

2003–2004 annual report

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT



MINISTER FOR THE ENVIRONMENT

In accordance with Section 62 of the *Financial Administration and Audit Act 1985*, I submit for your information and presentation to Parliament the annual report of the Department of Conservation and Land Management.



Keiran McNamara
EXECUTIVE DIRECTOR
31 August 2004

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THE OPINIONS OF THE AUDITOR GENERAL APPEAR AFTER THE PERFORMANCE INDICATORS AND THE FINANCIAL STATEMENTS



The Department is committed to developing a range of services that meet the needs of our many customers, and at the same time are consistent with our responsibilities for conservation and land management in WA.

Executive Director's review

A key priority for the Department of Conservation and Land Management (CALM) to conserve the nature of Western Australia (WA) is the development and management of WA's conservation reserve system. Currently, the existing publicly-owned terrestrial conservation reserve system includes just over 6.6 per cent of the State's land area.

Proposed extensions include nearly five million ha of former pastoral lease, and around 660,000 ha of State forest as national parks and other conservation reserves. The Department has identified a further 1.4 million ha under the 2015 pastoral lease renewal process for incorporation into the conservation reserve system.

When these various processes are complete, WA's terrestrial conservation reserve network will extend over nine per cent of the land mass. The World Conservation Union (IUCN) World Commission on Protected Areas in 1992 identified that 10 per cent of each biogeographic region should be preserved in formal protected areas. Subsequently, this benchmark has been increased in Australia through various reviews including the February 2004 draft position statement released by the Natural Resource Management Ministerial Council, entitled *Directions for the National Reserve System: A Partnership Approach*.

In reality we have a long way to go. The proportion of the individual biogeographic regions – and their subregions – that is reserved varies considerably across the State. Consequently, a major focus has been identifying those biogeographic regions and vegetation types that are under-reserved (or, in some cases, not reserved at all) and working towards ensuring WA has a reserve system that truly reflects the State's biodiversity.

A Biodiversity Audit of WA's 53 Biogeographic Subregions and a summary for the 22 biogeographical regions that lie entirely within the State, was completed in 2003–2004 and has subsequently been released to stakeholders. Both volumes are an important contribution to the development of a comprehensive, adequate and representative conservation reserve system. They also will contribute to the development of a State Biodiversity Conservation Strategy and provide significant references for a wide range of individuals and organisations including Government agencies, other research institutions, landowners, natural resource management groups and others generally interested in conserving the State's natural biodiversity.

However, while WA's terrestrial environment is biologically diverse – we have Australia's only world-ranked biodiversity hotspot (WA's south-west) and eight of Australia's 15 recognised national biodiversity hotspots – so, too, is our marine environment. The coastal waters between North West Cape and Rottnest Island also are an internationally-recognised biodiversity hotspot, ranking seventh in terms of total diversity richness and second in terms of the number of species found in a limited range.

As with the terrestrial conservation reserve system, the establishment and management of a marine reserve network including marine parks, marine nature reserves and marine management areas, is an essential part of conserving the State's marine environment for present and future generations.

The dedication of Jurien Bay Marine Park in August 2003 brought to seven the number of marine parks off the WA coast. Planning also is well under way for further marine parks and reserves. When implemented, these will assist in extending the conservation reserve network as part of the State's longer-term objective to have a world-class comprehensive, adequate and representative marine reserve system.

A key part of the conservation reserve planning process – for both terrestrial and marine environments – is the involvement of the community through consultation and participation. Consequently, engagement with the community is a major focus for CALM in the development of the public conservation reserve system, and in the conservation of the State's biodiversity.

The 2003–2004 year has also seen the continued growth of use of our parks, reserves and forests for nature-based recreation and tourism. Indeed our national and marine parks in particular house many of WA's natural tourism attractions and make a significant contribution to local and regional economies.

One of the milestone achievements for 2003–2004 was the completion of a new forest management plan which came into operation in January 2004. The plan protects old-growth forests, identifies areas to be set aside as national parks and other conservation reserves, and sets standards for the management of State forests in an ecologically sustainable manner.

I would like to thank CALM's staff and volunteers for their unstinting efforts, dedication and contribution to the Department's work during the year. CALM also acknowledges the contributions of the members and staff of the Conservation Commission of Western Australia, the Marine Parks and Reserves Authority and the many community-based and other organisations who work with CALM on a day-to-day basis throughout the year.



Keiran McNamara
EXECUTIVE DIRECTOR
31 August 2004

Our commitment

Our vision

A natural environment in Western Australia (WA) that retains its biodiversity and enriches people's lives.

Our mission

In partnership with the community, we conserve WA's biodiversity, and manage the lands and waters entrusted to us, for their intrinsic values and for the appreciation and benefit of present and future generations.

Our values

In working to achieve our Mission, we endeavour to behave with:

- **Honesty and integrity** – acting ethically, legally and treating people with impartiality.
- **Respect** – understanding and respecting individual differences, valuing each other's contribution, and respecting the views and aspirations of co-workers and the community.
- **Openness** – having processes that are transparent and understandable.
- **Commitment** – being responsible, accountable and dedicated in our work.

We will demonstrate:

- **Teamwork** – working collaboratively and cooperatively with co-workers, and in partnership with the community.
- **Leadership** – being progressive, showing initiative and creativity in meeting our objectives.
- **Professionalism** – acting in a professional, 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 conservation through continual improvement of our efforts.

Our principles

In making decisions we will be guided by the following principles:

- The diversity and health of ecological communities and native species throughout WA will be maintained and restored.
- 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 prevent loss of biodiversity.
- Users of the environment and resources will pay fair value for that use.
- Use of wildlife will be on the basis of ecological sustainability.
- Outcomes will be delivered in the most effective and efficient way.

- Cooperation, sharing and integration of resources and knowledge within CALM and between communities and agencies will be promoted.
- We will adopt a flexible and responsive approach to management and operations and be receptive to change.

Our objectives

Conserving biodiversity

To protect, conserve and, where necessary and possible, restore WA's natural biodiversity.

Creating sustainable community benefits

To generate social, cultural and economic benefits through the provision of a range of services that are valued by the community and are consistent with the principles of ecological sustainability.

Maintaining community involvement and support

To develop community awareness and appreciation of the State's rich diversity of native plants, animals and natural ecosystems, and its unique landscapes, and promote community involvement in and support for their protection, conservation and restoration.

Improving the way we do business

To foster a positive work culture of trust, continuous improvement and anticipation of biodiversity conservation issues and customer needs, and deliver core business activities in the most effective and efficient manner.

Our responsibilities

CALM is part of a greater conservation community and has distinct State Government responsibilities for implementing Government policy within that community. Conservation is a collective role.

We have the lead responsibility for conserving the State's rich diversity of native plants, animals and natural ecosystems, and many of its unique landscapes. On behalf of the people of WA, we manage more than 25 million hectares, including more than nine per cent of WA's land area: its national parks, marine parks, conservation parks, regional parks, State forests and timber reserves, nature reserves, and marine nature reserves.

As an agency with integrated responsibilities, we manage lands and waters for the conservation of biodiversity at ecosystem, species and genetic levels, including management for the renewable resources they provide, and for the recreation and visitor services they can sustainably support.

We assist the *Conservation and Land Management Act 1984* (CALM Act) statutory bodies (Conservation Commission of WA and Marine Parks and Reserves Authority) to carry out their statutory functions.

We work closely with the Forest Products Commission to ensure that all activities in State forests and timber reserves are consistent with the protection of nature conservation, community, recreation, cultural, catchment and physical values.

We also contribute to national and international programs through national Ministerial Councils, the Natural Heritage Trust, the work of organisations such as the IUCN (the World Conservation Union), and to the implementation of international conservation treaties in WA.

Customer service

While fulfilling our conservation and land management responsibilities, CALM places a great deal of importance on community and customer relations. We aim to increase our customer focus and provide a range of services that meet customer needs.

