor the richness of aquatic invertebrates in south-western forest streams. This project is to meet the requirements of Key Performance Indicator 20 identified in the FMP. Additional monitoring sites were established in the Canning River catchment to assess the effects of water supply reservoirs on stream biodiversity, and in the Blackwood River catchment to provide baseline information about streams associated with the Yarragadee aquifer. Low stream flows resulting from a dry winter prevented sampling at several sites in the eastern forest.

### **Adaptive management**

DEC contributed to the establishment by the Water Corporation of the Wungong Catchment Environment and Water Management project. This adaptive management trial in the 12,845 ha Wungong catchment aims to increase stream flow by managing vegetation density. *Phytophthora* dieback mapping and detailed harvest planning were completed for part of the trial.

#### **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 for the jarrah, karri and wandoo forests continued with a major emphasis on the jarrah guidelines and the monitoring and evaluation of current on-ground silvicultural practices.

Investigations into the genetic adaptations of understorey species within seed collection zones identified for forest rehabilitation following harvesting were initiated. Results will contribute to silviculture guidelines to maintain the genetic integrity of rehabilitated forests.

Two interim silviculture guidelines developed by the Water Corporation to facilitate implementation of the Water Corporation's Wungong Catchment Environment and Water Management project were approved by DEC. The guidelines are for thinning native jarrah forest and jarrah rehabilitation established after 1988 in areas previously mined for bauxite.

##### **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 FPC was

In the 12 months to December 2006, 210 ha of wandoo were thinned, and 90 ha of wandoo harvested to establish regeneration.

undertaken. In the 12 months to December 2006, 8,440 ha of jarrah forest were harvested with the following silvicultural or management objectives.

**Table 13: Objectives of jarrah forest harvest 2006–07**

	Area harvested (ha)
Promote growth on retained trees (thinning)	1,040
Release of regeneration (gap)	710
Establishment of regeneration – eastern jarrah (shelterwood)	1,090
Establishment of regeneration – western jarrah (shelterwood)	1,690
Single tree selection (dieback areas)	2,230
Selective	1,080
Other (mining and clearing for utilities)	600
<b>Total</b>	<b>8,440</b>

Silvicultural objectives for 1,700 ha harvested in this or previous years were achieved by follow-up treatment during the year.

In the 12 months to December 2006, 400 ha of karri forest were clear felled or partially cut, and 1,130 ha were thinned. Regeneration was completed on 600 ha harvested in either this or previous years.

In the 12 months to December 2006, 210 ha of wandoo were thinned, and 90 ha of wandoo harvested to establish regeneration.

### Regional harvest plans

DEC reviewed the 2007 Indicative Timber Harvest Plan submitted by the FPC, to ensure consistency with the settings adopted in the FMP.

The Three-year Timber Harvest Plan (2008–2010) required by the FMP to be produced by DEC was progressed. The annual Timber Harvest Plan for 2008 will be produced for the FPC in the latter half of 2007 from the first year of the 2008–2010 Three-year Timber Harvest Plan.

#### 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 to other national forums on ecologically sustainable forest management. The department also contributed to a review of the indicators used for sustainable forest management and subsequently provided information about Western Australia's forest in relation to these indicators. This information will assist development of the national State of the Forests Report planned for publication in 2008. Partnerships with regional natural resource management groups were also maintained through joint projects.



**Table 14:** Trends in the area of native forest harvested

	Jarrah forest (ha)	Jarrah/ wandoo forest (ha)	Karri forest	
			Clearfelled or cut to seed trees (ha)	Thinned (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

\*Jarrah/wandoo harvested included in jarrah total

## 2.1.3 Service 3: Performance of statutory functions by the Conservation Commission of Western Australia

**Service Description:** The undertaking of statutory functions by the Conservation Commission of Western Australia which include:

- having vested in it the State's national parks, conservation parks, nature reserves, State forest and timber reserves;
- policy development for the preservation and community enjoyment of the State's natural environment, and promoting the appreciation of flora, fauna and the natural environment;
- advice to the Minister for the Environment on the development of policies for the conservation and management of biodiversity throughout the State and on the ecologically sustainable management of State forest, timber reserves and forest produce; and
- audit of the department's and the FPC's performance against management plans.

### Performance summary

	2006–07 Estimate \$'000	2006–07 Actual \$'000	Variance \$'000
Expense by service	827	762	(65)

KEI	2006–07 Target	2006–07 Actual	Variance
The average cost per management plan/ significant policy submitted for the Conservation Commission's consideration	\$10,894	\$14,099	\$3,205

### Performance highlights

- Provided input into the Biodiversity Conservation Strategy and the Government's position on creating a Biodiversity Commission.
- Undertook and published five performance assessments of the department's and the FPC's performance against management plans in accordance with policy.
- Continued to enhance the management plan development process through the review of management plans and the generation of new tools and formats for management plan development.
- Continued to implement those elements of the Forest Management Plan that are the responsibility of the Conservation Commission.
- Convened the organising committee and progressed the development of a conference on the values of national parks.
- Continued to work with the department to develop appropriate joint management frameworks for relevant conservation reserves.
- Reviewed and provided input to the Water Corporation's South West Yarragadee Water Supply proposal and Wungong thinning trials recognising the interaction of the projects with forest and conservation lands.

The activities of the Conservation Commission of Western Australia are reported in detail in a separate annual report.



## 2.1.4 Service 4: 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 DEC, 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 wildfires; training DEC staff and volunteers, working with local tourist bureaux and commercial tour operators; involving Aboriginal 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 experiences and help develop greater community awareness and support for parks, natural areas, nature-based tourism and recreation services and policies.

### Performance summary

	2006–07 Estimate \$'000	2006–07 Actual \$'000	Variance \$'000
Expense by service	66,546	74,198	7,652

KEI	2006–07 Target	2006–07 Actual	Variance
Cost per visit	\$5.88	\$6.15	\$0.27
Ratio of total cost of services to operating revenue	3.88:1	4.91:1	1.03:1

### Performance highlights

- Advanced the provision of innovative sustainable tourism services and developments through partnerships with the tourism industry including leasing and licensing initiatives such as the *Landbank* project.
- Conducted workshops and meetings with regional tourism industry stakeholders to obtain feedback on the department's initiatives and establish stronger relationships with the tourism industry.
- Continued to develop the highly successful Community Involvement Program by increasing the range and scope of opportunities for volunteers to actively assist the department in projects designed to protect and manage natural and cultural values and enhance visitor experiences. In particular, additional support was provided for volunteer initiatives such as the *Campground Host* and *Homestead Host* programs.
- Commenced joint management arrangements with the Miriuwung-Gajerrong Corporation under the Ord Stage 2 Final Agreement. Established a Regional Park Council and six Sub-Councils and commenced the preparation of management plans for six new conservation parks.
- Established effective and meaningful liaison with Indigenous groups through the development of joint management agreements and the progression of employment and training opportunities for Aboriginal people through the *Mentored Aboriginal Training and Employment Scheme (MATES)* program.
- Continued the planning and construction of the Munda Biddi bike trail in the south-west forests and South Coast region and maintained and improved the Bibbulmun Track.
- Completed visitor infrastructure and tourist road improvement projects that were commenced in the previous financial year. Maintained all facilities in a safe and workable condition with a focus on site works that provide for the protection of environmental and cultural values and/or visitor safety.
- Made information available to the public through a range of media on sites managed by the department suitable for access and use by people with disabilities under the *You're Welcome* program.

- Continued to ensure the welfare and safety of visitors through the ongoing review and implementation of the department's Visitor Risk Management system.
- Improved data management and information systems in land administration to improve functionality.
- Progressed implementation of the remaining land tenure recommendations in the Forest Management Plan 2004–2013 and transfer of suitable water reserves in the Wheatbelt to the conservation estate.
- Continued to improve visitor data collection systems including the wider use of new data collection and handling technologies and approaches to increase the capacity to effectively manage nature-based recreation and tourism opportunities and assets.
- Continued to promote and expand the department's *Healthy Parks, Healthy People* program throughout the network of regional parks and the greater Perth metropolitan region and afforded the community opportunities to enhance their physical and mental wellbeing while helping to maintain a healthy and well-managed network of protected areas.
- Commenced construction of the Canning River Eco-Education Centre to increase community awareness of nature conservation values and enhance visitor experiences.
- Continued to provide support (through initiatives such as the department's Regional Parks Community Grants Scheme) and strengthen relations and partnerships with a diverse community who, as volunteers, provide input into regional park management and on-ground works that encourage awareness and appreciation of nature conservation at a local level.
- Maintained an emphasis on revenue collection from park entry and camping fees and, where appropriate, the sale of merchandise. This included further investigation of the use of smart card technology to assist with fee collection in parks.

The performance of Service 4: Parks and Visitors Services is reported in eight 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. Community involvement
6. Liaising and working with Indigenous people
7. Business management
8. Legislation and policy for parks and visitor services.

There are several significant projects, such as the Bibbulmun Track and Munda Biddi Trail, as well as regional parks and regional services that merit reporting separately.

### 2.1.4.1 Planning for management

The CALM Act specifies that the public be given an opportunity to contribute to the content of management plans. DEC achieves this through public and peak stakeholder workshops and meetings, advisory committees, newsletters and inviting comments on draft plans. During 2006–07, there were four meetings with public and peak stakeholders, 38 meetings for 17 different advisory committees, and eight meetings with four different Aboriginal park councils (excluding marine reserves—see Service 1).

DEC's NatureBase website enables public submissions to be submitted electronically and information relevant to management planning to be downloaded, including Issues Papers, Have Your Say brochures, final and draft management plans, analysis of public submission reports and copies of the *Planning Diary* newsletter. The newsletter aims to keep stakeholders up-to-date with progress on each management plan in preparation. Three issues of *Planning Diary* were produced during 2006–07, and the most recent was sent directly to approximately 950 stakeholders.



### Leasing activities

The department has lease arrangements for a wide range of purposes. At the end of the financial year there were 166 formal arrangements for uses on lands managed by DEC, including recreation, tourism, accommodation, utilities and sawmills.

The formal arrangements comprised 128 leases, 11 written agreements, 11 licences, 14 Memoranda of Understanding and two sawmill site permits.

Following the Minister's approval, DEC progressively applied new rental charges to a number of leases.

The department entered into 10 formal agreements, the majority of which included the renewal of existing arrangements. Two of the agreements were granted in respect to new utility services – a water boosting pumping station and a communication cable. The lease for the Broome Bird Observatory was renewed for a further term of seven years.

### Apiary site management

At the end of the year there were 3,573 current apiary site permits issued on Crown lands within the State. Of these, 1,728 (48 per cent) were on lands managed by DEC; 864 were located on State forest, 115 on timber reserves, 410 on national parks, 249 on nature reserves, 76 on conservation parks and 14 on other lands vested in Conservation Commission. Twenty-six permits were cancelled during the year.

During the year, 1,298 apiary site permits were issued which comprised:

- 141 permits transferred between beekeepers
- 113 permits from applications to occupy new or previously cancelled sites
- 1,031 permit renewals on sites located on a wide range of land tenures
- 10 permits relocated to new locations as requested by either DEC or the beekeeper, and
- 3 temporary permits.

DEC continued to progress the review of the Forest Management Regulations 1993 relating to beekeeping on Crown land. Following Ministerial approval for the drafting of the regulation amendments, the matter is under consideration by the Parliamentary Counsel's Office in consultation with the State Solicitor's Office.

The Beekeeping Consultative Committee met twice during the year and discussed issues including the trading of apiary sites, amendments to the Forest Management Regulations and a feral bee strategy. The committee is convened by DEC and consists of representatives from the WA Apiarists' Society, Wescobee Limited, WA Farmers' Federation, WA Beekeepers' Association, the Pollination Association of Western Australia as well as representatives from the Pastoral Lands Board, Water Corporation and the Pastoralists and Graziers' Association.

Other issues addressed during the year were:

- apiary sites affected by management plans
- access to pastoral leases for beekeeping purposes
- criteria for assessing apiary sites in conservation areas
- fire management issues
- apiary sites on lands vested in other Government agencies, and
- the replacement and renewal of permits.

#### 2.1.4.2 Park presentation and resource protection

Master plans, concept plans and site development plans were prepared for many projects around the State. These included plans for upgrading visitor access and facilities at Goongarrie Homestead and Pemberton Arboretum, visitor management for Nilgen and Wanagarren nature reserves north of Lancelin, protection of nature conservation values and enhancing visitor experience to Lake Thetis near Cervantes, new viewing lookouts at Castle Rock in Porongurup National Park and new visitor

DEC continued to progress the review of the Forest Management Regulations 1993 relating to beekeeping on Crown land.

Site planning and detailed design continued on the Walpole Wilderness Discovery Centre sites at the Valley of the Giants, Mt Frankland and Swarbrick.

facilities at Coalmine Beach in Walpole–Nornalup National Park. Design continued on the Pinnacles Desert Interpretive Centre in Nambung National Park, upgrading visitor facilities at Yardie Creek in Cape Range National Park as well as Sugarloaf Rock, Hamelin Bay and ‘access for more’ on the Cape to Cape Walk Track in Leeuwin–Naturaliste National Park. Planning for visitors commenced for the coastal reserves east and west of Esperance and continues for Shark Bay, Ningaloo and Lane Poole Reserve.

Design and/or construction documentation drawings were prepared for many projects such as boardwalks, toilets, steps and lookouts, including a new toilet for Tunnel Creek and Millstream–Chichester national parks, new shelters at Calgardup and Giants Caves in Leeuwin–Naturaliste National Park, a new shelter at The Channels in Walpole–Nornalup National Park, a new interpretive wall at Swarbrick in the Walpole Wilderness Discovery Centre, and bridges and a standard toilet design for the Munda Bididi Trail.

Site planning and detailed design continued on the Walpole Wilderness Discovery Centre sites at the Valley of the Giants, Mt Frankland and Swarbrick.

Planning, training and design advice for recreation were 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 representation occurred on working groups including the Inter-Agency Working Group to develop Visual Landscape Management Guidelines, the Coastwest Technical Assessment Group and Australian Standards for Outdoor Access for people with disabilities.

Visual impact assessments, recommendations, guidelines and specialist advice were provided for a number of proposals throughout the year, including telecommunications towers, infrastructure development and housing and tourism developments. A review of the database for Visitor Landscape Management is continuing.

Visual landscape management processes and operational guidelines for a wide range of impact and development types continue to be developed between the Department for Planning and Infrastructure, Main Roads WA, the Department of Water and DEC.

### 2.1.4.3 Visitor communication and management

#### Interpretive planning

During 2006–07, DEC staff provided interpretive perspectives into the preparation of management, visitor services and recreation site development plans and interpretive projects.

Interpretation project plans were prepared for major site developments with facilities, exhibits and sign products. Visitor services planning continued for the Ningaloo coast.

#### Interpretive design

The DEC Sign Design Studio continued to meet regional needs for signs and displays in managing visitors to DEC-managed areas. Designs were prepared for over 260 projects.

In the Walpole Wilderness Area, interpretive products of particular note were the Walpole Wilderness Discovery Centre where exhibits include the Door of Perception, the Wilderness Wall of Perceptions and contracted art exhibits; the Sandy Beach and Mount Clare trailheads; Fernhook Falls interpretation; and Harewood Forest trailside signs. Panels were produced for Mount Frankland for a shelter and view, as well as the old towerman’s hut and the current hut at the summit.

A trailhead was installed at Cape Naturaliste and the Perth Hills National Parks Visitor Centre wall mural was completed to complement the merchandise display in the Centre. Heritage Trail signs were produced for the Shire of Mundaring, and panels were produced for the Friends of Crooked Brook. Displays were produced for various nature reserves including Williams, Tutanning and Talbot Road. A major display is to be installed in Dwellingup Visitor Centre for the Lane Poole Reserve.





Visitor risk management signs along with *Western Shield* wildlife recovery program signs, dieback signs and site rehabilitation signs continued to be produced to assist the management of these issues.

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

Consultation with the Swan River Trust led to the production of the Liege Street Wetland interpretive shelter and trailside signs.

The Sign Design Studio worked closely with groups such as Dieback Consultative Committee, helping them with a new sign design initiative, various local shires across the State, and Friends groups for advice on planning, design and production of signs.

Support continued to the steering group of The National Trust of Australia (WA), FACET (WA Forum Advocating Cultural and Eco Tourism) with their tri-annual newsletter, and Museums Australia (WA) in partnership with Lotterywest that led to the production of *Sharing Our Stories: Guidelines for Heritage Interpretation*.

Editorial input was provided to a special Western Australian edition of the national newsletter of the Interpretation Australia Association in relation to three stories on significant interpretive projects of the department.

### **Training and professional development**

Staff contributed to the Graduate Recruit Induction Program; a three-day residential workshop in Designing Guided Interpretive Experiences for staff and for trainees pursuing the Certificate in Conservation and Land Management; and the annual Recreation Planning and Management Course.

Presentations and workshops were provided to the Interpretation Australia Association National Conference in Cairns in September 2006, the Wildlife Tourism Conference in Fremantle in August 2006 and the FACET Marine Tourism Conference in Bunbury in June 2007.

### **Nature-based tourism and recreation research**

DEC continued to work closely with WA's major tertiary institutions on nature-based recreation and tourism research. Potential research topics available to honours, masters or PhD students are listed on DEC's NatureBase website.

A draft Social Research Strategy was produced by the Recreation and Tourism Research Reference Group in October 2006 that will set the direction and priorities for DEC's social research program. The strategy includes proposals to explore cooperative research partnerships with universities.

DEC also plays an active role as a member of the Sustainable Tourism Cooperative Research Centre. Several projects were completed under the auspices of the CRC including research into the socio-economic impacts of changes to marine park zoning in Ningaloo Marine Park on coral coast communities (completed June 2007); the socio-economic impacts of cruise ship tourism on the Kimberley coast (draft report completed in June 2007); a review of social data collection methods for Australian protected areas (draft report completed in June 2007); and a review of pricing and user pays principles applied in Australian protected areas (draft report completed in June 2007). New research projects include an audit of wildlife tourism activities in Western Australia begun in April 2007 and an audit of best practice tourism partnerships started in March 2007. The Commonwealth Government's *Wealth from Oceans* program which focused on Ningaloo Reef included socio-economic modelling components and involved community workshops in Exmouth and Perth in June 2007.

#### **2.1.4.4 Community involvement**

DEC's Community Involvement Program continued to provide an effective means of enlisting the support of the community and meaningful and interesting opportunities for volunteers to participate in conservation and land management activities.

New research projects include an audit of wildlife tourism activities in Western Australia and an audit of best practice tourism partnerships.

In 2006–07, 3,250 active volunteers contributed 406,500 hours of support to projects across Western Australia.

In 2006–07, 3,250 active volunteers contributed 406,500 hours of support to projects across Western Australia.

**Table 15: Community involvement volunteers**

Year	Volunteers registered	New projects	Volunteers contributing	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	406,500

### Community involvement volunteers

In December 2006, 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 and in projects at the Western Australian Herbarium.

In addition, Conservation Volunteers Australia, the Department of Corrective Services and 4WD clubs worked closely with DEC field staff to rehabilitate and enhance the natural environment.

Eight new volunteer projects registered for 2006–07 were:

- maintenance of the Mount Dale Walk Trail
- clean up of the Sawyers Valley powerline
- nesting flatback turtles on Cape Domett
- works at Yeagarup precinct
- survey of the grand spider orchid
- management of Faunadale Nature Reserve
- the Etmilyn Walk Trail, and
- woylie conservation research project.

During 2006–07, the Community Involvement Unit provided training to DEC volunteers with support from specialist services within DEC and external agencies. Training included risk management; the Campground Host forum; basic fire awareness; first aid; cross cultural awareness; the basic wildlife rehabilitators course (regional and metropolitan; advanced and special topics for wildlife rehabilitation); and WILDCARE helpline evaluation and training.

Approximately 664 volunteers completed training coordinated by the Community Involvement Unit during the year.

Volunteers also supported DEC staff with public displays at events including the Perth 4WD and Adventure Show and the Caravan and Camping Show. Approximately 100 volunteers supported the Landcare display at the Royal Agricultural Society Show in October 2006.

#### 2.1.4.5 Liaising and working with Indigenous people

The Aboriginal Heritage Unit (AHU) focuses on education, training and liaison.



### Education and Training

The AHU:

- offered quality educational products to primary schools and the community, and the not-for-profit sector. The growing demand for educational products provides the opportunity to meet the requirements of the secondary school market and increasingly the corporate market
- ensured that an Aboriginal perspective is incorporated into DEC's planning processes. This has been achieved through the development of targeted staff training programs to increase the level of knowledge of the diversity of Aboriginal cultures in Western Australia
- raised awareness about management and protection of Aboriginal culture and heritage and provided a central point of advice for DEC staff regarding Aboriginal involvement on the DEC-managed estate, and
- provided a link between DEC Regional staff and Aboriginal community programs.

### Liaison

The AHU:

- represented DEC in preparation of the Aboriginal Tourism Development Strategy along with key department policies and strategies
- continued to develop links with Aboriginal communities and individuals. Successful outcomes this year have resulted through continued involvement of a local men's group. The group meets to discuss cultural issues and increase the level of knowledge and respect for Aboriginal culture
- continued building relationships and increasing the level of understanding of DEC programs with Aboriginal staff in other government departments, resulting in better partnerships, and
- participated in the delivery of training to Mentored Aboriginal Training and Employment Scheme (MATES) trainees, and continued to support other Aboriginal staff in DEC.

### Education and Training

The AHU continued to deliver quality educational products to schools (pre-primary to secondary), TAFE and universities, community groups (non-profit) and funded organisations. Over the financial year the unit has achieved:

- 66 deliveries at schools, TAFE/universities, community and special events
- presentations to 3673 participants, and
- delivery of three Walyunga Professional Development training programs to 60 staff.

The professional development cultural learning program is an ongoing commitment to cultural development of DEC staff, ensuring better working relationships with Aboriginal communities. The AHU also provided cultural learning for 60 DEC volunteers at Walyunga during March 2007.

#### 2.1.4.6 Business management

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

Experiencing Western Australia's national, marine and regional parks has been made easier for visitors with the new brochure, *National, marine and regional parks in Western Australia – A visitor's guide to the State*, produced in March 2007. The guide outlines activities at more than 100 parks for visitors to enjoy. It has been distributed to every visitor centre and DEC office in the State.

Fee increases for all park passes, including the Day Pass entry fee, were introduced in October 2006. This was the first fee increase since mid 2000. A concession Annual All Parks Pass was introduced with valid concessions expanded from Seniors, Age Pension and Department of Veteran's Affairs cards to include Centrelink Carer Payment or Allowance, Centrelink Disability Support, Centrelink Disability Support Blind and the Companion Card.

The professional development cultural learning program is an ongoing commitment to cultural development of DEC staff, ensuring better working relationships with Aboriginal communities.

National Park Passes are now distributed at 84 points around the State, including DEC offices and some national parks as well as 39 independent retail outlets such as visitor centres.

**Table 16: Fee increases as of October 2006**

National Park Pass type	Old price	New price
Day Pass	\$9	\$10
Holiday Park Pass	\$20	\$35
Annual Local Park Pass	\$17	\$20
Annual All Parks Pass	\$50	\$75
Goldstar Park Pass	\$75	\$100

Distribution figures indicate that the new concession pass is very popular. Demand for Annual All Parks Passes and Goldstar passes decreased in 2006–07. However, there was a 9 per cent increase in the total of 12-month passes for accessing all parks, including 1,891 of the new concession Annual All Parks Passes. There was also a substantial increase in the number of Annual Local Park Passes.

National Park Passes are now distributed at 84 points around the State, including DEC offices and some national parks as well as 39 independent retail outlets such as visitor centres. Online sales facilities are increasing in popularity, with two new independent online retailers.

**Table 17: Breakdown of pass distribution 2006–07**

Type of pass	Number	Change from 2005–06
Holiday Pass (Four weeks)	5,499	decreased 24%
Annual Local Park Pass (One park, 12 months)	8,388	increased 29%
Annual All Parks Pass (All parks, 12 months)	4,360	decreased 18%
Annual All Parks (concession) (All parks, 12 months)	1,891	new
Goldstar Park Pass (All parks, 12 months and 12-month LANDSCOPE subscription)	1,149	decreased 21%

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

A new souvenir Day Pass series was introduced for sale at 13 national parks with staffed entry points across the State in June 2007.

In November 2006, the Tourism and Marketing Unit partnered with the Community Involvement Unit to coordinate an interactive and informative display at the Perth 4WD and Adventure Show.

The unit also coordinated DEC's involvement at the 2007 Perth Caravan and Camping Show held at Belmont Park Racecourse on 8–12 March 2007, which attracted over 37,000 people.

Kalbarri National Park hosted a Tourism WA familiarisation visit for 38 Swiss travel agents in May 2007. DEC participated in the educational workshop series to showcase the State's national parks and provide practical information to encourage increased international visitors.

DEC partnered with the Tourism Council WA to present at 10 half-day accreditation workshops to assist tourism operators to maximise their business potential. DEC's presentation focussed on State-wide licensing and local capital works programs.

The Tourism and Marketing Unit continued to produce and distribute the bi-monthly Touring Western Australia industry e-newsletter for over 1,400 stakeholders in the tourism and travel industry, DEC staff, other Government agencies and local government.

DEC's Tourism Industry Reference Group continued to meet quarterly to generate two-way communication between DEC and the nature-based tourism industry.



In 2006–07, DEC approved 137 requests for entry fee waiver, totalling \$42,279 based on expected visitor numbers (see below) of 12,114 for which entry fees were waived.

**Table 18: Fees waived – visits by region**

Region	Around Perth	Midwest	Pilbara	Kimberley	Warren	South Coast
No. of visitors	7,754	1,085	1,628	510	482	655

The Tour Operator Handbook details licence conditions applicable to commercial tour operators conducting operations on DEC-managed estate. In November 2006, updates to the handbook were printed and distributed to commercial operators.

In April 2007 the Minister for the Environment approved a revised Tour Operator Handbook – Marine, due for release to commercial operators early in 2007–08.

To reduce the cost of administering small credit accounts and the incidence of defaults on credit accounts, DEC requires that operators apply for credit facilities for payment of entry and camping fees. In 2006–07, 43 operators were approved to maintain credit with DEC.

As at 30 June 2007, 356 commercial operations licences were on issue for activities in marine and terrestrial reserves: 310 general 'T' class licences and 46 'E' class licences. The number of commercial operations licences was down from 390 on issue at the end of 2005–06.

'E' class licences apply to operations that must be restricted in number or are in areas that are particularly sensitive. Restricted licences are allocated on a competitive basis, usually through a call for expressions of interest. One expression of interest was conducted this year for the allocation of a licence permitting vessel-based wildlife interaction tours from Monkey Mia in Shark Bay Marine Park.

'T' class licences may be issued on an annual, three- or five-year basis. To accommodate operators who conduct seasonal tours or travel to Western Australia occasionally, the department introduced a two month 'T' class licence at a cost of \$150. This has been well received by the industry with 24 operators taking the opportunity to apply for a two-month licence.

A new email licence renewal system was introduced in December 2006 for 'T' class licence holders, saving considerable time if details remain unchanged from previous applications. Letters and application forms continue to be mailed to operators without Internet access.

Three tour operator accreditation programs are currently recognised and strongly encouraged by DEC to assist in raising standards in the tourism industry: Eco Certification (with business and environmental components); National Tourism Accreditation Program business certification with an optional environmental component); and Green Globe. At the end of 2006–07, there were 45 Eco Certified (42 in 2005–06) and 117 National Tourism Accreditation Program accredited operators (128 in 2005–06).

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

The drafting of amendments to the Forest Management Regulations 1993 relating to the administration and management of apiary sites on Crown land continued.

In September 2006, amendments were made to the Conservation and Land Management Regulations 2002, which will improve DEC's ability to manage recreation and other activities on the lands and waters that it manages.

The review of *Policy Statement No. 18, Recreation, Tourism and Visitor Services*, and its associated guidelines was completed following its release for public comment. The final policy was released in October 2006.

At the end of 2006–07, the Bibbulmun Track Foundation had over 1,700 members and 390 volunteers, of whom 144 are track maintenance volunteers in regional areas.

### 2.1.4.8 Tracks and trails

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

- Karnet Prison crew provided construction labour for capital and maintenance projects on the Bibbulmun Track and continued maintenance tasks on the Munda Biddi Trail throughout the Perth Hills.
- Bunbury Prison crew worked on the development and maintenance of the Munda Biddi Trail in the Collie and Nannup areas and on Cape to Cape Walk Track improvements in Leeuwin–Naturaliste National Park.
- Walpole Work Camp (from Pardelup Prison) continued with maintenance on the Bibbulmun Track within the Frankland District.

DEC and Conservation Volunteers Australia entered into an agreement to provide volunteers for trails maintenance and construction projects in the Perth Hills and Swan Coastal Districts and in regional parks. A total of 26 days of volunteer trails team time was provided on weekends over a six-month period.

#### Trails and recreation publications and activities

A new map was added to the existing three Munda Biddi maps for the Waterous Loop Trail near Waroona. The Bibbulmun Track Map 2 was extensively updated. A new range of postcards depicting Bibbulmun Track landscapes was produced and new map and guidebook display stands were produced for visitor information centres.

Consultation with Canoeing WA continued to produce canoe guide maps for the south west of Western Australia with the first three guides to be released in late October 2007.

A draft standard system of walking track classifications based on Australian Walking Track standards was developed with an associated draft signage and marking system. These have been introduced on new trails in the Walpole Wilderness Area to ensure that the new classifications are communicated effectively to walkers.

A standard system for mountain bike trails classification and signage, based on the International Mountain Bike Association standards, was developed and is in use at the new Goat Farm Mountain Bike Park in Perth Hills District.

#### Bibbulmun Track

The allocation of capital funding for maintenance and improvement works along the Bibbulmun Track in 2006–07 saw the completion of retaining walls at Hewett's Hill campsite; steps and erosion control in Kalamunda National Park; drainage works and protection of the historic well at Mt Dale campsite; construction of duckboarding at Harris River Flats; a new bridge south of Collie; upgrading of rock steps south of Blackwood campsite and hand-built erosion control earthworks north of Balingup (both on very steep sections of trail); upgrading of 15 km of trail on three separate sections between the Donnelly Valley and Lake Maringup; new bunks in campsites; and re-location of the toilet at Torbay campsite.

The Bibbulmun Track was the only Western Australian trail included in Tourism Australia's Top Ten Trails and was voted one of the Top 5 journeys in Australia in Lonely Planet's Blue Lists (featured on SBS TV in June 2007). The track also won the Significant Tourist Attraction category at the 2006 WA Tourism Awards and was highly commended at the 2006 Australian Tourism Awards.

At the end of 2006–07, the Bibbulmun Track Foundation had over 1,700 members and 390 volunteers, of whom 144 are track maintenance volunteers in regional areas.

The Foundation, with DEC assistance, conducted six maintenance volunteer field days around the south west, and held the Bibbulmun Track Team Challenge with 16 teams participating. In addition, over 80 guided events were conducted on the track. A foundation office volunteer was named DEC Volunteer of the Year.

An analysis of data collected from campsite registers revealed that:



- 60 per cent of track users were male and 40 per cent female
- the most popular walks for campsite visitors were two to four days in length
- 135 walkers registered as End to End walkers in 2006–07
- 25 to 44 year olds were the largest group at campsites close to Perth, and
- 45 to 64 year olds represented the largest group along the South Coast.

### **Munda Biddi Trail**

During the year, Munda Biddi Trail projects included:

- completion of the Waterous Loop Trail (60 km) near Waroona (opened in November 2006)
- the Jarrahwood to Nannup Rail Trail (26 km) which is nearing completion, including the restoration of several historic railway bridges
- planning for the construction of a Munda Biddi campsite within Jarrahwood townsite
- construction of a campsite south of Collie
- fabrication and installation of a generic kit bridge on Munda Biddi creek crossings in the Wellington District, and
- continued planning for the remaining trail between Nannup and Albany.

Significant achievements for the Munda Biddi Trail Foundation during the year included the update of the Strategic Plan and appointment of a new Board, Executive Officer and Events Coordinator. Foundation activities included *Try the Trail* events, ride leaders' training, bike mechanics' workshops, women's clinics and expedition planning.

### **2.1.4.9 Regional parks**

Major achievements in managing Perth's regional parks during 2006–07 are listed below.

#### *Planning*

- Work continued to finalise the Woodman Point, Rockingham Lakes and Jandakot Regional Park Management Plans.
- DEC provided help to the Department for Planning and Infrastructure in planning for the establishment of the East Wanneroo Lakes Regional Park.
- A brochure, *Your Guide to Perth's Regional Parks*, was produced and distributed to key stakeholders.

#### *Conservation works*

Water supplementation, cygnet management and overpopulation control of western grey kangaroos were successful at Thomsons Lake Nature Reserve in Beeliar Regional Park. A number of weed control and revegetation projects across the regional park network were completed, in particular:

- in Yellagonga Regional Park at the Beenyup Boardwalk and Luisini Winery (in conjunction with the National Trust)
- in Woodman Point Regional Park as an environmental offset to the nearby Port Coogee development, and
- at Henderson (Beeliar Regional Park) in conjunction with Main Roads WA.

#### *On-ground park improvements*

- Construction of the Canning River Eco-Education Centre commenced in February 2007 near the Kent Street Weir. The centre was funded through the State Government and will be managed by the City of Canning in conjunction with the community. Consultation has begun for interpretation and education services to be offered at the centre.
- Two ammunition bunkers at Woodman Point Regional Park have been fenced and secured to mitigate visitor risk.
- Fencing along Woodman Point View (Woodman Point Regional Park) was completed in conjunction with the Department of Sport and Recreation.



In partnership with the Office for Seniors Interests and Volunteering, a 12-month program of *Healthy Parks, Healthy People* park-based activities for seniors has been developed and implemented. In addition, activities have been conducted with Diabetes WA and the Asthma Foundation of WA.

- Stage 1 works to construct bridle and pedestrian walk trails in Jandakot Regional Park were completed.

### Community involvement

The Regional Parks Unit continued to administer eight Community Advisory Committees for regional parks (one each for the parks on the Swan Coastal Plain and one for the parks in the Darling Range). A total of 43 committee meetings were held for the year.

Feedback received from a survey of committee members indicated that satisfaction levels are high and the committees are functioning well.

The Regional Parks Community Grants Scheme was successfully administered for the fifth year. A total of \$50,000 was offered in 2006–07. A community workshop was held to assist in the assessment of the applications and 19 community groups were successful in securing funding for a variety of projects including, rehabilitation works, weed control works and education programs.

Volunteers contributed 8,297 hours undertaking works primarily related to weed control and rehabilitation within regional parks during the year.

Further community consultation was undertaken to finalise names for four regional parks and three national parks in the Darling Range.

### Healthy Parks, Healthy People

In partnership with the Office for Seniors Interests and Volunteering, a 12-month program of *Healthy Parks, Healthy People* park-based activities for seniors has been developed and implemented. In addition, activities have been conducted with Diabetes WA and the Asthma Foundation of WA. The program was also involved with the Department for Planning and Infrastructure's *TravelSmart* program in creating a *TravelSmart* guide to Yellagonga Regional Park in May 2007.

#### 2.1.4.10 Other initiatives

##### Memoranda of Understanding

DEC continued its successful partnership with the Department of Corrective Services through the long-standing Memorandum of Understanding (MoU) 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 Walk Track, as well as a range of projects including weed removal, cyclone cleanup and recreation facility maintenance and development in many parks and reserves around the State, including Millstream-Chichester, Mirima, Porongurup and Leeuwin–Naturaliste national parks.

The MoU partnership between DEC and *Leave No Trace* continued, and a number of collaborative projects to promote minimal impact visitor behaviour were undertaken during the year, ranging from signage and publications to training programs.

In August 2006, a MoU was signed between DEC, Conservation Volunteers Australia (CVA) and Rio Tinto Future Fund to facilitate the *Future Volunteers* program. *Future Volunteers* is underpinned by a \$1 million commitment by the Rio Tinto WA Future Fund to fund CVA to undertake projects primarily on DEC-managed lands over a three-year period. The partnership will see projects undertaken in the Kimberley and Pilbara regions and regional parks in the metropolitan area. Under the MoU this year, there were 879 volunteer project days (a total of 7,032 volunteer hours) on DEC-managed lands. This included the construction of 1,200 m of walking track; maintenance/repair of 13,155 m of walking track and 3,800 m of boardwalk; 6.5 sq km of weed control work; 2,043 kg of rubbish removed; 21 surveys conducted; and 33,964 km of vehicle travel associated with projects.

##### Visitor use monitoring

Visitor use was monitored at 317 sites using traffic classifiers and counters, pedestrian counters, observation surveys and ticket sales in national parks, State forest areas and reserves throughout the State. The total number of





visits to lands and waters managed by DEC during the year was 12,063,000, an increase from the 11,842,000 visits recorded during 2005–2006.

The total number of visits to lands and waters managed by DEC during the year was 12,063,000, an increase from the 11,842,000 visits recorded during 2005–2006.

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

Year	Number of data collection sites	Total number of visits (million)
1998–1999	149	8.7
1999–2000	158	8.9
2000–2001	158	9.7
2001–2002	185	9.8
2002–2003	190	10.2
2003–2004	200	10.92
2004–2005	246	10.99
2005–2006	255	11.84
2006–2007	317	12.06

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

#### Visitor survey program

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

The 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, their overall level of satisfaction during their visit, the main purpose of their visit and the activities undertaken during their visit. The information collected aids in the planning and management of these recreation areas for site planning and design, visitor communications, business and marketing plans and performance evaluation.