Our customers can expect:

- positive, courteous and friendly service;
- competent and efficient assistance;
- timely and accurate information; and
- confidentiality where commercially sensitive issues are concerned.

More specifically, our customers can expect that:

- CALM staff will be well trained, competent and helpful; will wear name badges when in direct contact with the community; and will identify themselves by name when answering the telephone.
- Requests for information or assistance will be met directly or referred to the appropriate person for answering as soon as possible.
- Telephone calls to our main offices will be answered on average within six rings. Telephone messages will normally be returned by the next business day.
- A contact name, address and telephone number will be given in all correspondence for future enquiries. Where it is not possible to respond to correspondence fully, an acknowledgement will be sent, advising of the current situation and when a reply may be expected.
- Brochures and other information materials will be easily understandable, accurate and up-to-date.
- Recreational facilities in national, conservation and marine parks, reserves and State forests will be well maintained and kept clean.

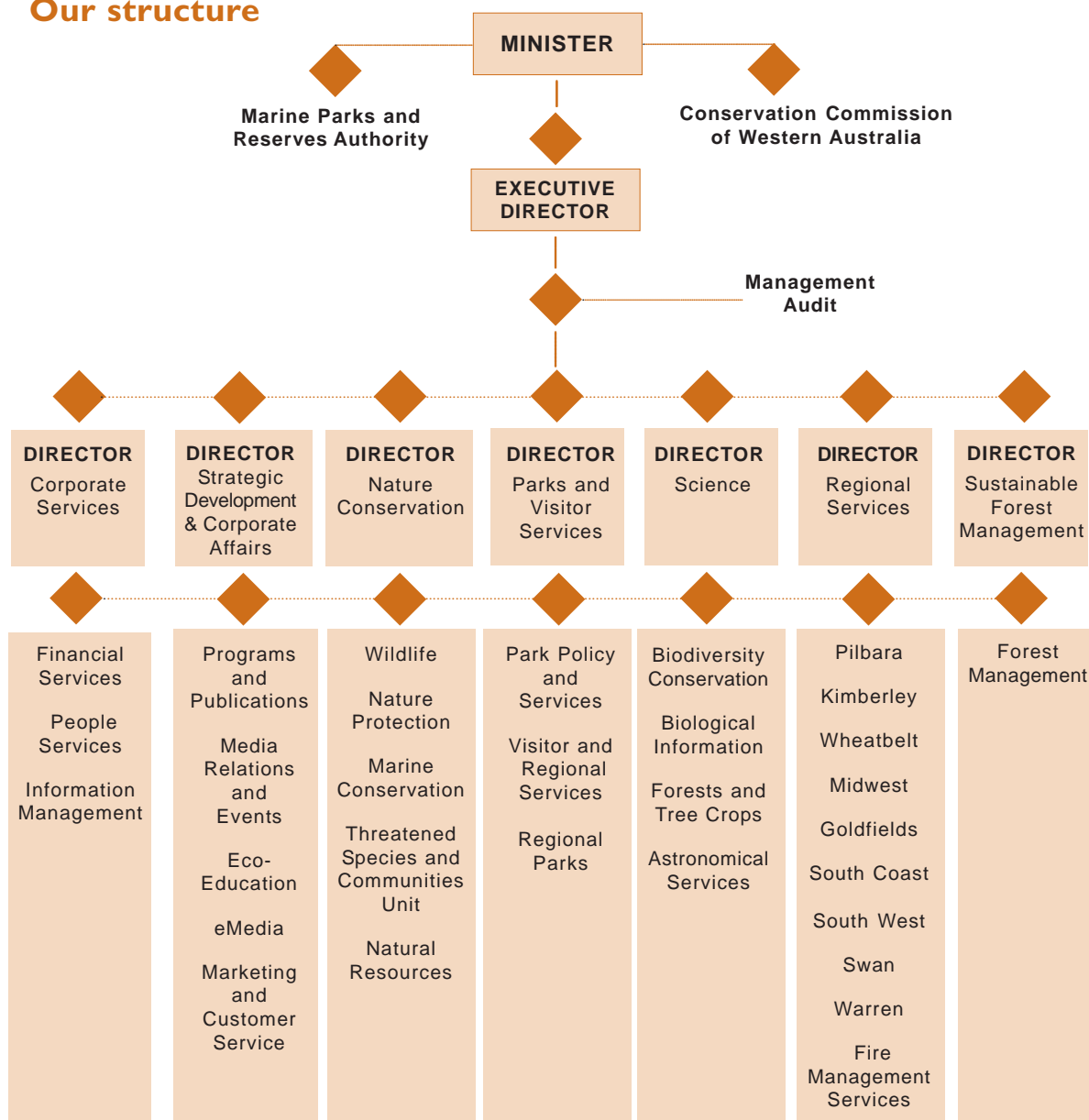
Our organisation

CALM is in the portfolio of the Minister for the Environment and is headed by an Executive Director. In keeping with the varied roles of CALM there is also a Corporate Executive, which consists of seven directors working with and reporting to the Executive Director. Regional, branch and other specialist officers often attend meetings of the Corporate Executive.

CALM gives responsibility to its staff whenever possible, depending on skills and potential. Provided there is opportunity, there is no impediment to the progress of a capable individual in the organisation.

The detailed structure of divisions, regions and branches is shown below with the names and qualifications of officers occupying senior positions shown over.

Our structure



Corporate Executive (as of 30 June 2004)

Executive Director

K J McNamara B Nat Res (Hons)

Director, Corporate Services

R A Kawalilak* BA, FPRIA

Director, Nature Conservation

G J Wyre* B Nat Res (Hons)

Director, Parks and Visitor Services

J R Sharp B Ed, Dip PE, M Ed

Director, Regional Services

A W Walker BSc For (Hons)

Director, Science

N D Burrows BSc For, PhD

Director, Strategic Development and Corporate Affairs

C Bailey*

Director, Sustainable Forest Management

P Jones* BSc For

Other senior staff

Regional Manager, Goldfields

I G Kealley BSc For

Regional Manager, Kimberley

G MacKay BEd (Env Sc), B App Sci (Parks & Wildlife)

Regional Manager, Midwest

K Gillen BSc (Hons)

Regional Manager, Pilbara

S White* BEd, Dip EIA, MSc

Regional Manager, South Coast

J R Watson BSc, Grad Dip Rec, PhD

Regional Manager, South West

R Chandler BSc For

Regional Manager, Swan

A Sands BAppliedSc, Grad Dip Nat Res

Regional Manager, Warren

P Keppel Cert For Mngmt

Regional Manager, Wheatbelt

B H Bone BApplied Sc Nat Res, Dip Mgmt

Manager, Biodiversity Conservation Group

K D Morris BSc, MSc

Manager, Biological Information Group

N G Marchant BSc (Hons), PhD

Manager, Financial Services Branch

M J Neilson BA, MAcc, CPA

Manager, Fire Management Services

R Sneeuwjagt BSc, MSc

Manager, Forests and Tree Crops Group

L McCaw* B For Sci, PhD

Manager, Forest Management Branch

M Rayner BSc For (Hons), PhD

Manager, Information Management Branch

C J Pearce BSc (Hons), PhD

Manager, Management Audit Branch

M Brabazon*

Manager, Marine Conservation Branch

C J Simpson B App Sci (Biol), G Dip Nat Res, PhD

Manager, Natural Resources Branch

K J Wallace Dip Ed, BSc (Hons)

Manager, Nature Protection Branch

D Mell* B App Sc

Manager, Park Policy and Services

C B Ingram B App Sc

Manager, People Services Branch

M Bolitho BA, MIR, AFAHRI

Manager, Programs and Publications

S McKenna

Manager, Regional Parks

T Bowra BSc

Manager, WA Threatened Species & Communities Unit

J Blyth* BSc (Hons)

Manager, Visitor and Regional Services

T Shea* BA, G Dip Nat Res

Manager, Wildlife Branch

K Atkins* BSc (Hons), PhD

Principal Media Relations Officer

N Higgs

Science Advisor

I J Abbott BSc (Hons), PhD, DSc

Government Astronomer

J Biggs BSc (Hons), PhD

* Acting

Regional activities

CALM is committed to regionalisation. There are nine regions which, according to the intensity of activity, are subdivided into districts. Accordingly, CALM is spread over many locations. The map (on page 17) shows regional boundaries and the location of regional offices, as well as the types of lands and waters CALM manages.

Management structures are in place at nine regional, 14 district and nine local offices. Within the regions there are national park rangers at 40 other locations.

Because of community concern for protection of the natural environment and an increasing desire to experience its values, the roles of regional managers and their staff in engaging the community are most important. Satisfactory experiences for the 10.9 million visits (2003–2004 estimated figures) to lands and waters managed by CALM, drawn from interstate and overseas as well as from all over WA, are largely in their hands. Regional staff are also responsible for the conservation of native flora and fauna on all lands and waters within regional boundaries.

Regional managers are responsible under corporate direction for developing the region's annual works program, and for managing the region's budget allocation. Liaison with local groups, especially Aboriginal people, other Government agencies and the community in general, is extensive.

There are often advisory committees established with a focus on CALM-managed lands and waters. The committees provide input into the preparation of management plans and, after the plans are approved by the Minister for the Environment, advise on management. It is mostly the regional managers and their staff who are responsible for this important interface with the local community.

Specialist and service activities

CALM's operations are directed by the Corporate Executive and supported by specialist and service staff. Their responsibilities are as follows:

Financial Services Branch provides advice to operational managers on purchasing and fleet management, manages accounts receivable and accounts payable processes, and asset records, coordinates remote area housing, consolidates Department budgets, maintains core financial software that is shared by all parts of the Department, and produces management, tax and statutory reports.

Fire Management Services sets fire management standards, coordinates the preparation and implementation of fire prevention and suppression plans, provides detection, communications, aircraft, fire trucks and equipment and other fire support services, and conducts training.

Forest Management Branch carries out resource inventories, disease mapping and database maintenance for CALM's Sustainable Forest Management output and the Forest Products Commission. It maintains corporate resource information and GIS databases relating to forest areas in the south-west and prepares strategic resource plans.

Information Management Branch plans, coordinates and implements CALM's information systems support, and is responsible for corporate document and records management. The Branch maintains CALM's Geographic Information System, and provides a land-related information service.

Management Audit Branch reports to the Executive Director, providing audits of management systems to advise on their effectiveness, efficiency, economy and compliance with legislation, policies and procedures.

Marine Conservation Branch provides policy, strategic and scientific advice for marine conservation and management, and advises marine reserves planning teams.

Natural Resources Branch is responsible for the development and coordination of CALM's natural resource management policies with a major focus on interaction with regional natural resource management groups. The branch also coordinates the implementation of State Salinity Strategy programs for biodiversity conservation funded through the Department.

Nature Protection Branch sets and implements the legislative compliance standards, coordinates the legislative compliance function across Departmental outputs and the protection of CALM-managed lands and waters from invasive species. It provides policy, strategic planning and advice for the protection of nature from unlawful activities, wildlife conflict and emergencies, dieback, weeds and feral animals, evaluates mining and development proposals affecting CALM-managed lands and waters and advises on rehabilitation of CALM-managed lands and waters.

Park Policy and Services develops policy and strategies for recreation and tourism and other commercial activities, including permits, leases and licences. It coordinates land administration and acquisition programs, and external funding opportunities. The Branch also coordinates visitor research and surveys, and maintains databases for the Parks and Visitor Services Division.

People Services Branch provides strategic planning, policy development and formulation, advice and coordination in the management of CALM's people. Services are provided by the Branch in the functional areas of personnel, payroll, labour relations, training and development, and risk management.

Perth Observatory is a group within Science Division. It has three astronomy-based core functions: research, information services and educational services.

Our people

Corporate Services Division

Financial Services Branch

During 2003–2004, Financial Services Branch continued to manage the Oracle Financial, Fleet Costing and Payroll Costing systems. It also produced regular financial reports for line managers and CALM's Corporate Executive, as well as various submissions for the Department of Treasury and Finance.

Projects undertaken included the continued disposal of surplus properties; preparation for the whole-of-Government Shared Service Centres scheduled for implementation in 2005–2006; replacement of a number of heavy fleet units; better integration of CALM's strategic planning and annual budget processes; improvement of a number of business processes; and development of an enhanced Chart of Accounts with a new activity-based costing structure for 2004–2005.

Information Management Branch

Information Services Section continued to upgrade CALM's communication network and regional servers to improve access by remote offices and work centres for information exchange and knowledge sharing. CALM's Information Technology and Telecommunications Strategic Plan was revised, and its implementation continued with the preparation of a plan to enable CALM to move towards a standard computer operating environment, with a focus on business continuity, security and disaster recovery.

Corporate Information Section continued to ensure CALM's compliance with the new State records legislation.

Geographic Information Services Section provided spatial data and mapping support for regional operations throughout CALM, including training and support in desktop geographic information systems (GIS). In addition, atlases were provided to regional offices and digital spatial data were distributed on compact disc, including the cadastre and georeferenced versions of CALM's operations maps.

A corporate spatial database, EcoBase, was set up with the means to provide web access to centrally-managed geographical information for all divisions within CALM.

The section continued to provide GIS support for the processes involved in the establishment of proposed new national parks in the south-west of the State. Data and assistance were provided to support the Natural Resource Management and the State Salinity Strategy programs, and for the preparation of the Forest Management Plan. GIS assistance was also provided to support the terrestrial conservation reserve acquisition program.

New maps were produced for the Bibbulmun Track, Munda Biddi Cycle Trail and a variety of other publications.

Remote sensing technology was employed to map fire history over selected areas of the State, and for vegetation monitoring over the State. CALM also continued to participate in the Landsat-based Land Monitor Project.

People Services Branch

The Workforce Services and Planning Section restructure undertaken in late 2002–2003 continued during 2003–2004 to provide for streamlining of processes and communication channels, greater team integration and better management of section workloads.

From March 2004, the new Recruitment Advertising and Management System (RAMS) became operational across the WA public sector and provided for the advertisement of vacancies through the Internet on the new WA Jobs Board. RAMS replaced the previous method of advertising vacancies in the Intersector magazine. Advertising through RAMS is free and provides a significant cost saving to CALM. Another anticipated benefit is the greater accessibility the WA Jobs Board provides for greater numbers of applicants for advertised vacancies.

From June 2004, the redeployment and severance module of RAMS became operational. This provides for the registration of redeployees and voluntary severance applications.

After much planning and testing, a two-year contract for Application Service Provider (ASP) for the provision of technical support for Concept Alesco, CALM's Human Resource Information Management System, was entered into in August 2003. At the same time, Concept Alesco was upgraded from version 8.03 to e8.06. These changes have improved system navigation for users, increased the amount of time available for data entry, reduced payroll-processing times and improved the level of application support. A further upgrade of Concept Alesco to e8.07 is planned for September 2004. Training in e8.06 for employees who use Concept Alesco was completed in early 2003–2004.

In April 2004, the section began posting division and branch establishment full time employee (FTE) reports on CALMweb on a pay-by-pay basis. This allowed directors and branch managers to verify the accuracy of their employee establishment and FTE data, and resulted in improved accuracy of data in Concept Alesco.

The processing of pay increases, including calculation of arrears, for employees covered by the new visitor centre and fire agreements were completed, as was the update of employee shortcodes in Concept Alesco for 2004–2005.

Changes to salary packaging arrangements included recoding and change of set-up in Concept Alesco from negative allowance to pre-tax deduction and availability of Remote Area Housing.

Employees are now able to salary package their GEHA rent through CALM. In addition, employees can now apply for salary packaging online.

The section began work to give effect to the corporate services changes following a restructure of the Forest Products Commission, including remapping of the structure in Concept Alesco, review and registration of new and amended Job Description Forms (JDFs), creation and classification of new positions, and processing of employee transfers. It is expected that this will be completed during 2004–2005.