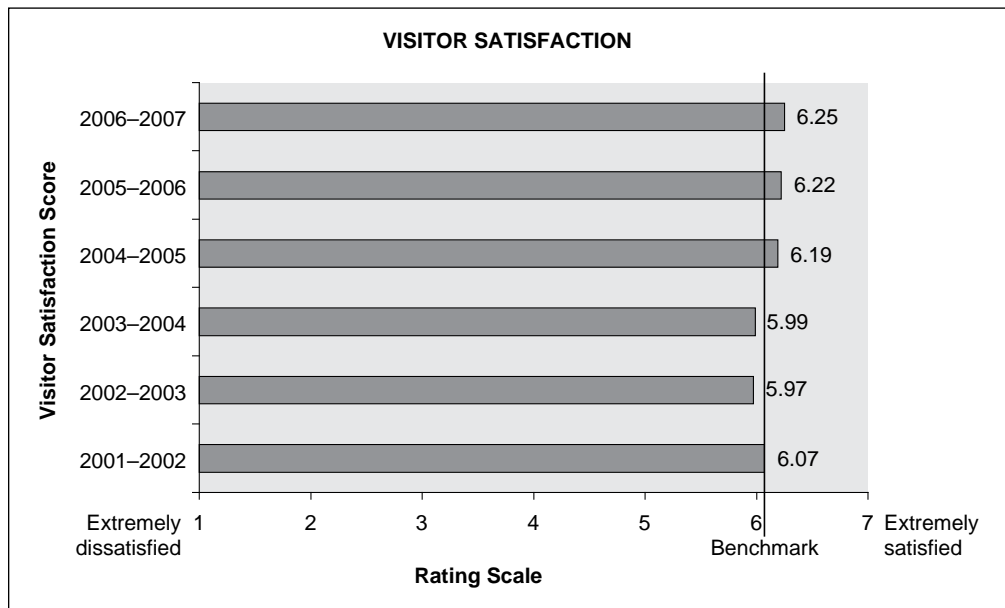
As a result of a review of the visitor survey program, a more user friendly and appealing survey form was distributed to visitors to parks across the State during 2006–07, and DEC's campground hosts and other volunteers distributed and collected completed forms from respondents, in addition to DEC staff conducting this task.

This survey program enhances the rigour of measuring the overall level of visitor satisfaction with DEC-managed recreation areas and provides a benchmark Visitor Satisfaction Index (VSI) and the collection of other information useful for planning and management purposes. The survey was conducted on an ongoing basis across a broad range of parks, reserves and forest areas to account for the geographic spread of these areas and associated seasonal variation in visitor patterns across the State.

Respondents to the 2006–07 survey program displayed the following characteristics:

- 44 per cent of respondents were from WA, 39 per cent from interstate and the remaining 17 per cent from overseas
- the majority of respondents surveyed were visiting with family and/or friends as opposed to traveling on their own, with an organised group or on a tour
- the largest proportion of respondents were in the 40–59 year age bracket (35 per cent of visitors), followed by the 60 and over (29 per cent) and the 25–39 year age brackets (20 per cent), and
- 73 per cent of respondents overall were first time visitors to the recreation areas surveyed.

As part of the survey program, a benchmark Visitor Satisfaction Index has been adopted in order to compare visitor satisfaction levels each year. This benchmark has been set at 6.1 on a rating scale from 1 (extremely dissatisfied) to 7 (extremely satisfied). The 2006–07 index averaged from visitor responses to the survey at the selected parks, reserves and forest areas around the State was 6.25, which is above the benchmark of 6.1. This is illustrated in the Visitor Satisfaction graph, along with the results from the previous years of the survey program.



An index figure of 6.25 equates to 87.5 per cent. This exceeds the target figure set for 2006–07 of 85 per cent. The survey also asked visitors to rate the condition and management of the site they visited, the activities in which they participated and their



overall experience at the site. The visitor experience ratings graph indicates that the attractiveness of the area, professionalism and knowledge of DEC staff, the enjoyment derived from leisure activities and the condition and management of facilities received the highest ratings from visitors' responses to this part of the survey. These were also the highest ratings given from responses to the surveys conducted last year.

### **World Heritage**

DEC advanced the World Heritage nomination for the Ningaloo Reef-North West Cape area. Following community consultation, analysis of proposal submissions and additional consultation with affected landholders, a preferred boundary was finalised by the State. In the first half of 2007, a nomination request was submitted to the Commonwealth for its consideration and support to finalise and submit a nomination to the international World Heritage Committee.

### **Road classification system**

The department continued to progress the development of its road classification and asset management system, based on the ROMAN Pavement Management system which is used by the majority of local government authorities throughout Western Australia.

The engineering firm OPUS International Consultants Limited was engaged through a competitive tendering process to carry out a field assessment and collect and record information on sealed and unsealed roads and associated road assets in the Swan, South West and South Coast regions. The assessment followed on from data collection undertaken in the previous year in the Warren Region by engineering firm Cardno BSD Pty Ltd, and was done in accordance with the new classification. In particular, the consultant was required to categorise and describe nominated department-managed roads, bridges and associated assets and to identify the location and nature of any risks to road users that would not otherwise be identified by the ROMAN inventory process.

The data collection program will be extended to a further five DEC regions in 2007–08 and 2008–09 to assess the remainder of the DEC-managed road network. When the data collection program is completed in 2009–10 and the new classification system is fully operational, it will help the department:

- identify and plan strategic road access requirements to meet current and future needs across the public conservation estate
- identify high priority road improvement and preventative and routine maintenance works
- periodically assess and report on the value of the department's road and bridge assets, and
- identify and mitigate potential road risks and allocate available funding.

This initiative will assist DEC's continuing collaborative work with local government authorities and Main Roads WA on inter-regional road construction and maintenance work across organisational boundaries.

### **Involvement with the Western Australian 4WD Association and Track Care WA**

During the year, DEC continued to work with the Western Australian 4WD Association and member clubs and with Track Care WA to promote the responsible use of the public conservation estate by four wheel drivers and other motorised visitors. Both of these peak bodies actively supported the department through track stabilisation and clean-up projects and other environmental care initiatives. This partnership, which dates back a number of years, has been enshrined in a formal Memorandum of Understanding that was renewed during a 4WD workshop in August 2006. A new *Adopt a Track* initiative has been embraced by clubs: three tracks have been adopted and more clubs are interested in joining the scheme. DEC is continuing to work with the Western Australian 4WD Association to identify and secure land suitable for their driver training program.

### 2.1.4.11 Parks and visitor services regional activities

#### Goldfields

- Boardwalk and viewing platform at Cave Hill Nature Reserve completed with the help of conservation employees from Perth Hills work centre.
- Upgrade of Goongarrie homestead camping area and facilities began.
- Maintenance to Yeo Lake Nature Reserve facilities and the shed at Wanjarri Nature Reserve completed.
- The upgrade of Lake Mason and Lorna Glen homesteads and sites continued.
- Ongoing Main Roads WA funding upgraded 14 km of access road into Goongarrie homestead and the creek crossing into Jaurdi homestead for all-weather access.
- Goldfields region continued effective and meaningful liaison with the Goldfields Land and Sea Council, the Ngaanyatjarra Council and Aboriginal communities for joint management of Gibson Desert Nature Reserve and Great Victoria Desert Nature Reserve. Works included site clearance, associated interpretation at developed sites, installation of hand pumps, roading, burning, fencing and completion of a biological survey.
- Volunteer Campground Hosts and caretakers engaged to help in managing homesteads on former pastoral stations now managed by DEC including Goongarrie, Lorna Glen and Lake Mason.

#### Kimberley

- Major upgrade of sections of the Gorge Road in Purnululu National Park completed including culverts, re-sheeting, crowning and drainage works.
- Kimberley region continued to engage Campground Hosts volunteers at Purnululu National Park and volunteer merchandise/boat attendants at Geikie Gorge National Park.
- Visitation grew steadily at Purnululu National Park with an increase of eight per cent in total visitation for the year.
- Tunnel Creek hybrid toilet system completed in June 2007: designed by DEC's Recreation and Landscape Unit, built and installed by Jarrahdale work centre.
- Hybrid power stations installed at Windjana, Geikie Gorge and Mitchell River national parks and King Leopold Range Conservation Park (Silent Grove), replacing diesel generated power supplies.
- Improved signage and vehicle circulation facilities installed at Mitchell River National Park to help cater for the introduction of camping fees.
- Indigenous joint management progressed with the appointment of the Miriuwung-Gajerrong Coordinator to aid with the implementation of the Ord Stage 2 Final Agreement.
- Fall arrest anchor installed at Prince Regent Nature Reserve (part of regional Visitor Risk Management program for safer access to remote sites).

#### Midwest

- Construction works continued on the Pinnacles Desert Discovery and Interpretive Centre.
- Stockyard Gully Cave Geophysical Survey conducted and visitor safety actions implemented.
- Three-year coastal assessment and restoration project continued in partnership with Curtin University, with Northern Agricultural Catchments Council funding.
- Hot tub area in François Peron National Park redeveloped to mitigate visitor risks, and new information panels installed at the park entry station.
- *Wonderfully Wild* activity programs conducted at Monkey Mia during the April, July and October school holidays.



- Seasonal Campground Hosts and Homestead Hosts placed at François Peron and Kennedy Range National Parks, Coalseam Conservation Park, Hamelin Pool telegraph station and Mt Augustus tourist resort.
- Three-year volunteer program with Subaru 4WD Club continued to assist with the maintenance and improvement of facilities at Lochada, Karrara, Kadji Kadji and Muggon rangeland properties.
- Outdoors WA, with DEC help, assessed and reported on management of abseil activities and visitor risks associated with hiking in the Murchison River gorge.
- Monkey Mia dolphin interaction experience review conducted with stakeholder input, and business plan commissioned for the proposed Monkey Mia Conservation Park.

### **Pilbara**

- Visitor Services Plan for the Ningaloo coast and Coral Bay Foreshore Plan commenced.
- Yardie Creek walk trail constructed in Cape Range National Park.
- Sanctuary zone markers and 20 dive site moorings installed in Ningaloo Marine Park.
- Karijini Ecoretreat, a tent resort developed by traditional owners, opened in Karijini National Park in April 2007.
- Whale shark guiding courses developed and presented to help operators in Exmouth and Coral Bay deliver more informative and relevant interpretation.
- Park Council meetings held for Millstream, Rudall River and Karijini national parks, Coral Coast, and Burrup Peninsula.
- Twelve indigenous people (Baiyungu and Bardi) trained for the Ningaloo Turtle Program.

### **South Coast**

- Pabelup Drive reconstruction and maintenance completed.
- Porongurup Scenic Drive upgrade completed.
- Safety devices trial for rock fishers at the Salmon Holes at Torndirrup National Park extended a further six months.
- Indigenous liaison continued with the Great Southern Development Commission and Department of Indigenous Affairs.
- Mt Martin and Gull Rock National Park Community Working Group Committee met for the first time, as did the Conservation Reserves of the Albany Coast Management Plan Advisory Committee.
- Flood and fire damage at Cape Le Grand, Cape Arid and Stokes national parks and Woody Lake Nature Reserve costed and temporary mitigation works completed. Detailed planning for full restoration works began.
- All site works associated with Stage 2 of the Skippy Rock campground redevelopment project at Stokes National Park completed including new shade shelters and replacement of barbecue stolen from the day use area.
- Norseman Information Shelter replaced and upgraded by DEC in partnership with the Shire of Dundas.
- Lake Windabout and Lake Wheatfield access roads (2 km) re-sheeted.
- Consultation continued with the Goldfields Land and Sea Council and the Esperance Nyoongar Claimant Group to progress the establishment of a Demonstration Park Council at Cape Le Grand National Park and to discuss a range of Indigenous and environmental issues within the Esperance District.

### **South West**

Visitor risk management remained the region's highest priority, with emphasis on cliff and karst areas of Leeuwin–Naturaliste National Park. A consultant geologist was engaged to conduct inspections at high visitation cliff sites in Leeuwin–Naturaliste National Park (Huzzas, Hamelin Bay and Wilyabrup cliffs). DEC continued to work with local fishing groups to install warning signs and anchor points at popular fishing sites along the Leeuwin–Naturaliste coast. Formal annual

inspections of all recreation sites were conducted, and quarterly and annual reviews to monitor progress on achieving risk mitigation targets were completed.

EcoEducation programs continued at Wellington Discovery Forest and the Margaret River Eco Discovery Centre. Staff conducted 117 excursions and seven professional learning days, including the new *Fire—a force for life* program. At Wellington Discovery Forest a new excursion to observe plants of cultural significance was developed with local Nyoongar people to cater for schools involved in Curtin University's *Plants for People* initiative.

The *Caring for Places* package was presented at several professional learning events. New multimedia tuart resources were launched including CD ROMs, a field kit for loan and posters for middle childhood. A *Western Shield* kit has been developed enabling EcoEducation to reach classes that are not currently participating in excursion activities and to increase promotion and encourage uptake of excursions. The increasing popularity for excursion activities during school holiday times led to the development of a new holiday program, *Forest Fun*.

In Wellington National Park:

- Major road upgrade program continued, in conjunction with Collie and Dardanup shires, with Falcon and Pile roads surveyed and engineered in preparation for sealing later in 2007.
- Handrails installed and stone steps repaired on the lookout path at Wellington Dam.
- Plan for maintenance and development of mountain bike trails prepared in conjunction with SW Mountain Bike Club and WA Mountain Bike Association.

In Leeuwin–Naturaliste National Park:

- Upgrades continued on the Cape to Cape Track: 1.2 km hard surfaced with hotmix, and timber boardwalk access from Cape Naturaliste to Sugarloaf Rock for people with disabilities (funded by DEC and grants from Australian Tourism Development Program, Coastwest and Lotterywest).
- New stairway and lookout providing panoramic coastal views at Sugarloaf Rock completed.
- Newly constructed access road at Hamelin Bay bypasses caravan park, significantly reducing day visitors traffic through the caravan park and enhancing amenity and safety for park visitors. Boat ramp, car and boat trailer parking, and pedestrian paths upgraded.
- Environmentally friendly, universal access toilet facility constructed at Canal Rocks with minimal visual impact.

### Swan

- Cabaret Cave redevelopment at Yanchep National Park completed including walkways from car park to Cave entrance; limestone retaining walls, balustrading and handrails; refit of room in the Cave to be used again as a function venue.
- Gloucester Lodge Pool structure preserved by infilling; surrounds landscaped to integrate with the nearby buildings; area made safe; water leaching into Gloucester Lodge stopped.
- Perth Hills National Parks Centre, in Mundaring National Park, opened in April 2007. The Centre attracted 13,260 visitors this year, an increase of 7,700 over last year.
- Fred Jacoby Park Stage 2 new access road, car parking facilities and toilet completed. Stage 3 walkways designed and initial works started.
- Stage 2 of mountain bike park at 'The Goat Farm', west of Greenmount National Park, completed: shelter and toilet facilities, removal of old trails, new trail restoration in conjunction with Perth mountain bike community.
- Stage 1 redevelopment of Scarp Pool at Lane Poole Reserve completed: resurfacing road access and car park; new furniture and signage.
- Nine sites offered 47 seasonal programs in natural environments around the metropolitan area. Nearly 4,000 people participated in activities managed by DEC.



## Warren

- A six kilometre stretch of road on D'Entrecasteaux Drive, from Windy Harbour to Point D'Entrecasteaux, sealed to provide 2WD access to three significant coastal sites in D'Entrecasteaux National Park.
- The Coalmine–Knolls precinct at Walpole redeveloped; new parking, recreation and pedestrian access infrastructure.
- The Swarbrick Walpole Wilderness Discovery Centre opened.
- Significant planning and construction works at Mt Frankland and Valley of the Giants–Tree Top Walk Discovery Centres completed.
- A magpaper, A Guide to the Southern Forests, redesigned and produced for visitors to the area.

## Wheatbelt

- Access road and parking facilities upgraded at Williams Nature Reserve nature interpretation and day-use visitor facility, a jointly funded project with the Shire of Williams.
- The Congelin campground facilities upgraded including a new shelter and campground access road upgrade. Toyota Land Cruiser Club of WA helped clean up rubbish from the campground and woodland areas.
- Master plan incorporating future proposals to upgrade Congelin campground to cater for increased visitor numbers to Dryandra Woodland began.
- Visitor risk assessments completed for sites in the Wheatbelt Region.
- Work commenced at the Barna Mia nocturnal animal visitor centre to install solar power generation to enhance visitor experience and ensure environmentally friendly future power generation.
- Work completed at Frog Nature Reserve to provide visitor information and address visitor risk issues associated with an historic well.
- Work commenced at Dingo Rock Nature Reserve to realign the access road and install bollards to manage traffic.
- Toilet established at Yorkrakine Rock Nature Reserve, Tammin Shire, to complement existing facilities, with the help of Department of Corrective Services prisoners.

### 2.1.5 Service 5: Astronomical Services

**Service description:** Through the Perth Observatory, providing public information and awareness directly beneficial to the Western Australian community, and contributing to scientific research in astronomy by cooperating with national and international institutions in the acquisition, analysis, interpretation and dissemination of information.

#### Performance summary

	2006–07 Estimate \$'000	2006–07 Actual \$'000	Variance \$'000
Expense by service	1,238	1,130	(108)

KEI	2006–07 Target	2006–07 Actual	Variance
Cost of providing astronomical services per head of Western Australian population	\$0.52	\$0.54	\$0.02

### Performance highlights

- \$350,000 capital works funding obtained for a dedicated building to house a larger telescope for research and public viewing.
- A 76 cm telescope acquired, the largest telescope regularly used in star viewing in the Southern Hemisphere.
- Successfully trialled a new outreach activity, Aboriginal Astronomy Nights.
- Three supernovae discovered.
- Operation of an automatic focuser for the major telescope commenced.
- Coordinated public viewing of Comet McNaught, the brightest comet in over 40 years.

#### 2.1.5.1 Public viewing and participation

Astronomy caught the attention of the general public with the appearance of Comet McNaught in January 2007, the brightest comet in 40 years. Over 700 people flocked to a local beach to view the spectacle with Observatory staff. The Observatory was fortunate to secure the comet's discoverer, Robert H. McNaught, to present the 2007 Summer Lecture to 170 people who were treated to inside information about the discovery of the comet.

In 2006–07, 5,270 visitors attended star-viewing nights and daytime guided tours. This decrease on the previous year was most likely due to daylight saving meaning late start times for viewing nights.

A new star viewing session, *Aboriginal Astronomy Night*, was successfully trialled and will be continued in the future. This activity was held in collaboration with DEC's Aboriginal Heritage Unit, who provided an indigenous perspective on the night sky while the Observatory provided star viewing with its telescopes.

Star viewing was provided to rural and metropolitan schools and communities with the Observatory's Astronomy Field Night Program. Total attendance at 16 field nights was 2,045, a substantial increase on the previous year due to public interest generated by Comet McNaught. In addition, 97 lectures and presentations were attended by 2,191 people, a significant increase over last year. These lectures included the majority of a multi-disciplinary first-year unit, and second-year and Honours-year university units, and general talks to primary school students and community groups.

Public awareness of the Observatory is high: 26,100 people (28,361 in 2005–06) attended talks and astronomy field nights, or visited or telephoned for information (12,348). Observatory staff informed the public of astronomical events in 67 radio and 11 television interviews, and 123 newspaper articles.

Customer satisfaction remained high as in previous years, with 98 per cent satisfied with their visit or service provided by the Observatory and 97 per cent satisfied with the educational quality of the services in which they participated.

Volunteers assisted permanent staff, notably with Star Viewing Nights, archiving and at displays. Volunteer assistance totalled 0.7 FTEs in 2006–07, and continues to make an important contribution to the Observatory output.

There were over 1,500,000 hits on the website, nearly 20 per cent during Comet McNaught. A new online development was a database that invites the public to record observations of unusual sightings on the website. Observatory staff can offer explanations and provide a scientific record of unusual astronomical sightings.

#### 2.1.5.2 Research activities

The Real Astronomy Experience Internet Telescope (a collaboration with University of California, Berkeley, and Lawrence Hall of Science, USA) was used regularly by students and scientists world-wide. In particular it was successfully used by physics students at Curtin University as part of their practical astronomy course. A second Internet telescope provided by the Oil Region Astronomy Society and Clarion University, USA will be commissioned during the 2007–08 financial year. Our collaborators consider that we have developed one of the most powerful robotic telescope systems in the





world. Perth Observatory developed the software that enables the telescope to acquire images in response to requests from real-time international users (mainly museums), and requests submitted to a queue, as well as being operated under local control in Bickley. This software was the basis of a refereed scientific publication (Fadavi, M, Verwee, A, Aymon, J, Merlin, D, Situ, K, Pennypacker, C, Biggs, J, White, G, Gould, A, Greenberg, G, Hoette, V, McCarron, K, Archer, K, Pino, F, Hibbs, M, Ford, M, Wetsch, J 2006, *Piloting a network of small telescopes*, *Astronomische Nachrichten*, Vol. 327, pp 811–813).

Efficiency of current equipment was improved with the commissioning of an automated focuser for the 24-inch Lowell telescope. This reduces the need for human involvement in telescope focusing and has nearly doubled the number of correctly-focused observations possible in a given night.

Another refereed publication was produced in the PLANET (Probing Lensing Anomalies NETwork) collaboration and concerned spatially resolving a giant star approximately 30,000 light years away. Perth Observatory astronomer Andrew Williams was seconded to install the Observatory telescope control system on the collaboration's Swedish telescope in Chile.

More variable stars were studied, in particular, the central stars of three planetary nebulae (old stars surrounded by a shell of ejected gas). A search for planets orbiting distant stars was conducted in collaboration with astronomers at James Cook University. This produced one refereed scientific paper that described the technique developed.

The ongoing supernova search program was very successful with three new discoveries after the number of galaxies monitored was increased.

### 2.1.5.3 Capital works

Research activities were boosted with a \$350,000 capital works allocation to house a 1-metre aperture telescope from Lowell Observatory (the USA's largest private astronomical observatory). Lowell has been a partner of Perth Observatory since the establishment of their 24-inch telescope at Bickley in 1971. They are very confident that moving the valuable 1-metre telescope to Bickley will realise its significant potential, given Perth Observatory's track record of maintaining the 24-inch telescope in near-new condition, upgrading it to computer control, and Internet telescope access technology applications.

The 1-metre telescope will deliver new science projects not feasible with the 24-inch telescope and better support existing science programs. The 1-metre has far more light gathering power than existing telescopes in Western Australia, which will facilitate an effective program of spectroscopy (a detailed study of the light emitted by an object). It will also complement the Square Kilometre Array project being considered for siting in Western Australia.

The 1-metre telescope will be an important training tool for local universities with its capacity for photometric, imaging and spectroscopic programs. The Observatory has a long history of providing meaningful public programs and the new telescope will be incorporated into these activities.

In 2006–07, \$60,000 was allocated for this project for site preparation, a geotechnical survey, some preliminary engineering design and the excavation for the telescope's supporting pier. The \$290,000 remainder of the capital works funding will be used to design, fabricate and construct the walls and dome in 2007–08.

## 2.1.6 Service 6: Air Quality Management Plans and Air Quality Monitoring

**Service description:** 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).

Our collaborators consider that we have developed one of the most powerful robotic telescope systems in the world.

## Performance summary

	2006–07 Estimate \$'000	2006–07 Actual \$'000	Variance \$'000
Expense by service	7,039	6,390	(649)

KEI	2006–07 Target	2006–07 Actual	Variance
Average cost per air monitoring station	\$414,059	\$456,451	\$42,392

## Performance highlights

- Implemented the Perth Air Quality Management Plan with major initiatives aimed at reducing smoke emissions, including Phase 2 of the Wood Heater Buy Back program.
- Implemented the Diesel National Environment Protection Measure including emissions testing of the public bus fleet, selected light and heavy diesel trucks and a technical training/education program.
- Implemented major air quality investigations at Wagerup.
- Developed air quality management plans for the key regional centres of Port Hedland, Wedgefield and the Collie basin as a strategic context for addressing air quality issues.
- Undertook targeted monitoring at selected regional and industrial locations.
- Implemented the Air Toxic program in Perth and regional centres.
- Implemented National Environment Protection Measure monitoring.

### 2.1.6.1 Perth Air Quality Management Plan

The Perth Air Quality Management Plan (AQMP) was launched in December 2000. It details 126 actions to ensure that clean air is achieved and maintained throughout the Perth metropolitan region over the next 30 years. The Perth AQMP seeks to reduce the emission of air pollutants that are causing occasional episodes of unacceptable air quality currently and by preventing the development of future air quality problems. The AQMP aims to steadily improve Perth's air quality to a level that will not negatively impact on the environment or on the health of the community.

The Implementation Strategy has consolidated linked actions from the Perth AQMP into initiatives for an integrated approach to targeting air quality issues.

During 2006–07 DEC focused on vehicle emissions, fuel quality, haze from domestic wood heaters and health related air quality research as well as ongoing air quality monitoring and campaign air sampling programs.

#### Vehicle emissions

During 2006–07, DEC continued to implement the *CleanRun* vehicle emissions reduction program to improve air quality. The *CleanRun* program involves the following initiatives:

- A communication/education campaign
- In-service and apprentice mechanic training
- Vehicle emissions testing
- Environmental verification
- Smoky vehicle reporting.

DEC continued to implement a comprehensive communication and education strategy. Activities over the past year included a public launch with an opportunity to view the emissions testing equipment in operation, development of the *CleanRun* webpages, a publication series and the incorporation of key messages into existing



community education programs such as *TravelSmart* and *AirWatch*. DEC has begun a community-based social marketing trial to reduce diesel vehicle emissions by encouraging behaviour change in owners and operators of diesel vehicles.

DEC entered into an agreement with Swan TAFE to incorporate emissions testing, pollution control maintenance and installation into apprentice mechanic training courses. DEC has been working with the TAFE to develop an in-service mechanic training package that offers practical advice on the causes of diesel pollution and how emissions can be managed. This training will be provided free of charge.

Diesel emissions testing of Public Transport Authority (PTA), school and private buses and private trucks was completed in September 2006. The testing used the DT80 test method, established under the Diesel National Environment Protection Measure. A total of 104 PTA buses, 31 school buses, seven private buses and 25 private heavy duty trucks were tested over six weeks, allowing comparison with national standards. Thirteen PTA buses failed the emissions test for oxides of nitrogen (NO<sub>x</sub>). Following tuning, all buses passed a re-test. All school and private charter buses passed the test. Only one of the private trucks failed the test, with excessive particle emissions. The final report detailing the results of this phase of testing is available from DEC's website.

In February 2007, an assessment of vehicle exhaust emissions using advanced on-road remote sensing technology at six sites around Perth was completed. Vehicle emissions were measured from over 14,000 vehicles which drove through a roadside sensor, measuring the amount of pollutants emitted. Drivers were given a 'good', 'fair' or 'poor' reading on a sign as they drove past. A report comparing Perth emissions testing results with Brisbane and Sydney, where similar testing occurred, will be available late in 2007. The remote sensing technology was used during a community information day on 24 February 2007 where an estimated 300 individuals had their vehicle checked for emissions free-of-charge by qualified mechanics.

The Smoky Vehicle Reporting Program integrates the 'ten second rule' for smoky vehicles under the Road Traffic (Vehicle Standards) Rules 2002 into a public reporting system. After review in 2006, the program was expanded to engage more people and adopt a firmer enforcement approach for repeat offenders. The program was enhanced with a new number 1800 0 SMOKY (1800 076 659) introduced in August 2006 to make it easier for people to report smoky vehicles. The future success of the revised program will rely on the involvement of the community, as well as other government agencies such as the Department for Planning and Infrastructure and the WA Police Service.

### **Fuel Quality**

The Commonwealth Government introduced new national standards for petrol and diesel (*Fuel Quality Standards Act 2000*) on 1 January 2006. These new standards further align with the WA Environmental Protection (Diesel and Petrol) Regulations 1999. However, the maximum allowable content of aromatics and methyl tertiary butyl ether are more stringent within the Western Australian regulations.

A review of whether Western Australia should align with national legislation or continue to maintain its own regulation is being finalised. This review process included targeted stakeholder and broader community consultation and commissioning a consultant to evaluate the economic implications (costs and benefits) of implementing a number of amendment options.

A final position paper is being drafted and is expected to be forwarded to the Minister for consideration by December 2007. DEC will continue industry consultation to investigate amendment options and ensure that any changes to the Western Australian regulations occur in a managed and strategic way.

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

DEC continues to implement a range of initiatives to manage and reduce winter haze in Perth. The Haze Reduction Initiative of the Perth AQMP aims to reduce emissions contributing to haze formation, including those from domestic wood

The remote sensing technology was used during a community information day on 24 February 2007 where an estimated 300 individuals had their vehicle checked for emissions.

### DEC's Wood Heater Replacement Program is a \$400,000 initiative, offering rebates as an incentive to residents of the Perth Metropolitan Area.

heaters. These actions include wood heater replacement programs, a policy options consultation paper, environmental health officer training, wood heater audits and enforcement, expansion of school-based education, and haze alerts.

The Minister released the wood heater policy options for consultation on 23 May 2007. The wood heater policy options paper covers the environmental and health issues associated with wood smoke mitigation. Recommendations for action over the next five years were presented for consideration and public comment until 3 September 2007. Initiatives include monetary incentives for people to surrender second-hand wood heaters or convert to alternative heating systems and a proposal to require the removal of a non-compliant wood heater when a house is sold.

DEC's Wood Heater Replacement Program offers an economic incentive to people using wood heaters or fireplaces as their main home heat source to convert to an alternative heating source. In response to the success of the 2006 program, which offered a total of 400 rebates, the 2007 Program was launched on 23 May 2007. This is a \$400,000 initiative, offering 800 rebates to residents of the Perth Metropolitan Area. As with previous replacement programs, participants must retrofit a flued or ducted gas heater to be eligible for a one-off rebate of \$500. An additional \$100 Kleenheat gas voucher is available for LPG gas systems. The expansion of this year's program is in part due to financial assistance (\$100,000) from Alinta.

DEC, with assistance from the Department of Health, continues to offer training to local government officers and final year university students responsible for responding to domestic wood smoke complaints and for implementing the nuisance provisions of the *Health Act 1911*. Two one-day training sessions were offered in May 2007 with information on the impact of wood smoke and how emissions can be reduced. Guidance was provided on the interpretation, use and enforcement of the revised legislation. Practical sessions showed the use of moisture meters and methods to effectively light fires to reduce smoke emissions.

Audits of 29 wood heater retailers were completed in the Perth metropolitan region and 13 retailers in targeted regional areas to determine compliance with relevant Australian and New Zealand Standards (AS/NZS 4013:1999) in 2006 and 2007. A letter was sent to all audited retail outlets, outlining their results and the action that must be taken to resolve non-compliance. Follow-up inspections occurred and five infringement notices were issued to retailers where non-compliant wood heaters were still being offered for sale.

The Environmental Protection (Domestic Solid Fuel Burning Appliances and Firewood Supply) Regulations 1998 are a key component for promoting positive action from the wood heater industry to reduce wood heater emissions. DEC ran newspaper advertisements during 2007 to increase public awareness that these regulations also apply to the sale of second-hand wood heaters.

Negotiations continue with the Commonwealth Department of the Environment and Water Resources, other State environment agencies, Australian Standards committee and the wood heater industry to drive improved standards and compliance of wood heater manufacture and sale.

Haze alerts continued to be issued between June and September each year. If a haze event is predicted, DEC informs the Bureau of Meteorology. The Bureau verifies this prediction and if confirmed, a haze alert is issued to all media outlets in Perth. One haze alert was issued during 2006–07.

### Health-Related Air Quality Research

DEC is involved in the Cooperative Research Centre for Asthma and Airways Project on Urban Emissions and Health Outcomes. As part of this research project, DEC is conducting air sampling of particulates at three sites along a major transport corridor in the Perth metropolitan area. Monitoring began in May 2007 for a 12-month period. The resulting data will be used to develop exposure metrics for epidemiologic studies and will be available in early 2008.



### 2.1.6.2 Regional Air Quality Management Plans

#### Collie and Kalgoorlie

DEC continued work on air quality management strategies for Collie and Kalgoorlie.

In May 2007 an issues paper for a strategic framework for air quality management in Collie was prepared. The issues paper contained nine strategic recommendations for Collie's air quality management.

An air emission inventory for Collie has now been formulated. Results indicate that for the Collie region, the dominant sources of oxides of nitrogen, particles and sulphur dioxide are from human activities, while total volatile organic compounds are dominated by natural sources.

Work on updating and improving the Kalgoorlie aggregate air emission data began in November 2006. The new air emission inventory domain includes the areas of Coolgardie and Kambalda in addition to Kalgoorlie.

A home heating survey was conducted in Collie and Kalgoorlie in July 2006 to investigate the types of home heating used, the prevalence of wood heaters, and how likely residents may be to change from wood heaters to an alternative source of heating.

Community engagement activities have been planned in the area focusing on air quality management and closely related environmental issues. In August 2006, a poster competition involving Amaroo and St Bridgid's primary schools was conducted to outline how to keep the air in Collie clean and how to save energy. An award ceremony was held at Amaroo Primary School in October 2006 and DEC provided the schools with Lego eLabs kits which allow the students to build systems powered by solar and wind energy and additional resources for fostering environmental education.

### 2.1.6.3 Air quality monitoring

#### Monitoring stations

Ten metropolitan and four regional air quality monitoring stations were operated by DEC throughout Western Australia to monitor pollutants such as carbon monoxide, nitrogen dioxide, ozone, sulphur dioxide and particles as  $PM_{10}$ <sup>3</sup>. Air quality is measured against the National Environment Protection (Ambient Air Quality) Measure standards. Particles such as  $PM_{2.5}$ <sup>4</sup> are monitored to gather sufficient  $PM_{2.5}$ <sup>4</sup> data nationally to facilitate a review of the current National Advisory Reporting Standard.

The data are used to report on ambient air quality via the annual *Western Australia Air Monitoring Report* as well as the *State of Environment Report*, and are placed on the DEC website. During 2006–07, the data were updated twice daily.

#### Port Hedland

Results from the January to May 2006 air quality sampling program in Port Hedland were analysed and published on DEC's website in March 2007. The study found volatile organic compound levels were low and a further detailed investigation is not required at this time.

A major toxicological study by DEC in collaboration with the University of Western Australia and the Chemistry Centre of Western Australia is underway. Dust samples have been collected from selected sites within Port Hedland, Geraldton, Perth and Sydney. The study and accompanying report will be finalised by July 2008.

#### Wagerup

DEC has been involved with consultation in the Wagerup area for many years in response to community concerns about air quality. In response to Alcoa's Wagerup III expansion proposal, DEC has increased its air quality investigations in the region.

In 2006 DEC deployed a number of advanced instruments and undertook field observations from August to December:

<sup>3</sup>  $PM_{10}$  – Particle matter with an aerodynamic diameter of 10 micrometres or less.

<sup>4</sup>  $PM_{2.5}$  – Particle matter with an aerodynamic diameter of 2.5 micrometres or less.

Ten metropolitan and four regional air quality monitoring stations were operated by DEC throughout Western Australia to monitor pollutants such as carbon monoxide, nitrogen dioxide, ozone, sulphur dioxide and particles as  $PM_{10}$ .

- A Doppler Lidar system (laser radar) to monitor the 3-dimensional wind fields and to observe the movement and dispersion of refinery plumes over the region.
- A high sensitivity Proton Transfer Reaction Mass Spectrometer (PTRMS) was installed in Yarloop to monitor volatile organic compounds in the ambient air.
- A flux tower was installed to monitor atmospheric stability – a condition that strongly influences plume dispersion within the atmosphere.
- An acoustic sounder (SODAR – or sonic radar) was installed to measure the vertical wind structure over the site.
- A ceilometer (a vertical looking Lidar) was installed to measure cloud height and cover and to estimate the height of the mixing layer.
- An air quality monitoring station was colocated with the PTRMS in Yarloop to monitor meteorological data, trace gases and fine particles.
- Intensive observation periods when DEC staff were deployed in the field to assess odours and take canister samples.
- A community canister sampling program was launched which included logbooks to record observations on perceived air quality events. The results of the winter 2006 canister sampling program were published in November 2006 and new logbooks were issued for continuation of the program into 2007.

The information collected during this period is being analysed by specialists from DEC, CSIRO, Arizona State University, the Chemistry Centre of Western Australia and The University of Western Australia. The complete analysis of all the 2006 Lidar data is not expected until late 2007.

In addition to this, dust samples continue to be collected to examine the effect of dust on the human respiratory system, with more sites being identified for dust collection. More field studies are planned for 2008 and the overall investigation and follow-up studies are expected to take up to three years.

#### **Background campaign sampling**

The Background Air Quality (Air Toxics) Program in Collie was initiated as part of DEC's air quality management strategy for the area, and in response to local concerns over smoke from domestic wood heaters. A sampling program commenced in April 2006 to assess ambient levels of volatile organic compounds.

A similar program commenced at three sites in Albany in November 2005 to assess the impacts of increased vehicular traffic and industrial development in the port area.

Monitoring for volatile organic compounds in Kalgoorlie continued during 2006–07 at four locations around the town. Results obtained so far indicate that levels measured were well below national and international standards.

A pilot trial conducted during November and December 2006 in Midland investigated the effectiveness of various active and passive sampling technologies. A community open day on 10 February 2007 provided feedback regarding the proposed position of monitoring instruments and which pollutants should be measured during the study. The findings of the pilot trial and open day were used to develop a 12-month monitoring program in the Midland area, beginning in mid 2007.

During 2006–07, sampling for air toxics in ambient air under the Background Air Quality Study continued at Duncraig, Queens Building in the CBD and Hope Valley. Monitoring for volatile organic compounds, nitrogen dioxide, ammonia and particles was conducted in the Kwinana and Rockingham area. DEC will continue this study with a focus on areas in the vicinity of ports, heavy transport corridors, industry and residential zones. Sampling for heavy metals and particles is earmarked for the near future, once the infrastructure can be erected.