Premier's Circular 2002/17 was issued in October 2002 and provided for the conversion of fixed-term contract employees to permanent status. To date, 71 employees have achieved permanency through this process. A further eight are still to be converted.

Throughout CALM last year, 25 salaried staff achieved career advancement through promotion via advertised vacancies. Five salaried staff were reclassified into higher-level positions and eight achieved advancement through criteria progression.

Risk Management Section is responsible for developing and implementing risk management policies and procedures in respect of occupational safety and health; corporate health and fitness; workers' compensation; injury management; general liability and the corporate insurance portfolio.

Organisational Learning and Development Section saw 19 recruits graduate in May 2004 after completion of 12 weeks competency-based training delivered over a two-year period. Training programs cover a range of nature conservation and park management initiatives and are nationally recognised by the Training Accreditation Council. All 19 of the graduating officers achieved permanent appointments with CALM.

Twenty-seven CALM employees were awarded scholarships from six internal scholarship programs that promote continuous learning in a range of academic disciplines that include science, business, leadership and management.

Sixty-five employees successfully completed one of the three tiers of the Leadership and Organisational Development programs during the past financial year. The programs, delivered by Murdoch University, are designed to provide employees with the necessary tools to address areas of leadership, change management and project management. The program features a multi-faceted approach incorporating theory, experiential learning and more importantly, collegial learning.

Twelve employees successfully completed the nationally recognised Certificate IV in Government course and a further 11 completed the Diploma of Management course. A further 16 employees enrolled in the Certificate IV Government course and 20 entered into the Diploma of Business course for 2004.

At the end of the 2003–2004 year, 21 wages employees were enrolled in the Conservation and Land Management Training package, which is jointly administered by CALM and TAFE.

CALM also made significant progress with its Aboriginal employment strategy – the Mentored Aboriginal Training and Employment Scheme (MATES). A partnership with the Commonwealth Department of Employment and Workplace Relations (DEWR) was established and progressed. CALM employed 22 Aboriginal trainees across the State as at 30 June 2004 under this partnership, and a further 10 Aboriginal trainees under other arrangements. Five graduated from Certificate II in Conservation and Land Management while a further five graduated from the Certificate III level. On completion of their Certificate IV studies the graduates will be employed in field officer positions throughout the State.

A further four cadets were sponsored by CALM while undertaking tertiary studies. This program is part of the National Indigenous Cadetship Program that provides funds for students during the 40 weeks of academic study and placement with CALM for the remaining 12 weeks during semester breaks and between academic years.

The MATES program has been so successful in such a short time that CALM won the Premier's Award category for 'Leadership in Diversity' as well as the overall 'Premier's Award for Excellence' in October 2003.

Employee Relations Section saw the conclusion in October 2003 of negotiations on common conditions of employment for fire suppression by a joint working party with representatives from the Australian Workers Union (AWU), Allied Liquor Hospitality and Miscellaneous Workers Union (ALHMWU) and the Civil Service Association (CSA). The AWU and ALHMWU rejected the proposed agreement and the CSA accepted the agreement, which was then registered in May 2004 by the WA Industrial Relations Commission. Negotiations are continuing with AWU and the ALHMWU to try to achieve the original aim of a common agreement for all employees engaged in fire suppression before the start of the 2004–2005 fire season.

A project officer was commissioned to review the current AWU Career Development Model (CDM) process and report on possible improvements in relation to training, classification, progression and assessments for all AWU workers. This entailed consultation with all relevant stakeholders and a report was completed in April 2004. It is envisaged that the report recommendations will be implemented during the next 18 months.

The majority of CALM's enterprise agreements expired in December 2003. Negotiations have started on replacement agreements to coincide with the Government's offer of three-year agreements.

CALM-managed lands and waters

Total estate

As at 30 June 2004 the total area under CALM's management was 25,002, 951 hectares (ha) representing an increase of 295,535 ha during 2003–2004.

The terrestrial area (i.e. not including marine reserves) was approximately 9.37 per cent of the land area of WA. The table below provides a summary of all tenure classifications.

National parks

National parks are for wildlife and landscape conservation, scientific study, preservation of features of archeological, 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 69 national parks at 30 June 2004 was 5,092,680 ha, a net decrease of 2,698 ha for the year. Notable changes were an increase to Walpole-Nornalup National Park (372 ha) to correct a previous misinterpretation of the park's boundary and a decrease to Cape Range National Park (2,926 ha) 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.

CALM-managed lands and waters (ha) by region as at 30 June 2004

Tenure Classification	South West	Goldfields	Kimberley	Midwest	Pilbara	South Coast	Warren	Swan	Wheatbelt	Total
National Park	31,827	151,009	829,773	504,833	2,393,701	891,810	243,521	44,914	1,292	5,092,680
Conservation Park	747	33,517	460,232	3,750	149,040	-	-	56,570	257	704,113
Nature Reserve	9,943	6,304,112	809,783	738,223	250,595	1,585,540	33,047	51,657	1,044,972	10,827,872
Marine Park	-	-	21,912	831,111	225,564	-	-	16,391	-	1,094,978
Marine Nature Reserve	-	-	-	132,000	-	-	-	-	-	132,000
Marine Management Area	-	-	-	-	-	-	-	-	-	-
State Forest	656,164	781	-	-	-	4,055	544,126	496,485	28,066	1,729,677
Timber Reserve	33,775	28,576	-	26,338	-	5,231	19,025	28,501	-	141,446
Sections 5(1)(g) & 5(1)(h) Reserve	30,282	81,593	80,535	2,318	8,131	<1	639	27,439	1,313	232,250
Miscellaneous Reserve	358	<1	58	515	1,779	3,814	351	5,946	15	12,836
Freehold(Exec Dir)	21,143	<1	1	<1	<1	63	4,918	275	1	26,401
Leasehold (Exec Dir), Former Leasehold & Section 33(2) Managed Land	-	1,261,520	35,625	2,910,755	784,767	-	-	-	-	4,992,667
Sections 16 & 16A Managed Land	121	215	-	7,020	-	-	-	8,675	-	16,031
TOTALS	784,360	7,861,323	2,237,919	5,156,863	3,813,577	2,490,513	845,627	736,853	1,075,916	25,002,951

Source: Information Management Branch

The area of conservation parks at 30 June 2004 was 704,113 ha, a net decrease of 103 ha. Notable changes were the creation of a new park at Harvey (166 ha), the change in tenure of Penguin Island (11 ha) and excision of 268 ha from the conservation park at Cane River for the Dampier-Bunbury Natural Gas Pipeline.

Nature reserves

Nature reserves are for wildlife and landscape conservation, scientific study, and preservation of features of archeological, historic or scientific interest. Recreation that does not harm natural ecosystems is allowed.

The area of nature reserves at 30 June 2004 was 10,827,872 ha, representing a net increase of 616 ha for the year. New nature reserves created during the year resulting from land purchases were areas about 13 km south of Gingin (108 ha) and about 17 km south of Bencubbin (194 ha). Other new reserves included areas about 31 km north of Eneabba (65 ha) and about 34 km east of Southern Cross (255 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 2004 was 1,729,677 ha, a net decrease for the year of 297 ha. The majority of excisions were for road surveys.

Timber reserves

Timber reserves declared under the CALM Act are managed on the same basis as State forests. The category is often transitional; as reserves are evaluated they may be changed to a more appropriate tenure, e.g. State forest or nature reserve. The area of timber reserves at 30 June 2004 was 141,446 ha, a net increase of 12 ha.

Marine 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 flora and fauna and their habitats. Fishing and collecting are not permitted.

The area of marine parks at 30 June 2004 was approximately 1,094,978 ha, a net increase of 81,038 ha, due mainly to the creation of Jurien Bay Marine Park (82,376 ha) and an area reduction of Rowley Shoals Marine Park (1,338 ha) due to recalculation.

The area of marine nature reserves at 30 June 2004 was approximately 132,000 ha. There were no changes during the year.

Marine Management Areas will 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. As yet no Marine Management Areas have been proclaimed.

Section 5(1)(g) and 5(1)(h) reserves

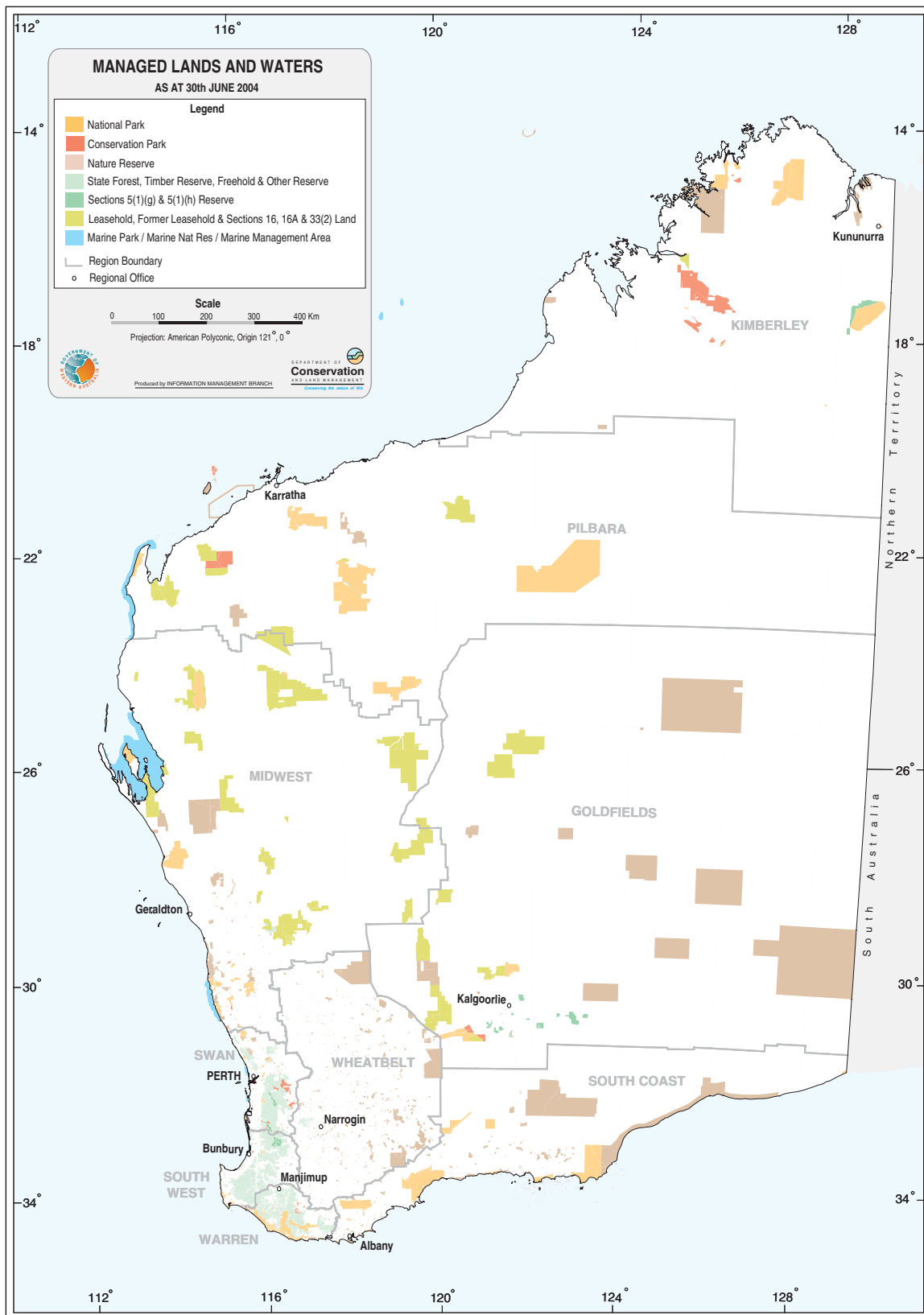
Under the CALM Act, lands categorised as sections 5(1)(g) and 5(1)(h) reserve are lands reserved under the *Land Act 1933* and the *Land Administration Act 1997* respectively, for which care, control and management is issued to the Conservation Commission. Unlike national parks, conservation parks and nature reserves, they are not automatically vested in the Conservation Commission. Immediately before the commencement of the CALM Act, some were vested in, or were under the control of, the National Parks Authority but not as a national park, e.g. Matilda Bay Reserve. Predominantly they have conservation/recreation purposes.

The area of sections 5(1)(g) and 5(1)(h) reserves at 30 June 2004 was 232,250 ha, an increase for the year of 1,637 ha. The increases were due to the purchase of an area about 40 km south-east of Lake Grace (725 ha) and the creation of a reserve for Crocodile Management (909 ha) in the Kimberley.

National parks vested in the Conservation Commission of Western Australia as at 30 June 2004

NAME	AREA (ha)	NAME	AREA (ha)	NAME	AREA (ha)
Alexander Morrison	8,500	Hassell	1,265	Serpentine	4,357
Avon Valley	4,366	John Forrest	2,676	Shannon	52,598
Badgingarra	13,109	Kalamunda	375	Sir James Mitchell	497
Beedelup	1,786	Kalbarri	183,004	Stirling Range	115,920
Boorabbin	26,000	Karijini	627,442	Stokes	9,726
Brockman	49	Kennedy Range	141,660	Tathra	4,322
Cape Arid	279,382	<i>Lawley River</i>	17,572	Torndirrup	3,936
Cape Le Grand	31,801	Leeuwin-Naturaliste	18,770	Tuart Forest	2,049
Cape Range	47,655	<i>Lesmurdie Falls</i>	56	<i>Tunnel Creek</i>	91
Collier Range	235,162	Lesueur	26,966	<i>Un-named</i>	1,571
D'Entrecasteaux	116,686	Millstream-Chichester	199,736	<i>Un-named</i>	16,039
Drovers Cave	2,681	<i>Mirima</i>	2,068	Walpole-Nornalup	19,444
Drysdale River	448,264	<i>Mitchell River</i>	115,325	<i>Walyunga</i>	1,812
<i>Eucla</i>	3,560	Moore River	17,254	Warren	2,982
Fitzgerald River	329,882	Mount Augustus	9,168	Watheroo	44,474
Francois Peron	52,587	Mount Frankland	30,830	<i>Waychinicup</i>	3,982
Frank Hann	67,550	Nambung	18,362	Wellington	3,045
Geikie Gorge	3,136	Neerabup	937	<i>West Cape Howe</i>	3,517
Gloucester	876	Peak Charles	39,959	William Bay	1,734
<i>Goldfields Woodlands</i>	64,612	Porongurup	2,621	Windjana Gorge	2,134
Goongarrie	60,397	Purnululu	239,723	Wolfe Creek Crater	1,460
Gooseberry Hill	33	Rudall River	1,283,706	Yalgorup	13,090
Greenmount	202	Scott	3,273	Yanchep	2,876
				TOTAL	5,092,680

* Names shown in italics are not yet gazetted



Miscellaneous reserves

There are some remaining reserves managed by CALM, which do not fall within any of the above discrete categories. The purposes of reserves within this category are varied and may include settlements and CALM offices. The area of miscellaneous reserves at 30 June 2004 was 12,836 ha, representing an increase of three hectares for the year.

Other land

The area of freehold land held by the Executive Director at 30 June 2004 was 26,401 ha, a net decrease of 200 ha for the year. Softwood forests occupy the major portion of freehold land held by the Executive Director.

The area of pastoral lease held by the Executive Director at 30 June 2004 was 218,437 ha. In addition, a further 4,655,577 ha of former pastoral lease land is being held under an interim management arrangement prior to formal reservation.