The findings of these programs are available from DEC's website <<http://www.dec.wa.gov.au/airquality>>.

#### **EPA Guidance Statement No 47 Review**

Nuisance odour is responsible for a large percentage of the complaints received by DEC and is a major environmental protection issue in Western Australia



EPA Guidance Statement No 47 is the key planning document designed to protect public amenity from potential odour impacts relating to new development proposals. During the past two years, this document has been undergoing a thorough review process and a new draft Guidance Statement is in preparation.

## 2.1.7 Service 7: Regulation of discharges to the environment

**Service description:** Regulate emissions and discharges to the environment and the transport of hazardous wastes.

### Performance summary

	2006–07 Estimate \$'000	2006–07 Actual \$'000	Variance \$'000
Expense by service	16,202	15,355	(847)

KEI	2006–07 Target	2006–07 Actual	Variance
Average cost per industry licence	\$14,081	\$17,122	\$3,041
Average cost per controlled waste permit	\$20	\$19	(\$1)

### Performance highlights

- Implemented a program to review prescribed premises categories.
- Completed an upgrade of the industry licensing database.

#### 2.1.7.1 Controlled Waste

In 2006–07, the Controlled Waste Section processed 275 carrier licences, 717 controlled waste drivers licences and 339 bulk controlled waste vehicle licences, of which 65 were new tankers. 273 drivers attended driver training conducted by DEC.

A scheduled auditing program targeted the regional areas of Cue/Meekatharra/Mt Magnet (October 2006), Geraldton (March 2007) and Mandurah/Waroona (June 2007). The auditing program covered 895 inspections in the metropolitan and regional areas including waste carriers, disposal sites and waste generators' premises, drivers, vehicles and tankers transporting controlled waste.

The auditing program allowed assessment of the level of compliance with the Regulations in the areas audited, an opportunity to rectify any instances of non-compliance and the chance to optimise compliance through further education.

There were few instances of non-compliance amongst controlled waste licence holders. These were largely operational in nature and quickly rectified by licensees. One unlicensed carrier company was identified and instructed to cease controlled waste transport until the company improved their standards and obtained the appropriate licences. Communication with controlled waste generators in the Geraldton area revealed a lack of oily water disposal options as a hindrance to compliance with the Regulations. Liaison with the City of Geraldton has begun to rectify the situation.

The total volume of waste tracked via the Controlled Waste Tracking System transported on public roads was 487,851 kilolitres, and included:

- 53 per cent biological waste
- 14.5 per cent waste oils and emulsions
- 18 per cent alkalis
- seven per cent low strength waste waters.



These data show that the bulk of controlled waste transported remains biological waste including grease trap waste and septage waste from small business. Tracking of waste allows anticipation of trends in production of waste types and volumes, to assist in more effective forward planning for waste management.

This year, 64,992 controlled waste tracking forms were activated to track controlled waste from the point of generation to point of treatment/disposal. Approximately 10 per cent of these were paper based tracking forms which were entered into the electronic system by DEC staff.

An amendment to the Environmental Protection (Controlled Waste) Regulations 2004 was made in April 2007. The amendment allowed for an increase in fees for controlled waste tracking forms to achieve full cost recovery for controlled waste functions, and the removal of a regulation resulting from a request by the Joint Standing Committee on Delegated Legislation.

Most of the controlled waste licensees demonstrate a high level of compliance with the Regulations. Of all inspections conducted during 2006-07, 9.1 per cent of inspections identified an instance of non-compliance. The majority of these related to operational digressions which leave potential for environmental harm or affect the ability of the Controlled Waste Section to monitor waste transport rather than actual emissions into the environment. Controlled waste generators are generally found to be either complying, or actively attempting to comply with the Regulations.

### 2.1.7.2 Implementation of Keating Review recommendations

DEC is in the third year of implementing those recommendations of the Keating Review which are relevant to the responsibilities of the department in respect of the operation of Part V of the *Environmental Protection Act 1986*.

Our key achievements during 2006–07 in implementing the recommendations were:

- integration of relevant Keating processes, timelines and protocols into DEC's operations as 'core business'
- achievement of agreed timelines for works approvals and licences for the majority of State development projects
- integration of timeline reporting for State development projects into DEC's new Industry Licensing System, as well as provision for electronic lodgement of application documents
- advancing the development of 'regulatory maps' as a means of identifying opportunities for removing regulatory duplication for some industrial premises.

There is an agreed 60 day timeline for State development projects and a time-clock has been built into the Industry Licensing System so that reminders are sent automatically to staff about the assessment of a project. Automated reporting of time taken for project approvals has also been incorporated into the system.

### 2.1.7.3 Emissions Inventories

The Emissions Inventories Section continued to administer reporting to the National Pollutant Inventory (NPI) of substance emissions from Western Australian industrial facilities. Emission reports were received from 630 facilities in 55 industry sectors for the period 2005–06.

DEC was represented on the project team drafting the variation to the National Environment Protection Measure relating to the NPI. Changes include reporting transfers of NPI-listed substances in waste, and reporting six greenhouse gases as an interim measure until introduction of a national greenhouse gas reporting system under the auspices of the Council of Australian Governments. The section has input to the Greenhouse and Energy Reporting Group involved with the development process.

Work continued on the development of a Western Australian Greenhouse Gas Inventory, as outlined in the Western Australian Greenhouse Strategy. The requirement for Western Australian Government agencies to lodge greenhouse gas emission estimates for 2006–07 and beyond was introduced, and legislation is being developed to require reporting by Western Australian companies and Government trading enterprises. In the interim, submission of voluntary reports has been requested.





#### 2.1.7.4 Compliance Monitoring

DEC has responsibility under Part IV of the *Environmental Protection Act 1986* for monitoring compliance with environmental conditions set on projects as a result of formal environmental impact assessment by the Environmental Protection Authority.

The last year was quite challenging due to loss of staff during a “boom” in resource development. Consequently DEC was only able to maintain a base level of services, however, work was advanced on migrating the audit database to the new department platform. A review was commenced on the approach to monitoring implementation of EPA assessed projects as a consequence of the growing number of “active” projects potentially requiring monitoring.

#### Industry Licensing System

DEC completed design and testing of the Industry Licensing System so that occupiers of prescribed premises can apply for works approvals and licences via the Internet. During June 2007 staff from each region and about 300 representatives from industry were trained in the use of the system, prior to its release planned for 1 July 2007.

#### Initiation of the Review of Prescribed Premises Categories

DEC has initiated a review of the Prescribed Premises Categories and prepared a document outlining proposed alterations to the categories. The document was distributed for discussion with regional staff.

The review has identified many areas of possible change which will allow for minimising regulatory control without compromising the environmental outcome. A specific focus of the review has been the removal of duplication in regulatory systems across Government consistent with the objectives of the Keating Review.

#### Amendments to the Environmental Protection Regulations 1987

Following a review of the costs associated with the regulation of industry, the Environmental Protection Regulations 1987 were amended to increase the fees for licences, works approvals and registrations. These changes apply from 1 July 2007 and will allow DEC to better resource industry regulation. The amendments involve a general fee increase as well as increases specific to particular pollutants, industries and proximity to densely populated areas.

#### Regional offices

Regional offices throughout the State undertake the day-to-day management of prescribed premises.

In the Kimberley region the formation of DEC led to the separation of the Department of Environment North West region into the Pilbara and Kimberley regions, resulting in the need to build the industry regulation capacity in the Kimberley region. The co-location of previous DoE and CALM staff occurred in October 2006.

Major industry regulation proposals in the Kimberley region during 2006–07 included the Koolan Island iron ore mine and the Tanami gold mine, with works approvals for construction and operating licences issued for both sites. Significant interest has arisen over the recommencement of operations at the Derby lead and zinc export facility and a proposed gas plant on the Maret Islands.

#### 2.1.7.5 Esperance Port Lead Issue

Mass bird deaths in Esperance starting in December 2006 sparked a wide environmental investigation by the department to determine the cause. As the issue unfolded, other government agencies became involved and DEC worked closely with them and with local stakeholders.

Between December and March, DEC staff collected more than 100 dead birds for testing at the Department of Agriculture and Food’s Animal Health Laboratory and at the Chemistry Centre (WA).

The birds were found to have prominent levels of lead and phosphorus, but with nothing to compare them to, it wasn’t known if these levels

DEC completed design and testing of the Industry Licensing System so that occupiers of prescribed premises can apply for works approvals and licences via the Internet.

were normal for the Esperance area. Additional testing on control samples determined the likely cause of death was lead poisoning.

Initial test results did not provide direct evidence of a lead source but it was noted that lead carbonate was being transported into Esperance for shipping through the Esperance port.

This led to the environmental investigation, focusing on the port and town area to confirm the source of the lead, carried out by officers from the Pollution Response Unit and the Esperance district office. The testing program involved soil sampling throughout the Esperance town site and along the transport route and inspections and testing at the port including marine sediment sampling. Swabs of buildings and residences were also taken for testing.

A licence inspection of the port resulted in serving Environmental Field Notices to improve dust management of the loading facilities. The Port Authority was also directed to undertake additional environmental monitoring. The department served a prevention notice on the Esperance Port Authority in March to prevent it receiving and shipping lead carbonate and closely monitored all nickel ship loading from this date. An investigation into possible breaches of the *Environmental Protection Act 1986* was commenced by DEC's Environmental Enforcement Unit.

Isotope testing commissioned by the department on bird liver samples subsequently matched the lead in these and other samples to the lead material shipped in and out of Esperance.

The department further announced an independent review would be held of its own audit and inspection processes to identify where improvements were needed.

Together with the Department of Health, DEC has commissioned a health and ecological risk assessment to assess any risks to the community and the environment from emissions and shipping operations to date and to recommend any clean-up measures that may be required.

Parliament referred the Esperance lead issue to a Parliamentary Standing Committee in April to inquire into the cause and extent of lead pollution in the Esperance area. The department presented written and oral evidence to the committee.

The Esperance issue has also prompted a statewide assessment of ports bulk handling mineral ores by DEC, the Department of Health and the Department of Consumer and Employment Protection.

## 2.1.8 Service 8: Regulation of contaminated sites

**Service description:** Regulate the investigation, classification and management of contaminated sites.

### Performance summary

	2006–07 Estimate \$'000	2006–07 Actual \$'000	Variance \$'000
Expense by service	6,294	4,018	(2,276)

KEI	2006–07 Target	2006–07 Actual	Variance
Average cost per contaminated site assessment	\$2,203	\$2,628	\$425
Average cost of remediating state sites	\$755,280	\$741,326	(\$13,954)

### Performance highlights

- Proclaimed and implemented the *Contaminated Sites Act 2003*, including establishment of the Contaminated Sites Auditor Accreditation Scheme and a public database to provide the State with the capacity to more effectively manage contaminated lands.



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

The *Contaminated Sites Act 2003* and Contaminated Sites Regulations 2006 commenced on 1 December 2006. Approximately 1,000 new reports of known or suspected contaminated sites were received, mostly in late May 2007.

More than 375 sites have been classified under the Act. Soil and groundwater investigations have confirmed the presence of contamination at around 100 of these sites, which are listed on the publicly-available database on DEC's website.

In preparation for implementation of the Act, final or updated versions of the following guidelines were published: Community Consultation; Contaminated Sites Auditors: Guidelines for Accreditation; Conduct and Reporting; Disclosure Statements; Reporting of Known or Suspected Contaminated Sites; Site Classification Scheme and The Use of Risk Assessment in Contaminated Site Assessment; and Management: Guidance on the Overall Approach. A series of fact sheets on aspects of the legislation was published, and public briefings were held in Perth and in regional centres.

### 2.1.8.2 Contaminated site and acid sulphate soil assessments

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

During the 2006–07 financial year, the department reviewed and provided advice on 303 reports relating to contaminated sites, and 293 reports relating to acid sulphate soils and water. These reports were submitted by proponents of land developments, or their environmental consultants, in relation to compliance with planning and Ministerial conditions, dewatering licence requirements, and general queries regarding contamination and acid sulphate soil and water issues. These statistics relate only to reports prepared by environmental consultants and many more were answered by e-mail and telephone.

#### Acid sulphate soils

DEC continued to facilitate workshops on acid sulphate soil issues for the community, local government and environmental consultants, at metropolitan and regional venues this year, all of which were well attended. The experience in eastern Australia has been that community and local government involvement in identifying and managing acid sulphate soil issues is the key to success.

Participation in research projects continued, mainly through in-kind contributions including technical advice and support. These projects include assessing the environmental risk caused by acid sulphate soil disturbances in Baigup wetland and the Peel Estuary.

During the 2006–07 financial year, the department reviewed and provided advice on 303 reports relating to contaminated sites, and 293 reports relating to acid sulphate soils and water.

## 2.1.9 Service 9: Administration of the Waste Management Recycling Fund

**Service description:** Administer the Waste Management and Recycling Fund (WMRF) on behalf of the Waste Management Board, to promote the diversion of waste from landfills.

#### Performance summary

	2006–07 Estimate \$'000	2006–07 Actual \$'000	Variance \$'000
Expense by service	984	1,013	29

KEI	2006–07 Target	2006–07 Actual	Variance
Cost of administering the Waste Management Recycling Fund as percentage of total fund	14.4%	15.5%	1.1%

## Performance highlights

- Administration of the Strategic Waste Initiatives Scheme and Community Grants Scheme.

### 2.1.9.1 Strategic Waste Initiatives Scheme and Community Grants Scheme

Two rounds each of the Strategic Waste Initiatives Scheme and the Community Grants Scheme were offered during 2006–07.

In December 2006 the Minister, on the recommendation of the Waste Management Board, approved funding totalling \$620,000 for seven projects under the Strategic Waste Initiatives Scheme. At its June 2007 meeting, the Waste Management Board began assessment of the largest Strategic Waste Initiatives Scheme round to date – 42 project applications seeking assistance to a total of \$6.7 million.

Community Grants Scheme rounds of funding were awarded in October 2006 for three projects to a total of \$17,000; and April 2007 for 14 projects to a total of \$107,000. During the course of the year, the funding limit was increased from \$5,000 to \$10,000 per project, which resulted in a significant increase in the level of interest in the scheme.

Details of the funding schemes are available on the Towards Zero Waste website at <<http://www.zerowastewa.com.au/ourwork/supportschemes/>>.

### 2.1.10 Service 10: Policies and strategies to reduce and recycle waste

**Service description:** Develop and implement policies and strategies that promote waste avoidance and minimisation in industry, government and the community.

#### Performance summary

	2006–07 Estimate \$'000	2006–07 Actual \$'000	Variance \$'000
Expenses by service	5,829	7,960	2,131

KEI	2006–07 Target	2006–07 Actual	Variance
Percentage of Waste Management Recycling Fund allocated to projects that achieve scheduled milestones	87.2%	44.1%	(43.1%)

#### Performance highlights

- Released the Waste Avoidance and Resource Recovery Bill for public comment.
- Supported the Stakeholder Advisory Group review of best practice container deposit systems for Western Australia.

#### 2.1.10.1 Waste Avoidance and Resource Recovery Bill

In July 2006, Cabinet approved the release of the Waste Avoidance and Resource Recovery Bill and the Waste Avoidance and Resource Recovery Levy Bill for 14 weeks public review and consultation.

The Waste Avoidance and Resource Recovery Bill allows for the creation of a statutory waste authority to drive improvements in waste avoidance and resource recovery in Western Australia; confirms the powers of local governments to collect and manage local government waste; allows for the introduction of voluntary product stewardship plans and mandatory extended producer responsibility schemes; and allows for a range of other related matters.



From August to November 2006, 35 public meetings and workshops were held around the State, with advertisements explaining where to obtain copies and inviting public submissions on the Bills. Of 82 formal submissions received on the Bills, 76 were either supportive or very supportive. Almost all of these submissions included suggestions or recommendations for specific improvements to the two Bills.

All submissions have been considered and, as a consequence, changes have been drafted to improve the next version of the Waste Avoidance and Resource Recovery Bill.

From August to November 2006, 35 public meetings and workshops were held around the State, with advertisements explaining where to obtain copies and inviting public submissions on the Bills.

### 2.1.10.2 Review of best practice container deposit systems for Western Australia

The Stakeholder Advisory Group on Container Deposit Systems was formed by the then Minister for the Environment, Hon Dr Judy Edwards MLA in February 2006. The group was to investigate best practice container deposit systems for Western Australia.

The Stakeholder Advisory Group examined over 20 different container deposit systems in operation around the world, including the current system in South Australia. The systems examined differ in a number of elements, including administration, financing, and collection / infrastructure.

The Stakeholder Advisory Group presented its findings and recommendations in a report to the Minister in April 2007.

### 2.1.10.3 Decommissioning and rehabilitation of the former Brookdale Liquid Waste Treatment Facility

The contamination status of the former Brookdale Liquid Waste Treatment Facility site has now been confirmed and the project is moving into its final stages. A plan outlining how the contamination on the site will be addressed will be prepared and approved by September 2007. The approved Site Management Plan will be implemented and the site returned to its owner, the Water Corporation. The site will then be suitable for other uses.

## 2.1.11 Service 11: Environmental impact assessments of development proposals and planning schemes

**Service description:** Manage the environmental impact assessment process for the Environmental Protection Authority to enable sound environmental advice on development proposals and planning schemes/amendments to be provided to the Government, developers and the public to ensure the environment is protected for the community.

### Performance summary

	2006–07 Estimate \$'000	2006–07 Actual \$'000	Variance \$'000
Expense by service	6,129	6,337	208

KEI	2006–07 Target	2006–07 Actual	Variance
Cost for number of environmental assessments	\$130,404	\$192,069	\$61,665

### Performance highlights

- Completed the assessment of the South West Yarragadee Water Source Development project.
- Completed assessment of the major duplication of the Dampier to Bunbury Natural Gas Pipeline.
- Progressed consideration of mineral resource projects within improved regional contexts, particularly in the Midwest region.

### 2.1.11.1 Overview

DEC manages Service 11: Environmental impact assessments of development proposals and planning schemes for the EPA. The service aims to provide sound advice on development proposals and planning schemes/amendments to Government, developers and the public to ensure the environment is protected for the community. DEC supports the EPA via the EPA Service Unit, which sits administratively within the agency, but for EPA matters is under the control of the EPA.

### 2.1.11.2 Major projects

#### **South West Yarragadee Water Supply Development**

The EPA released its report (Bulletin 1245) in December 2006 on the proposal by the Water Corporation to develop a wellfield on the Blackwood Plateau near Jarrahwood and to supply the groundwater from the South West Yarragadee aquifers into the Integrated Water Supply Scheme.

The main issues considered in the EPA report were:

- risk of impacts on groundwater dependent ecosystems from groundwater abstraction
- management of the total groundwater use and the potential significance of climate change.

The EPA concluded that the proposal could be implemented but that, even with the commitments given by the Water Corporation, there remain considerable residual risks to environmental values if the proposal proceeds.

Because of the need to consider the whole of the South West Yarragadee aquifer, the EPA also provided other advice on a number of matters.

The full EPA report *Bulletin 1245 South West Yarragadee Water Supply Development* is available on their website at <[www.epa.wa.gov.au](http://www.epa.wa.gov.au)>.

#### **Wungong Urban Water Redevelopment Scheme**

The EPA provided its report and recommendations (Bulletin No. 1253) in April 2007 on the Wungong Urban Water Redevelopment Scheme 2006 initiated by the Armadale Redevelopment Authority. The EPA concluded that it is unlikely that the EPA's objectives would be compromised and recommended that:

- a number of enforceable conditions be imposed to manage water and to require remedial action and potentially the application of offsets should the prevailing water quality criteria not be met
- conditions require the preparation and implementation of a Foreshore Management Plan and Wetland Management Plans to complement the responsible authority's initiatives
- conditions require a landscape management strategy at structure planning stage, fauna management plans and construction management plans for development near environmentally significant areas
- there be conditions to manage the risk of disturbing acid sulphate soil.

The full EPA report *Bulletin 1253 Wungong Urban Water Redevelopment Scheme 2006* is available on their website at <[www.epa.wa.gov.au](http://www.epa.wa.gov.au)>.

#### **Mt Gibson Iron Ore Mine**

On 27 November 2006, the EPA released its report and recommendations (Bulletin No 1242) on the proposal by Mount Gibson Mining Limited to mine and process iron ore from Extension Hill and Extension Hill North, and to construct infrastructure to transport the magnetite slurry to Geraldton Port, and strip the ore from the slurry for export. Extension Hill is located next to the Great Northern Highway approximately 350 km north east of Perth, in the Midwest region.



A key issue for the EPA was the presence of significant vegetation often found on the Banded Iron Formation (BIF) ranges in the region. The EPA considered that the BIF ranges in the Yilgarn Craton have outstanding conservation significance.

The EPA considered that the proposal should only proceed if, prior to ground-disturbing activities:

- the remaining ridges of BIFs in the Mt Gibson area with sub-populations or suitable habitat for *Darwinia masonii* and *Lepidosperma* sp. Mt Gibson, and suitable habitat for the remaining restricted floristic vegetation communities are protected in the formal conservation estate, as a class 'A' nature reserve, exempt from any exploration or mining activity
- adequate management resources are provided to ensure that threatening processes on the remaining plant populations and restricted vegetation within the reserve are mitigated.

The EPA provided recommended conditions in *Bulletin No 1242 Mt Gibson Iron Ore Mine and Infrastructure Project*, available on their website at <[www.epa.wa.gov.au](http://www.epa.wa.gov.au)>. The conditions included the preparation and implementation of comprehensive research and recovery plans for *Darwinia masonii* and *Lepidosperma* sp. Mt Gibson. The EPA concluded that if appropriate conservation reservation of the remaining sub-populations of *Darwinia masonii* and *Lepidosperma* sp. Mt Gibson, and habitat for the remaining restricted floristic vegetation communities in the Mt Gibson ranges cannot be achieved, and adequate management resources were not provided prior to ground-disturbing activities, the proposal should not be implemented.

### **Dampier Port Upgrade**

Hamersley Iron Pty Ltd (HI) proposed to undertake both capital and maintenance dredging within the Port of Dampier in the vicinity of the company's Parker Point and East Intercourse Island iron ore export loading facilities. The proposal involved dredging of approximately 3.4 million cubic metres of material from the ocean floor and disposal of the dredged material on land near Parker Point and to the established East Lewis and Northern ocean disposal grounds. Monitoring during previous dredging campaigns provided information on historic cumulative loss of coral habitat in the port environs and on the diversity of the inshore coral communities, indicating that within the HI Sea Lease (East Intercourse Island to the Service Wharf) of approximately 40 square kilometres, the estimated loss of coral since 1957 ranged between 23 and 35 per cent.

While the management framework recommended in the conditions largely remained the same as that previously applied to dredging programs in the Dampier Port, the EPA recommended a condition which required that dredging should cease if 10 per cent coral mortality is detected through the monitoring program.

The EPA included a recommended condition which allows for the continuation of dredging and spoil disposal during the spring period on the basis of the results of investigations relating to the timing and extent of coral spawning and the participation of coral species.

The EPA also provided other advice about the need for a coordinated approach to monitoring and research.

The EPA concluded in its report and recommendations (Bulletin No. 1225) in August 2006 that the proposal was capable of being managed in an environmentally acceptable manner.

The full EPA report *Bulletin 1225 Dredging Program Dampier Port Upgrade* is available on their website at <[www.epa.wa.gov.au](http://www.epa.wa.gov.au)>.

### 2.1.11.3 Bulletins produced during 2006–07

#### Environmental Review and Management Program (ERMP) and Public Environmental Review (PER)

Bulletin Number	Title	Level of Assessment	Release date
1245	South West Yarragadee Water Supply Development: Water Corporation	ERMP	8 Dec 2006
1224	Riverslea Subdivision (Sussex Locations 9002 and 9101), Margaret River: Greendene Development Corporation Pty Ltd	PER	10 July 2006
1228	Development of Industrial Land on the Burrup Peninsula for Future Gas Development: Woodside Energy Ltd	PER	4 Sept 2006
1234	Helena East Precinct Remediation and Redevelopment: Midland Redevelopment Authority	PER	16 Oct 2006
1232	Industrial Subdivision of Lots 300–303 and 14 & 15 Beringarra Avenue, Malaga: Sandbourne Holdings Pty Ltd	PER	6 Nov 2006
1239	Alkimos Wastewater Treatment Plant – Wastewater Disposal Strategy and Proposed Ocean Outlet (Site B), Alkimos: Water Corporation	PER	13 Nov 2006
1238	Alkimos Wastewater Treatment Plant – Wastewater Disposal Strategy and Proposed Ocean Outlet (Site A), Alkimos: Water Corporation	PER	13 Nov 2006
1242	Mt Gibson Iron Ore Mine and Infrastructure Project: Mount Gibson Mining Limited	PER	27 Nov 2006
1250	Long Island Tourism Development, Houtman-Abrolhos Islands: Humfrey Land Developments Pty Ltd	PER	19 March 2007
1251	Mesa A / Warramboe Iron Ore Project: Robe River Mining Company Pty Ltd	PER	26 March 2007

#### Formal Under Part IV

Bulletin Number	Title	Release date
1257	Rural/Residential Subdivision, Lot 2 Ellenbrook Road, Bullsbrook: Mr. H J Hawke	14 May 2007

#### Scheme Assessed (S48A)

1253	Wungong Urban Water Redevelopment Scheme 2006: Armadale Redevelopment Authority	4 April 2007
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#### Scheme Incapable of Being Made Environmentally Acceptable (S48A)

1227	City of Albany TPS 3 Amendment 247, Modify provisions related to development within Conservation Zone No.1 Lots 11-14 of Locs 1947 & 2229, Locs 3102, 2065, 1990, 1991, 1992, 1609 & 1828 Eden Road Albany: City of Albany	28 Aug 2006
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#### Assessment on Referral Information (ARI) and Environmental Protection Statement (EPS)

1225	Dredging Program Dampier Port Upgrade: Hamersley Iron Pty Ltd	7 Aug 2006
1229	Materials Stockpiling and Handling Facilities, Cape Preston: Korean Steel Pty Ltd	11 Sept 2006
1231	Dampier to Bunbury Natural Gas Pipeline Stage 5 Expansion: Dampier to Bunbury Natural Gas Pipeline (WA) Nominees Pty Ltd	4 Oct 2006
1233	Cloverdale Mineral Sands: Iluka Resources Ltd	13 Nov 2006
1246	Cape Lambert Port upgrade – increase in throughput to 85 Mtpa: Robe River Iron Associates	8 Jan 2007
1248	Kwinana Ethanol Bio-Refinery: Primary Energy Pty Limited	12 Feb 2007
1249	Extension of Rehoboth Christian School, 92 Kenwick Road, Kenwick: Association for Christian Education Inc.	5 March 2007
1254	Dredging Program Cape Lambert Port Upgrade: Robe River Iron Associates	10 April 2007
1255	Maxima 3D Marine Seismic Survey – Scott Reef: Woodside Energy Ltd	30 April 2007
1258	Kemerton Power Station Enhancement Project: Transfield Services Kemerton Pty Limited	28 May 2007





## Proposal Unlikely to be Environmentally Acceptable

1236	Clearing of between 65 and 112 hectares of native vegetation for agriculture, Kent Location 1858, Shire of Gnowangerup: G M & V M Plane	16 Oct 2006
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## Section 46

1226	Dredging Program Dampier Port Upgrade to a Throughput Capacity of 120 Million Tonnes Per Annum: Hamersley Iron Pty Ltd	21 Aug 2006
1241	Albany Foreshore Redevelopment, Princess Royal Harbour – Change to Environmental Conditions: Landcorp and City of Albany	20 Nov 2006
1244	Synthetic Rutile Plants 1 and 2, North Capel. Change to Environmental Conditions: Iluka Resources Ltd	4 Dec 2006
1247	Dust Management Program for Finucane Island and Nelson Point Operations, Change to Environmental Conditions: BHP Billiton Iron Ore Pty Ltd	29 Jan 2007

## Section 16 Strategic advice

1230	Fremantle Ports Outer Harbour Project: Fremantle Ports/Department for Planning and Infrastructure	25 Sep 2006
1237	Cape Peron Tourist Precinct Project: Cape Peron Tourist Precinct Steering Committee	23 Oct 2006
1240	Strategic advice on the proposed buffer for the Woodman Point Wastewater Treatment Plant: Water Corporation	20 Nov 2006
1243	Fire Management in the Kimberley and other Rangeland Regions of Western Australia	4 Dec 2006
1256	Proposed Mt Manning Nature Reserve Extensions	14 May 2007

### 2.1.12 Service 12: Environmental policies and State of the Environment reporting

**Service description:** Coordinate the development and analysis of environmental policy, ensure its effective implementation, manage the Environmental Protection Authority's formulation of statutory Environmental Protection Policies and State Environmental Policies, coordinate State of the Environment reporting and provide sound, accurate and timely information about the environment to the community to promote positive environmental behaviours and outcomes.

#### Performance summary

	2006–07 Estimate \$'000	2006–07 Actual \$'000	Variance \$'000
Expense by service	6,881	8,480	1,599

KEI	2006–07 Target	2006–07 Actual	Variance
Cost for number of environmental policies developed	\$382,333	\$403,810	\$21,477

#### Performance highlights

- Prepared the final State of the Environment Report on behalf of the EPA.
- Prepared the draft Peel–Harvey Water Quality Improvement Plan for public comment.
- Progressed the Swan Bioplan program.
- Expanded the Indian Ocean Climate Initiative partnership with the CSIRO and the Australian Bureau of Meteorology to include climate change predictions for the north of the State and initiated a new program on adaptation to climate change.
- Continued to work collaboratively with State agencies to develop approaches for further advancing sustainability in respect of core business services and to

The scope of this service expanded considerably in this reporting year with the inclusion of additional responsibilities of climate change and sustainability and a higher profile in national environmental policy matters.

- refine agency reporting on sustainability, and progress relationships with the non-government sector to foster appropriate sustainability directions and initiatives.
- Commenced the new *Act Now for the Future* public information and awareness campaign aimed at changing behaviours for sustainability with an initial focus on climate change.
- Finalised the State/Local Government Sustainability Partnership Agreement, enhanced related policies and strategies, advanced existing partnerships with the Cities of Swan, Wanneroo, Gosnells and Geraldton and progressed development of prospective agreements with the local governments of Esperance, Mandurah and Kwinana.
- Participated in national greenhouse policy development through membership on the Council of Australian Governments' climate change working group and the National Emissions Trading Taskforce.
- Coordinated a whole-of-government response to climate change.
- Coordinated a whole-of-government response to implementing the Western Australian Greenhouse Strategy.
- Reviewed the work of the Greenhouse Unit and assessed how to strengthen the work the unit undertakes.
- Supported the Greenhouse and Energy Taskforce.

### 2.1.12.1 Overview

The scope of this service expanded considerably in this reporting year with the inclusion of additional responsibilities of climate change and sustainability and a higher profile in national environmental policy matters. However, a considerable amount of work was in support of the Environmental Protection Authority's policy functions through Environmental Protection Policies, State Environmental Policies, advice under s.16(e) of the *Environmental Protection Act 1986*, Position and Guidance Statements and State of the Environment reporting.

A greatly increased public awareness of issues around climate change and sustainability have imposed a significant additional work load on this service. Additional funding for the 2007–08 financial year and the four following years will enable additional recruitment for climate change program implementation.

Strong economic growth affected outputs from this service with environmental approvals processes consuming an atypically large portion of available resources.

### 2.1.12.2 State of the Environment Report

The department's State of the Environment reporting team supported the EPA in finalising the State of the Environment (SoE) Report 2007. This significant undertaking involved:

- delivering 30 information seminars on the draft SoE Report at various locations across the State
- analysing public submissions on the draft report
- updating and amending the content to produce a final report
- developing GIS products
- briefing the EPA on progress
- coordinating a range of support functions such as re-writing, editing; desktop design, web design and final report production.

Subsequent to this reporting period, the *State of the Environment Report: Western Australia 2007* was released by the EPA on 25 July 2007.

### 2.1.12.3 State Environmental Policies

A number of State Environmental Policies (SEPs) have progressed in their development during the year.



### **Ambient Air State Environmental Policy**

Development of the supporting technical appendices to the Ambient Air State Environmental Policy was progressed with assistance from external experts.

The SEP will bring together the deeming of the Ambient Air National Environment Protection Measure (NEPM) as a statutory Environmental Protection Policy in line with previous government commitments and the preparation of policy on other NEPMs related to ambient air. It will also provide guidance on non-NEPM ambient emissions.

The draft SEP is being finalised and a detailed explanatory document has been drafted. Technical methodologies are yet to be finalised.

### **Coastal Zone State Environmental Policy**

During the year the EPA recommended to the Minister that it not continue the development of a SEP for the coastal zone. The commitment that gave rise to the SEP has been addressed by the planning portfolio (through *Coasts WA: Better Integration* and the *State Coastal Planning Policy*). The Minister agreed with the EPA that a Position Statement be developed on the coastal zone. The department will assist the EPA in the development of the Position Statement.

### **Environmental Protection Policies (EPPs)**

After finalisation of the Swan Coastal Plain Wetlands Environmental Protection Policy the Minister decided not to approve the EPP. The Minister provided his reasons by way of a notice published in the *Government Gazette* (No. 193, page 4797, 21 November 2006). The Minister considered that there were sufficient existing powers and regulations already in place to protect important wetlands on the Swan Coastal Plain. The Minister asked the EPA to consider developing a guide document to assist the community on wetland management and protection. The department worked with the EPA to develop a joint guidance document.

The existing Swan Coastal Plain Lakes EPP remains in force.

### **Other policy initiatives**

The Minister for the Environment announced in September 2006 the phase-out of water soluble fertilisers in environmentally sensitive areas of the south west. A Joint Government and Fertiliser Industry Working Party was established to develop an action plan for the phase-out of highly water soluble phosphorus fertilisers in these areas.

The working party presented their Fertiliser Action Plan to the Minister in March 2007. The Minister tabled the report in Parliament. Before making decisions on the recommendations in the plan the Minister asked the department to organise a symposium to consult relevant stakeholders on the plan. Subsequent to this reporting period, the symposium was held on 3 July 2007.

### **Water Quality Improvement Plan for the Peel Inlet-Harvey Estuarine System**

A Draft Water Quality Improvement Plan for the Peel Inlet-Harvey Estuarine System is being prepared by the Environmental Protection Authority in partnership with the Australian Government's Department of the Environment and Water Resources and State agencies including DEC, the Department of Water, the Department of Agriculture and Food, the Peel Development Commission; and with the support of the Peel Harvey Catchment Council, Western Australian Planning Commission and Department for Planning and Infrastructure.

The draft plan is being developed under the Coastal Catchments Initiative, an Australian Government program of the Natural Heritage Trust to reduce pollution in coastal water quality hotspots.

During 2006-07 major progress was made on finalising the draft plan in readiness for public review. Significant input was received from stakeholders on the working draft. The Draft Water Quality Improvement Plan is expected to be released early in 2007-08 for an eight-week public comment period.

Current partnerships address sustainability service and infrastructure developments of around \$500 million over five to eight years.

### Sustainability Programs Unit

Throughout 2006–07 the Sustainability Programs Unit (previously Sustainability Policy Unit) maintained its key roles of advising and supporting State agencies with development and implementation of sustainability policy, practices and reporting arrangements, and responding to a diverse range of significant sustainability issues raised with the Government and the department.

The unit continued its provision of sustainability partnerships information and advice to the State/Local Government Council, and actively participated in the related State/Local Government Partnership Steering Group.

The recent focus and widespread publicity on climate change has stimulated considerable new public and industry interest in the broader sustainability agenda.

The unit maintained its involvement with the local authorities of Swan, Wanneroo, Geraldton/Greenough, Gosnells, Chittering and Kwinana, furthering the development and implementation of major sustainable community and urban development partnership agreements. Current partnerships address sustainability service and infrastructure developments of around \$500 million over five to eight years.

Establishment of a major Sustainability and Climate Change Partnership Agreement for State and local government was progressed, and the conceptual development of a social sustainability framework related to the WA Council of Social Service and its member organisations, was begun.

Development also began on an online directory of major new sustainability developments and outcomes by State Government, State agencies, local government, industry and others which will be progressed through the coming year. Designed to complement the *Act Now for the Future* campaign, the directory will reflect the extent and diversity of sustainability activity and achievements. It is aimed at enhancing public awareness of sustainability achievements and encouraging greater involvement on all fronts.

Substantial responses were provided to the House of Representatives inquiry into establishment of an Australian Sustainability Charter and an independent Australian Sustainability Commission.

A Sustainability Division is being established in DEC. It will bring together the Sustainability Programs Unit and the Waste Management and Community Education branches of the department.

The division will enhance the capacity to provide advice and support and to help coordinate reporting on State sustainability policy and practice. In relation to waste management and community education, it will promote awareness and application of environmentally sustainable practices through involvement with the development, administration and implementation of policy and targeted programs.

#### 2.1.12.4 Climate Change

##### Implementation of the Western Australian Greenhouse Strategy

The Western Australian Greenhouse Strategy (released in September 2004) provided a framework for limiting Western Australia's greenhouse gas emissions and ensuring the State can effectively address the unavoidable impacts of global climate change. Since its release the Government has been implementing the 141 actions contained in the strategy. Significant achievements since the last annual report include the following:

- Electricity Reform Program completed with disaggregation of Western Power into four new business units in 2006
- renewable energy subsidy of 1c/kWh for new renewable electricity generation projects not eligible for Renewable Remote Power Generation Program funding now in place and operating
- inclusion of TravelSmart survey data in the Perth and Regions Travel Survey to analyse and link the relationship between travel behaviour change and urban congestion



- continuation of the bus fleet replacement program, replacing ageing diesel buses with the lower emission Mercedes-Benz Euro 4 gas bus. Over 270 diesel buses had been replaced as at December 2006.
- preparation of an implementation plan for the development of a comprehensive Renewable Energy Strategy
- voluntary reporting by industry and government under way as part of continuing development of the WA Greenhouse Gas Inventory ahead of a planned move to mandatory reporting at a later date
- implementation of the Strategic Tree Farming project, jointly funded (\$64 million) by the Western Australian and Australian Governments and in cooperation with regional Natural Resource Management Councils. This will reforest 20,000 ha of farmland, sequester carbon dioxide and improve water quality in key catchments.