Crown land placed under the management of CALM under section 33(2) of the CALM Act as at 30 June 2004 totalled 118,653 ha. Of this, 406 ha comprised unvested Crown reserves. The remainder was land proposed for addition to the conservation estate, and was managed accordingly under an interim arrangement.

Two areas, parts of Credo and Boolardy pastoral leases totalling 7,235 ha, were managed under section 16A of the CALM Act, by agreement between the lessees and CALM.

The area of freehold land managed by CALM under section 16 of the CALM Act at 30 June 2004 was 8,796 ha. Most of this land falls within regional parks and is managed by agreement between the WA Planning Commission and CALM.

Conservation land acquisitions

CALM acquired about 223,065 ha of land of high conservation value during the year for future addition to the conservation estate. Priorities for purchase were those areas containing ecosystems that are not adequately reserved in the existing conservation reserve system, and additions to existing reserves that would greatly improve their diversity or facilitate their management.

Funds for conservation land acquisitions were obtained from four sources: CALM's annual capital allocation; carry-over funds allocated in previous years under the Gascoyne-Murchison Strategy; the National Reserve System component of the Commonwealth Government's Natural Heritage Trust; and some funding from the Crown reserves component of the State Salinity Strategy. In addition, environmental offset funds provided by Cable Sands (WA) Pty Ltd for the protection and enhancement of threatened ironstone communities assisted towards one of the purchases. The total expenditure from all funding sources for the financial year was more than \$1,096,500.

The Kadji Kadji pastoral lease north-east of Morawa, the Warriedar pastoral lease located about 400 km north-east of Perth in the Yalgoo and Perenjori shires and part of the Kaluwiri pastoral lease south-east of Meekatharra, covering a combined total area of 222,775 ha, were purchased with funds allocated under the Gascoyne-Murchison Strategy. All of these areas adjoin lands previously purchased for conservation.

Four other parcels of land were purchased during the year. One of the last remaining freehold blocks covering about four hectares within the Bengier Swamp Nature Reserve was purchased. This seasonal wetland is important as habitat for many different species of waterbird. About 94 ha of bushland located in the Shire of Plantagenet, near Narrikup, containing two species of threatened flora, including one critically endangered species, was acquired. Land covering about 48 ha south-west of Busselton supporting three distinct threatened ecological communities and a number of species of priority flora was also acquired. A 145-ha parcel of remnant bushland near Nyabing in the Wheatbelt was also acquired during the year with funding from the State Salinity Strategy. All of the lands acquired will make important additions to the State's terrestrial conservation reserve system.

CALM gratefully acknowledges the contribution made by the Commonwealth Government through the National Reserve System component of the Natural Heritage Trust, which assisted with some of the above purchases. In 2003–2004 this contribution amounted to \$333,500. This support will continue to help with making progress towards the establishment of a comprehensive, adequate and representative terrestrial reserve system in WA.

Fire management services

The 2003–2004 fire season in the southern half of the State was generally drier than the long-term mean and continued the extended run of drought years that has prevailed since 1998. No significant rainfall occurred throughout the south-west of WA in the period from mid-November 2003 to early May 2004. This was reflected in the Soil Dryness Index (SDI), which is an indicator of the seasonal dryness of soil and large branch ground debris. The SDI for many locations in the south-west reached peak values of between 1,800 and 2,000 in February to April 2004.

The dryness of the ground litter and vegetation fuels throughout the southern half of the State meant that approximately 60 per cent of prescribed burning programs that were planned for spring and early summer months in the south-west, midwest and south coastal zones were cancelled because of the risk of severe fire behaviour and possible burn escapes.

CALM took advantage of favourable burning conditions including mild temperatures and low wind speeds during the late summer and autumn months in the lower south-west to undertake prescribed burning in the karri and southern jarrah forest ecosystems. The large autumn burn program that was achieved in the forest regions (107,832 ha) meant that the total area for the full year of 192,119 ha was only slightly below the nominal annual target of 200,000 ha.

Weather conditions during the summer months of the fire season in southern WA were moderately hot and dry, and the fire danger levels reached extreme levels only on very few occasions. Unlike the previous year, the incidence of lightning-caused wildfires was well below average, and this, in combination with a reduced incidence of arson and accidental fires, resulted in a significant reduction in the number and size of wildfires on or near CALM-managed lands.

The total number of wildfires attended by CALM forces was 462, which is 10 per cent less than the long-term average. The total area of wildfires attended by CALM forces throughout the State was 800,086 ha. The area of wildfires that burned through CALM-managed lands in the south-west was 14,198 ha.

Rapid response by aerial and ground-based suppression forces ensured that 85 per cent of the south-west wildfires were contained to less than 10 ha, and 97 per cent to less than 100 ha. Many of these fires were contained to small sizes because they burned into low fuel and recently-burnt areas.

Of the total of 462 wildfires throughout the State that were managed by CALM, the main cause of ignitions was deliberate lighting or arson (52 per cent); lightning (11 per cent); escapes from private burning (seven per cent) and accidental fires (nine per cent). There were 14 escapes from CALM prescribed burns, which represented three per cent of all wildfire numbers (see table on page 105 for details).

Major fires

CALM's fire fighting resources were heavily involved in two serious wildfires that started on 27 December 2003 and resulted in extensive damage to properties and community values.

The Tenterden fire, which started from powerlines on farmlands four kilometres north-west of the Tenterden town site, killed two people and burned 9,550 ha of private lands and 6,534 ha of Stirling Range National Park. CALM firefighters contained the headfire when it ran into low fuels in the park, which had been prescribed burned five years earlier.

The Bridgetown fire started from powerlines in an FPC pine plantation on CALM land at Dalgapur approximately 12 km west of Bridgetown. This fire burned 4,621 ha of which 3,367 ha were private farm properties and 1,254 ha were Crown lands including 556 ha of FPC pine plantations.

The cost of suppressing wildfires on or near the State's conservation lands in 2003–2004 was \$6.289 million. This was a \$6.011 million reduction on the previous year.

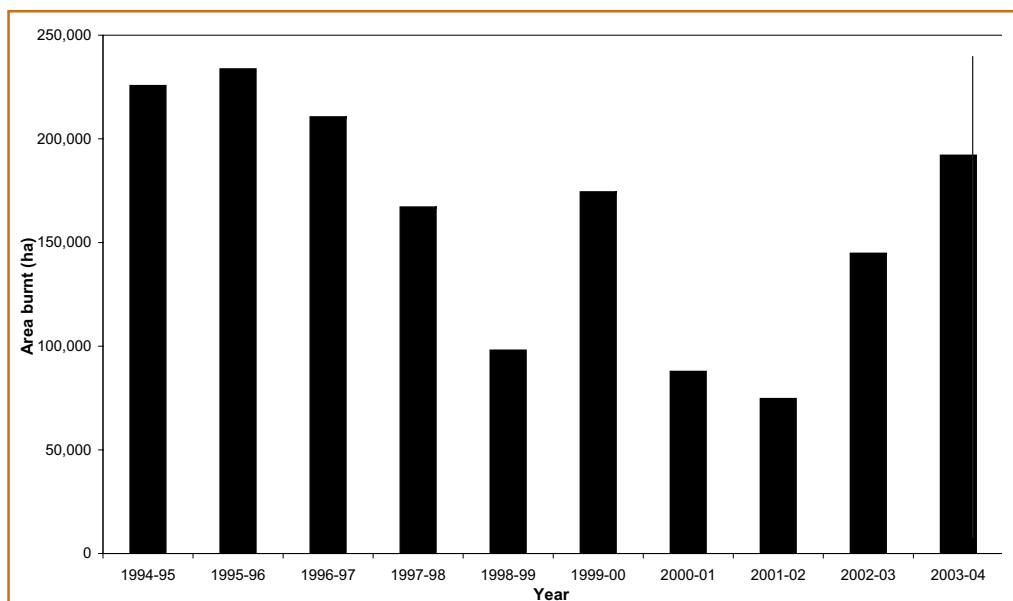
Prescribed burning

Each year CALM plans to undertake prescribed burning on land it manages for three primary purposes, which are not necessarily mutually exclusive. These purposes are (a) to protect and conserve biodiversity values and community assets, (b) to reduce occurrence and impacts of large, intense wildfires and (c) to regenerate and protect forest ecosystems following harvesting operations or other disturbances.