Over the coming years further steps will be taken to ensure Western Australia continues to build on the strategy's framework. This will place Western Australia in the best position to respond positively to the greenhouse challenge. To ensure responses remain abreast with science and the policy environment, the strategy is due to be reviewed and updated in 2008.

### 2.1.12.5 Greenhouse and Energy Taskforce

The Greenhouse and Energy Taskforce was established in May 2005 to provide advice to the Western Australian Government on practical and economically feasible ways to manage greenhouse gas emissions from the stationary energy sector.

The taskforce was chaired by Dr Roy Green AO FTSE. Dr Green has been the Deputy Chair of the EPA and has undertaken senior roles throughout his career in Australia, such as Chief Executive Officer of the CSIRO, Chairman of the National Land and Water Resources Audit and President of the Murray Darling Basin Commission.

The other four independent members were **Mr John Akehurst**, CEO of Biostarch Pty Ltd, Director of Alinta and Coogee Resources and the former CEO of Woodside Petroleum Ltd; **Mr Richard Begley**, Director of Insight Economics and a specialist in greenhouse and sustainable energy economics; **Dr John Zillman** AO FAA FTSE; former President of the World Meteorological Organization, former Director of the Australian Bureau of Meteorology and a former Principal Delegate of Australia to the Intergovernmental Panel on Climate Change; and **Ms Cathy Zoi**, Group Executive Director of Bayard Group and the former chief of staff of environmental policy in the Clinton White House.

The department hosted the Greenhouse and Energy Taskforce, providing executive support and policy advice and coordinating the production of the taskforce's interim and final reports.

The taskforce's final report was transmitted to the Ministers for the Environment and Energy in December 2006.

The department is coordinating Government's consideration of the Taskforce Recommendations including leading the development and implementation of the Premier's Climate Change Action Statement.

### 2.1.12.6 Pictures of a Changing Climate exhibition

In December 2005, the Western Australian Government accepted an invitation from The Climate Group, an international climate change non-government organisation, to use its international touring climate change photographic exhibition *NorthSouthEastWest* as a communication tool.

To add a personal and local perspective on climate change, the department and the Department of the Premier and Cabinet invited Western Australians to submit photos. The three-month competition was judged by a panel of independent members and the Minister.

The *Pictures of a Changing Climate* exhibition was launched at the Western Australian Museum on 30 March 2007:

- **NorthSouthEastWest:** Images by 10 of the world's best photographers from the Magnum Photographic Agency with written contributions by well-known identities such as ex-Secretary General of the UN, Kofi Annan; Environmentalist and Broadcaster, David Suzuki; and UK Prime Minister 1997–2007, Tony Blair
- **Natural Australian Icons:** Ten images from five areas across Australia (excluding WA) threatened by climate change, including the Great Barrier Reef and the Murray-Darling River System
- **Western Australian Climate Change Photographic Competition:** Ten winning images from the WA 2006 competition
- **Making a Change for our Climate:** A 'snapshot' of the State's achievements and initiatives that are tackling climate change
- **The Green Zone:** A fun interactive area where people discover what they can do to reduce their carbon footprint.

The exhibition touring program covered the Perth metropolitan region (including the Western Australian Museum, Parliament House and The University of Western Australia) and regional areas including Albany, Geraldton, Bunbury, Denham, Kalgoorlie and Port Hedland. The exhibition has inspired a climate change lecture series at The University of Western Australia, in conjunction with the Western Australian Government.

#### 2.1.12.7 Premier's Climate Change Action Statement

The Premier's Climate Change Action Statement was released on 6 May 2006 and includes over \$100 million of investment in new policies and programs to tackle climate change. It is concerned with new mitigation initiatives and actions to better prepare the State to adapt to unavoidable climate change. Key features include:

- a target to reduce emissions by at least 60 per cent below 2000 levels by 2050
- a \$36.5 million Low Emission Energy Development Fund
- a target to increase renewable energy generation on the South West Interconnected System to 15 per cent by 2020 and 20 per cent by 2025
- a clean energy target of 50 per cent by 2010 and 60 per cent by 2020
- State Government purchase of 20 per cent renewable energy by 2010
- a mandatory energy efficiency program that will require large and medium energy users to invest in cost effective energy efficiency measures
- tripling the successful solar schools program so that over 350 schools will be using renewable energy by 2010
- a new \$1.5 million Household Sustainability Audit and Education program that will provide practical information to households about how they can reduce greenhouse gas emissions
- investing \$8.625 million to help businesses and communities adapt to the impacts of climate change
- the development of new climate change legislation
- a commitment to establishment of a national emissions trading scheme.

#### 2.1.12.8 Indian Ocean Climate Initiative and Climate Change Adaptation Program

Over the past 10 years the State Government has invested in the Indian Ocean Climate Initiative (IOCI) to undertake research on climate change. IOCI has been an effective partnership between WA State agencies, CSIRO and the Bureau of Meteorology. IOCI undertook world-class, WA-specific climate change research and provided the State Government with climate change information and advice to help key sectors adapt to climate change. More information about IOCI can be found on its website at <<http://www.ioci.org.au>>.

Over the next five years, through the Office of Climate Change in DEC, the State Government will invest \$8.625 million to help Western Australia's industries, people and environment adapt to the unavoidable impacts of climate change.



Four million dollars has been allocated to undertake Phase 3 of the IOCI program and \$4.652 million will be used to identify regions and sectors in Western Australia most vulnerable to climate change impacts and to develop adaptation programs. This investment will provide better projections of regional climate to allow people, businesses and State Government agencies to plan and adapt to a changing climate.

As part of the Premier's Climate Change Action Statement, the Government has established an Office of Climate Change within DEC.

#### 2.1.12.9 Office of Climate Change

As part of the Premier's Climate Change Action Statement, the Government has established an Office of Climate Change within DEC. The Office of Climate Change replaces the role of the former Greenhouse Policy Branch.

The Office of Climate Change is responsible for the implementation of the Premier's Climate Change Statement and will:

- lead development of policy advice on greenhouse issues in Western Australia and coordinate whole-of-government responses to climate change related issues
- represent Western Australia in intergovernmental negotiations and policy development, including the detailed technical design and development of the national emissions trading scheme;
- develop and implement the WA Climate Change Bill, including administrative procedures and detailed policy development
- undertake and review economic analysis of greenhouse policy, emissions trading and carbon markets
- implement the Government's adaptation to climate change program, coordinate IOCI and translate and communicate climate change science for Government policies and programs, the community and industry
- work across each sector of the economy in conjunction with relevant State agencies to assess greenhouse gas abatement opportunities and policy measures
- develop and support a WA offsets policy and WA Government offset programs
- work with conservation and natural resource management agencies and organisations to develop and monitor implementation of climate change policies and programs to protect biodiversity, create carbon sinks and provide other environmental benefits
- analyse monitoring and reporting data, and prepare advice to Government on trends and issues, and develop standards and methodologies for greenhouse gas monitoring, reporting, accounting and registration
- provide advice to the EPA (and other statutory authorities) on climate change and greenhouse policy
- coordinate monitoring, reporting and evaluation of climate change policies and programs across Government
- implement climate change education and communication programs.

#### 2.1.12.10 Swan Bioplan Program

Swan Bioplan is a four-year regional biodiversity program to update regional biodiversity information, promote ecological sustainability and the integration of natural heritage values into regional development on the southern Swan Coastal Plain (excluding the Perth metropolitan area where regional conservation areas have been updated through the Bush Forever report, endorsed by Government in 2000). An agreement has been developed with the Western Australian Local Government Association (WALGA) to facilitate close collaboration between Swan Bioplan and WALGA's South West Biodiversity Project.

Swan Bioplan will implement election commitments to undertake Peel and Bunbury Bushplan recommendations and an earlier undertaking to update the EPA System 6 recommendations.

Four key project work areas have been defined:



A preliminary report on the vegetation, flora, fauna and natural areas of the Eastern Estuaries Area (Peel Planning Region) has been completed for the Eastern Estuaries Environmental Assessment Project.

- Project definition, coordination and consultation. Objective: To establish a well defined project with effective coordination processes.
- Biodiversity resource inventory and assessment of natural areas for protection. Objective: To define regional environmental and biodiversity characteristics and develop reserve and protected area proposals.
- Understanding biodiversity and landscape values: developing skills and information transfer. Objective: To promote understanding of regional biodiversity values, and develop skills and enhance information transfer.
- Report preparation and release of draft and final reports. Objective: To prepare and gain endorsement for draft and final reports.

To date, project resources have mainly been directed to comprehensive mapping of natural areas/native vegetation and targeted fauna recording across the project area south of Perth, and to consultation and training sessions with State and local government officers and the community in the region. Preliminary vegetation mapping has been completed for the area south of Perth and made available to local government.

A preliminary report on the vegetation, flora, fauna and natural areas of the Eastern Estuaries Area (Peel Planning Region) has been completed for the Eastern Estuaries Environmental Assessment Project, a Government priority to support environmental planning ahead of the Peel Eastern Bypass Highway. Extensive flora and vegetation survey work has been completed on the Whicher Scarp.

Resources have also gone into supporting a review of the possible application of the Biodiversity Banking concept as a potential mechanism for encouraging and supporting private conservation and strategic revegetation initiatives in this region and beyond.

### 2.1.12.11 Community Education Branch

The Community Education Branch provides educational advice and support to program managers in key areas throughout DEC. The branch is developing a Climate Change Education Strategy for the new Office of Climate Change.

The branch actively participates in and supports the Australian Sustainable Schools Initiative (AUSSI) in partnership with the Department of Education and Training. Over 130 Western Australian schools joined AUSSI in 2006–07.

#### Educational programs

Programs including TravelSmart, Tidy Towns, *CleanRun* and Keep Australia Beautiful grants help adults in the community to put their environmental knowledge into action at home, at work and during recreational pursuits.

AirWatch, Ribbons of Blue/Waterwatch WA, Waste Wise Schools and Keep Australia Beautiful are other programs run by Community Education. These school programs support the Kindergarten to Year 12 curriculum, and encourage children to adopt a strong environmental ethos from a young age.

During 2006–07 the Community Education Branch provided the following programs.

#### Air Watch school program

AirWatch continued to develop and implement air quality projects, programs and resources for schools, communities and industry throughout 2006–07.

- WeatherWatch is a partnership between DEC, Channel 7, and 100 schools, 40 per cent of which are in regional or remote areas. Participating schools report local weather from on-site meteorological stations each weekday which are included in Channel 7 Nightly News.
- Twenty-eight metropolitan and regional schools participated in three air quality monitoring projects which aim to develop student awareness and understanding of photochemical smog and particulates through the use of air quality monitoring equipment.
- The On Air project invited students to create their own radio commercials to raise awareness of air quality issues and promote positive behaviours to reduce





emissions. DEC worked in partnership with RTR FM and winning commercials were aired on radio twenty-five times over the Christmas period.

- Two new climate change resource packages for schools were developed to support the Western Australian installation of an international photographic exhibition, *Pictures of a Changing Climate*.

#### *Evaluation of AirWatch*

Murdoch University Masters student Kelly Sommerford and her supervisor, Dr Catherine Baudains, produced two technical reports, *A Review of Air Quality Education and Investigation of Best Practice* and *The AirWatch Schools Program: Operation and Comparison to Best Practice*.

Nine key recommendations were made, four of which were implemented by June 2007. For example, substantial upgrades and maintenance were completed on the air quality monitoring kits.

#### *AirWatch Community workshops*

The AirWatch team delivered air quality education through community workshops held in partnership with two local government authorities and the South Metropolitan Regional Council Living Smart program.

AirWatch staff delivered a workshop series on indoor air quality for the City of Canning (50 participants) and the Town of Victoria Park (24 participants). AirWatch staff presented two sessions for each local government authority, over three- or four-week intervals.

Respondents from the workshops showed an increase in knowledge about indoor air quality issues to some degree, with 77 per cent showing an increased awareness of the toxics found in common household products.

#### *Airwatch CleanRun Program*

The CleanRun Behaviour Change Initiative is funded by the Diesel National Environment Protection Measure as part of the Air Quality Management Branch's vehicle emission reduction program.

A market research survey and in-depth interviews of drivers and fleet managers of light commercial diesel vehicles and articulated trucks undertaken in 2006 helped AirWatch develop a trial program. A 10-week trial of the program was held in early 2007 at Toll IPEC, an express courier company in Perth, and focused on monitoring fuel consumption.

Evaluation of the trial was completed in May 2007, and the results presented to Toll IPEC. The company has since given preliminary approval to collaborating on the next phase of the initiative, commencing in July 2007.

### **Waste Wise Schools Program**

#### *Teacher training/professional learning workshops*

Waste Wise Schools offers a range of professional learning workshops to teachers. Ninety teachers joined the program in 2006–07. Five full-day workshops and four half-day workshops were held during the year.

#### *Waste Wise Schools Grants*

Eleven grants were received by Waste Wise Schools in 2006–07. Schools received up to \$500 to help with their Waste Wise Program. Some of the projects include:

- worm bank and organic waste recycling project
- recycling, worm farm and composting project
- no-dig garden, worm farming and composting centre
- resource recycling project
- community permaculture kitchen garden
- organic waste recycling project.

**Ninety teachers joined the Waste Wise Schools program in 2006–07. Five full-day workshops and four half-day workshops were held.**

Since the TravelSmart annual launch in November, the total number of workplaces recruited for 2007 has risen to nine.

### *Waste Wise Schools Van*

In 2006–07 the Waste Wise Schools Van spent approximately 70 days visiting more than 5,000 students in Western Australia. These visits are an incentive for schools to involve the students in waste audits of school waste, composting and worm farming projects and school incursions. Curriculum resources are being upgraded to span the learning areas to support the Western Australian Curriculum Framework.

### *Regional development and cluster groups*

There are now over 100 regional schools involved in the Waste Wise Schools Program. Clusters of schools are being formed to provide support and local resources for each other.

### **TravelSmart Workplace**

The TravelSmart Workplace program, a joint initiative of the Department for Planning and Infrastructure and DEC, has seen changes in the style of program delivery in 2006–07 and a significant increase in the number of organisations taking part.

Five workplaces with eight sites and 6,500 employees completed Green Transport Plans in 2006:

- Department of Treasury and Finance
- Department of Housing and Works
- Office of Energy
- Queen Elizabeth II Medical Centre Trust
- Perth Zoo.

These employers have committed to providing information on travel options to employees through intranet and inductions, reviewing employee car parking charges, making MultiRider or SmartRider tickets available for business trips and participating in walking and cycling challenges.

The TravelSmart annual launch was held on 21 November 2006 to recognise the participating workplaces. Since the launch, a further four workplaces have joined the program bringing the total number of workplaces recruited for 2007 to nine:

- City of Gosnells
- City of Joondalup
- City of Mandurah
- City of Rockingham
- City of Stirling
- Edith Cowan University
- Landcorp
- Main Roads WA
- Public Transport Authority.

Monthly travel planning workshops were conducted from January to June 2007 with a representative from each of these organisations participating. These workplaces are finalising their Green Transport Plans for the TravelSmart launch in October 2007.

TravelSmart Workplace held a TravelSmart Cafe at the Department of Housing and Works in February 2007 which was attended by about 40 people.

A review of the TravelSmart survey methods is currently being undertaken by Sinclair Knight Mertz.

Dr Elliot Wood from University of Western Australia has been contracted to interview a representative from all organisations who have developed a Green Transport Plan as part of the TravelSmart Workplace program to find out if actions have been implemented and what help and support is needed (23 organisations).

Quarterly TravelSmart forums have been held with 30 to 40 people at each forum:



- November – Public Transport Authority, New Smart Rider
- February – Cycle commuting (Bike Week events) and incentives for change (City of Subiaco, employee travel allowance)
- May – Les Robinson, Inviting Change: Marketing TravelSmart in your Workplace

### **DEC TravelSmart**

Following the November TravelSmart Workplace launch, the DEC Director General asked Community Education to assess TravelSmart options for staff at the department's Kensington offices.

Surveys were conducted with Atrium staff moving to Kensington in December/January, followed by a site visit to Kensington for these staff.

A survey of all Kensington staff was undertaken in March with 126 respondents. A group was set up to investigate improving bicycle facilities at Kensington and a car pool register was established.

After liaison with the Public Transport Authority and Curtin University, a 15-minute bus service from Canning Bridge Bus Station to DEC will commence once the southern rail commences, and the Town of Victoria Park and City of South Perth will erect bus shelters at bus stops closest to DEC in Kensington.

### **Ribbons of Blue/Waterwatch WA**

The Ribbons of Blue water quality program is delivered around the State by 13 coordinators employed by various organisations including the Swan River Trust, Department of Water and local government. The State Support Team provides educationally sound products (such as curriculum materials) and processes (such as water quality monitoring procedures) that meet curriculum needs while addressing environmental outcomes.

The Ribbons of Blue State Support Team's key achievements for 2006–07 were:

- development of a teacher resource kit for primary schools
- content and navigation review and new design for an updated website expected to go online early in 2007–08
- maintenance of quality assurance and control procedures for regional coordinators including calibration and 'mystery' solutions and the redesign of forms for data collection to allow inclusion into the Department of Water database
- finalising the 2006 State Banner competition and display of regional entries at the 2006 Perth Royal Show
- design and development of the concept and materials for the 2007 photographic competition Our Waterscapes – Wonders and Woes
- project management of the South West Catchments Council funded Ribbons of Blue project.
- coordination of the statewide Macroinvertebrate and Saltwatch snapshots
- renewal of the Partnership Agreement with the Department of Education and Training. The agreement allows for the secondment of an experienced teacher to work with the State Support Team.
- production of yearly planners detailing activities throughout the year for all stakeholders.
- assistance for regional coordinators with hands-on support for Catchment Activity Days run in the priority catchments of the Swan River Trust, provision of professional development meetings and workshops, and development of materials.

### **Keep Australia Beautiful Council**

Keep Australia Beautiful Council (KABC) is a separate statutory authority but receives support from the Community Education Branch of DEC. KABC produces its own annual report for Parliament.

KABC's operations are defined by the *Litter Prevention Strategy for Western Australia 2006–2009*.

The department's annual Environment Awards continued to attract strong interest during the year, with 71 entries received for the 2006 awards.

### 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 closely with other DEC divisions to provide services and products that will support the department in achieving its mission and maintaining community trust.

The SDCA division operated as an amalgamated team from the first day of operations following the merger of the Department of Environment and the Department of Conservation and Land Management. This enabled continuity of services including media relations, publications and online services, community consultation, events coordination, marketing, EcoEducation programs and corporate planning.

During 2006–07, the division worked with other sections of the department providing advice and services for a wide range of departmental initiatives, including:

- development and introduction of the DEC Corporate Plan
- introduction of the *Contaminated Sites Act 2003* and the associated Contaminated Sites Regulations 2006
- community understanding of changes to the native vegetation clearing legislation in the *Environmental Protection Act 1986*
- creating awareness of the Saving our Species initiative
- release of the *Phytophthora* Dieback Atlas
- release of the wood heater policy options paper and associated *Halt the Haze 2007 Wood Heater Replacement Program*
- release of the draft Biodiversity Conservation Strategy
- production of a 15-minute DVD to help reduce whale entanglements in the rock lobster fishing season.

SDCA also provided extensive community involvement, media, publications and marketing advice and services for significant issues including:

- lead and nickel contamination in Esperance
- air quality in Wagerup
- emissions from brickworks in Midland
- odours from the South Metropolitan Regional Council composting facility at Canning Vale
- wildfires at Esperance, Fitzgerald River National Park, Julimar, Dwellingup and Porongurup National Park
- concern that a childcare facility in Lathlain was situated on a contaminated site.

Media, publications and marketing support was also provided for programs including Waste Wise Schools, Ribbons of Blue, Clean Up Australia and Keep Australia Beautiful programs including Tidy Towns, sustainable communities and the National Litter Index.

One of the early projects for the division during the year was the development of a new single identity for DEC. The resulting visual identity style guide documents DEC's branding for use on all corporate publications, uniforms and programs.

The division also led the development of the whole-of-government branding and public awareness campaign *Act Now for the Future* which was launched on World Environment Day in June 2007. As part of the campaign, SDCA established the *Act Now for the Future* portal on the Internet. DEC hosts the site which provides a single entry for State government initiatives available to people wanting to help the environment.

One of the department's major events, the annual Environment Awards, continued to attract strong interest during the year with 71 entries received for the 2006 awards. The awards recognise individuals, community groups, industry



organisations, businesses and Government agencies that contribute to the protection and conservation of WA's environment and the ecosystems it sustains.

In other awards, DEC's popular *LANDSCOPE* magazine and 2006 *LANDSCOPE* calendar were among the winners in the Printing Industries Craftsmanship Awards.

As well as the quality publications and online services for major departmental initiatives, the division continued to produce a selection of saleable products. They included two new titles in the popular BushBook series and reprints of five others and a new publication, *North West Bound*, launched by the Minister for the Environment and Climate Change at Karratha.

*Landscape Expeditions* conducted five research expeditions during the year. Forty-nine volunteers assisted scientists and regional staff on field research programs as part of larger DEC science projects. The program contributed more than \$100,000 towards research in these remote areas of the State.

There was keen interest in the programs and activities organised by EcoEducation for primary and secondary school students and teachers. The programs deliver education and communication outcomes for major DEC projects and fulfil student outcomes of the State's Curriculum Framework.

More than 1,020 educators attended workshops and presentations at universities, schools, conferences and professional development days. The section also provided 36 excursion programs and other activities for more than 14,000 participants at five field centres in the metropolitan area and DEC's South West region.

EcoEducation produced a new package, *Caring for Places – National parks in south-west Western Australia* and two interactive multimedia CDs, fieldwork kits and poster activities which contributed to DEC's Tuart Conservation and Management Strategy. In collaboration with the Fire Management Services section, EcoEducation also developed classroom-based fire education resources and held three professional development days for educators (see section 2.2.4.8).

Part of the EcoEducation section, the Bush Ranger cadets expanded to 51 units during the year with the establishment of 13 new Bush Ranger cadets units. More than 1500 youths and 150 adult volunteers participate in Bush Ranger cadets programs which operate in every DEC region and include three Education Support Centres for youth with disabilities. More than 20 per cent of the participants are Indigenous youth and many have English as a second language.

*Landscape Expeditions* conducted five research expeditions during the year. Forty-nine volunteers assisted scientists and regional staff on field research programs as part of larger DEC science projects.

### 2.2.2 Enforcement support

The Environmental Enforcement Unit (EEU) was established in 2003 following recommendations from a review of the Enforcement and Prosecution Guidelines of the then Department of Environmental Protection. The EEU contributes to the protection of the environment through the provision of investigative and enforcement support to the department's environmental services programs, particularly in relation to enforcement of the *Environmental Protection Act, 1986* and associated regulations.

The unit has the lead role in investigations into major environmental incidents and EEU investigators have successfully coordinated and concluded 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, the EEU develops and conducts the Regulatory Officers Training Course in consultation with the department's Environmental Training Coordinator. The two-week course is held at the WA Police Academy in Joondalup and involves the co-delivery of generic investigations and DEC agency specific training. Since 2005, over 120 departmental officers have benefited from this training. The course was a finalist in the 2006 Premier's Awards category of 'Governance and Public Sector Improvement'.

The Regulatory Officers Training Course was a finalist in the 2006 Premier's Awards category of 'Governance and Public Sector Improvement'.

The EEU has taken advantage of a number of synergies created by the amalgamation of the former Department of Environment and the Department of Conservation and Land Management. For example, the EEU's Intelligence Analyst, (whose role is to collect, collate and evaluate information and intelligence with a view to identifying, patterns, emerging trends and criminal or other unlawful activity) was seconded one day a week to the WA Police Arson Squad working on wildfire incidents. Criminal intelligence analytical services are provided by the EEU on a regular basis to the DEC Nature Protection Branch.

### 2.2.2.1 EEU finalised prosecutions for 2006–07

The following Department of Environment and Conservation environmental prosecutions were subject to final court determination during 2006–07. Several matters remain before the courts and are expected to be finalised within the next 12 months.

#### **Mandurah Magistrates Court Charge Number 3505/06**

A man from Nambeelup appeared in the Perth Magistrates Court on 24 October 2006 and pleaded guilty to allowing clearing of native vegetation to occur, without authorisation, contrary to Sections 51C and 99Q of the *Environmental Protection Act 1986*.

It was alleged that between 8 July 2004 and 27 July 2005, the defendant allowed an estimated 6000 square metres of land to be cleared from a Nambeelup property. It was also alleged that an estimated 600 square metres of the cleared land occurred inside an environmentally sensitive area (pursuant to the Environmental Protection (Clearing of Native Vegetation) Regulations 2004).

The defendant was fined \$2,000 and ordered to pay \$300 costs.

#### **Perth Magistrates Court Charge Number 06/53460**

A man from Applecross appeared in Perth Magistrates Court on 13 December 2006 and pleaded guilty to counselling or procuring another to commit an offence, namely, cutting back a tree on land within the management area, contrary to regulation 6(1) of the Swan River Trust Regulations 1989 made under the *Swan River Trust Act 1988*.

It was alleged that between 9 and 21 October 2005, the defendant counselled or procured another to cut back a tree which was growing on the Swan River foreshore between the defendant's property and the Swan River without the authority of the Swan River Trust.

The defendant was fined \$200 and ordered to pay \$105.70 costs.

#### **Midland Magistrates Court Charge Numbers 2812 and 2813/07**

A Swan View man appeared in the Midland Magistrates Court on 12 April 2007 and pleaded guilty to two charges of causing an Unauthorised Discharge of a Prohibited Material under Section 3(1) Environmental Protection (Unauthorised Discharges) Regulations 2004.

It was alleged that on 14 December 2005 the man drove a truck containing 200 litre oil drums and other refuse to a roadside bush location on Toodyay Road where he dumped part of the load. It was alleged that a quantity of oil leaked from the drums and discharged into the ground.

It was also alleged that the man then drove to a bush location near Doconing Road, Beechina and tipped the remainder of the load into a small clearing where a quantity of oil leaked from the drums at this site and discharged into the ground.

The defendant was fined \$3,000, ordered to pay \$1,500 costs and a further \$1,500 restitution toward the cost of the site's clean up.

#### **Midland Magistrates Court Charge Number 195/07**

An eastern suburbs brick manufacturing company was subject to a prosecution for allegedly contravening its licence under the *Environmental Protection Act 1986*.



The company was charged with contravening a condition of its licence contrary to Section 58(1) of the Act.

It was to be alleged that the company failed to monitor at two of three required air monitoring sites and provide related ambient fluoride reports.

This charge was withdrawn on 10 May 2007 and substituted with a Modified Penalty Notice.

### 2.2.2.2 Modified Penalties

Modified penalties are administered by DEC under Section 99A of the *Environmental Protection Act 1986* which empowers the department to issue a modified penalty where certain statutory conditions are met. If the fine is not paid within the specified time, the department will commence prosecution action.

#### **Modified Penalty Notice 3/2006**

A waste management and industrial services company paid a \$25,000 modified penalty fine for causing material environmental harm contrary to Section 50B(2)(a) of the *Environmental Protection Act 1986*.

The penalty was issued after an investigation by the department's EEU and the Swan River Trust found that a discharge in excess of 200 kL of sewage occurred at the Swan River foreshore during sewerage maintenance work being conducted by the company on 20 April 2005.

#### **Modified Penalty Notice 1/2007**

A Kalgoorlie mining company paid a \$25,000 modified penalty for allegedly contravening its licence under Section 58(1) of the *Environmental Protection Act 1986*.

The penalty was issued after an investigation by DEC identified that the company allegedly caused an emission of sulphur dioxide at Coolgardie on 27 May 2005.

#### **Modified Penalty Notice 2/2007**

An eastern suburbs brick company paid a Modified Penalty fine of \$12,500 in relation to its failure to carry out monitoring at its Midland premises.

The company had been charged with contravening a condition of its licence contrary to Section 58(1) of the *Environmental Protection Act 1986* after an investigation identified that it had failed to monitor at two of three required air monitoring sites and provide related ambient monitoring reports, as required by its licence.

In issuing the modified penalty, the department recognised the fact that the incident did not result in any environmental harm.

## 2.2.3 Legal Services

The Legal Services Branch provides general legal advice to the department in relation to the legislation administered by DEC; public law generally; and pending litigation matters relevant to the department.

### 2.2.3.1 Litigation

Litigation relevant to the department and the legislation it administers that was determined this year is listed below.

#### **Water Corporation v. Chief Executive Officer of the Department of Environment [2006] WASC 256**

The Supreme Court clarified the scope of the exemption to clearing offence provisions in Item 1 of Schedule 6 to the *Environmental Protection Act 1986*.



The total area of the 605 wildfires attended and monitored by DEC staff throughout the State was about 1.95 million hectares.

### **Re: Minister for the Environment; Ex parte Elwood and Anor [2007] WASCA 137**

The Court of Appeal discharged the order *nisi*, effectively upholding the decisions of the Minister for the Environment under sections 45C and 46 of the *Environmental Protection Act 1986* to: (1) approve the expansion of Hanson's quarry proposal without a revised proposal being referred to the EPA, and (2) amend the implementation conditions relating to the quarry proposal.

#### **2.2.3.2 Freedom of Information Services**

The Legal Services Branch manages the processes for the department under the *Freedom of Information Act 1992*. The department's Information Statement is currently being reviewed to ensure that it is up to date and accurately reflects the functions of the agency and its related agencies, the nature of the information held by the agency and its related agencies, and that information which is made available to the public.

During the year, the department received 354 applications for access to information, 11 of which were subsequently withdrawn. The average time taken to process each application was 19 days.

#### **2.2.3.3 Contingent Liabilities**

In addition to the liabilities incorporated in the financial statements, the department has the following contingent liabilities.

##### **Litigation in progress**

The department has various pending litigation that may affect the financial position to the value of \$300,000 all of which is fire related. The department has denied liability and any legal claim will be defended.

##### **Native title claims**

Some of the department's land is subject to native title claims that have yet to be assessed by the National Native Title Tribunal. Should these claims be successful, the financial effect cannot be estimated at this time.

### **2.2.4 Fire Management Services**

#### **2.2.4.1 Fire season 2006–07**

The 2006–07 fire season in Western Australia (with the exception of the Kimberley Region) was significantly drier than the long-term average and continued the extended run of drought years that has prevailed since 1998. The winter of 2006 was one of the driest on record for most parts of the south west. The heavy ground fuel components of logs and large dead branch materials did not become saturated as normally occurs during the winter months. The dry fuels burnt readily during the spring months and fire behaviour was more intense and erratic than usually experienced at that time of the year.

The severe rainfall deficit continued over the spring, summer and autumn months and the period of elevated fire danger extended from late November 2006 to early April 2007.

The total area of the 605 wildfires attended and monitored by DEC staff throughout the State was about 1.95 million hectares. Of this total area, about 1.17 million hectares occurred in the Pilbara Region, 370,000 ha in Goldfields Region, 232,000 ha in Kimberley Region and 31,700 ha in the three south-west forest regions. About 690,000 ha of the Pilbara fires were located on pastoral leases adjoining DEC-managed lands.

Lightning-caused fires represented about 36 per cent of all wildfires attended by DEC staff. This is well above the long-term average of about 15 per cent. Deliberately lit or arson-caused fires also started 36 per cent of all fires. This is a significant reduction on the long-term average of about 50 per cent.





Other causes of wildfires include accidental fires (eight per cent); escapes from private burns (four per cent) and unknown (nine per cent). Seven wildfires were the result of escapes from DEC prescribed burns, representing about one per cent of all wildfires.

There were 408 wildfires attended by DEC forces within the three south-west forest regions. These fires burned about 31,700 ha of which 19,000 ha were on DEC-managed lands. Three of the largest fires accounted for a total of 23,000 ha (71 per cent). Ninety-six per cent of all fires were contained to less than 20 ha due to the rapid detection and fire suppression response and the presence of low fuels within previously prescribed burned lands.

The South Coast Region experienced one of its worst fire seasons on record, due to dry vegetation fuels and dry lightning storms from October to December 2006. Twenty-five large fires occurred in several of the coastal DEC-managed reserves including Fitzgerald River, Cape Arid, Cape Le Grand and Stokes national parks, and nature reserves at Lake Shaster and Middle Island.

A fire that started on private property near the Porongurup National Park on 11 February 2007 burnt out most of the park and adjacent farmlands, including one house.

Details on the wildfires attended by DEC forces are provided in the tables on the following pages.

### **The Dwellingup-Pinjarra fires of January-February 2007**

DEC and Forest Products Commission fire fighting resources, supported by local government volunteer bushfire brigades, Fire and Emergency Services Authority (FESA) and emergency support agencies, were heavily involved in the suppression and post-fire recovery operations on a wildfire that occurred between Dwellingup and Pinjarra and north of Waroona. This fire burned from 26 January to 11 February 2007. The fire burnt 13,376 ha of which 7,625 ha was on private property. The fire destroyed 14 homes and 35 sheds and outbuildings, and about 100 km of fencing. The fire spread in three phases, with the original fire occurring on Australia Day, 26 January 2007 in State forest 5 km north of Dwellingup. This deliberately lit fire spread in a westerly direction down the Darling escarpment towards Pinjarra. The fire was controlled and mopped-up by 30 January. However, on 3 February, another fire started near the southern boundary of the 'Australia Day' fire, about 10 km north-west of Dwellingup. This fire was suspected to have been lit by an arsonist, as several more fires were deliberately lit in the vicinity. The latter fires were readily controlled by local forces.

The second fire burned under very severe fire danger conditions with a maximum temperature of 40°C, and strong and dry north-west winds. The fire burned rapidly up the steep slopes of the escarpment into grass and long unburnt forest fuels on private property west of the State forest. Although 14 houses were lost, the fire fighting forces were able to save 35 other houses and farm structures.

The crown fire, with associated spotting up to 2 km ahead of the headfire, moderated once it entered two areas of lighter fuels that had been prescribed burned by DEC within the previous four years. These prescribed burns played an important role in the suppression of the fire, and ensured that the town of Dwellingup was not impacted directly by the fire. The fire entered its third phase on the night of 4 February when strong easterly winds drove the fire down the scarp onto farmlands on the coastal plain north of Waroona. The fire was eventually controlled in pastures during the morning of 5 February.

#### **2.2.4.2 Prescribed burning**

Each year the department plans and implements prescribed burning on DEC-managed lands in the south west for three primary purposes:

- to protect and conserve biodiversity values and community assets
- to reduce the occurrence and impacts of large, intense wildfires

**Prescribed burns played an important role in the suppression of the second Dwellingup-Pinjarra fire, and ensured that the town of Dwellingup was not impacted directly.**

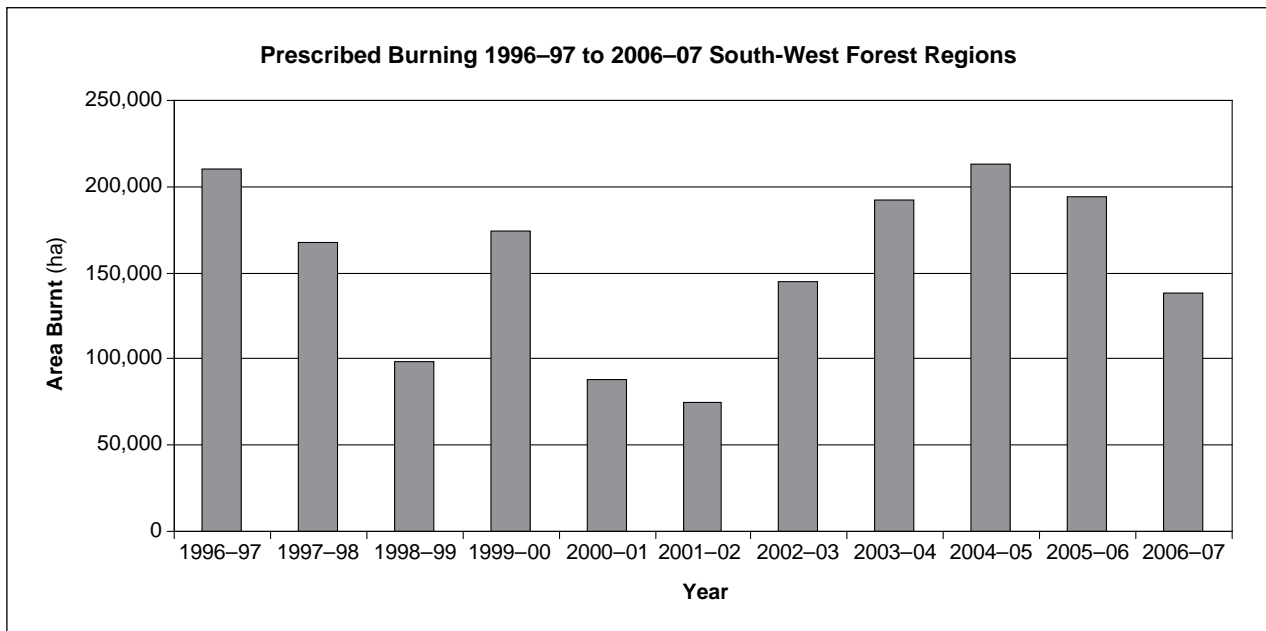
- to regenerate and protect forest ecosystems following harvesting operations or other disturbances.

In many cases these outcomes are achieved together within a prescribed burn.

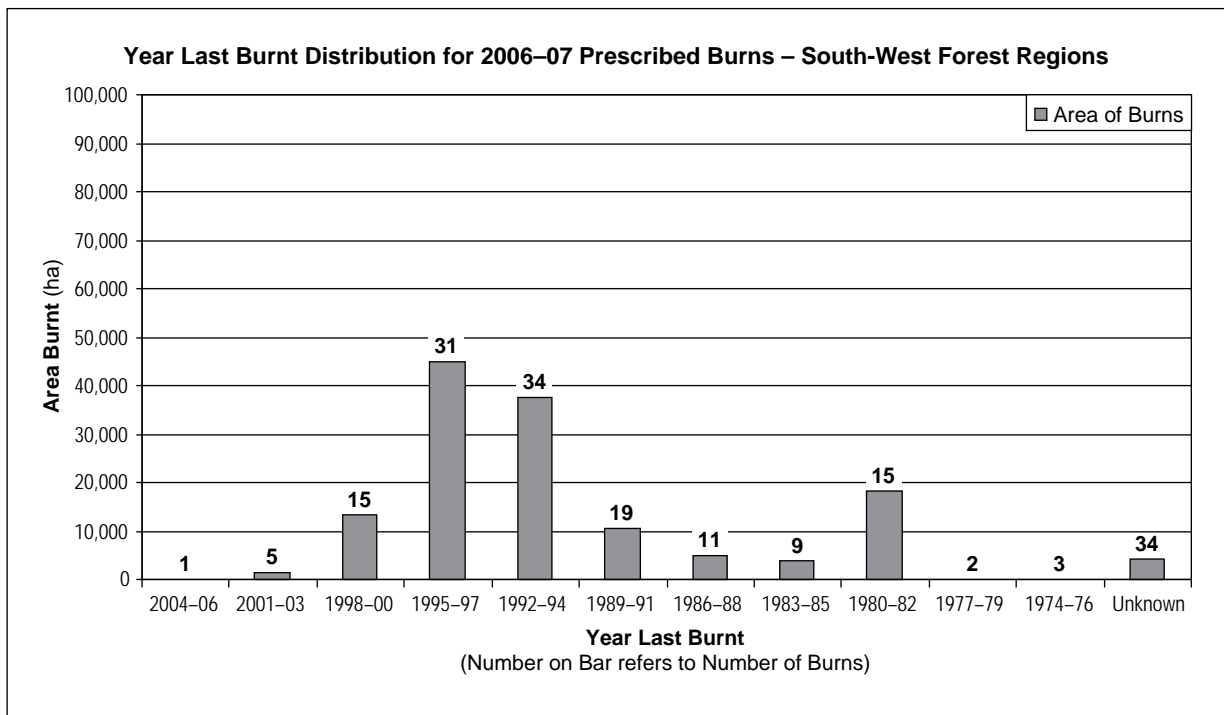
In order to meet these objectives, the department's Master Burn Planning process identified about 330,000 ha in 230 burning units that were available for prescribed burning in the south-west forest regions for the 2006–07 burning seasons. Of this program about 25,000 ha was for native hardwood silvicultural purposes and forest regeneration following timber harvest operations. This range of burn jobs provided the flexibility required to take advantage of any favourable burning situations in the south west during the season.

In the south-west regions, the prescribed burn program for 2006–07 achieved a total of about 138,600 ha, including about 16,600 ha that were burnt for pine plantation protection. Approximately 67 per cent of all burns were undertaken in the spring–early summer period (September to December 2006); 29 per cent in autumn (April to June 2007); and four per cent in winter (July and August 2006). The relatively low achievement in autumn 2007 was due to the very limited number of suitable burning days as very dry summer conditions extended into the middle of April 2007. This was followed by an extensive period of rain during April and early May 2007, and the wet conditions did not dry out until middle of May 2007.

The figure below shows the achievement of prescribed burning in the south-west forest regions from 1996–97 to 2006–07. The decline in burning during the period from 1998 to 2003 is a reflection of the impacts of drought and unfavourable burning conditions.



The following figure shows the year of last burn of the vegetation/ fuel within all the prescribed burns conducted in the south-west regions in 2006–07. Approximately 70 per cent of the burns contained fuels that had not been previously burnt since 1994, more than 12 years ago.



In addition to the burn programs achieved in the south-west regions, about 495,000 ha of prescribed burning was undertaken by DEC in the South Coast, Midwest, Kimberley, Goldfields, Wheatbelt and Pilbara Regions. Many of these burns were open-edge burns and aurally ignited wind-driven burns that provided protective buffers to limit the spread of wildfires from burning out entire reserves and to protect nearby community assets. The burns were carried out on DEC-managed lands as well as on unallocated Crown lands and unmanaged reserves within these regions. Prescribed burns that were undertaken within DEC-managed lands in the Kimberley Region in the early-dry season of 2005–06 were instrumental in restricting the areas of late season wildfires in 2006–07.

Details on the prescribed burn areas achieved are provided in the tables on the following pages and at Appendix E.

**2.2.4.3 Additional fire management resources**

Due to concerns about the impacts of the predicted long, dry and hot summer, the State Government provided an additional \$5.5 million at the start of the 2006–07 fire season to bolster the DEC fire fighting resources fleet by two bulldozers, two front-end loaders, three large transporters, five heavy duty tankers, and two fast attack units. In addition, two tankers fitted with high lift snorkels were constructed for extinguishing fires burning in the crowns of tall trees.

Other components of the \$5.5 million package included mobile field-based control centres with high capacity satellite networks; new computer based tracking systems for equipment, aircraft and personnel; and additional equipment, protective clothing, tents, sleeping equipment, power generators, maps and radios.

**2.2.4.4 Aerial water bombing operations**

The department contracted eight fixed-wing water bomber aircraft during the peak summer months of the 2006–07 fire season to provide rapid aerial suppression capability in the South Coast Region and south-west forest regions, and the Perth outer metropolitan area. Two pairs of Dromader aircraft were based at Manjimup and Albany. An Air Tractor 602 aircraft and an Air Tractor 802 aircraft were based at

The eight fixed-wing aircraft contracted by DEC over the peak summer months attended a total of 156 wildfires from Jurien Bay to Esperance. These aircraft dropped 1,384 loads and flew a total of 880 operational hours.

Bunbury and a second pair of Air Tractors at 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) were contracted by FESA to provide coverage for the Perth urban and peri urban 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 over the peak summer months attended a total of 156 wildfires from Jurien Bay to Esperance. These aircraft dropped 1,384 loads and flew a total of 880 operational hours. This compares with 595 loads and 365 hours in 2005–06.

### 2.2.4.5 Fire Training

DEC Fire Management Services training staff conducted 60 formal fire training courses involving 712 participants. In addition, District and Regional staff delivered 22 fire training programs (formal and informal) to 193 participants.

The formal courses conducted in 2006–07 included AllIMS Awareness; Introduction to AllIMS; Logistics Management; Prescribed Burning; Fireline Construction Using Machines; Basic Fire Awareness; Basic Fire Fighting; Fire Fighting Level 1; Fire Fighting Level 2; Fire Operations 1; Operational Management; Wildfire Suppression 3; Fire Weather; Resources Unit Management; Communications Planning; Information Services Management; and Fireline Leadership.

Training was also provided for aerial operations personnel including Fire Detection Pilots; Aerial Suppression Support staff; Air Attack Supervisors; Helitorch operators; Incendiary Machine Supervisors; and Incendiary Machine Bombardiers. A total of 138 participants were involved in the aerial operations training programs.

Participants were predominantly from DEC, but included personnel from the Forest Products Commission, FESA, local government authorities, contractors, and the department's 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.

### 2.2.4.6 Fire detection

DEC provided an effective fire detection system in the high fire risk zones of the south-west regions, based on nine single-engine aircraft and 13 fixed lookout towers. The department's nine aircraft (American Champion Scouts) flew 3,900 hours for aerial surveillance within pre-determined circuits in the south-west forest regions at schedules that varied according to fire danger levels and fire activity. In addition the aircraft flew 380 hours in support of aerial suppression operations. The aircraft were flown by two permanent senior pilots, and 15 seasonal and casual pilots.

### 2.2.4.7 Fire preparedness on unallocated Crown lands

From 1 July 2003 onwards, responsibility for the coordination and on-ground management of fire risk prevention and fire preparedness works on rural unallocated Crown land and unmanaged reserves has been taken over by DEC. This Crown land consists of approximately 89 million hectares.

The fire preparedness works undertaken in 2006–07 included the upgrade and maintenance of about 800 km of fire access and firebreaks; establishment of 50 km of fuel breaks by scrub rolling and slashing; 20,000 ha of prescribed burning of buffers; and establishment and maintenance of water supplies. Most of the works were on lands adjacent to high value or high risk areas.



### 2.2.4.8 Fire ecology education programs

The fire ecology education program continued to operate in 2006–07 through the EcoEducation Section of DEC Strategic Development and Corporate Affairs Division, and the Fire Management Services Branch.

Three professional learning days were successfully undertaken in Perth Hills National Park (2) and at Margaret River Eco Discovery Centre, attended by 59 teachers and environmental educators.

EcoEducation fire resources were developed in printed and electronic forms for use in the classroom. These are available for teachers from the EcoEducation Section of the NatureBase website.

### 2.2.4.9 Fire management services performance indicators

#### Prescribed burning in south-west regions

Region	10 year rolling average (ha)	Actual 2006–07	Difference (ha)	%
Swan	48,374	37,509	-10,865	-22%
South West	46,721	45,496	-1,225	-3%
Warren	56,599	55,597	-1,002	-2%
<b>Total</b>	<b>151,695</b>	<b>138,602</b>	<b>-13,093</b>	<b>-9%</b>

These statistics compare the 2006–07 prescribed burning achievements with the ten-year rolling average for prescribed burning.

The prescribed burning achieved within the south-west forest regions was below the ten-year rolling average primarily due to the extended drought conditions and unfavourable fuel moisture and weather conditions during the spring/early summer and autumn months.

The total area achieved (138,602 ha) was below the nominal annual program for the south-west regions of 200,000 ha.

#### Fire suppression in south-west regions

Region	Priority 1 and 2*	
	Standard	2006/07
Swan	95%	90%
South West	95%	95%
Warren	95%	90%
DEC average (1 year)		92%
DEC average (5 years)		91.5%

\*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 percent 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).

### 2.2.4.10 Radio communications services

The department owns an extensive radio communications network that provides a reliable and flexible communications for 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 radios, and 66 repeaters and towers, and 12 portable broadband satellite terminals.

The following are some of the achievements of the Radio Communications Section in 2006–07:

- As a stakeholder in the Western Australian Emergency Radio Network (WAERN), DEC's Radio Communications section staff have commissioned new radio infrastructure such as towers and repeaters in the Warren, South Coast, Wheatbelt and Swan Regions. The WAERN will see the complete change of the department's current Mid Band VHF radio network to High Band VHF over the next 2-3 years. This will provide better interoperability with the Fire and Emergency Services Authority, volunteer bushfire brigades, local authorities and other Government agencies during incidents and other day-to-day operations.
- The Radio Communications Section has been involved in the planning and establishment of improved satellite communications systems for remote areas throughout the State.
- A new radio communications tower and remote radio facility was constructed in Harvey by DEC to enable reliable communications into the DEC Harvey office. DEC was then approached by the WA Police to jointly share this facility and it is now also occupied by the WA Police as a key communications facility for their operations in and around the Harvey.
- All DEC regions, districts and specialised sections were provided with fault rectifications and radio service programs.



### 2.3.1 People Services Branch

The People Services Branch provides client-focused services including employee relations, workforce operational services, policy delivery, learning and development programs and initiatives, strategic planning, data analysis and reporting and risk management of the safety, health and wellbeing of our employees.

A significant proportion of the financial year was focused on restructuring the former Department of Environment and Department of Conservation and Land Management to create the Department of Environment and Conservation.

The transition of people and systems has been, and continues to be, a priority for the department.

Core people services functions delivered are outlined below.

#### **Workforce services and planning**

The section managed the key requirements to migrate all former Department of Environment employee information to DEC's Human Resources Information Management System. In addition, the system was successfully upgraded, resulting in improvements to navigation, functionality and faster personnel/payroll processing.

This year the department became an approved business sponsor with pre-approval for up to 15 sponsored prospective employees from overseas over a two-year period. Four sponsorships have been approved and progressed to date.

The department recognises that a balance between work and private life is a key factor for productive, healthy and contented staff, and to assist staff in achieving this, work/life balance guidelines have been developed and promoted.

The department has completed a thorough review and developed a new draft Equity and Diversity Management Plan for 2007–2010. The new Disability Access and Inclusion Plan 2007–2012 continues the department's long-term commitment to improve access, facilities and services in order to meet the needs of customers and staff. Achievements in the areas of equity and diversity management, and disability services are included in the Statutory Information Section of this report.

#### **Workforce planning and performance**

The People Services Branch established a section concentrating on workforce planning and performance reporting. Key initiatives include the development of a workforce planning model with supporting strategic and tactical initiatives. Identified priorities addressed by the branch from these outputs cover recruitment and selection, induction, leadership development, succession planning and workplace conditions and practices, all of which are linked to attraction and retention of staff.

The department introduced a new Code of Conduct. The code was reviewed to incorporate more information with respect to public comment, liaison with the Minister, misconduct, holding of shares, contact with lobbyists and receiving gifts or benefits. The code outlines staff obligations and responsibilities. The 'Conflict of Interest' provision includes a registration and annual review process.

#### **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 benefit of a safe working environment is well recognised, as is the interface between safety, health and fitness in minimising injury to workers and reducing costs. 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

The department recognises that a balance between work and private life is a key factor for productive, healthy and contented staff, and to assist staff in achieving this, work/life balance guidelines have been developed and promoted.

The Graduate Recruitment Program for 2007 placed 27 new and existing recruits within the department.

and illness, as well as create a working environment that maximises the effectiveness of each worker. To achieve this, the active involvement of every employee is required.

### **Organisation learning and development**

The department is a Registered Training Organisation.

The *Mentored Aboriginal Training and Employment Scheme* (MATES) program commenced in 2002 and continues to increase employment opportunities for Indigenous Australians. The National Indigenous Cadetship component of the program has six cadets supported by the department, with two recently graduating from the program. The Indigenous Traineeship element has 23 trainees. Twenty-eight trainees graduated with certificates in Conservation and Land Management.

A review of the Graduate Recruitment Program was undertaken to better meet the needs of the new department. The Graduate Recruitment Program for 2007 placed 27 new and existing recruits within the department.

The department provided scholarships to 15 employees this year.

In conjunction with the Chicago Botanic Garden, DEC provided an International Exchange Program. Four employees travelled to the United States, while five United States' representatives arrived to work with the department.

### **2.3.2 Information Management Branch**

#### **Records management**

The Corporate Information Section continued to support the department's compliance with the *State Records Act 2000*. During 2006–2007 substantial progress was made in integrating the records of the new department following the merger, and completing a new Recordkeeping Plan and Retention and Disposal Schedule. The Electronic Document and Records Management System was progressively implemented across the department concurrently with the corporate keyword classification system. The section's award-winning Recordkeeping Awareness training package continues to be adopted in Western Australia and other states.

#### **Geographic Information Services**

The Geographic Information Services Section provided maintenance and support for corporate spatial databases. It commenced the integration of corporate spatial data and desktop GIS systems following the merger. The section produced a Northern Wheatbelt Emergency Services Directory and provided digital spatial data depicting the cadastre, aerial photography and geo-referenced versions of the department's operations maps. In addition, the section provided training and support in desktop geographic information systems (GIS), including the implementation of a major upgrade to desktop GIS application software.

The section continued to provide GIS support for the processes involved in the establishment of conservation reserves. Hydrological modelling was carried out for Natural Diversity Recovery Catchments and assistance was provided for the Road Classification Project and for the development of the State Wetlands Database. Remote sensing technology was employed for a variety of projects including vegetation monitoring over Karijini National Park and Millstream, monitoring for wandoo decline and Wheatbelt wetlands baseline monitoring.

Other significant activities included contribution to an Emergency Services Directory for the south west of the State, and contributions to Landgate's Shared Land Information Platform project in the Natural Resource Management, Emergency Management and Interest Enquiry focus areas.





### Infrastructure

The Information Services Section continued to pursue the objectives identified in the department's Information Technology and Telecommunications Strategic Plan. Key focus areas included the standardisation, integration and operational management of infrastructure, including a major project to transfer the former Department of Environment business information systems into the DEC computing infrastructure and implement a new DEC computing network domain. The section also continued to implement the Information Technology Infrastructure Library framework with emphasis on incident, problem and change management processes.

As at 30 June 2007, the total area under DEC's care was 27,012,790 ha, representing an increase of 673,298 ha during 2006–07.

### 2.3.3 Financial Services Branch

The department's central Financial Services Branch consists of a small team of staff who coordinate 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 2006–07 the Financial Services Branch established financial and related systems for the new department.

### 2.3.4 DEC managed lands and waters

#### Total estate

As at 30 June 2007, the total area under DEC's care was 27,012,790 ha, representing an increase of 673,298 ha during 2006–07.

The terrestrial area (that is, not including marine reserves) is approximately 10.05 per cent of the land area of WA. Table 20 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 2007 was 5,595,741 ha, an increase of 2,205 ha for the year. The major addition of 2,154 ha was to Boorabbin National Park near Kalgoorlie following an area recalculation.

#### Conservation parks

Conservation parks have the same purpose as national parks, but they do not have the same national or international significance.

The area of conservation parks at 30 June 2007 was 843,907 ha, an increase of 752 ha. Notable additions were an area of 454 ha situated about 6 km east of Jurien Bay and another of 160 ha, about 4 km south of Woodman Point.

#### 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 2007 was 10,872,183 ha, representing a net increase of 11,351 ha for the year.

Notable additions were an area of about 2,946 ha, situated about 20 km north east of Lake Grace and 644 ha about 25 km west of Coorow. There was also an addition of 6,495 ha to correct a long-standing omission of Recherche Archipelago Nature Reserve from the reporting figures.

## 2.3 MANAGING OUR DEPARTMENT

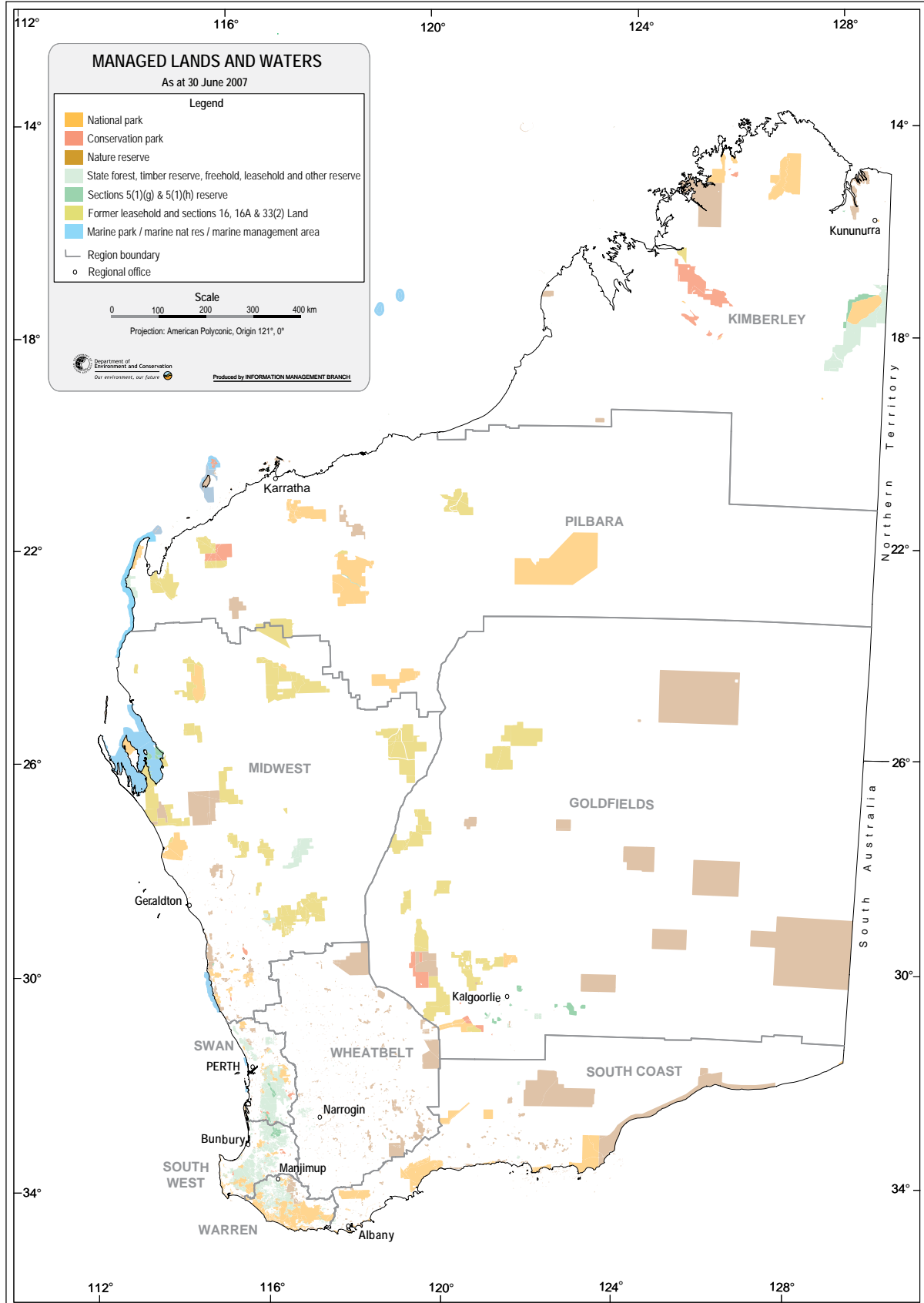
◀ Back Contents Forward ▶

**Table 20: Managed lands and waters (ha) by region as at 30 June 2007**

Tenure Classification	Goldfields	Kimberley	Midwest	Pilbara	South Coast	South West	Swan	Warren	Wheatbelt	Total
National Park	153,161	829,773	505,139	2,393,701	893,978	141,169	117,165	560,363	1,292	5,595,741
Conservation Park	182,817	460,232	14,967	149,348	7	13,560	21,341	76	1,559	843,907
Nature Reserve	6,304,226	809,611	738,840	250,596	1,566,192	12,899	52,378	86,742	1,050,699	10,872,183
Marine Park	-	87,807	868,860	288,108	-	-	16,391	-	-	1,261,166
Marine Nature Reserve	-	-	132,000	-	-	-	-	-	-	132,000
Marine Management Area	-	-	-	143,385	-	-	-	-	-	143,385
State Forest	781	-	-	-	4,055	542,563	466,474	262,553	28,066	1,304,492
Timber Reserve	28,575	-	26,338	-	5,231	26,484	28,501	8,216	-	123,345
Sections 5(1) (G) & 5(1) (H) Reserve	81,593	80,624	1,939	8,131	<1	31,014	27,455	1,513	1,386	233,655
Miscellaneous Reserve	<1	575,245	509	1,779	3,766	124	5,944	245	15	587,627
Freehold (CALM Exec Body)	-	<1	<1	<1	-	20,838	85	4,658	1	25,582
Leasehold (CALM Exec Body)	-	-	173,618	49,731	-	-	-	-	-	223,349
Former Leasehold	1,803,351	35,625	2,904,810	783,995	-	-	-	-	-	5,527,781
Section 33(2) Managed Land	28,514		90,139							118,653
Sections 16 & 16a Managed Land	-	4,840	7,020	-	-	121	7,903	40	-	19,924
<b>Totals</b>	<b>8,583,018</b>	<b>2,883,757</b>	<b>5,464,179</b>	<b>4,068,774</b>	<b>2,473,229</b>	<b>788,772</b>	<b>743,637</b>	<b>924,406</b>	<b>1,083,018</b>	<b>27,012,790</b>

Source: Information Management Branch

Note: \*It appears that the Recherche Archipelago Nature Reserve has never featured in the area stats for South Coast Region Nature Reserves. Therefore 6495.2 ha was added to the total. (Figure from SCRMP). \*\*Four other island NR's areas were gazetted 'indeterminable' but have been added using graphic/SCRMP areas – two in the Midwest, one in the Pilbara, one in the South Coast). \*\*\*Only one other reserve at this time is gazetted indeterminable – Res 33831 – Great Sandy Island. No figure has been derived for this reserve due to the large discrepancy between DEC and Landgate graphics.



The combined area of marine parks, nature reserves and management areas as at 30 June 2007 was approximately 1,536,551 ha.

### 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 2007 was 1,304,492 ha, a decrease for the year of 127 ha.

The major change of 83 ha was due to a proposed new highway about 6 km south east of Lake Clifton townsite.

### Timber reserves

Timber reserves declared under the CALM Act are managed on the same basis as State forests.

The area of timber reserves at 30 June 2007 was 123,345 ha, an increase of 1 ha.

### Marine parks and 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 2007 was approximately 1,261,166 ha. There were no changes during the year.

The area of marine nature reserves at 30 June 2007 was approximately 132,000 ha. 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 2007 was approximately 143,385 ha. There were no changes during the year.

### Section 5(1)(g) and 5(1)(h) reserves

Within the meaning of 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 2007 was 233,655 ha. This represents an increase for the year of 167 ha.



**Table 21: National parks vested in the Conservation Commission of Western Australia as at 30 June 2007**

Name	Area (ha)	Name	Area (ha)
Alexander Morrison	8,500	Lesueur	27,235
Avon Valley	4,366	Millstream-Chichester	199,736
Badjingarra	13,108	<i>Milyeannup</i>	18,692
<i>Blackwood River</i>	20,477	<i>Mirima</i>	2,068
Boorabbin	28,154	<i>Mitchell River</i>	115,325
<i>Boorara Gardner</i>	11,008	Moore River	17,254
<i>Boyndaminup</i>	5,439	Mount Augustus	9,168
Bramley	3,892	Mount Frankland	37,359
Brockman	52	<i>Mount Frankland North</i>	22,053
<i>Canning</i>	2,492	<i>Mount Frankland South</i>	42,283
Cape Arid	279,446	<i>Mount Lindesay</i>	39,541
Cape Le Grand	31,801	<i>Mount Roe</i>	127,726
Cape Range	47,655	<i>Mundaring</i>	4,617
Collier Range	235,162	Nambung	18,400
D'Entrecasteaux	116,686	Neerabup	943
<i>Dalgarup</i>	2,377	Peak Charles	39,959
Drovers Cave	2,681	<i>Pickering Brook</i>	6,344
Drysdale River	448,264	Porongurup	2,621
<i>Easter</i>	2,985	Purnululu	239,723
<i>Eucla</i>	3,560	Rudall River	1,283,706
Fitzgerald River	329,882	Scott	3,273
<i>Forest Grove</i>	1,379	Serpentine	4,357
Francois Peron	52,587	Shannon	52,598
Frank Hann	67,550	Sir James Mitchell	247
Geikie Gorge	3,136	Stirling Range	115,920
Gloucester	876	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	19,447
<i>Greater Preston</i>	12,665	Walyunga	1,812
Greenmount	202	<i>Wandoo</i>	46,493
<i>Gull Rock</i>	2,104	Warren	2,982
Hassell	1,265	Watheroo	44,474
<i>Helena</i>	12,255	<i>Waychinicup</i>	3,982
<i>Hilliger</i>	16,962	Wellington	16,790
<i>Jane</i>	6,863	<i>West Cape Howe</i>	3,517
John Forrest	2,678	<i>Whicher</i>	6,343
Kalamunda	375	William Bay	1,734
Kalbarri	183,004	Wiltshire-Butler	11,645
Karijini	627,442	Windjana Gorge	2,134
Kennedy Range	141,660	Wolfe Creek Crater	1,460
<i>Lake Muir</i>	9,625	Yalgorup	13,141
<i>Lawley River</i>	17,572	Yanchep	2,876
Leeuwin-Naturaliste	19,092	<i>Yelverton</i>	729
<i>Lesmurdie Falls</i>	56		

**Total: 5 595 741 ha**

*Names shown in italics are unofficial*

The department bought 10 parcels of land of high conservation value with a total area of approximately 636,410 ha during the year for future addition to the conservation reserve system.

**Table 22: Marine reserves vested in the Marine Parks and Reserves Authority as at 30 June 2007**

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
<b>TOTAL</b>	<b>1,536,551</b>

### Miscellaneous reserves

There are some remaining reserves managed by the department, which do not fall within any of the above 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 2007 was 587,627 ha, representing a decrease of 382 ha for the year.

The major change was a 365 ha excision from the Ord River Regeneration Reserve.

### Other land

The area of freehold land held by DEC at 30 June 2007 was 25,582 ha, a net decrease of 1 ha for the year. Softwood forests occupy the major portion of this freehold land.

The area of former pastoral lease land being held under an interim management arrangement prior to formal reservation is 5,527,781 ha representing an increase of about 436,198 ha, including adjustments to previously quoted figures.

Crown land placed under the management of the department under section 33(2) of the CALM Act as at 30 June 2007 totalled 118,653 ha. Of this, 406 ha is unvested Crown reserves. The remainder is land proposed for addition to the conservation estate, which is managed accordingly under an interim arrangement.

Areas currently managed under section 16A of the CALM Act by agreement between the lessees and the department amount to 11,860 ha, a decrease during the year of 215 ha. This was due to DEC's purchase of Credo pastoral lease therefore cancelling the agreement.

The area of freehold land managed by the department under section 16 of the CALM Act at 30 June 2007 was 8,064 ha. Most of this land falls within regional parks and is managed by agreement between the Western Australian Planning Commission and DEC.

### Conservation land acquisitions

The department bought 10 parcels of land of high conservation value with a total area of approximately 636,410 ha during the year for future addition to the conservation reserve system. A 50 per cent share in the 49,731 ha Ningaloo pastoral lease was also acquired.



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

The purchases were funded from a number of sources: DEC's annual capital allocation for acquiring conservation land; proceeds of asset sales; the National Reserve System component of the Commonwealth Government's Natural Heritage Trust; environmental offset funds; Gascoyne-Murchison Strategy funding carried over from previous years; and a special appropriation. The total expenditure from all funding sources for the financial year was more than \$3.3 million.

With funds allocated under the Gascoyne-Murchison Strategy, the Dalgarranga, Noongal and Thundelarra pastoral leases within the Shire of Yalgoo were acquired. Also acquired with these funds was part of the Nerren Nerren pastoral lease adjoining the existing Zuytdorp Nature Reserve within the Shire of Shark Bay. This acquisition will make a significant addition to the Zuytdorp Nature Reserve.

A special appropriation was approved during the year for the purchase of the Credo pastoral lease in the Goldfields and a 50 per cent share in the Ningaloo pastoral lease near Exmouth. The purchase of Credo, which adjoins the Rowles Lagoon Conservation Park and the Clear and Muddy Lakes Nature Reserve, will protect the Rowles Lagoon catchment, which falls almost entirely within the pastoral lease. The share in the Ningaloo pastoral lease was acquired as part of a whole-of-Government approach for the protection of the Ningaloo coast and proposed World Heritage listing.

Environmental offset funds received in connection with a transmission line and road developments in the Midwest and Swan Regions were used to buy three parcels of remnant vegetation during the year. One property, located within the Shire of Three Springs, adjoins an existing nature reserve and will protect an occurrence of the Threatened Ecological Community 'Organic Mounds of the Three Springs Area'. A small parcel of land was purchased in the Shire of Dandaragan adjoining the Hill River Nature Reserve. The acquisition of the land and inclusion in the nature reserve has helped provide a more manageable boundary. The Ellen Brook Nature Reserve in Upper Swan, a key site for the preservation of the critically endangered Western Swamp Tortoise, was also expanded by the purchase of a small section of an adjoining property.

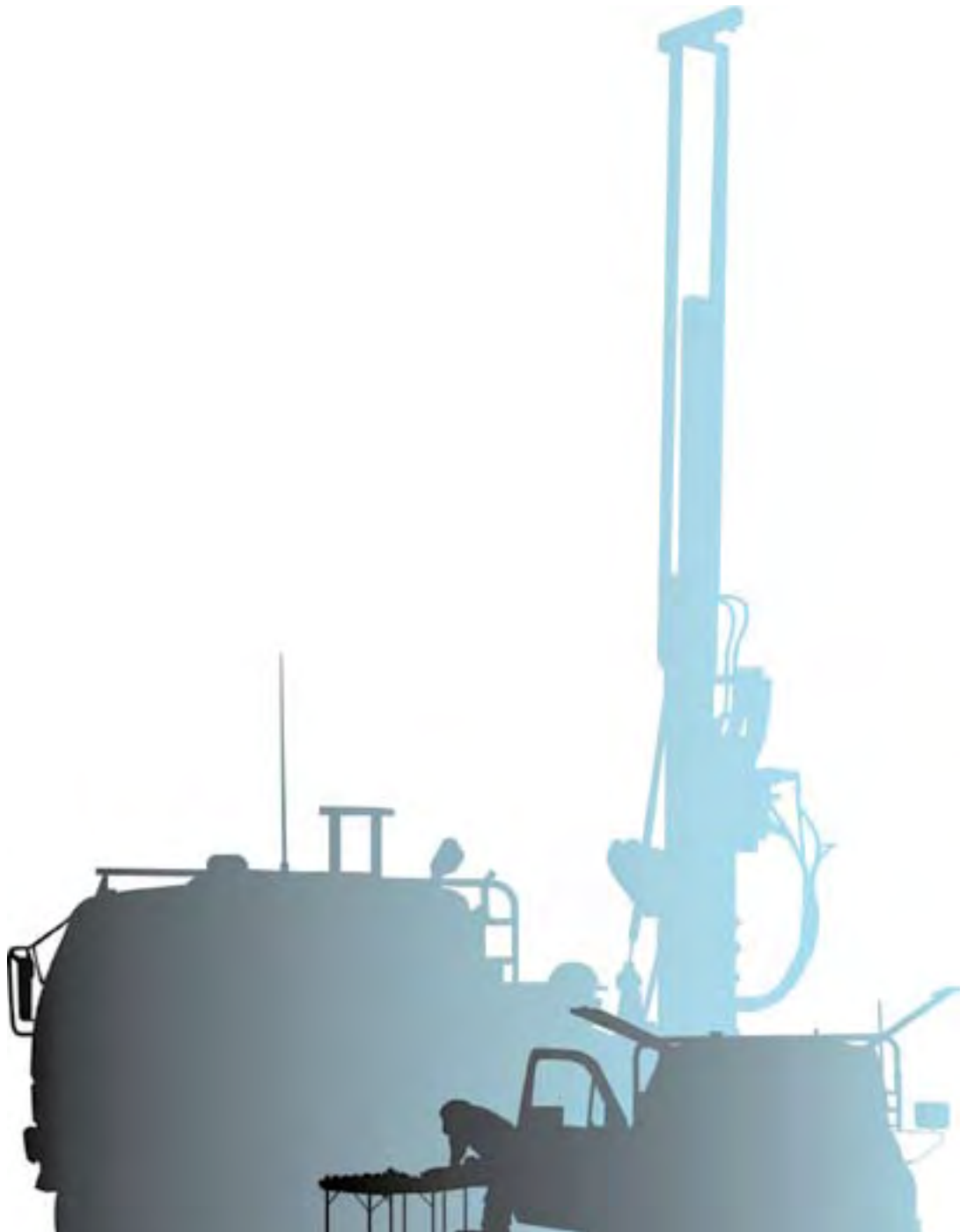
Other purchases finalised during the year were: a 130 ha parcel of bushland in the Shire of Gingin and 194 ha adjoining the unofficially named Dalgarrup National Park west of Bridgetown. This block, along with the adjoining national park, contains the most northern occurrence of karri and stands of mature blackbutt.

The department acknowledges the contribution made by the Commonwealth Government through the National Reserve System component of the Natural Heritage Trust, which helped with a number of the land purchases. In 2006–07 this contribution amounted to \$576,000. A further \$309,375 was received towards the purchase of the Woolgorong pastoral lease north of Mullewa, which was bought with Gascoyne-Murchison Strategy funds in the previous year. The support of the Commonwealth Government continues to help with progress towards the establishment of a comprehensive, adequate and representative system of terrestrial conservation reserves in Western Australia.