To meet these objectives, CALM's Master Burn Plan provides for an annual prescribed burning program in the south-west forest regions of around 200,000 ha, of which 20,000 to 30,000 ha is for silvicultural purposes and forest regeneration following timber harvest operations.

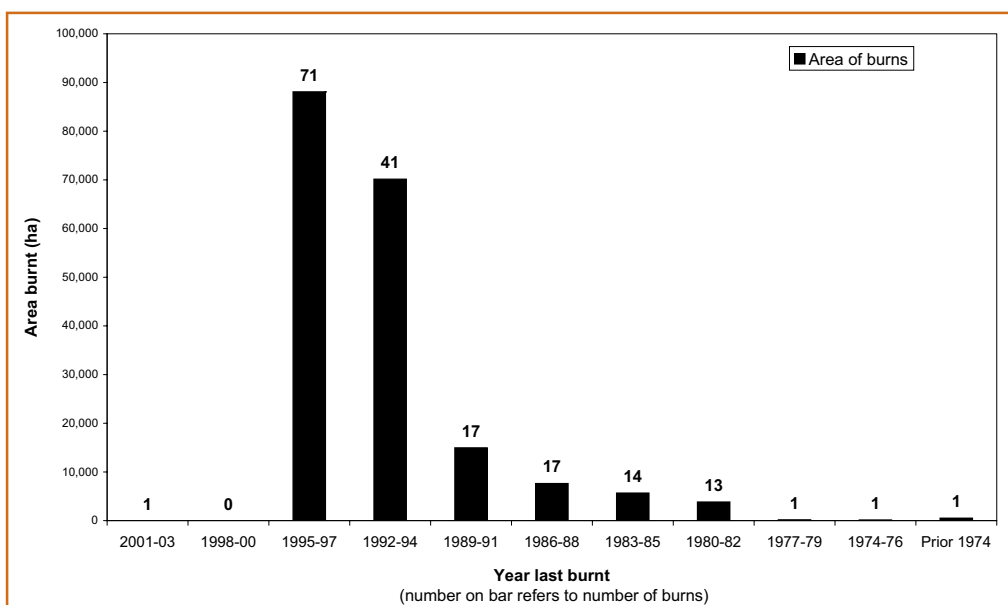
Throughout the south-west regions, the prescribed burn program achieved in 2003–2004 within the native ecosystems totalled 192,119 ha. Approximately 35 per cent of burns were undertaken in the spring period (September to December 2003); eight per cent in summer (January to March 2004); 56 per cent in autumn (April to June 2004); and one per cent in winter (July and August 2003).

The chart on page 102 shows the achievement of prescribed burning in the south-west forest regions from 1994–1995 to 2003–2004. The decline in burning in the period from 1998 to 2003 is a reflection of the impacts of drought and unfavourable burning conditions on planned burning operations.



Prescribed burning in south-west forest regions, 1994-95 to 2003-04

The chart below shows the age of the vegetation/fuel of all the prescribed burns conducted in the south-west regions in 2003–2004. Approximately 49 per cent of the burns contained fuels that had not been burnt for more than 10 years.



Year last burnt distribution for 2003-04 prescribed burns in south-west forest regions

A total of 39,786 ha of prescribed burning was undertaken in CALM's South Coast, Midwest, Wheatbelt, Kimberley, Goldfields and Pilbara regions. Many of these burns were wind-driven or open-edged burns that provided strategic protection to conservation reserves or nearby community assets.

Boost to fire management resources

The State Government injected an additional \$3 million into CALM's fire management budget in December 2003 to improve CALM's capacity to respond to wildfires and complete programmed prescribed burns in the State's south. The additional funds were used to appoint 38 seasonal fire crew members in the south-west forest regions, as well as CALM's Midwest and South Coast regions. The funds also were used to increase the autumn burning programs significantly and to upgrade about 700 km of strategic firebreaks and access tracks that assisted the wildfire suppression and prescribed burning operations. Two contract bulldozers with transport trucks were hired to boost the wildfire suppression response capacity in the northern forest areas.

The additions to crew numbers and the increase in fire operations budgets enabled CALM to make better use of the limited number of suitable burning days in which planned burns could be undertaken safely and effectively with minimal detrimental impact on the community.

Aerial water bombing operations

CALM contracted six fixed-wing water bomber aircraft (Dromaders) during the peak summer months of the 2003–2004 fire season to provide rapid suppression capability in the south-west forest regions and the Perth outer metropolitan area. Pairs of the Dromader aircraft were based at three locations (Perth, Bunbury and Manjimup) to provide an aerial rapid-attack capability to assist ground fire crews. In addition to the fixed-wing aircraft, two light helicopters (helitankers) were contracted by the Fire Emergency Services Authority (FESA) to provide coverage for the Perth urban and urban-rural interface areas. The fixed-wing aircraft and helitankers were used successfully in combination on several bushfires in Perth's outer metropolitan area that threatened residential areas.

The six fixed-wing aircraft attended a total of 89 wildfires in the area stretching from Gingin to Denmark. These aircraft dropped 654 loads (2,500 litres each) and flew a total of 291 operational hours. The air attack supervision aircraft (a mix of helicopters and fixed-wing) flew 209 hours. Many notable saves of buildings and property were made during the Bridgetown fire, however, one of the Dromader aircraft was forced to land on private property near Bunbury. While there was no injury to the pilot, the contract aircraft was destroyed.

Fire training

CALM's fire training staff conducted a total of 17 fire training courses involving 484 participants. The courses included the following topics: Advanced Incident Leadership; Incident Control System; Incident Planning; Incident Logistics Management; Operations Management; Prescribed Burning; Machine Fireline Construction; Sector Commander Operations; Fire Fighting Level 1 and Level 2; Fire Management in CALM; Fire Awareness for Contractors; Wildfire Suppression; Fire Weather; Incident Resources Management; Situation Officer; Air Observers; Pilot Training; Aerial Suppression Support; Air Attack Supervision; Helitorch and Incendiary Machine Operator; Incident Mapping; Information Management at Incidents; Management Support; and Incident Communications.

In addition, fire courses were conducted for new CALM field staff recruits and CALM Bush Rangers Cadets.

CALM delivered training programs to interstate fire and land management agency staff on prescribed burning, aerial suppression and aerial observation.

The development and promotion of common fire training programs and course materials was again actively pursued between fire agencies within WA as well as with other States and territories.

Fire detection

CALM provided an effective fire detection system in the south-west regions that was based on the combination of eight single-engine aircraft and 13 fixed lookout towers. CALM's fleet of eight aircraft (American Scout) flew a total of 2,977 hours for aerial surveillance within pre-determined circuits at schedules that varied according to the fire danger levels and the fire activity. In addition, the aircraft flew 95 hours in support of aerial water bombing operations. Three permanent senior pilots, eight seasonal pilots and two casual pilots flew the surveillance aircraft.

Fire prevention on unallocated Crown lands

From 1 July 2003 onwards, responsibility for the coordination and on-ground management of fire prevention works on non-metropolitan, non-townsite Crown land was transferred from the then Department of Land Administration (DOLA) to CALM. This Crown land, which consists of approximately 88.4 million hectares of unallocated Crown lands (UCL) and unmanaged reserves (UMR), covers about 35 per cent of the State.

Fire risk management on UCL and UMR up until 30 June 2003 had been coordinated and implemented by the Fire and Emergency Services Authority (FESA) on behalf of DOLA. The State Government approved the change in responsibility from DOLA to CALM as it considered that CALM's land management and fire management capacity would enhance the on-ground management of the rural areas of UCL and UMRs. Responsibility for fire mitigation works for metropolitan and townsite UCL and UMR rests with the Department for Planning and Infrastructure (DPI), which has arranged for FESA to coordinate these works through a separate Memorandum of Understanding.