**A share in the Ningaloo pastoral lease was acquired as part of a whole-of-Government approach for the protection of the Ningaloo coast and proposed World Heritage listing.**

# 3

## SIGNIFICANT ISSUES AND TRENDS

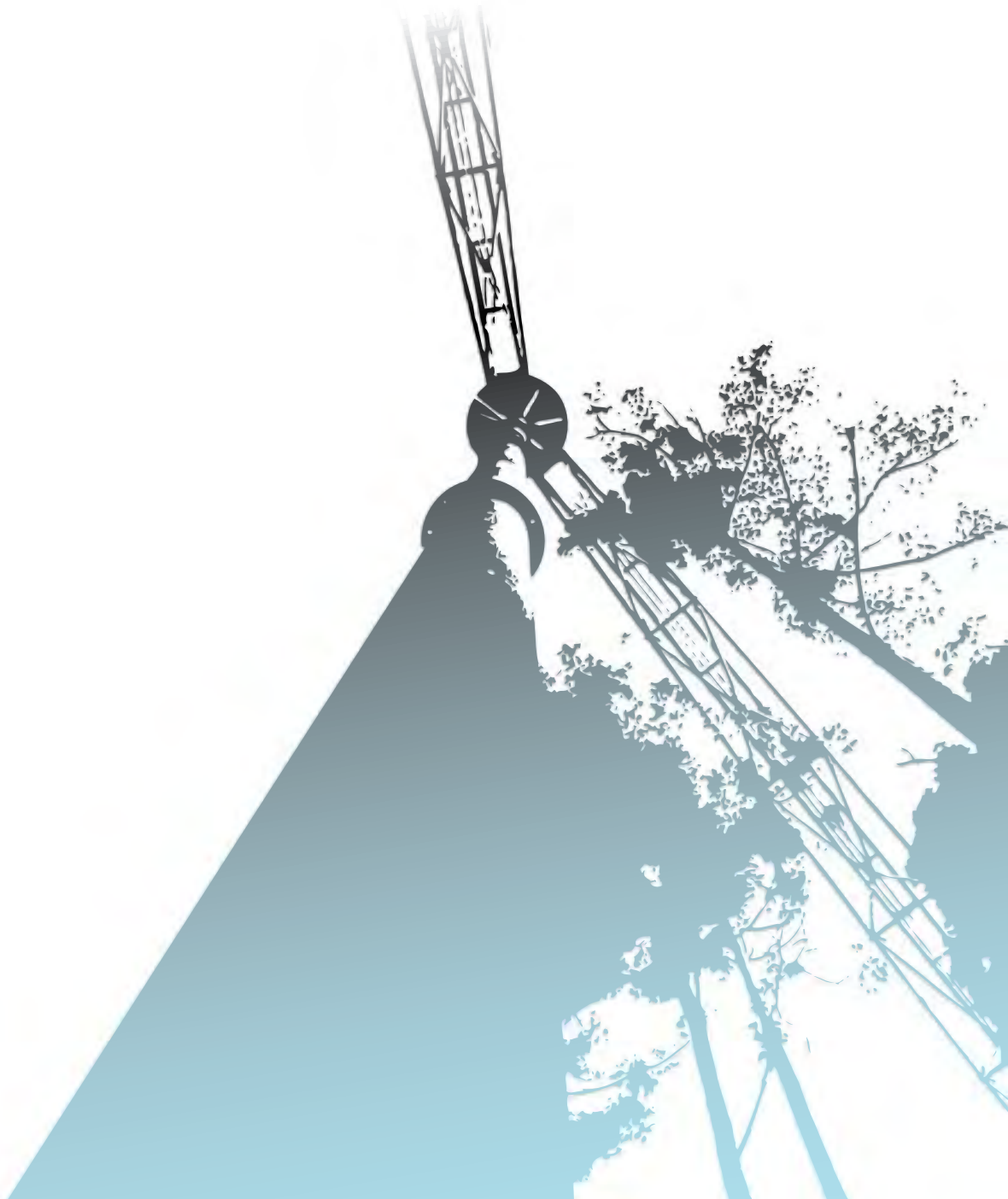




- Increasing community awareness and expectations for action to reduce predicted impacts of climate change on the environment and biodiversity of Western Australia.
- Significant policy development at international, national and state levels in relation to adaptation to climate change and mitigation of greenhouse gases.
- Strong economic growth and major resource development projects placing pressure on the natural environment and on the department's environmental impact assessment and regulatory functions.
- The department instigated a statewide assessment of ports to ensure environmental and health standards were being met. The ports of Geraldton and Derby were inspected in May. Other assessments are scheduled for the ports of Port Hedland, Kwinana, Bunbury, Albany and Wyndham.
- Growing threats to the State's biodiversity from pest animals and weeds, dieback, salinity, altered fire regimes, habitat loss and climate change.
- Increasing emphasis on recovery of threatened species and ecological communities, and significant ecosystems and landscapes to reverse biodiversity decline.
- The need to establish a terrestrial and marine conservation reserve system to conserve biodiversity, that is comprehensive, adequate and representative and provides for sustainable nature-based recreation and tourism.
- Increasing interaction with private industry, individuals and other government agencies to conserve biodiversity on private and public lands that are not part of the formal conservation reserve system.
- Continued growth in visitation to parks.
- Continued expectation from recreational and community groups, including people with disabilities, to maintain and upgrade facilities, park infrastructure and services.
- Continued emphasis on developing partnerships with the non-government sector in providing tourism and recreation services and facilities.
- Working with Indigenous communities for joint management and employment in conservation and land management.
- Increase in complexity in the management of State forests for timber production and biodiversity conservation as a result of changes flowing from implementation of the Forest Management Plan 2004–2013.
- Increasing focus on management of fire for biodiversity and protection of public and private assets and the community from fire risks on departmental land.
- Continued focus on Government and community efforts to stop cane toads expanding their range from the Northern Territory into Western Australia.
- Responsibility for pest animal and weed control and wildfire preparedness on unallocated Crown Land and unmanaged reserves outside the metropolitan area and townsites.
- Increasing expectation that the department will be a good neighbour to pastoralists, farmers and others.
- Staff recruitment and retention challenges in a buoyant economy.
- Impact of rising costs of both materials and labour on the capacity to deliver projects and services, especially in remote locations.
- Continuing demand for the Perth Observatory's services and facilities by international astronomical institutions due to its isolated location as well as continued public demand for astronomical education and information services.
- Continuing strong community and industry interest in air quality management and health protection in the Perth metropolitan area and key regional centres including Wagerup, Port Hedland, Kwinana, Esperance, Collie and Kalgoorlie.
- Increasingly complex management of industry regulation accompanied by demands for improved community engagement.
- Increasing public focus on remediation of contaminated sites following proclamation of the *Contaminated Site Act 2003* and the availability of a public database of sites.
- Reduction in reliance on landfill through waste avoidance, recycling and better management of hazardous wastes.
- Increasing support for the concept of extended producer responsibility in waste management.
- Focus on working with the community and industry to shift the way we live to a more sustainable basis.
- State of the Environment reporting as a plan for action influencing policy and resource allocation to programs.
- Continued implementation of the reform recommendations from the Keating Review of government approval processes for enhanced timelines.
- Streamlining of procedures to reduce processing delays for clearing permit applications while still maintaining the protection of native vegetation.

# 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 year ending 30 June 2007 and the financial position as at 30 June 2007.

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.



Keiran McNamara  
**Accountable Authority**  
28 August 2007

John Byrne  
**Chief Finance Officer**  
28 August 2007



## 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 2007

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 2007, and the Income Statement, Statement of Changes in Equity, Cash Flow Statement, Schedule of Income and Expenses 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 "<http://www.audit.wa.gov.au/pubs/Audit-Practice-Statement.pdf>".

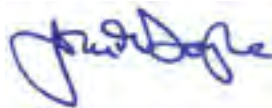
An audit does not guarantee that every amount and disclosure in the financial statements and key performance indicators is error free. The term "reasonable assurance" recognises that an audit does not examine all evidence and every transaction. However, my audit procedures should identify errors or omissions 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 2007**

**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 2007 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 2007.



JOHN DOYLE  
ACTING AUDITOR GENERAL  
21 September 2007

DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
 INCOME STATEMENT  
 FOR THE YEAR ENDED 30 JUNE 2007

	Note	2007 \$'000
<b>COST OF SERVICES</b>		
<b>Expenses</b>		
Employee benefits expense	5	135,347
Supplies and services	6	82,108
Depreciation and amortisation expense	7	17,154
Accommodation expenses	8	5,153
Grants and subsidies	9	5,067
Capital user charge	10	16,256
Other expenses	11	20,962
<b>Total cost of services</b>		<b>282,047</b>
<b>Income</b>		
<i>Revenue</i>		
User charges and fees	12	54,973
Commonwealth grants and contributions	13	11,576
Other grants and contributions	14	4,498
Interest revenue		3,442
Other revenue	16	3,804
<b>Total revenue</b>		<b>78,293</b>
<b>Gains</b>		
Gain on disposal of non-current assets	15	1,538
Total income other than income from State Government		<b>79,831</b>
<b>NET COST OF SERVICES</b>		<b>202,216</b>
<b>INCOME FROM STATE GOVERNMENT</b>		
Service appropriation	17	212,538
Liabilities assumed by the Treasurer		2,551
Assets assumed (transferred)		52
Resources received free of charge		575
<b>Total income from State Government</b>		<b>215,716</b>
<b>SURPLUS/DEFICIT FOR THE PERIOD</b>		<b>13,500</b>

The Income Statement should be read in conjunction with the accompanying notes.

DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
BALANCE SHEET  
AS AT 30 JUNE 2007

	Note	2007 \$'000
<b>ASSETS</b>		
<b>Current Assets</b>		
Cash and cash equivalents	30	68,833
Restricted cash and cash equivalents	18	97
Inventories	19	344
Receivables	20	17,145
Amounts receivable for services	21	7,306
Other current assets	22	716
Non-current assets classified as held for sale	23	0
<b>Total Current Assets</b>		<b>94,441</b>
<b>Non-Current Assets</b>		
Restricted cash and cash equivalents	18	828
Inventories	19	1,377
Amounts receivable for services	21	50,604
Property, plant and equipment	24	3,432,898
<b>Total Non-Current Assets</b>		<b>3,485,707</b>
<b>TOTAL ASSETS</b>		<b>3,580,148</b>
<b>LIABILITIES</b>		
<b>Current Liabilities</b>		
Payables	26	14,897
Provisions	27	22,462
Other current liabilities	28	4,500
<b>Total Current liabilities</b>		<b>41,859</b>
<b>Non-Current Liabilities</b>		
Provisions	27	9,687
<b>Total non-current liabilities</b>		<b>9,687</b>
<b>TOTAL LIABILITIES</b>		<b>51,546</b>
<b>Net Assets</b>		<b>3,528,602</b>
<b>Equity</b>		
Contributed Equity	29	2,779,619
Reserves		735,483
Accumulated surplus/(deficiency)		13,500
<b>Total equity</b>		<b>3,528,602</b>
<b>TOTAL LIABILITIES AND EQUITY</b>		<b>3,580,148</b>

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 2007

	Note	2007 \$'000
Balance of equity at start of period		0
<b>CONTRIBUTED EQUITY</b>	29	
Balance at start of period		0
Capital contribution		17,406
Other contributions by owners		2,762,213
Distributions to owners		0
<b>Balance at end of period</b>		<b>2,779,619</b>
<b>RESERVES</b>	29	
<b>Asset Revaluation Reserve</b>		
Balance at start of period		0
Gains/(losses) from asset revaluation		735,483
<b>Balance at end of period</b>		<b>735,483</b>
<b>ACCUMULATED SURPLUS (RETAINED EARNINGS)</b>	29	
Balance at start of period		0
Change in accounting policy or correction of prior period errors		0
Restated balance at start of period		0
Surplus/(deficit) or profit/(loss) for the period		13,500
Gain/(losses) recognised directly in equity		0
<b>Balance at end of period</b>		<b>13,500</b>
<b>Balance of equity at end of period</b>		<b>3,528,602</b>
<b>Total income and expense for the period (a)</b>		748,983

(a) The aggregate net amount attributable to each category of equity is: surplus \$13,500,000 plus gains from asset revaluation \$735,483,000

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 2007

	Note	2007 \$'000
<b>CASH FLOWS FROM STATE GOVERNMENT</b>		
Service appropriation		195,639
Capital contributions		17,406
Holding account drawdowns		7,106
Non-retained revenue distributed to owner		0
<b>Net cash provided by State Government</b>		<b>220,151</b>
<b>Utilised as follows:</b>		
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Payments		
Employee benefits		(132,468)
Supplies and services		(74,544)
Capital user charge		(16,361)
Accommodation		(5,046)
Grants and subsidies		(5,067)
GST payments on purchases		(11,619)
Other payments		(20,356)
<b>Receipts</b>		
User charges and fees		53,128
Commonwealth grants and contributions		12,245
Interest received		2,810
GST receipts on sales		3,751
GST receipts from taxation authority		7,759
Other receipts		8,163
<b>Net cash provided by/(used in) operating activities</b>	30	<b>(177,605)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Proceeds from sale of non-current physical assets		1,934
Purchase of non-current physical assets		(32,027)
<b>Net cash provided by/(used in) investing activities</b>		<b>(30,093)</b>
Net increase/(decrease) in cash and cash equivalents		12,454
Cash and cash equivalents at the beginning of the period		57,305
<b>CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD</b>	30	<b>69,758</b>

The Cash Flow Statement should be read in conjunction with the accompanying notes.

# 4.1 FINANCIAL STATEMENTS

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DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
SCHEDULE OF INCOME AND EXPENSES BY SERVICE FOR THE YEAR ENDED 30 JUNE 2007

	2007 \$'000	Nature Conservation	2007 \$'000	Sustainable Forest Management	2007 \$'000	Performance of Statutory Functions by the Commission of WA	2007 \$'000	Parks and Visitor Services	2007 \$'000	Astronomical Services	2007 \$'000	Air Quality Management Plans and Air Quality Monitoring	2007 \$'000	Regulation of Discharges to the Environment	2007 \$'000	Regulation of Contaminated sites	2007 \$'000	Administration of the Waste Management Recycling Fund	2007 \$'000	Policies and Strategies to Reduce and Recycle Waste	2007 \$'000	Environmental Impact Assessments of Development Proposals and Planning Schemes	2007 \$'000	Environmental Policies and Reports on the State of the Environment	2007 \$'000	Total 2007 \$'000
<b>COST OF SERVICES</b>																										
<b>Expenses</b>																										
Employee benefits expense	56,210	21,163	495	31,725	673	2,748	7,788	1,759	445	2,319	4,693	5,329	135,347													
Supplies and services	33,429	14,517	166	18,903	186	2,610	5,387	1,131	455	2,186	878	2,260	82,108													
Depreciation and amortisation expense	4,062	3,160	18	9,018	67	48	504	36	12	33	77	119	17,154													
Accommodation expenses	1,114	359	24	921	19	246	1,059	212	65	174	448	512	5,153													
Grants & subsidies	493	0	0	101	0	549	6	777	0	3,114	0	27	5,067													
Capital user charge	4,108	2,749	10	9,200	160	3	11	2	1	2	5	5	16,256													
Other expenses	8,007	7,033	49	4,330	25	186	600	101	35	132	236	228	20,962													
<b>Total cost of services</b>	<b>107,423</b>	<b>48,981</b>	<b>762</b>	<b>74,198</b>	<b>1,130</b>	<b>6,330</b>	<b>15,355</b>	<b>4,018</b>	<b>1,013</b>	<b>7,960</b>	<b>6,337</b>	<b>8,480</b>	<b>282,047</b>													
<b>Income</b>																										
User charges and fees	9,367	9,674	0	12,541	144	185	10,326	58	18	11,795	131	734	54,973													
Commonwealth grants and contributions	8,472	801	0	196	0	1,373	134	116	0	173	17	294	11,576													
Other grants and contributions	1,634	90	0	2,363	0	179	106	0	0	120	6	0	4,498													
Interest revenue	2,558	123	0	315	0	1	0	0	0	445	0	0	3,442													
Other revenue	762	2,189	7	529	0	90	23	123	0	69	5	7	3,804													
Gain on disposal of non-current assets	298	1,024	0	222	0	0	(6)	0	0	0	0	0	1,538													
<b>Total income other than income from State Government</b>	<b>23,091</b>	<b>13,901</b>	<b>7</b>	<b>16,166</b>	<b>144</b>	<b>1,828</b>	<b>10,583</b>	<b>297</b>	<b>18</b>	<b>12,602</b>	<b>159</b>	<b>1,035</b>	<b>79,831</b>													
<b>NET COST OF SERVICES</b>	<b>84,332</b>	<b>35,080</b>	<b>755</b>	<b>58,032</b>	<b>986</b>	<b>4,562</b>	<b>4,772</b>	<b>3,721</b>	<b>995</b>	<b>(4,642)</b>	<b>6,178</b>	<b>7,445</b>	<b>202,216</b>													
<b>INCOME FROM STATE GOVERNMENT</b>																										
Service appropriation	83,609	41,783	835	51,862	1,049	5,461	5,843	4,476	808	2,021	6,212	8,579	212,538													
Liabilities assumed by the Treasurer	238	86	2	134	4	12	36	8	4	9	609	1,409	2,551													
Assets assumed (transferred)	0	0	0	52	0	0	0	0	0	0	0	0	52													
Resources received free of charge	108	64	1	74	2	37	134	23	13	21	53	45	575													
<b>Total income from State Government</b>	<b>83,955</b>	<b>41,933</b>	<b>838</b>	<b>52,122</b>	<b>1,055</b>	<b>5,510</b>	<b>6,013</b>	<b>4,507</b>	<b>825</b>	<b>2,051</b>	<b>6,874</b>	<b>10,033</b>	<b>215,716</b>													
<b>Surplus/deficit for the period</b>	<b>(377)</b>	<b>6,853</b>	<b>83</b>	<b>(5,910)</b>	<b>69</b>	<b>948</b>	<b>1,241</b>	<b>786</b>	<b>(170)</b>	<b>6,693</b>	<b>696</b>	<b>2,588</b>	<b>13,500</b>													

The Schedule of Income and Expenses by Service should be read in conjunction with the accompanying notes.

DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
SUMMARY OF CONSOLIDATED ACCOUNT APPROPRIATIONS AND INCOME ESTIMATES  
FOR THE YEAR ENDED 30 JUNE 2007

	2007 Estimate \$'000	2007 Actual \$'000	Variance \$'000
<b>DELIVERY OF SERVICES</b>			
Item 93 Net amount appropriated to deliver services	160,196	174,818	14,622
Item 95 Net amount appropriated to deliver services	23,643	23,643	0
Item 96 Net amount appropriated to deliver services	13,010	13,010	0
Section 25 transfer of service appropriation	0	505	505
Amount Authorised by Other Statutes – <i>Salaries and Allowances Act 1975</i>	406	562	156
<b>Total appropriations provided to deliver services</b>	<b>197,255</b>	<b>212,538</b>	<b>15,283</b>
<b>CAPITAL</b>			
Item 167 Capital Contribution	11,110	16,556	5,446
Item 169 Capital Contribution	850	850	0
<b>GRAND TOTAL</b>	<b>209,215</b>	<b>229,944</b>	<b>20,729</b>
<b>Details of Expenses by Service</b>			
Nature Conservation	87,363	107,423	20,060
Sustainable Forest Management	39,074	48,981	9,907
Performance of statutory functions by the Conservation Commission of Western Australia	827	762	(65)
Parks and Visitor Services	66,546	74,198	7,652
Astronomical Services	1,238	1,130	(108)
Air Quality Management Plans and Air Quality Monitoring	7,039	6,390	(649)
Regulation of Discharges to the Environment	16,202	15,355	(847)
Regulation of Contaminated sites	6,294	4,018	(2,276)
Administration of the Waste Management Recycling Fund	984	1,013	29
Policies and Strategies to Reduce and Recycle Waste	5,829	7,960	2,131
Environmental Impact Assessments of Development Proposals and Planning Schemes	6,129	6,337	208
Environmental Policies and Reports on the State of the Environment	6,881	8,480	1,599
<b>Total Cost of Services</b>	<b>244,406</b>	<b>282,047</b>	<b>37,641</b>
Less total income	(54,270)	(79,831)	(25,561)
<b>Net Cost of Services</b>	<b>190,136</b>	<b>202,216</b>	<b>12,080</b>
Adjustments (1)	7,119	10,322	3,203
<b>Total appropriations provided to deliver services</b>	<b>197,255</b>	<b>212,538</b>	<b>15,283</b>
<b>Capital Expenditure</b>			
Purchase of non-current physical assets	24,667	32,027	7,360
Adjustment for other funding sources	(12,707)	(14,621)	(1,914)
<b>Capital Contribution (appropriation)</b>	<b>11,960</b>	<b>17,406</b>	<b>5,446</b>
<b>DETAIL OF INCOME ESTIMATES</b>			
Income disclosed as Administered Income	145	186	41

(1) Adjustments comprise movements in cash balances and other accrual items such as receivables, payables and superannuation.

Note 34 "Explanatory statement" provides details of any significant variations between estimates and actual results for 2007.

DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
 NOTES TO THE FINANCIAL STATEMENTS  
 FOR THE YEAR ENDED 30 JUNE 2007

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 2006–2007 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.

DEC was created on 1 July 2006 and took over functions and staff of the former Department of Environment (DOE) and Department of Conservation and Land Management (CALM). With 2006–2007 being the first financial year for DEC, no comparative data has been provided for 2005–2006. At note 40 are the closing balance sheets of DOE and CALM which formed the opening balance sheet for DEC.

2. Australian equivalents to International Financial Reporting Standards

*General*

These are DEC's first published financial statements and as a result no comparative data is available.

DEC's financial statements for the year ended 30 June 2007 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 2007.

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. For example, AASB 116 requires land and buildings to be measured at cost or fair value; TI 954 mandates the fair value option.

The *Financial Management Act 2006* 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.

Modifications or clarifications to accounting standards through the TI's are to provide certainty and ensure consistency and appropriate reporting across the public sector.

## **(b) Basis of Preparation**

The financial statements have been prepared in accordance with Accounting Standard AAS 29 'Financial Reporting by Government Departments' on the accrual basis of accounting using the historical cost convention, modified by the revaluation of land and buildings 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 41 'Administered expenses and income' and note 42 'Administered assets and liabilities'.

## **(d) Contributed Equity**

UIG Interpretation 1038 'Contributions by Owners Made to Wholly-Owned Public Sector Entities' requires transfers 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 are designated as contributions by owners where the transfers are non-discretionary and non reciprocal. See note 29 '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 17 '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 2006–2007 Budget Statements, DEC retained \$ 79,831 million in 2007 being from:

- 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 the Department 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.

Where contributions recognised as revenues during the reporting period were obtained on the condition that they be expended in a particular manner or used over a particular period, and those conditions were undischarged as at the balance sheet date, the nature of, and amounts pertaining to, those undischarged conditions are disclosed in the notes.

### *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 over \$1,000 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 \$1,000 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).

### *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 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 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, ie. 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 24 'Property, plant and equipment' for further information on revaluations.

### *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) Intangible Assets**

#### *Capitalisation/Expensing of assets*

Acquisitions of intangible assets costing \$1,000 or more and internally generated intangible assets costing \$50,000 or more are capitalised. The cost of utilising the assets is expensed (amortised) over their useful lives. Costs incurred below these thresholds are immediately expensed directly to the Income Statement.

All acquired and internally developed intangible assets are initially recognised at cost. For assets acquired at no cost or for nominal cost, the cost is their fair value at the date of acquisition.

The cost model is applied for subsequent measurement requiring the asset to be carried at cost less any accumulated amortisation and accumulated impairment losses.

Amortisation for intangible assets with finite useful lives is calculated for the period of the expected benefit (estimated useful life) on the straight line basis using rates which are reviewed annually. All intangible assets controlled by DEC have a finite useful life and zero residual value. The expected useful lives for each class of intangible assets are:

Licences	up to 10 years
Software (i)	2.5 years
Research and Development costs	3 to 5 years
Web site costs	3 to 5 years

(i) Software that is not integral to the operation of any related hardware.

#### *Licences*

Licences have a finite useful life and are carried at cost less accumulated amortisation and accumulated impairment losses.

#### *Research and Development*

Research costs are expensed as incurred. Development costs incurred for an individual project are carried forward when the future recoverability can reasonably be regarded as assured and the total project costs are likely to exceed \$50,000. Other development costs are expensed as incurred.

#### *Computer Software*

Software that is an integral part of the related hardware is treated as property, plant and equipment. Software that is not an integral part of the related hardware is treated as an intangible asset. Software costing less than \$1,000 is expensed in the year of acquisition.

#### *Web site costs*

Web site costs are charged as expenses when they are incurred unless they relate to the acquisition or development of an asset when they may be capitalised and amortised. Generally, costs in relation to feasibility studies during the planning phase of a web site, and ongoing costs of maintenance during the operating phase are expensed. Costs incurred in building or enhancing a web site, to the extent that they represent probably future economic benefits that can be reliably measured, are capitalised.

### **(h) 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 not yet available for use are tested for impairment at each balance sheet date irrespective of whether there is any indication or 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 25 'Impairment of assets' for the outcome of impairment reviews and testing. See also note 3 (p) 'Receivables' and note 20 'Receivables' for impairment of receivables.

### **(i) 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.

### **(j) 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.

### **(k) Financial Instruments**

DEC has two categories of financial instrument:

- Loans and receivables (cash and receivables); and
- Non-trading 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.

### **(l) 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.

### **(m) Accrued Salaries**

The accrued salaries suspense account (refer note 18 'Restricted cash and cash equivalents') consists of amounts paid annually into a suspense account over a period of 10 financial years to 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 28 'Other liabilities') 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.

**(n) 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 17 'Income from State Government' and note 21 'Amounts receivable for services'.

**(o) 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, being valued on a first in first out basis.

See note 19 'Inventories'

**(p) 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. 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 35 'Financial Instruments' and note 20 'Receivables'.

**(q) Payables**

Payables are recognised when DEC becomes obliged to make future payments as a result of a purchase of assets or services. The carrying amount is equivalent to fair value, as they are generally settled within 30 days. See note 35 'Financial Instruments' and note 26 'Payables'.

**(r) 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 27 '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 who are not members of either the Pension or the GSS Schemes become non-contributory members of the West State Superannuation Scheme (WSS), an accumulation fund. 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 Scheme.

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(s) '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 11 'Other Expenses' and note 27 'Provisions'.

### **(s) Superannuation Expense**

The following elements are included in calculating the superannuation expense in the Income Statement:

- (a) Defined benefit plans – 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 West State Superannuation Scheme (WSS), GESB Super Scheme (GESBS), and the equivalent of employer contributions to the GSS.

Defined benefit plans – in order to reflect the true cost of services, 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 3(r)(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 17 "Income from State Government".

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.

### **(t) 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.

### **(u) Comparative Figures**

No comparative figures have been provided as this is the first financial year for DEC.

#### 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 2006:

1. AASB 2005-9 'Amendments to Australian Accounting Standards [AASB 4, AASB 1023, AASB 139 & AASB 132]' (Financial guarantee contracts). The amendment deals with the treatment of financial guarantee contracts, credit insurance contracts, letters of credit or credit derivative default contracts as either an "insurance contract" under AASB 4 'Insurance Contracts' or as a "financial guarantee contract" under AASB 139 'Financial Instruments: Recognition and Measurement'. DEC does not currently undertake these types of transactions, resulting in no financial impact in applying the Standard.
2. UIG Interpretation 4 'Determining whether an Arrangement Contains a Lease' as issued in June 2005. This Interpretation deals with arrangements that comprise a transaction or a series of linked transactions that may not involve a legal form of a lease but by their nature are deemed to be leases for the purposes of applying AASB 117 'Leases'. At balance sheet date, DEC has not entered into any arrangements as specified in the Interpretation, resulting in no impact in applying the Interpretation.
3. UIG Interpretation 9 'Reassessment of Embedded Derivatives'. This Interpretation requires an embedded derivative that has been combined with a non-derivative to be separated from the host contract and accounted for as a derivative in certain circumstances. At balance sheet date, DEC has not entered into any contracts as specified in the Interpretation resulting in no impact in applying the Interpretation. The following Australian Accounting Standards and Interpretations are not applicable to DEC as they have no impact or do not apply to not-for-profit entities:

##### *AASB Standards and Interpretations*

- 2005-1 'Amendments to Australian Accounting Standard' (AASB 139 – Cash flow hedge accounting of forecast intragroup transactions)
- 2005-5 'Amendments to Australian Accounting Standards [AASB 1 & AASB 139]'
- 2006-1 'Amendments to Australian Accounting Standards [AASB 121]'
- 2006-3 'Amendments to Australian Accounting Standards [AASB 1045]'
- 2006-4 'Amendments to Australian Accounting Standards [AASB 134]'



2007-2 'Amendments to Australian Accounting Standards arising from AASB Interpretation 12 [AASB 1, AASB 117, AASB 118, AASB 120, AASB 121, AASB 127, AASB 131 & AASB 139]' – paragraph 9

UIG 5 'Rights to Interests arising from Decommissioning, Restoration and Environmental Rehabilitation Funds'

UIG 6 'Liabilities arising from Participating in a Specific Market – Waste Electrical and Electronic Equipment'

UIG 7 'Applying the Restatement Approach under AASB 129 Financial Reporting in Hyperinflationary Economies'

UIG 8 'Scope of AASB 2'

### **Voluntary changes in Accounting Policy**

The creation of DEC on 1 July 2006, which took over functions and staff of the former DOE and former CALM has resulted in a change in the capitalisation threshold of assets for former DOE from \$5,000 to \$1,000. The revised capitalisation is for new asset purchases, this is in line with the capitalisation threshold for former CALM.

### **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 but are not yet effective. These will be applied from their application date:

1. AASB 7 'Financial Instruments: Disclosures' (including consequential amendments in AASB 2005-10 'Amendments to Australian Accounting Standards [AASB 132, AASB 101, AASB 114, AASB 117, AASB 133, AASB 139, AASB 1, AASB 4, AASB 1023 & AASB 1038]'). This Standard requires new disclosures in relation to financial instruments. The Standard is considered to result in increased disclosures, both quantitative and qualitative of DEC's exposure to risks, enhanced disclosure regarding components of DEC's financial position and performance, and possible changes to the way of presenting certain items in the financial statements. DEC does not expect any financial impact when the Standard is first applied. The Standard is required to be applied to annual reporting periods beginning on or after 1 January 2007.
2. AASB 2005-10 'Amendments to Australian Accounting Standards (AASB 132, AASB 101, AASB 114, AASB 117, AASB 133, AASB 139, AASB 1, AASB 4, AASB 1023, & AASB 1038)'. The amendments are as a result of the issue of AASB 7 'Financial Instruments: Disclosures', which amends the financial instrument disclosure requirements in these standards. DEC does not expect any financial impact when the Standard is first applied. The Standard is required to be applied to annual reporting periods beginning on or after 1 January 2007.
3. AASB 101 'Presentation of Financial Statements'. This Standard was revised and issued in October 2006 so that AASB 101 has the same requirements as IAS 1 'Presentation of Financial Statements' (as issued by the IASB) in respect of for-profit entities. DEC is a not-for-profit entity and consequently does not expect any financial impact when the Standard is first applied. The Standard is required to be applied to annual reporting periods beginning on or after 1 January 2007.
4. AASB 2007-4 'Amendments to Australian Accounting Standards arising from ED 151 and Other Amendments (AASB 1, 2, 3, 4, 5, 6, 7, 102, 107, 108, 110, 112, 114, 116, 117, 118, 119, 120, 121, 127, 128, 129, 130, 131, 132, 133, 134, 136, 137, 138, 139, 141, 1023 & 1038)'. This Standard introduces policy options and modifies disclosures. These amendments arise as a result of the AASB decision that, in principle, all options that currently exist under IFRS's should be included in the Australian equivalents to IFRS's and additional Australian disclosures should be eliminated, other than those now considered particularly relevant in the Australian reporting environment. Department of Treasury and Finance has indicated that it will mandate

to remove the policy options added by this amending Standard. This will result in no impact as a consequence of application of the Standard. The Standard is required to be applied to annual reporting periods beginning on or after 1 July 2007.

5. AASB 2007-5 'Amendment to Australian Accounting Standard – Inventories Held for Distribution by Not-for-Profit Entities (AASB 102)'. This amendment changes AASB 102 'Inventories' so that inventories held for distribution by not-for-profit entities are measured at cost, adjusted when applicable for any loss of service potential. DEC has inventories held for distribution, the financial impact is not expected to be material when the Standard is first applied. The Standard is required to be applied to annual reporting periods beginning on or after 1 July 2007.
6. AASB Interpretation 4 'Determining whether an Arrangement Contains a Lease [revised]'. This Interpretation was revised and issued in February 2007 to specify that if a public-to-private service concession arrangement meets the scope requirements of AASB Interpretation 12 'Service Concession Arrangements' as issued in February 2007, it would not be within the scope of Interpretation 4. At balance sheet date, DEC has not entered into any arrangements as specified in the Interpretation or within the scope of Interpretation 12, resulting in no impact when the Interpretation is first applied. The Interpretation is required to be applied to annual reporting periods beginning on or after 1 January 2008.
7. AASB Interpretation 12 'Service Concession Arrangements'. This Interpretation was issued in February 2007 and gives guidance on the accounting by operators (usually a private sector entity) for public-to-private service concession arrangements. It does not address the accounting by grantors (usually a public sector entity). It is currently unclear as to the application of the Interpretation to DEC if and when public-to-private service concession arrangements are entered into in the future. At balance sheet date, DEC has not entered into any public-to-private service concession arrangements resulting in no impact when the Interpretation is first applied. The Interpretation is required to be applied to annual reporting periods beginning on or after 1 January 2008.
8. AASB Interpretation 129 'Service Concession Arrangements: Disclosures [revised]'. This Interpretation was revised and issued in February 2007 to be consistent with the requirements in AASB Interpretation 12 'Service Concession Arrangements' as issued in February 2007. Specific disclosures about service concession arrangements entered into are required in the notes accompanying the financial statements, whether as a grantor or an operator. At balance sheet date, the Department has not entered into any public-to-private service concession arrangements resulting in no impact when the Interpretation is first applied. The Interpretation is required to be applied to annual reporting periods beginning on or after 1 January 2008.

The following Australian Accounting Standards and Interpretations are not applicable to DEC as they will have no impact or do not apply to not-for-profit entities:

*AASB Standards and Interpretations*

AASB 8	'Operating Segments'
AASB 1049	'Financial Reporting of General Government Sectors by Governments'
AASB 2007-1	'Amendments to Australian Accounting Standards arising from AASB Interpretation 11 [AASB 2]'
AASB 2007-2	'Amendments to Australian Accounting Standards arising from AASB Interpretation 12 [AASB 1, AASB 117, AASB 118, AASB 120, AASB 121, AASB 127, AASB 131 & AASB 139]' – paragraphs 1 to 8
AASB 2007-3	'Amendments to Australian Accounting Standards arising from AASB 8 [AASB 5, AASB 6, AASB 102, AASB 107, AASB 119, AASB 127, AASB 134, AASB 136, AASB 1023 & AASB 1038]'
Interpretation 10	'Interim Financial Reporting and Impairment'
Interpretation 11	'AASB 2 – Group and Treasury Share Transactions'

	<u>2007</u> \$'000
<b>5. Employee benefits expense</b>	
Wages and salaries (a)	112,850
Superannuation – defined contribution plans (b)	10,342
Superannuation – defined benefit plans (c)(d)	2,551
Long service leave (e)	2,071
Annual leave (e)	<u>7,533</u>
	<u>135,347</u>
<p>(a) Includes the value of the fringe benefits to the employee plus the fringe benefits tax component.</p> <p>(b) Defined contribution plans include West State and Gold State (contributions paid).</p> <p>(c) Defined benefit plans include Pension scheme and Gold State (pre-transfer benefit).</p> <p>(d) An equivalent notional income is also recognised (see note 17 'Income from State Government').</p> <p>(e) Includes a superannuation contribution component.</p> <p>Employment on-costs such as workers' compensation insurance are included at note 11 'Other Expenses'. The employment on-costs liability is included at note 27 Provisions'.</p>	
<b>6. Supplies and Services</b>	
Communications	3,160
Consultants and contractors	12,064
Services and contracts	33,013
Materials	16,433
Repairs and maintenance	4,256
Travel	4,879
GEHA rental expense	2,386
Other	<u>5,917</u>
	<u>82,108</u>
<b>7. Depreciation and amortisation expense</b>	
<i>Depreciation</i>	
Plant, equipment and vehicles	7,617
Software	194
Buildings	9,343
Total depreciation	17,154
<i>Amortisation</i>	
Intangible assets	<u>0</u>
Total amortisation	<u>0</u>
Total depreciation and amortisation	<u>17,154</u>
<b>8. Accommodation expenses</b>	
Lease rentals	3,889
Electricity, power and water	1,264
Other accommodation expenses	<u>0</u>
	<u>5,153</u>

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		<u>2007</u> <u>\$'000</u>
9.	<b>Grants and subsidies</b>	
	<i>Recurrent</i>	
	Fire and Emergency Services	750
	Keep Australia Beautiful Council (WA)	547
	Conservation Council of WA Inc	230
	Water and Rivers Commission	166
	Southern Metropolitan Regional Council	135
	City of Stirling	94
	City of Mandurah	91
	Murdoch University	84
	WA Chip and Pulp Co Pty Ltd	82
	Green Skills Inc	80
	Curtin University of Technology	80
	Eastern Metropolitan Regional Council	74
	Swan Catchment Council	65
	Geocatch	61
	Printing Industries Association	56
	WA Local Government Association	56
	Amcor Recycling Australasia	55
	Bibbulmun Track Foundation	50
	Earthcare Consulting	50
	Various grants under \$50,000	2,261
		<u>5,067</u>
10.	<b>Capital user charge</b>	
	Capital user charge	<u>16,256</u>
	The charge was a levy applied by Government for the use of its capital. In 2006–07, the final year in which the charge was levied, a single payment was made equal to the appropriation for 2006–07 less any adjustment relating to 2005-06.	
11.	<b>Other expenses</b>	
	Employment on-costs (a)	350
	Operating lease – motor vehicle	10,106
	Other lease, rental and hire expenses	10,506
		<u>20,962</u>
	(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 27 'Provisions'. Superannuation contributions accrued as part of the provision for leave are employee benefits and are not included in employment on-costs.	
12.	<b>User charges and fees</b>	
	User charges	9,570
	Fees	24,041
	Landfill levy revenue	11,302
	Pollution licences	8,549
	Waste control permits	1,511
		<u>54,973</u>



	<u>2007</u> <u>\$'000</u>
13. Commonwealth grants and contributions	
Capital	1,066
Recurrent	10,510
	<u>11,576</u>
At 30 June 2007 \$8,273,422 relates to outstanding commitments.	
14. Other grants and contributions	
Capital	1,309
Recurrent	3,189
	<u>4,498</u>
At 30 June 2007 \$3,584,726 relates to outstanding commitments.	
15. Net gain/(loss) on disposal of non-current assets	
<i>Costs of Disposal of Non-Current Assets</i>	
Plant, property, equipment & vehicles	187
Buildings	392
Land	587
<i>Proceeds from Disposal of Non-Current Assets</i>	
Plant, property, equipment & vehicles	1,794
Land	910
Net gain/(loss)	<u>1,538</u>
16. Other revenues	
Publications revenue	452
Mining compensation revenue	1,629
Other revenues	1,723
	<u>3,804</u>

	<u>2007</u> <u>\$'000</u>
17. Income from State Government	
Appropriation revenue received during the year:	
Service appropriations (a)	199,192
Services provided to EPA	12,784
<i>Salaries and Allowances Act 1975</i>	562
Total appropriations	<u>212,538</u>
The following liabilities have been assumed by the Treasurer during the financial year:	
– Superannuation (b)	2,551
Total liabilities assumed by the Treasurer	<u>2,551</u>
Initial recognition of assets not previously recognised in the financial statements: (c)	
– Plant, equipment and vehicles	44
– Buildings	8
Total assets not previously recognised	<u>52</u>
Resources received free of charge (d)	
Determined on the basis of the following estimates provided by agencies:	
– Department of Land Information	155
– Landgate	75
– State Solicitor's Office	251
– Department of Water	2
– Department of Treasury and Finance	92
Total resources received free of charge	<u>575</u>
	<u>215,716</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) The assumption of the superannuation liability by the Treasurer is a notional income to match the notional superannuation expense reported in respect of current employees who are members of the Pension Scheme and current employees who have a transfer benefit entitlement under the Gold State Superannuation Scheme. (The notional superannuation expense is disclosed at note 5 'Employee Benefits Expense').	
(c) Where the Treasurer or other entity has assumed a liability, DEC recognises revenues equivalent to the amount of the liability assumed and an expense relating to the nature of the event or events that initially gave rise to the liability. From 1 July 2002 non-discretionary non-reciprocal transfers of net assets (ie. restructuring or administrative arrangements) have been classified as Contributions by Owners (CBO's) under TI 955 and are taken directly to equity. Discretionary transfers of assets between State Government agencies are reported as assets assumed/(transferred) under Income from State Government.	
(d) Where assets or services have been received free of charge or for nominal cost, DEC recognises revenues (except where the contributions of assets or services are in the nature of contributions by owners in which case DEC shall make a direct adjustment to equity) 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.	

		2007 \$'000
18.	<b>Restricted cash and cash equivalents</b>	
	<i>Current</i>	
	Cash amounts in suspense account	97
	<i>Non Current</i>	
	Accrued salaries suspense account (a)	828
	(a) 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.	
19.	<b>Inventories</b>	
	<i>Current</i>	
	Inventories held for resale:	
	Publications	232
	Souvenirs	112
		344
	<i>Non-current</i>	
	Publications	1,320
	Impairment of publications	(391)
	Souvenirs	448
		1,377
	See also note 3(o) 'Inventories'.	
20.	<b>Receivables</b>	
	<i>Current</i>	
	Receivables	9,841
	Allowance for impairment of receivables	(72)
	GST receivable	2,499
	Earned revenue	4,877
		17,145
21.	<b>Amounts receivable for services</b>	
	<i>Current</i>	7,306
	<i>Non-current</i>	50,604
		57,910
	Represents the non-cash component of service appropriations. See note 3(n) 'Amounts receivable for services (Holding Account)'. It is restricted in that it can only be used for asset replacement or payment of leave liability.	
22.	<b>Other assets</b>	
	<i>Current</i>	
	Prepayments	716

		2007 \$'000
23.	Non-current assets classified as held for sale	
	<i>Opening balance</i>	
	Plant, equipment and vehicles	6
	Less write-down from cost to fair value less selling costs	0
		6
	 <i>Assets reclassified as held for sale</i>	
	Plant, equipment and vehicles	0
	Less write-down from cost to fair value less selling costs	0
		0
	 <i>Total assets classified as held for sale</i>	
	Plant, equipment and vehicles	6
	Less write-down from cost to fair value less selling costs	0
		6
	 <i>Less assets sold</i>	
	Plant, equipment and vehicles	6
	Less write-down from cost to fair value less selling costs	0
		6
	 <i>Closing balance</i>	
	Plant, equipment and vehicles	0
	Write-down from cost to fair value less selling costs	0
		0
	 See also note 3 (i) 'Non-current assets classified as held for sale' and note 15 'Net gain/(loss) on disposal of non-current assets'.	

	<u>2007</u> \$'000
<b>24. Property, plant and equipment</b>	
Land	
At fair value (a)	<u>3,251,302</u>
	<u>3,251,302</u>
Buildings	
At fair value (a)	70,413
Accumulated depreciation	<u>(3,216)</u>
	<u>67,197</u>
Plant and equipment	
At cost	99,839
Accumulated depreciation	<u>(11,286)</u>
	<u>88,553</u>
Vehicles	
At cost	13,951
Accumulated depreciation	<u>(2,652)</u>
	<u>11,299</u>
Assets under construction	<u>14,547</u>
	<u>3,432,898</u>

(a) Land and buildings were revalued at 1 July 2006 by the Western Australian Land Information Authority (Valuation Services). The valuations were performed during the year ended 30 June 2007 and recognised at 30 June 2007. In undertaking the revaluation, fair value was determined by reference to market values for land: \$1,641,236,600 and buildings: \$5,280,200. For the remaining balance, fair value of land and buildings was determined by reference to existing use. See note 3(f) *Property, Plant and Equipment*.

To ensure the valuations provided by Valuation Services were compliant at 30 June 2007 with the fair value requirements under AASB 116, Valuation Services provided the Department of Treasury and Finance (DTF) with information that tracked the general movement in the market value of land and in building construction costs from the 1 July 2006 (the date of valuation) to 31 March 2007. DTF reviewed the information and determined that the valuation provided by Valuation Services (as at 1 July 2006) were compliant with fair value requirements for 30 June 2007 reporting without further adjustment.

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

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 con- struction	Total
<b>2007</b>	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Carrying amount at start of year	2,525,375	55,810	79,905	7,414	10,517	2,679,021
Additions	3,453	2,281	20,055	6,552	4,030	36,371
Assets not previously identified	0	8	44	0	0	52
Transfers (a)	285	0	0	0	0	285
Disposals	(587)	(393)	(165)	(15)	0	(1,160)
Revaluation increments	722,776	12,707	0	0	0	735,483
Depreciation	0	(3,216)	(11,286)	(2,652)	0	(17,154)
Carrying amount at end of year	<u>3,251,302</u>	<u>67,197</u>	<u>88,553</u>	<u>11,299</u>	<u>14,547</u>	<u>3,432,898</u>

(a) The Department for Planning and Infrastructure (DPI) is the only agency with the power to sell Crown land. The land is transferred to DPI for sale and DEC accounts for the transfer as a distribution to owner (DTO).

	<u>2007</u> <u>\$'000</u>
25. Impairment of assets	
<p>There were no indications of material impairment to property, plant and equipment at 30 June 2007.</p> <p>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 2007 have been written-off.</p>	
26. Payables	
<i>Current</i>	
Trade payables	<u>14,897</u>
See also note 3(q) 'Payables' and note 35 'Financial Instruments'.	
27. Provisions	
<i>Current</i>	
Employee benefits provision	
Annual leave (a)	12,053
Long service leave (b)	<u>10,209</u>
	<u>22,262</u>
Other provisions	
Employment on-costs (c)	<u>200</u>
	<u>22,462</u>
<i>Non-current</i>	
Employee benefits provision	
Long service leave (b)	<u>9,601</u>
Other provisions	
Employment on-costs (c)	<u>86</u>
	<u>9,687</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 reporting date	<u>12,053</u>
(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 reporting date	10,209
More than 12 months after reporting date	<u>9,601</u>
	<u>19,810</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 11 'Other expenses'.	

	<u>2007</u> <u>\$'000</u>
28. Other liabilities	
<i>Current</i>	
Accrued expenditure	2,244
Accrued salaries and wages	234
Accrued superannuation	41
Unearned revenue	<u>1,981</u>
	<u>4,500</u>
29. 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.	
<b>Contributed equity</b>	
Balance at the start of the year	0
<b>Contributions by owners</b>	
Capital contribution (a)	17,406
Transfer of net assets from other agencies (b)	
EX DOE and EX CALM	2,758,856
Land transfer Department of Agriculture and Food	285
Munda Biddi Trail	3,006
Other asset transfers	<u>66</u>
Total contributions by owners	<u>2,779,619</u>
<b>Distributions to owners</b>	
Transfer of net assets to other agencies (c)	<u>0</u>
Balance at the end of the year	<u>2,779,619</u>
(a) Capital Contributions (appropriations) and non-discretionary (non-reciprocal) transfers of net assets from other State government agencies have been designated as contributions by owners in Treasurer's Instruction TI 955 'Contributions by Owners Made to Wholly Owned Public Sector Entities' and are credited directly to equity.	
(b) UIG Interpretation 1038 'Contributions by Owners Made to Wholly-Owned Public Sector Entities' requires where the transferee accounts for a transfer as a contribution by owner, the transferor must account for the transfer as a distribution to owners. Consequently, non discretionary (non-reciprocal) transfers of net assets to other State government agencies are distributed to owners are debited directly to equity.	
(c) TI 955 requires non-reciprocal transfers of net assets to Government to be accounted for as distribution to owners.	
Reserves	
Asset revaluation reserve:	
Balance at the start of the year	
Net revaluation increments/(decrements):	0
Land	722,776
Buildings	<u>12,707</u>
Balance at the end of the year	<u>735,483</u>
<b>Accumulated surplus/(deficiency) (Retained earnings)</b>	
Balance at the start of the year	0
Result for the period	<u>13,500</u>
Balance at the end of the year	<u>3,528,602</u>

	<u>2007</u> <u>\$'000</u>
30. Notes to the Statement of Cash Flows	
<i>Reconciliation of cash</i>	
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	68,833
Restricted cash and cash equivalents (see note 18)	925
	<u>69,758</u>
<i>Reconciliation of net cost of services to net cash flows provided by/(used in) operating activities</i>	
Net cost of services	(202,216)
Non-cash items:	
Depreciation and amortisation expense	17,154
Superannuation expense	2,551
Resources received free of charge	575
Net (gain)/loss on sale of property, plant and equipment	(1,538)
<i>(Increase)/decrease in assets:</i>	
Current receivables (b)	(1,637)
Inventories	34
Prepayments	873
Other current assets	(2,281)
<i>Increase/(decrease) in liabilities:</i>	
Current payables (b)	4,889
Provisions	4,464
Other current liabilities	(364)
Net GST receipts/(payments) (a)	(109)
Net cash provided by/(used in) operating activities	<u>(177,605)</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.	
31. Resources provided free of charge	
During the year the following resources were provided to other agencies free of charge for functions outside the normal operation of DEC:	
Department of Agriculture – office accommodation	<u>5</u>



		2007 \$'000
32.	<b>Commitments</b>	
	<i>Capital expenditure commitments</i>	
	Capital expenditure commitments, being contracted capital expenditure additional to the amounts reported in the financial statements payable as follows:	
	Within 1 year	17,209
	Later than 1 year and not later than 5 years	17,650
		34,859
	The capital commitments include amounts for:	
	Buildings	26,645
	Plant and Equipment	8,214
		34,859
	<i>Non-cancellable operating lease commitments</i>	
	Commitments in relation to leases contracted for at the reporting date but not recognised in the financial statements are payable as follows:	
	Within 1 year	2,761
	Later than 1 year and not later than 5 years	6,774
	Later than 5 years	10,072
		19,607
	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.	
33.	<b>Contingent liabilities and contingent assets</b>	
	<i>Contingent liabilities</i>	
	In addition to the liabilities incorporated 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 \$392,811 all of which 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 <i>Contaminated Sites Act 2003</i> 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.	
	During the year DEC reported nil suspected contaminated sites to DEC as an extension for reporting sites has been requested, as a result no sites require classification.	

## 34. Explanatory statement

Significant variations between estimates and actual results for income and expenses 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 2007 – Total appropriation to deliver services:

	2007 Estimate \$'000	2007 Actual \$'000	Variance \$'000
<i>Total appropriation provided to deliver services</i>	197,255	212,538	15,283

There was a significant variance in the total appropriation provided to DEC in 2007 and this was due principally to the funding of wildfire suppression costs of \$16M. There was also significant offsetting variances in the following service expenditures and total income:

#### *Details of expenses by services*

– Nature Conservation	87,363	107,423	20,060
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The increased expenditure in this service above estimate relates principally to wildfire suppression expenditure \$6.5M, additional externally funded specific purpose projects \$5.9M, increase in employee leave provisions expense \$1.8M, transfer of the former Department of Environment's native vegetation function into the Nature Conservation service \$1.6M and other general payroll and price increases.

– Sustainable Forest Management	39,074	48,981	9,907
---------------------------------	--------	--------	-------

The increased expenditure in this service above the estimate relates principally to wildfire suppression expenditure of \$8M, depreciation \$0.7M and an increase in employee leave provisions expense \$0.6M.

– Parks and Visitor Services	66,546	74,198	7,652
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The increased expenditure in this service above estimate relates principally to the maintenance of parks and visitor facilities \$3.5M, wildfire suppression expenditure \$1.5M, increase in employee leave provisions expense \$1.1M and other general payroll and price increases.

– Regulation of Contaminated Sites	6,294	4,018	(2,276)
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Under expenditure against this service is due principally to the deferral of \$2.5M for the remediation of the waste control site at Bellevue which will now occur in 2007-08.

– Policies and Strategies to Reduce and Recycle Waste	5,829	7,960	2,131
---	-------	-------	-------

Expenditure in this service above estimate relates principally to increased grants and subsidies expenditure \$1.1M and other general payroll and price increases.

– Environmental Policies and Reports on the State of the Environment	6,881	8,480	1,599
--	-------	-------	-------

The increase in expenditure in this service relates principally to an increase in the liabilities assumed by the Treasurer for superannuation expense \$1.3M.

<i>Total Income</i>	<b>54,270</b>	<b>79,831</b>	<b>25,561</b>
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Additional revenues for 2007 were principally attributable to increased Commonwealth grants and contributions \$7.1M, landfill levies \$6.3M, additional externally funded specific purpose account project revenues \$6.1M, recoup of expenditure for assistance provided for wildfire suppression \$2.9M and increased interest revenue \$1.7M.

### (ii) Significant variances between estimate and actual for 2007 – Capital Contribution:

<i>Capital contribution (appropriation)</i>	<b>11,960</b>	<b>17,406</b>	<b>5,446</b>
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The capital contribution increase was due principally to the allocation of an additional \$5.5M for the acquisition of equipment for fire management activities.

### (iii) Significant variances between estimate and actual for 2007 – Administered income:

<i>Income disclosed as administered income</i>	<b>145</b>	<b>186</b>	<b>41</b>
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Actual revenues collected in 2007 were higher due to the collection of environmental infringement fines.

## 35. Financial instruments

**(a) Financial Risk Management Objectives and Policies**

Financial instruments held by DEC are cash, receivables and payables. DEC has limited exposure to financial risks. DEC's overall risk management program focuses on managing the risks identified below.

*Credit risk*

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. At 30 June 2007 30% is owed by State and Federal Government.

*Liquidity risk*

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.

*Cash flow interest rate risk*

DEC is not exposed to interest rate risk because DEC has no borrowings.

**(b) Financial Instrument disclosures***Interest rate risk exposure*

The following table details DEC's exposure to interest rate risk as at the balance sheet date:

	Fixed Interest Rate Maturity						Total
	Weighted average effective interest rate	Variable interest rate	Less than 1 year	1 to 5 years	More than 5 years	Non-interest bearing	
2007	%	\$000	\$000	\$000	\$000	\$000	\$000
Financial assets							
Cash assets	6.021%	68,833	-	-	-	-	68,833
Restricted cash assets		925	-	-	-	-	925
Receivables		-	-	-	-	17,145	17,145
Amounts receivable for services		-	-	-	-	56,312	56,312
		69,758	-	-	-	73,457	143,215
Financial liabilities							
Payables		-	-	-	-	14,897	14,897
		-	-	-	-	14,897	14,897

*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 values unless otherwise stated in the applicable notes.

2007  
\$'000

36. 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:

\$	Number
110,001 – 120,000	1
120,001 – 130,000	1
130,001 – 140,000	6
140,001 – 150,000	1
150,001 – 160,000	3
330,001 – 340,000	1

The total remuneration of senior officers is: 1,995

The total remuneration includes the superannuation expense incurred by DEC in respect of senior officers. Three senior officers are members of the Pension Scheme.

37. Remuneration of Auditor

Remuneration payable to the Auditor General for the financial year is as follows:

Auditing the accounts, financial statements and performance indicators	<u>125</u>
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The expense is included at note 6 'Supplies and services'.

38. Affiliated bodies

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	776
Conservation Commission	1,063
Marine Parks and Reserves Authority	<u>199</u>
	<u>2,038</u>

	<b>2007</b>
	<b>\$'000</b>
<b>39. 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	977
Receipts	252
Payments	176
Balance at the end of the year	1,053
Waste Management and Recycling 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 the Environment, Climate Change, Peel on the advice of the Waste Management Board.	
Balance at the start of the year	4,535
Receipts	9,869
Payments	7,332
Balance at the end of the year	7,072
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. Action under section 53 – DEC costs of investigation and ensuring compliance with notices.	
Balance at the start of the year	0
Receipts	3,892
Payments	45
Balance at the end of the year	3,847
<b>40. Supplementary financial information</b>	
<i>Write-offs</i>	
During the financial year \$ 15,125 was written off DEC's asset register and \$21,232 was written off as bad debts, under the authority of:	
The Accountable Authority	36
The Minister	0
Executive Council	0
	36

## 4.1 FINANCIAL STATEMENTS

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### Opening Balance Sheet Reconciliation 1 July 2006

	EX CALM '000	EX DOE \$'000	TOTAL \$'000
<b>ASSETS</b>			
<b>Current assets</b>			
Cash and cash equivalents	42,027	6,779	48,806
Restricted cash and cash equivalents	1	8,047	8,048
Inventories	351	0	351
Receivables	9,187	1,592	10,779
Amounts receivable for services	6,706	400	7,106
Other current assets	1,188	1,430	2,618
Non-current assets classified as held for sale	6	0	6
<b>Total current assets</b>	<b>59,466</b>	<b>18,248</b>	<b>77,714</b>
<b>Non-current assets</b>			
Restricted cash and cash equivalents	333	95	428
Inventories	1,404	0	1,404
Amounts receivable for services	39,241	1,770	41,011
Property, plant and equipment	2,676,885	1,747	2,678,632
Intangible asset	0	389	389
<b>Total non-current assets</b>	<b>2,717,863</b>	<b>4,001</b>	<b>2,721,864</b>
<b>TOTAL ASSETS</b>	<b>2,777,329</b>	<b>22,249</b>	<b>2,799,578</b>
<b>LIABILITIES</b>			
<b>Current liabilities</b>			
Payables	8,116	9	8,125
Provisions	14,812	4,512	19,324
Other current liabilities	3,070	1,843	4,913
<b>Total current liabilities</b>	<b>25,998</b>	<b>6,364</b>	<b>32,362</b>
<b>Non-current liabilities</b>			
Provisions	6,734	1,626	8,360
<b>Total non-current liabilities</b>	<b>6,734</b>	<b>1,626</b>	<b>8,360</b>
<b>TOTAL LIABILITIES</b>	<b>32,732</b>	<b>7,990</b>	<b>40,722</b>
<b>Net assets</b>	<b>2,744,597</b>	<b>14,259</b>	<b>2,758,856</b>
<b>Equity</b>			
Contributed equity	10,626	1,868	12,494
Reserves	2,500,952	0	2,500,952
Accumulated surplus/(deficiency)	233,019	12,391	245,410
<b>Total equity</b>	<b>2,744,597</b>	<b>14,259</b>	<b>2,758,856</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>2,777,329</b>	<b>22,249</b>	<b>2,799,578</b>



		2007 \$'000
41.	Administered expenses and income	
	<b>Expenses</b>	
	Receipts paid into Consolidated fund	113
	<b>Total administered expenses</b>	113
	<b>Income</b>	
	For transfer:	
	Fauna licences	90
	Revenue from regulatory fines	96
	<b>Total administered income</b>	186
42.	Administered assets and liabilities	
	<b>Current assets</b>	
	Cash assets	73
	<b>Total administered current assets</b>	73
	<b>Current liabilities</b>	
	Payables	73
	<b>Total administered current liabilities</b>	73

### 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 ending 30 June 2007.



Keiran McNamara  
**Accountable Authority**  
28 August 2007



### 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 of biodiversity (the variety of life forms: the different plants, animals and micro-organisms, the genes they contain, and the ecosystems they form).**

##### Service 1

##### **Nature Conservation**

**Service description:** The development and implementation of programs for the conservation of biodiversity, 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**

**Service description:** The sustainable management of State forest and timber reserves while maintaining or enhancing nature conservation, water, recreation, landscape and other values in the long term and encouraging public awareness, understanding and support for sustainable forest management, services and policies.

##### Service 3

##### **Performance of Statutory Functions by the Conservation Commission of Western Australia**

**Service description:** The undertaking of statutory functions by the Conservation Commission of Western Australia which include: having vested in it the State's national parks, conservation parks, nature reserves, State forest and timber reserves; policy development for the preservation and community enjoyment of the States' natural environment, and promoting the appreciation of flora, fauna and the natural environment; advice to the Minister for the Environment on the development of policies for the conservation and management of biodiversity throughout the State and on the ecologically sustainable management of State forest, timber reserves and forest produce; and audit of the Department's and the Forest Products Commission's performance against management plans.

### Outcome 2

---

#### **Community understanding, enjoyment and appreciation of parks, wildlife and the natural environment and involvement in their management.**

##### Service 4

###### **Parks and Visitor Services**

**Service description:** 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, nature-based tourism and recreation services and policies.

##### Service 5

###### **Astronomical Services**

**Service description:** Through the Perth Observatory, providing public information and awareness directly beneficial to the Western Australian community, and contributing to scientific research in astronomy by cooperating with national and international institutions in the acquisition, analysis, interpretation and dissemination of information.

### Outcome 3

---

#### **Emissions and discharges meet approved environmental criteria.**

##### Service 6

###### **Air Quality Management Plans and Air Quality Monitoring**

**Service description:** 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).

##### Service 7

###### **Regulation of Discharges to the Environment**

**Service description:** Regulate emissions and discharges to the environment and the transport of hazardous wastes.

##### Service 8

###### **Regulation of Contaminated Sites**

**Service description:** Regulate the investigation, classification and management of contaminated sites.

### Outcome 4

---

#### **Waste management practices meet approved performance targets.**

##### Service 9

#### **Administration of the Waste Management Recycling Fund**

**Service description:** Administer the Waste Management and Recycling Fund on behalf of the Waste Management Board, to promote the diversion of waste from landfills.

##### Service 10

#### **Policies and Strategies to Reduce and Recycle Waste**

**Service description:** Develop and implement policies and strategies that promote waste avoidance and minimization in industry, government and the community.

### Outcome 5

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#### **Environmental policy and environmental impact assessment that protects, conserves and enhances the environment in accordance with accepted long term plans.**

##### Service 11

#### **Environmental Impact Assessments of Development Proposals and Planning Schemes.**

**Service description:** Manage the environmental impact assessment process for the Environment Protection Authority to enable sound environmental advice on development proposals and planning schemes/amendments to be provided to the Government, developers and the public to ensure the environment is protected for the community.

##### Service 12

#### **Environmental Policies and Reports on the State of the Environment.**

**Service description:** Coordinate the development and analysis of environmental policy, ensure its effective implementation, manage the Environmental Protection Authority's formulation of statutory Environmental Protection Policies and State Environmental Policies, coordinate State of the Environment reporting and provide sound, accurate and timely information about the environment to the community to promote positive environmental behaviours.

## Outcomes and Key Effectiveness Indicators

Outcome: Conservation of biodiversity (the variety of life forms: the different plants, animals and microorganisms, the genes they contain, and the ecosystem they form).

### Threatened Species Management

The conservation of biodiversity is supported by a management system to identify, protect and recover flora and fauna that is threatened with extinction or otherwise in need of special protection. This system is underpinned by the identification and listing of flora and fauna in appropriate conservation categories as determined by the level of threat and the level of available knowledge. The following categories represent different levels of threatened or management status of the State's wildlife.

**Threatened:** Flora and fauna may be listed as threatened when the Minister for the Environment is satisfied that they are either rare or likely to become extinct, and therefore in need of special protection. These flora and fauna are in the greatest need for recovery and management action, and are being intensively managed for conservation outcome. The increase in numbers of threatened flora and fauna reflect the investigations being undertaken into the State's wildlife which result in the identification of those species which require special protection. Once identified and listed, conservation actions are developed to enable their ongoing conservation.

**Presumed extinct:** Flora or fauna that are presumed to have become extinct may also be listed by the Minister for the Environment, and given special protection. Listing facilitates further survey work or other recovery actions to attempt to find occurrences of the species, and provides special protection to any new occurrences that are found. There has been an historical decline in the number of species listed as presumed extinct as an outcome of investigations into those species which have determined that they are not in fact extinct. Additions to the list of presumed extinct species has also occurred as investigations confirm that an historical record has not been relocated in recent times despite attempts to find the species.

**Otherwise specially protected:** Flora or fauna may be listed by the Minister as being otherwise in need of special protection where the species is not in immediate danger of extinction, but requires management action to prevent this from occurring. The listed species are all fauna that have the potential to come into conflict with human activities.

**Priority listed:** Flora and fauna which are suspected of being at risk, or which may become at risk in the future, are listed on a supplementary conservation list (Priority List) to facilitate further investigations to confirm their status, and enable interim conservation actions. The Priority List is divided into a number of categories to further prioritise investigations and management. The increase in the number of taxa listed mainly reflects the Department's maintenance of an enhanced knowledge base of the State's wildlife through taxonomic revision, curation of collections, databasing of information, and field investigations, and does not in itself represent a change in the conservation status of the State's wildlife.

Number of flora and fauna that are:	2006-07 Target	2006-07 Actual	2006-07 Variance
- threatened	580	582	2
- presumed extinct	32	32	0
- otherwise specially protected	11	11	0
- priority listed	2,500	2,466	-34

### Wildlife Utilisation

Species such as kangaroos, crocodiles and a number of flora species (excluding timber) are commercially utilised and must be managed to ensure the use is sustainable. Kangaroo harvesting involves the taking of larger numbers of animals from the wild, and must, therefore, be managed in a manner that does not threaten the wild populations. Management programs have been published for red and western grey kangaroo harvesting, which outline the basis of sustainable harvesting using population estimates from aerial surveys and harvest quotas. Harvest quotas are calculated the previous year, based on the population estimate for that year. Harvest levels are therefore expressed as a percentage of the previous year's population estimate. Variation in the harvest percentage occurs due to seasonal conditions affecting harvest access and kangaroo numbers. Total harvest is, however, regulated through the quota allocation.

Proportion of the most recent estimate of kangaroo population commercially harvested:	2006-07 Target	2006-07 Actual	2006-07 Variance
- Red kangaroo	16.1%	9.2%	-6.9%
- Western Grey kangaroo	13.2%	11.6%	-1.6%

### Compliance with forest management standards

The Department aims to achieve a very high level of compliance with standards for harvesting and regrowth operations in native forests.

	2006-07 Target	2006-07 Actual	2006-07 Variance
	95.0%	97.0%	2.0%

Outcome: Community understanding, enjoyment and appreciation of parks, wildlife and the natural environment and involvement in their management.

### Average level of visitor satisfaction with their visits

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.

	2006-07 Target	2006-07 Actual	2006-07 Variance
	85.0%	87.5%	2.5%

**Note to the indicator:** The survey was conducted on an ongoing basis across a broad range of parks, reserves, and forest areas to account for the geographic spread of these areas and associated seasonal variation in visitor patterns across the State. Approximately 6674 surveys were distributed to visitors across 20 parks/recreation sites throughout the State, with 1903 (or 28.5%) returned. At a 95% confidence level, the survey responses reported have a standard error within the range of  $\pm 1.90\%$ .

Outcome: Emission and discharges meet approved environmental criteria.

### Number of exceedances of approved environment criteria by regulated activities

The number of exceedances of approved environmental criteria is a key indicator of the Department's effectiveness in setting and monitoring environmental standards.

	2006-07 Target	2006-07 Actual	2006-07 Variance
	100	67	-33

**Note to the indicator:** The variance between the target and actual exceedances is due to improved industry practice and settling of licence limits as industry licences are reviewed and made consistent with licensing policy.

Outcome: Waste management practices meet approved performance targets.

### Percentage of waste in the metropolitan area diverted from landfill and recycled

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 of reducing the impact of waste on our environment.

	2006-07 Target	2006-07 Actual	2006-07 Variance
	25.0%	33.4%	8.4%

**Note to the indicator:** New recycling facilities, particularly in the Southern and South-Eastern Metropolitan Regions, increased average recycling rates and decreased landfilling rates.

Outcome: Environmental policy and environmental impact assessment that protects, conserves and enhances the environment in accordance with accepted long term plans.

### Number of approved projects with impacts significantly exceeding those assessed.

The number of projects with impacts significantly exceeding those assessed is a key indicator for the community.

	2006 - 07 Target	2006 - 07 Actual	2006-07 Variance
	0	1	1

**Note to the indicator:** The lead issues at Esperance during 2007 highlighted deficiencies in the assessment of the amended Magellan Metals proposal to export lead through Esperance.

## Key Efficiency Indicators

### Service 1: Nature Conservation

#### Wildlife habitat management - cost per hectare managed

The cost per hectare of wildlife habitat management is an indirect indicator of the Department's efficiency in delivering nature conservation. Increases in the indicator generally reflect increases in funding.

	2006-07 Target	2006-07 Actual	2006-07 Variance
	\$3.31	\$3.98	\$0.67

**Note to the indicator:** Increased expenditure level due to higher level of income to the service.

### 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 of 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. The area managed totalled 1,297,800 ha.

	2006-07 Target	2006-07 Actual	2006-07 Variance
	\$30.11	\$37.74	\$7.63

**Note to the indicator:** Increase due to large fire suppression cost on WA State Forest and interstate and overseas fires and other cost increases such as full expenditure of appropriated funding to service FPC and salary and wage increases.

### Service 3: Performance of Statutory Functions by the Conservation Commission of Western Australia

#### The average cost per management plan/significant policy submitted for the Conservation Commission's consideration

This indicator is an indirect measure of the efficiency of the Conservation Commission's operations. The Conservation Commission's cost structure is largely in the nature of a fixed cost.

	2006-07 Target	2006-07 Actual	2006-07 Variance
	\$10,894	\$14,099	\$3,205

## Service 4: 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.

	<b>2006–07 Target</b>	<b>2006–07 Actual</b>	<b>2006–07 Variance</b>
	\$5.88	\$6.15	\$0.27

**Note to the indicator:** The 2006–2007 gross cost per visit was \$6.15, an increase compared to the figure of \$5.72 reported for the 2005–2006 financial year and above the target figure of \$5.88. The increase was primarily due to the ongoing construction and maintenance of park infrastructure, increased fire expenditure and employee leave liability.

**Ratio of total cost of services to operating revenue**

The Department charges fees to access parks in accordance with approved Government policies. While these fees cover only part of the cost of providing parks and other natural areas, they do make a significant contribution to allow the Department to improve the level of service delivered to the community.

	<b>2006–07 Target</b>	<b>2006–07 Actual</b>	<b>2006–07 Variance</b>
	3.88:1	4.91:1	1.03:1

## Service 5: Astronomical Services

**Cost of providing astronomical services per head of Western Australian population**

The cost of providing astronomical services per head of Western Australian population is an indirect measure of the Perth Observatory's efficiency in delivering astronomical services to the Western Australian community.

	<b>2006–07 Target</b>	<b>2006–07 Actual</b>	<b>2006–07 Variance</b>
	0.52	0.54	0.02

## Service 6: Air Quality Management Plans and Air Quality Monitoring

**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.

	<b>2006–07 Target</b>	<b>2006–07 Actual</b>	<b>2006–07 Variance</b>
	\$414,059	\$456,451	\$42,392



**Note to the indicator:** The number of permanent air quality monitoring stations is 14 with an additional two new stations in Kalgoorlie and Collie which will be commissioned in 2007–08. The bulk of the scientific instrumentation and communication systems was purchased during 2006–07 financial year.

### Service 7: Regulation of Discharges to the Environment

#### Average cost per industry licence

The Department intends to increase the level of resourcing applied to management of regulation of discharges to the environment, largely funded by increases in fees charged to industry on a user pays basis. This increased resource level to achieve improved performance outcomes will result in increased costs per licence. Also during 2007/2008 Industry Regulation will be progressing other reforms which could result in a lower number of premises being licensed. This process will at the same time be accompanied by the need for improved policy and procedures to be developed and more rigorous training programs. All of the aforementioned will impact on the final cost per licence.

	2006–07 Target	2006–07 Actual	2006–07 Variance
	\$14,081	\$17,122	\$3,041

**Note to the indicator:** There was a decrease in the number of licensed premises as low risk industries were moved to registration. This decrease resulted in approximately 20% of the variance. The remaining variance is attributable to a continuing need to retain the same level of industry regulation resourcing as during 2005–06.

#### Average cost per controlled waste permit

Costs are recovered from controlled waste operators on a user-pays basis. While the department aims to minimize costs this is balanced against the necessity to maintain an adequate regulatory framework.

	2006–07 Target	2006–07 Actual	2006–07 Variance
	\$20	\$19	-\$1

### Service 8: Regulation of Contaminated Sites

#### Average cost per contaminated site assessment

This indicator is affected by the number of contaminated site assessments carried out each year.

	2006–07 Target	2006–07 Actual	2006–07 Variance
	\$2,203	\$2,628	\$425

**Note to the indicator:** A large but unknown number of contaminated sites reports were anticipated following the commencement of the *Contaminated Sites Act 2003* on 1 December 2006. Although a large number of reports were received, the majority were submitted just prior to the end of the period of grace for reporting on 31 May 2007, and had not been assessed by 30 June 2007 (they will be accounted for when they are assessed).

### 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.

	2006–07 Target	2006–07 Actual	2006–07 Variance
	\$755,280	\$741,326	-\$13,954

### Service 9: Administration of the Waste Management Recycling Fund

#### Cost of administering Waste Management Recycling Fund as percentage of total fund

The Waste Management and Recycling Fund 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.

	2006–07 Target	2006–07 Actual	2006–07 Variance
	14.4%	15.5%	1.1%

**Note to the indicator:** The later start of the new Zero Waste Incentive Schemes meant that operational payments were deferred from 2006–07 to 2007–08.

### Service 10: Policies and Strategies to Reduce and Recycle Waste

#### Percentage of Waste Management Recycling Fund allocated to projects that achieve scheduled milestones

Grant funding to approved projects requires the achievement of certain milestones specified within grant schedules. Ensuring that funding is allocated to projects that achieve their agreed milestones is important in ensuring that grant funding is achieving the objectives of promoting improved waste management practices in a timely manner.

	2006–07 Target	2006–07 Actual	2006–07 Variance
	87.2%	44.1%	-43.1%

**Note to the indicator:** The Zero Waste Plan Development Scheme targeted for 31 January 2007 was released in the first week of March. This highly material project accounts for around a third of the variance. Other projects missed deadlines due to goals being changed during the year, and resources being reassigned to higher priority projects.

### Service 11: Environmental Impact Assessments of Development Proposals and Planning Schemes

#### Cost for number of environmental assessments

The average cost per environmental assessment largely reflects the number of significant development proposals considered each year.

	2006-07 Target	2006-07 Actual	2006-07 Variance
	\$130,404	\$192,069	\$61,665

**Note to the indicator:** The number of proposal and scheme assessments completed during the year was almost one third lower than forecast, primarily as a result of proponent's taking longer to acquire environmental information and thus delaying assessment by the EPA. As a result, the number of projects being assessed by the EPA increased during the year. Staffing retention and replacement difficulties meant that the Division was also substantially underspent during 2006-07.

### Service 12: Environmental Policies and Reports on the State of the Environment

#### 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.

	2006-07 Target	2006-07 Actual	2006-07 Variance
	\$382,333	\$403,810	\$21,477

## 4.3 MINISTERIAL DIRECTIVES

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The Department received no Ministerial directives during the reporting period.

### 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 good or service. Fees are reviewed on an annual basis.

As park access fees were last increased in July 2000, fee increases to account for the effects of inflation in input costs took effect from 3 October 2006 for the general public and from 1 June 2007 for commercial tour operators. To improve equity across the State, fees were implemented at a limited number of additional parks that were not formerly part of the fee access system. Eligibility for concessional fees was also broadened. Park access fees are charged in accordance with the *Conservation and Land Management Act 1984* and as prescribed in the Conservation and Land Management Regulations 2002.

### 4.4.2 Major capital projects

The department's planned capital works program of \$23.4 million for 2006–07 provided funds for tourism roads and park facilities, plant and equipment, conservation estate land purchase, fire fighting fleet replacement, and buildings and other works.

**Table 23: Summary of major capital works 2006–07**

DETAILS OF MAJOR CAPITAL PROJECTS UNDERTAKEN			
WORKS IN PROGRESS	Expected Year of Completion	Estimated Expenditure Remaining \$'000	Estimated Total Project Cost \$'000
Biodiversity Conservation Science Centre and Herbarium – Stage 1	2009–10	24,270	25,625
Ord New Parks Infrastructure	2010–11	1,000	1,000
Denham Office – new accommodation	2009–10	950	950
Dirk Hartog Island Pastoral Lease Acquisition	2007–08	400	400
Improvements to aerial fire management facilities	2007–08	100	100
Walpole Wilderness Discovery Centre	2008–09	348	1,000
Ningaloo Marine Park capital works	2007–08	250	2,834
Environmental Education Centre Canning River Regional Park	2007–08	1,144	2,500
Perth Observatory new telescope building	2007–08	290	350
Pinnacles Interpretive Centre	2007–08	2,494	5,674
RECURRING CAPITAL PROGRAMS	Expected Year of Completion		2006–07 Expenditure
Conservation Land Acquisition	Ongoing		3,472
Fire Fighting Fleet and Equipment	Ongoing		7,112
Plant and Equipment Purchase and Replacement	Ongoing		9,535
Tourism Road Improvements	Ongoing		4,828
Gnangara Park Development	Ongoing		250
Parks Improvement Program (excluding works detailed above)	Ongoing		5,060

### 4.4.3 Employment and industrial relations

**Table 24: Staff profile 2006–07**

	FTE	Head count
Full Time Permanent	1,314.00	1,314
Full Time Contract	403.00	403
Part Time measured by FTE	137.27	205
On Secondment	21.40	22
<b>Total</b>	<b>1,875.67</b>	<b>1,944</b>

#### Staff development

During 2006–07, employees were offered over one hundred internally and externally run training programs in the areas of field operations, safety and health, nature conservation, marine and fire operations, cultural development, licensing and corporate training. As a Registered Training Organisation, DEC was able to offer many of these training courses at a nationally recognised standard. In addition, all staff were offered the opportunity to study postgraduate and undergraduate studies in the areas of conservation and business management. On the job training, job rotation, transfers and acting positions are all additional ways that staff are offered development opportunities throughout the department on an ongoing basis.

Fourteen scholarships were awarded this financial year to promote career and study development opportunities for department staff and to provide recognition, reward and financial assistance to motivated staff members. Four DEC travelled to the USA as part of the department's International Exchange Program (IEP), while staff from the Bureau of Land Management have been placed in DEC work centres around the State. The benefits of the exchange include applied training, experience and an increased awareness of international conservation issues.

While opportunities are offered to all staff, in all divisions of the agency, graduate recruits, DEC Indigenous trainees and Conservation Employees have targeted programs that are offered to provide more specific learning opportunities. 26 graduate recruits graduated this year after attending three months of structured training within their first two years of employment with DEC. 26 Indigenous trainees also graduated from a Certificate II, III or IV in Conservation and Land Management as part of the Mentored Aboriginal Training and Employment Scheme (MATES), and over 20 Conservation Employees, through self directed learning, are being helped through studies in Conservation and Land Management.

#### Industrial relations

##### Occupational Safety and Health

**Table 25: Occupational Safety and Health Performance Indicators**

	2005–06*	2006–07
Lost Time Injury Frequency Rate**	4	4
All Injury Frequency Rate**	37	24
Number of Lost Time Incidents	24	14
Average Days Lost (per LTI)	11	12
Annual Workers' Compensation Contribution (Premium)	\$484,145	\$839,144

\* 2005–06 indicators are representative of the former agency CALM only. In addition, during 2005–06, there was one Workers Compensation claim for the former DoE, with a total of 2,107.5 hours (281 days) lost time. 2006–07 indicators are representative of the new agency DEC.

\*\* Lost time and all injury frequency rates are calculated using an Australian Standards formula, based on the total number of incidents for the 12 month period, multiplied by 1,000,000 and divided by the total number of hours worked in that period.



### **Interest in existing or proposed contracts and benefit received**

At the date of reporting, senior officers of the department held no contracts with the department other than normal contracts of employment of service. No senior officers of the department had substantial interests in entities with existing or proposed contracts or agreements with the department.

### **Director's liability insurance**

The department does not hold Director's liability insurance.

### 4.6.1 *Electoral Act 1907*

In accordance with the requirements of Section 175ZE of the *Western Australian Electoral Act 1907*, the Department of Environment and Conservation incurred the following expenditures in the financial year ended 30 June 2007.

- Total expenditure for 2006–07 was \$ 1,432,313.281
- Expenditure was incurred in media advertising. There was no expenditure in the advertising agencies, market research, direct mail and polling classes by the Department.

**Table 26: Advertising expenditure**

Class of expenditure	Total expenditure for class	Name of person/agency where total annual payments are greater than \$1,800
Media advertising	1,432,313.281	\$458,391.95 (Marketforce Express)
		\$475,522.63 (Media Decisions WA)
		\$186,596.20 (Marketforce Communications)
		\$4,045.80 (Macwrite Publicity Services)
		\$7,285.63 (Email Media)
		\$3,827.56 (Albany Advertiser)
		\$4,400.00 (MRG International)
		\$90,180.74 (ZZ Productions)
		\$132,847.00 (Synovate Research Reinvented)
		\$59,907.92 (Sauce Films Pty Ltd)
		\$5,952.05 (State Law Publisher)
<b>Total expenditure</b>	<b>1,432,313.281</b>	

### 4.6.2 Disability Access and Inclusion Plan Outcomes

DEC continues 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 new Disability Access and Inclusion Plan 2007–2012 continues with DEC's ongoing program of improving access, facilities, and services to ensure they meet the needs of our customers and staff. New key strategies include the development and implementation of disability awareness training and the participation in the Australian Standard Outdoor Access working group to develop national standards.

Some of the more noteworthy access improvement works undertaken during the year included:

- A new walk track along Yardie Creek in Cape Range National Park to lookout points giving better views and interpretation of the gorge and creek environment
- A new deck on the banks of Honeymoon Pool on the lower Collie River providing better and safer access to the pool itself whilst protecting the river edge
- Improved access to the walk track to Mt Lindsay with a new parking area and more sustainable track design to ensure environmental protection
- New visitor facilities and access to the inlet at The Channels in Walpole-Nornalup National Park including sealed paths, accessible toilets and picnic shelters as well as small lookout areas to enjoy the views over the water



- A new recreation site at Swarbrick north of Walpole that interprets the forest for visitors. Access is provided from the parking area to the various artworks that are scattered along the circuit path
- New works have improved access to Lake Dumbleyung including better parking, paths and interpretation
- Works continue on the Cape to Cape Walk 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, gradients are more even and it has been sealed, with new boardwalks (at locations to protect fragile areas), seats, signs and lookouts at strategic locations
- A new universal toilet on the second floor of DEC's Kensington office.

Additional key achievements from the previous plan include an access audit of the department's buildings and a survey of its employees with disabilities for improvements on access and services.

To increase the recruitment of people with disabilities, DEC continues the practice of emailing details of all advertised vacancies to disability employment agencies.

DEC continues to participate in the *Your 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.

### 4.6.3 Equal Employment Opportunity and Diversity Management Outcomes

The department's Equity and Diversity Management Committee has completed a thorough review of both the former Department of Conservation and Land Management and Department of Environment EEO and Diversity Management Plans to draft the new DEC Equity and Diversity Management Plan 2007–2010.

The new plan aims to provide for the continued achievement of a corporate culture that embraces and values a diverse workforce, and a work environment that is free from discrimination and harassment. Key equity areas that the department will focus on are the distribution of indigenous employees across all levels and women in senior management.

Some of the noteworthy initiatives carried out this year have included:

- A review of the Aboriginal Traineeship and Cadetship policy.
- Targeted recruitment such as advertising in indigenous and disability media.
- The Good Working Relations Policy and Procedure was revised and updated.
- The Code of Conduct was revised and updated.
- Ongoing cross-cultural awareness training for all employees.
- The graduation of 13 MATES trainees in Certificate IV of Conservation and Land Management.
- Celebration of Harmony Week including attendance of employees at an International Women's Day breakfast and the screening of animated traditional cultural tales from around the world.
- Ongoing training of employees in Workplace Discrimination and Sexual Harassment via an online course.
- Increased number of youth in the department via traineeships and the Graduate Recruitment and MATES programs.
- Commencement of surveying all employees to update their EEO information.
- Participation of senior female employees in leadership forums and workshops.

### 4.6.4 Compliance with Public Sector Standards and Ethical Codes

**Table 27:** Office of the Public Sector Standard Commissioner reporting under s31 of the *Public Sector Management Act 1994* for 2006–07

Compliance Issue	Significant action taken to monitor and ensure compliance
<p><b>Public Sector Standards (PSS)</b></p> <p>Two breach claims were lodged against the Recruitment, Selection and Appointment Standard of which no breach of PSS was found.</p>	<ul style="list-style-type: none"> <li>• The department's People Services intranet site has information on the Public Sector Standards including a hyper link to the Office of Public Sector Standards Commissioner's (OPSSC) Internet site.</li> <li>• The department has reviewed its PSS policy and procedures in 2006–07.</li> <li>• The department made direct contact with Regional Managers when advised that the OPSSC was having a PSS awareness raising workshop in their region. This was done in conjunction with a general e-mail broadcast to all personnel.</li> <li>• Ongoing training is provided to grievance officers and officers required to participate on recruitment panels to ensure that relevant PSS are complied with.</li> <li>• Management Audit has completed an internal audit of the department's compliance with the PSS and its opinion was <i>"Management Audit is of the opinion that the department has taken appropriate action to ensure compliance with the Public Sector Standards"</i></li> </ul>
<p><b>WA Code of Ethics</b></p> <p>There were no reports of non compliance with the WA Code of Ethics</p>	<ul style="list-style-type: none"> <li>• The department has incorporated the WA Code of Ethics reference in the revised Code of Conduct including a hyper link to the OPSSC Internet site for the <i>Western Australia Public Sector Code of Ethics</i>.</li> </ul>
<p><b>Department's Code of Conduct</b></p> <p>Two allegations raised in 2005–06 were carried into 2006–07.</p> <p>Five further allegations of breaches to code of conduct were raised in 2006–07.</p>	<ul style="list-style-type: none"> <li>• Two of the seven alleged breaches have been carried over to 2007–08.</li> <li>• Five alleged breaches were investigated, substantiated and appropriate disciplinary action taken. Of the five substantiated breaches four were for inappropriate conduct and one for inappropriate use of the department's Corporate Card.</li> <li>• After the Department of Environment and Conservation was formed on 1 July 2006 a new Code of Conduct was prepared and incorporates best practice, including incorporation of the WA Code of Ethics and employee declarations.</li> <li>• The Code of Conduct is included in the Department's induction package and is available on the People Services Branch intranet site.</li> <li>• Awareness raising workshops on the new code of conduct will be held in 2007–08.</li> </ul>

### 4.6.5 Recordkeeping plans

During 2006–07 progress was made towards completing a new Recordkeeping Plan for the department.

### 4.7.1 Corruption prevention

A revised Code of Conduct was developed in consultation with staff and provided to all staff during the year. The Code of Conduct was developed in consultation with the Corruption and Crime Commission and the Office of the Public Sector Standards Commissioner. All staff have been requested to complete a declaration form to acknowledge in writing that they have read and understood the Code of Conduct. Where a staff member has an actual or perceived conflict of interest, a declaration of this is required. A register is maintained of all declared conflicts of interest and is reviewed annually to maintain its currency. A communication strategy is in place and involves human resources staff visiting major locations to provide information and respond to questions. Staff are reminded of the code and its specific requirements through broadcast emails.

During the year Premier's Circular 2007–09 *Contact with Lobbyists Code and the Register of Lobbyists* was issued. The requirements of the policy have been incorporated into the department's Code of Conduct and all staff have been advised of the requirements.

### 4.7.2 Substantive equality

During 2006–07 DEC and the Equal Opportunity Commission began planning for a review of the activities of the DEC's Parks and Visitor Services service in respect of Substantive Equality. Two key areas of the Parks and Visitor Services operation have been identified for review:

- recreation planning and design, and
- community involvement and participation in the management planning process for national parks and other lands and waters managed by DEC.

Four meetings were held to scope the proposed works and establish a time frame for undertaking the review and reporting on the outcomes. The work is expected to be completed by the end of 2008.

### 4.7.3 Sustainability

The DEC Corporate Plan and agency business plans include commitments to implementing programs that promote environmentally sustainable practices in the community, industry and government sectors.

The agency's focus on sustainability assessment is clearly reflected in the 2007 State of the Environment Report, and through its extensive involvement in the environmental review and evaluation of both proposed and existing industry initiatives. DEC consults widely with key stakeholders and the general public in carrying out its statutory and general advisory roles.

The organisation complies with the State Supply Commission sustainability guidelines related to procurement and is developing agency policies and practices to further improve its performance. In respect of waste management and recycling, energy and water conservation, vehicle and fuel efficiencies, DEC will continue to work towards enhancing its response to targets.

A comprehensive strategy and action plan is currently being developed to ensure the department continues to meet its sustainability obligations.

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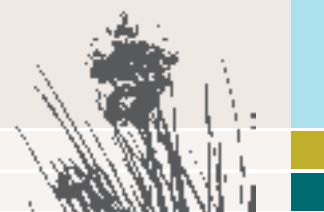
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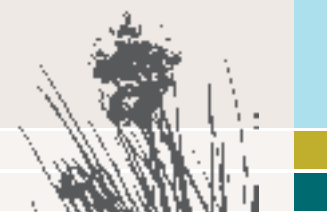
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<b>ABRS</b>	Australian Biological Resources Study
<b>APB</b>	Agriculture Protection Board
<b>AQMP</b>	Air Quality Management Plan
<b>AUSSI</b>	Australian Sustainable Schools Initiative
<b>BIF</b>	Banded Ironstone Formation
<b>CRC</b>	Cooperative Research 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>EPA</b>	Environmental Protection Authority
<b>FACET WA</b>	Forum Advocating Cultural and Eco Tourism
<b>FMP</b>	Forest Management Plan 2004–2013
<b>FPC</b>	Forest Products Commission
<b>IOCI</b>	Indian Ocean Climate Initiative
<b>IPAS</b>	Integrated Project Approvals System
<b>KABC</b>	Keep Australia Beautiful Council
<b>MATES</b>	Mentored Aboriginal Training and Employment Scheme
<b>ML</b>	Management Letter
<b>MoU</b>	Memorandum of Understanding
<b>NPI</b>	National Pollutant Inventory
<b>PTA</b>	Public Transport Authority
<b>RATIS</b>	Recreation and Tourism Information System
<b>RMP</b>	Regional Marine Planning
<b>SoE</b>	State of the Environment
<b>TAFE</b>	Technical and Further Education
<b>TEC</b>	Threatened Ecological Community
<b>TECSC</b>	State Threatened Ecological Community Scientific Committee
<b>TSSC</b>	Threatened Species Scientific Committee
<b>WA</b>	Western Australia
<b>WAHERB</b>	Western Australian Herbarium database
<b>WIN</b>	Works Improvement Notice
<b>WWF</b>	World Wildlife Fund



## Management Plans as at 30 June 2007

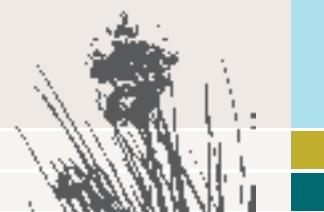
<b>Final Management Plans (completed and approved)</b>	<b>Region</b>	<b>Gazettal Date</b>
Mooradung Nature Reserve	Swan	21.02.86
Nature Reserves in the Shire of Wyalkatchem	Wheatbelt	21.02.86
Nature Reserves of the Shires of York and Northam	Swan	10.07.87
Shannon National Park and D'Entrecasteaux National 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	16.3.90
Cape Range National Park	Pilbara	23.3.90
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	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
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

<b>Final Management Plans (completed and approved)</b>	<b>Region</b>	<b>Gazettal Date</b>
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

<b>Final Management Plans (being prepared)</b>	<b>Region</b>	<b>Submission Period</b>
Woodman Point Regional Park	Swan	30.08.02–30.11.02
Rockingham Lakes Regional Park	Swan	27.10.03–27.02.04
Jandakot Regional Park	Swan	24.11.04–24.02.05
Proposed Dampier Archipelago Marine Park and Regnard Marine Management Area Indicative Management Plan	Pilbara	11.01.05–10.05.05
Proposed St John Brook and Jarrahwood Conservation Parks	South West	04.01.05–11.03.05
Shannon and D'Entrecasteaux National Parks	Warren	21.05.05–31.08.05
Kennedy Range National Park and Proposed Additions	Midwest	19.08.05–28.10.05
Dryandra Woodland	Wheatbelt	02.12.05–06.02.06
Lake McLarty Nature Reserve	South West	10.01.06–10.03.06
Cape Range National Park	Pilbara	14.02.06–14.05.06
Proposed Burrup Peninsula Conservation Reserve*	Pilbara	11.07.06–11.09.06
Shoalwater Islands Marine Park Draft Management Plan	Swan	22.07.06–27.10.06
Wellington National Park and Westralia Conservation Park	South West	08.09.06–10.11.06
Walpole Wilderness Area and Adjacent Parks and Reserves	Warren	27.08.06–01.12.06
Proposed Walpole and Nornalup Inlets Marine Park Indicative Management Plan	Warren	27.08.06–01.12.06
Shark Bay World Heritage Property Strategic Plan*	Midwest	20.10.06–15.12.06
Proposed Geographe Bay/Leeuwin Naturaliste/Hardy Inlet Marine Park Indicative Management Plan	South West	06.09.06–15.12.06

\* Non CALM Act management plan prepared by DEC.





<b>Draft Management Plans (in preparation)</b>	<b>Region</b>
Conservation Reserves of the Albany Coast	South Coast
Dampier Archipelago Terrestrial Reserves	Pilbara
Esperance Coastal Reserves	South Coast
Lane Poole Reserve	Swan and South West
Millstream-Chichester National Park and Mungaroo Range Nature Reserve	Pilbara
Northern Yilgarn Conservation Reserves	Goldfields
Parks of the Leeuwin-Naturaliste Ridge, Scott National Park and Gingilup Swamps Nature Reserve	South West
Shark Bay Terrestrial Reserves and Proposed Reserve Additions	Midwest
Tuart Forest National Park	South West
Yanchep and Neerabup National Parks and Neerabup Nature Reserve	Swan

**Area Covered by Management Plans\***

<b>Tenure classification</b>	<b>Area covered by management plan (ha)</b>	<b>Total tenure area (ha)</b>	<b>% covered</b>
National Park	1,751,553	5,591,090	31.3
Nature Reserve	361,956	10,856,529	3.3
Marine Reserve	1,489,461	1,536,418	96.9
Other Recreational/ Conservation Reserves	94,110	892,271	10.5
Total DEC-managed estate	3,473,080	18,876,308	18.4

\* Figures exclude (a) some Regional Park management plan areas and (b) the area covered by the Forest Management Plan except those reserves with specific area management plans.

Wildlife licences issued in 2006–07

<b>Fauna Licences</b>		<b>Licences Issued</b>
SCIENTIFIC		
Scientific collection (Reg 17)		464
Bird/bat banding (Reg 23)		128
EDUCATION AND PUBLIC		
(to take) (Reg 15)		
Marine interaction		254
Other		491
EDUCATION AND PUBLIC		
(to hold) (Reg 16)		61
AVIAN FAUNA		
Keep and breed in captivity (Reg 12)	2,866	2,866
Deal (Reg 13)		50
Breed for commercial purposes (Reg 14)		0
Trap (Reg 11)		2
<b>Species Trapped Commercially</b>		<b>Number</b>
	Twenty-eight parrot	197
	Red-capped parrot	77
	Western rosella	156
	Galah	66
FAUNA		
Keep in Captivity (Reg 12A)		79
HERPETOFAUNA (Reptiles and amphibians)		
Keeping		1622
Dealing		25
Farming		4
Taking		10
EMUS		
Emu Farming (Reg 14)		11
Dealing (Reg 8)		3
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
KANGAROO		
Take kangaroos for sale (Reg 6)		384
Deal in carcasses (Reg 8)		23
Skin dealing (Reg 10)		14
Processing (Reg 7)		26



<b>Fauna Licences</b>	<b>Licences Issued</b>
<b>EXPORTS INTERSTATE</b>	
Skins of fauna (or other dead fauna)	24
Fauna (live)	274
Herpetofauna (reptiles and amphibians)	42
	<b>340</b>
<b>EXPORT OVERSEAS</b>	
Skins of fauna (or other dead fauna) from WA	43
Emu eggs or products (personal items) from WA	1
Fauna (avian) from WA (live)	1
	<b>45</b>
<b>IMPORTS INTERSTATE</b>	
Skins of fauna (or other dead fauna) into WA	24
Australian fauna (live)	292
Live exotic birds and other animals	147
Herpetofauna (reptiles and amphibians)	4
	<b>467</b>
<b>Total Fauna Licences</b>	<b>7,376</b>
<b>Flora Licences</b>	
<b>Licences Issued</b>	
Commercial Purposes	386
Sandalwood (from Crown Land)	23
Forest Produce (from Crown Land)	4
Commercial Producers	281
Sandalwood (from Private Land)	27
Scientific/Prescribed Purposes	870
Permits To Take Declared Rare Flora	218
<b>Total Flora Licences</b>	<b>1,809</b>

**Table E1: Area of prescribed burns for all DEC regions 2004–05 to 2006–07**

	2004–05	2005–06	2006–07
<b>Indigenous Vegetation – Hand Burning (ha)</b>			
State forest	7,349	5,819	3,687
National parks	11,355	55,873	17,534
Nature reserves	4,070	5,485	2,192
Other Crown land and Private Property *	7,047	2,538	13,449
<b>Total</b>	<b>29,821</b>	<b>69,715</b>	<b>36,862</b>
<b>Indigenous Vegetation – Aerial Burning (ha)</b>			
State forest	63,068	66,475	35,282
National parks	101,209	104,411	341,174
Nature reserves	64,785	66,314	41,579
Other Crown land and Private Property *	99,877	112,287	240,738
<b>Total</b>	<b>328,939</b>	<b>349,487</b>	<b>658,773</b>
<b>Indigenous Vegetation – Silviculture Burning (ha)</b>			
– Jarrah dominant forests	22,186	15,321	21,491
– Karri, Karri/Marri dominant forests	641	497	403
– Other forest	-	11	-
<b>Total</b>	<b>22,827</b>	<b>15,829</b>	<b>21,894</b>
<b>Softwood Plantation - Burning (ha)</b>			
– Strategic Protection	19,008	10,381	13,160
– Second Rotation Clearing Burns	625	554	180
– Logging Debris Removal, Silviculture	2,050	2,563	3,346
<b>Total</b>	<b>21,683</b>	<b>13,498</b>	<b>16,686</b>
<b>Grand Total</b>	<b>403,270</b>	<b>448,529</b>	<b>734,215</b>

For data specific to south-west forest regions see Appendices 4 and 5.

\* Includes Other Crown Land, Other DEC Reserve, and Private Property

**Note:** The relative area of DEC-managed estate in various land tenure has changed over the reported period with the creation of new national parks on lands that were previously State Forest



**Table E2: Wildfires in all regions 2004–05 to 2006–07**  
 – Number and area by land category  
 – Number and per cent by cause

ALL REGIONS	Number **			Area Burnt (ha) *		
	2004–05	2005–06	2006–07	2004–05	2005–06	2006–07
State forest						
native hardwood	93	134	96	22,642	7,486	8,079
softwood plantation	46	79	89	629	160	183
National parks	97	60	117	970,127	40,124	326,124
Nature reserves	44	33	43	115,845	49,217	104,268
Other CALM reserves	38	66	61	689,205	35,356	139,702
Other Crown lands	14	15	22	11,288	254,670	711,857
Private property	164	66	112	678,947	8,040	202,361
Unallocated Crown Land	32	27	65	1,344,267	2,292,464	453,058
<b>Total</b>	<b>528</b>	<b>480</b>	<b>605</b>	<b>3,832,950</b>	<b>2,687,516</b>	<b>1,945,633</b>

CAUSES	Number **			Per cent		
	2004–05	2005–06	2006–07	2004–05	2005–06	2006–07
ALL REGIONS						
Deliberately/illegally lit	196	244	219	37	51	36
Escapes – DEC burns	8	7	7	1	1	1
Escapes – non DEC burning	19	37	22	4	8	4
Accidental – timber industry	1	2	3	0	0	0
Accidental – other industries	24	17	26	5	4	4
Accidental – recreationists	23	29	26	4	6	4
Lightning	169	94	219	32	20	36
Unknown	64	33	52	12	7	9
Other causes	24	17	29	5	3	5
<b>Total</b>	<b>528</b>	<b>480</b>	<b>605</b>	<b>100</b>	<b>100</b>	<b>100</b>

\* Area (ha) burnt by wildfires in the tenure type

\*\* Number of wildfires that started in each tenure type and fire cause

## APPENDIX E – FIRE MANAGEMENT

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**Table E3: Area and number of wildfires attended and monitored by DEC for all regions 2006–07**

Region		State Forest Native Hardwood	State Forest Softwood Plantation	National Parks	Nature Reserves	Other DEC Reserves	Other Crown Lands	Private Property	Unallocated Crown Land	Total
<b>Southwest Forest Regions</b>										
Swan	Area (ha) *	5,869	167	418	335	8,559	185	9,533	57	25,124
	Number **	37	71	32	8	25	7	43	6	229
South West	Area (ha) *	1,964	10	1,141	20	203	1,074	289	21	4,722
	Number **	40	18	20	2	12	3	29	1	125
Warren	Area (ha) *	239	6	35	4	77	280	1,111	176	1,928
	Number **	16	-	15	3	4	1	15		54
<b>Sub Total</b>	<b>Area (ha) *</b>	<b>8,072</b>	<b>183</b>	<b>1,594</b>	<b>359</b>	<b>8,839</b>	<b>1,539</b>	<b>10,933</b>	<b>254</b>	<b>31,774</b>
	<b>Number **</b>	<b>93</b>	<b>89</b>	<b>67</b>	<b>13</b>	<b>41</b>	<b>11</b>	<b>87</b>	<b>7</b>	<b>408</b>
<b>Other Regions</b>										
Kimberley	Area (ha) *	-	-	605	-	-	20,000	185,000	26,191	231,796
	Number **	-	-	4	-	-	1	1	6	12
Pilbara	Area (ha) *	-	-	270,686	3,339	107,557	689,481	-	100,275	1,171,338
	Number **	-	-	18	1	12	7	-	6	44
Midwest	Area (ha) *	-	-	9,071	-	1,588	481	1,945	21,853	34,938
	Number **	-	-	4	-	2	1	7	9	23
Goldfields	Area (ha) *	-	-	1,000	94,966	20,400	-	-	253,805	370,171
	Number **	-	-	1	12	4	-	-	20	37
Wheatbelt	Area (ha) *	2	-	-	2,686	-	-	1,923	3,267	7,878
	Number **	2	-	-	7	1	1	3	3	17
South Coast	Area (ha) *	5	-	43,168	2,918	1,318	356	2,560	47,413	97,738
	Number **	1	-	23	10	1	1	14	14	64
<b>Sub Total</b>	<b>Area (ha) *</b>	<b>7</b>	<b>-</b>	<b>324,530</b>	<b>103,909</b>	<b>130,863</b>	<b>710,318</b>	<b>191,428</b>	<b>452,804</b>	<b>1,913,859</b>
	<b>Number **</b>	<b>3</b>	<b>-</b>	<b>50</b>	<b>30</b>	<b>20</b>	<b>11</b>	<b>25</b>	<b>58</b>	<b>197</b>
<b>Grand Total (All regions)</b>	<b>Area (ha) *</b>	<b>8,079</b>	<b>183</b>	<b>326,124</b>	<b>104,268</b>	<b>139,702</b>	<b>711,857</b>	<b>202,361</b>	<b>453,058</b>	<b>1,945,633</b>
	<b>Number **</b>	<b>96</b>	<b>89</b>	<b>117</b>	<b>43</b>	<b>61</b>	<b>22</b>	<b>112</b>	<b>65</b>	<b>605</b>

\* Area (ha) burnt by wildfires in the tenure type

\*\* Number of wildfires originating in the tenure type



**Table E4:** Area prescribed burnt within south-west forest regions for 2006–07

Dominant Purpose	Region	Area (hectares)				Year of Last Fire *
		Winter	Spring	Summer	Autumn	
Community / Strategic Protection	Swan	2,040	7,578	-	9,686	1975–1999
	South West	-	13,650	-	986	1983–1997
	Warren	-	38,671	-	1,955	1981–1998
Biodiversity Conservation	Swan	-	2,492	-	2,467	1982–2000
	South West	-	4,271	-	2,047	1982–1997
	Warren	-	2,953	957	6,841	1993–2002
Hardwood Silviculture	Swan	-	-	-	2,243	1976–1999
	South West	811	8,008	-	7,641	1984–1994
	Warren	-	2,813	32	346	1977–2003
Plantation Silviculture / Protection	Swan	2,037	3,468	-	4,112	1988–2001
	South West	-	4,491	-	1,482	1984–2005
	Warren	-	309	-	-	1990–1990
Tourism and Recreation / Protection	Swan	-	966	-	420	1980–1996
	South West	-	2,064	-	45	1981–1993
	Warren	-	569	-	151	1974–1999
<b>Grand Total by season (ha)</b>		<b>4,888</b>	<b>92,303</b>	<b>989</b>	<b>40,422</b>	
<b>Seasonal %</b>		<b>4</b>	<b>67</b>	<b>1</b>	<b>29</b>	
<b>Grand Total (ha)</b>		<b>138,602</b>				

\* Range of vegetation / fuel ages as at July 2006

**Table E5:** Number of prescribed burns conducted within south-west forest regions in each season for various purposes in 2006–07

Dominant Purpose	Region	Winter		Spring		Summer		Autumn		Total Number of Burns	No. of Escapes
		Aerial	Hand	Aerial	Hand	Aerial	Hand	Aerial	Hand		
Community / Strategic Protection	Swan	1	-	2	5	-	-	4	4	16	-
	South West	-	-	7	1	-	-	1	1	10	1
	Warren	-	-	14	6	-	-	-	5	25	3
Biodiversity Conservation	Swan	-	-	1	3	-	-	1	-	5	-
	South West	-	-	1	-	-	-	1	1	3	-
	Warren	-	-	1	-	1	1	5	1	9	1
Hardwood Silviculture	Swan	-	-	-	-	-	-	2	1	3	1
	South West	1	-	4	-	-	-	3	1	9	-
	Warren	-	-	2	10	-	3	-	11	26	-
Plantation Silviculture / Protection	Swan	-	28	-	7	-	-	2	3	40	-
	South West	-	-	4	2	-	-	1	8	15	-
	Warren	-	-	-	1	-	-	-	-	1	-
Tourism and Recreation / Protection	Swan	-	-	-	5	-	-	1	2	8	-
	South West	-	-	1	2	-	-	2	-	5	-
	Warren	-	-	-	3	-	-	-	1	4	1
<b>Total</b>		<b>2</b>	<b>28</b>	<b>37</b>	<b>45</b>	<b>1</b>	<b>4</b>	<b>23</b>	<b>39</b>	<b>179</b>	<b>7</b>

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  
Swan River Trust

### **Advisory committees**

Advisory Committee of the proposed Geographe Bay/  
Leeuwin-Naturaliste/Hardy Inlet Marine Park  
Air Quality Coordinating 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  
Coral Coast Park Council  
Coral Coast Parks Advisory Committee  
Darling Range Regional Park Community Advisory Committee  
Dieback Consultative Council  
Environmental Regulation Stakeholder Reference Group  
Esperance Parks and Reserves Community Advisory Committee  
Fitzgerald River National Park Advisory Committee  
Gibson Desert Working Together Group (Park Council)  
Goldfields Land and Sea Council Joint Management Working Group  
Herdsman Lake Regional Park Community Advisory Committee  
Jandakot Regional Park Community Advisory Committee  
Kalgoorlie Boulder Community and Industry Reference Group  
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  
Millstream Park Council  
Miriuwung-Gajerrong Regional Council  
Murujuga - Burrup Park Council  
Proposed Walpole/Nornalup Marine Park Focus Group

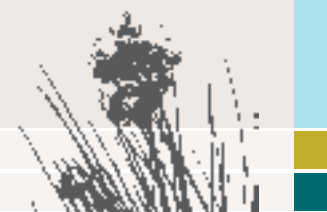




Purnululu Park Council  
Roadside Conservation Committee  
Rockingham Lakes Regional Park Community Advisory Committee  
Rudall River National Park  
Shannon D'Entrecasteaux Advisory Committee  
Shark Bay Terrestrial Reserves Community Advisory Committee  
Shoalwater Islands Marine Park Focus Group  
South Coast Regional Marine Planning Advisory Group  
State Marine Policy Stakeholders Group  
Tuart Response Group  
Threatened Ecological Communities Scientific Committee  
Threatened Species Scientific Committee  
Tuart Forest National Park Community Advisory Committee  
WA Flora Industry Advisory Committee  
Walpole Wilderness Area  
Waste Management Board  
Wellington National Park  
Wetlands Coordinating Committee  
Wetland Restoration and Management Manual Project Steering Committee  
Wetland Status Working Group  
Woodman Point Regional Park Community Advisory Committee  
Yanchep National Park  
Yellagonga Regional Park Community Advisory Committee

Most new publications are available to download in PDF format from our website at <[www.dec.wa.gov.au](http://www.dec.wa.gov.au)>. Many publications are also available on CD.

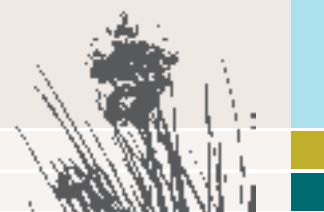
100-Year Biodiversity Conservation Strategy for WA – Draft	Report
100-Year Biodiversity Conservation Strategy for WA – Draft – Have Your Say	Leaflet
100-year plan Biodiversity Conservation Strategy for WA	Book
<b>A</b>	
A Visitors Guide to the State National, Marine and Regional parks of WA	Leaflet
Annual Report – Department of Conservation and Land Management 2005–2006	Report
Annual Report – Department of Environment 2005–2006	Report
Arbor Day	Poster
Are you affected by Noise from Bird Control in Orchards?	Leaflet
Authority to Remove Fire Wood for Personal Use	Booklet
Air Quality – Together we can create a healthier environment for our children	Poster
Air quality strategy for Collie	Poster
Air Quality – Continuous emission monitoring system (CEMS) code for stationary source air emissions	Report
Air Quality – Midland community ambient air monitoring program	Brochure
Air Quality – Midland background air quality study (MBAQS) draft project	Report
Air Quality – Midland background air quality study (MBAQS) pilot trial	Report
<b>B</b>	
Back from the Edge	Leaflet
Back from the Edge – Avon Catchment Fauna	Poster
Back from the Edge – Saving Native Species and Communities most at Risk	Poster
Background Quality of Marine Sediments Mid-west Coast of WA	Report
Barna Mia	Leaflet
Baselining the Natural Diversity of the Avon Region	Poster
Baselining Wandoo Crown Condition 2006	Report
Beachcombing Perth and South West Beaches	Bush book
Become a Friend of the Munda Bididi Trail	Flyer
Best Practice Guidelines for Bird Scaring in Orchards	Booklet
Bird Scaring in Orchards	Leaflet
Black Cockatoos Fact Sheet No1	Leaflet
Black Cockatoos Fact Sheet No2 – Using Explosive Cartridges to Scare	Leaflet
Black Cockatoos in Orchards – All you need to Know	Leaflet
Bugs in the Backyard	Bush book
Buntine – Marchagee Catchment News 4 issues	Newsletter
Bush Tucker Plants of the South-West	Bush book
<b>C</b>	
<i>Caledonia williamsiae</i>	Poster
Campground Hosts	Leaflet
Cane Toad – WA Initiative	Leaflet
Cane Toad Initiative	Newsletter
Cape Range National Park Ningaloo Marine Park and Muiron Islands Management Area Information and Recreational Guide	Leaflet



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Caring for places – Educator and Student Resource	Leaflet
CleanRun: DT80 emissions – Testing for fuel tax credit	Pamphlet
CleanRun: Air pollution and vehicles	Pamphlet
CleanRun Set of 15 information posters	Poster
CleanRun Remote sensing project information	Pamphlet
Climate Change Action Statement	Leaflet
Climate Change Education	Leaflet
Climate Change Photo Exhibition	Flyer
Climate change – Western Australia climate change photographic competition package	Flyer
Coastal Assessment and Restoration Project Guilderton to Kalbarri	Booklet
Code of Conduct – Swimming with Whale Sharks	Poster
Common Wildflowers of the South-West Forests	Bush book
Communities, Department of Environment and Conservation and the Avon Catchment Council	Poster
Community Marine Reserve	Poster
Conservation Science Western Australia Vol 5 Number 3	Booklet
Contaminated Sites Auditors: Guidelines for accreditation, conduct and reporting Version 2	Report
Contaminated Sites Fact Sheet 1 – Availability of information on Contaminated Sites in Western Australia	Flyer
Contaminated Sites Fact Sheet 2 – Staged approach to staged assessment	Flyer
Contaminated Sites Fact Sheet 3 – Land transactions and occupation of Contaminated Sites	Flyer
Contaminated Sites Fact Sheet 4 – How do I support a site?	Flyer
Contaminated Sites Fact Sheet 5 – How to hire a Contaminated Sites consultant and/or credited auditor	Flyer
Contaminated Sites Fact Sheet 6 – My site has a planning condition related to a Contaminated Site	Flyer
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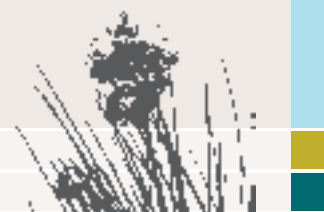
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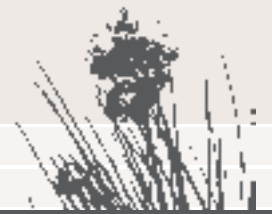
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