Responsibility for the suppression of fires on UCL and UMR remained with local government bushfire brigades and town brigades.

During the 2003–2004 financial year, CALM conducted fire risk assessments on the UCL/UMR lands and identified fire prevention works and priorities throughout the State. Within the allocated budget of \$350,000 the following fire mitigation programs were conducted on the rural UCL lands: maintenance of strategic firebreaks; prescribed burning of buffer zones adjacent to high community values; and scrub rolling and mechanical fuel modification.

Fire prevention works completed on UCL/UMR in 2003–2004

	CALM region upgrade & maintenance (km)	Firebreak/access rolling/slashing & vegetation modification (km)	Scrup Open-edge burning (km)	Block burning (ha)
South Coast	385	189	154	30
Wheatbelt	23			
Goldfields	200			
Midwest	328		15	
Kimberley			1,356	
South West	10			600
Total	946	189	1,525	630

Key effectiveness indicators (1 and 2)

1. Prescribed burning

These statistics compare the 2003–2004 planned burning program with the 10-year rolling average for prescribed burning.

1. Prescribed burning				
Region	10-year rolling average (ha)	Actual 2003–2004 (ha)	Difference (ha)	%
Swan	45,594	37,829	-7,765	-17
South West	55,128	57,084	1,956	4
Warren	59,237	97,206	37,969	64
Total	159,960	192,119	32,160	20

The Warren and South West regions' burning achievement was above the 10-year rolling average primarily due to a very successful autumn burning season in both Warren and South West regions.

The Swan Region's burn total was below the 10-year average due to the drought conditions that continued to prevail throughout the spring and autumn months in the northern forest areas.

2. Fire suppression

The percentage of all forest wildfires that are attacked with effective suppression forces before these fires exceed five hectares in Priority 1 and Priority 2 areas, under 95 percentile weather conditions. The percentage standard to be exceeded is 95 per cent of all forest fires requiring suppression by direct attack.

2. Fire suppression		
Region	Priority 1 and 2 (%)	
	Standard	2003–2004
Swan	95	87
South West	95	91
Warren	95	94
Dept average (1 yr)		93
Dept average (5 yrs)		96

Definition: *The 95 percentile weather conditions* are days when forest fire danger is below 'very high' and 'extreme' as calculated in CALM's Forest Fire Behaviour Tables (1998). Firefighters work safely and effectively under these conditions in standard forest fuels.

Area of prescribed burns for all CALM regions 2001–2002 to 2003–2004

	2001–2002	2002–2003	2003–2004
Indigenous Vegetation - Hand Burning (ha)			
State forest	7,027	3,455	1,749
National parks	5,754	38,924	13,914
Nature reserves	3,024	2,496	680
Other Crown land and private property*	470	3,549	1,952
Total	16,275	48,424	18,295
Indigenous Vegetation - Aerial Burning (ha)			
State forest	24,958	60,386	53,956
National parks	13,747	85,845	90,969
Nature reserves	13,256	8,384	1,415
Other Crown land and private property*	839	4,152	31,887
Total	52,801	158,767	178,227
Indigenous Vegetation - Silviculture Burning (ha)			
• jarrah	17,042	41,603	18,236
• karri	1,873	1,621	–
• wandoo	–	–	–
• marri	n/a	n/a	1,301
Total	18,915	43,224	19,537
Softwood Plantation - Burning (ha)			
• strategic protection	8,306	4,671	14,965
• second rotation clearing burns	582	–	881
• logging debris removal	–	433	–
Total	8,888	5,104	15,846
Grand Total	96,878	255,519	231,905

For data specific to south-west forest regions see Tables 4 and 5.

* includes Other Crown land, Other CALM reserve and private property

Wildfires in all CALM regions 2001–2002 to 2003–2004 Number and area by land category and number and percentage by cause

All CALM regions	Number			Area burnt (ha)		
	2001–2002	2002–2003	2003–2004	2001–2002	2002–2003	2003–2004
State forest						
• native hardwood	192	197	128	2,330	56,854	4,519
• softwood plantation	63	72	49	122	5,140	90
National parks	63	93	71	360,469	532,274	50,852
Nature reserves	36	53	28	27,820	158,383	8,717
Other Department reserves	57	42	24	83,951	62,441	75,079
Other Crown lands	82	68	41	88,483	1,148,195	559,024
Private property	111	131	109	14,735	148,631	19,246
Unallocated Crown land			12			82,559
Total	604	656	462	577,910	2,111,919	800,086
CAUSES						
	Number			Percentage		
	2001–2002	2002–2003	2003–2004	2001–2002	2002–2003	2003–2004
Deliberately/illegally lit	280	172	240	46	26	52
Escapes—Department burns	5	8	14	1	1	3
Escapes—other burning	25	36	31	4	5	7
Accidental—timber industry	3	4	2	0	1	0
Accidental—other industries	16	18	21	3	3	4
Accidental—recreationists	32	19	17	5	3	4
Lightning	101	275	52	17	42	11
Unknown	113	103	59	19	16	13
Other causes	29	21	26	5	3	6
Total	604	656	462	100	100	100

Area and number of wildfires for all CALM regions 2003–2004

Region	State forest native hardwood	State forest softwood plantation	National parks	Nature reserves	Other CALM reserves	Other Crown land	Private property	Unallocated Crown land	Total
South-west forest regions									
Swan	Area (ha) * Number **	84 47	503 32	146 9	119 9	616 32	2,595 55	675 6	5,260 268
South West	Area (ha) * Number **	6 2	1,217 11	993 1	961 10	148 5	3,485 30	350	10,901 96
Warren	Area (ha) * Number **	251 12	4,750 10	843 3	62 3	1 1	153 13	5	6,065 41
Sub Total	Area (ha) * Number **	90 49	6,470 53	1,982 13	1,142 22	765 37	6,233 98	1,030 6	22,226 405
Other regions									
Kimberley	Area (ha) * Number **		3,404 5	1,600 2	73,691	546,089 1	1,500	57,238	683,522 8
Pilbara	Area (ha) * Number **		29,485 4	945 4		5,514 1		12,949	48,892 9
Midwest	Area (ha) * Number **		3,424 2	2,110 1		853 1	1,252 4		7,639 8
Goldfields	Area (ha) * Number **					5,623		10,849 1	16,472 1
Wheatbelt	Area (ha) * Number **			45 3	25 1		50	300 1	420 5
South Coast	Area (ha) * Number **	5 1	8,070 7	2,037 5	221 1	180 1	10,211 7	192 4	20,915 26
Sub Total	Area (ha) * Number **	5 1	44,382 18	6,736 15	73 937 2	558 259 4	13 013 11	81 528 6	777,860 57
Grand Total	Area (ha) * Number **	90 49	50,852 71	8,718 28	75 079 24	559 024 41	19 246 109	82 558 12	800,086 462

* Area (ha) burnt by wildfires in the tenure type
 ** Number of wildfires originating in the tenure type

Areas prescribed burnt within south-west forest regions

Dominant purpose	Forest regions	Area (ha)				Years since last burnt*
		Winter	Spring	Summer	Autumn	
Community strategic protection	Swan	517	7,931		14,792	6–23
	South West	1,666	7,610		5,380	6–17
	Warren	1	12,962	5,551	28,737	2-25
Biodiversity conservation	Swan					
	South West				12,369	6–10
	Warren		10,370	8,022	25,575	6–28
Hardwood silviculture	Swan		3,052			8–9
	South West		8,384		3,694	7–12
	Warren		2,764	743	900	6-23
Plantation silviculture protection	Swan		4,249		2,427	6–18
	South West		4,818		3,463	7–22
	Warren		889			7–8
Parks and visitor protection	Swan		2,516		2,345	7–23
	South West		1,551		8,149	6–20
	Warren		556	135	1	10–36
Grand Total by season (ha)		2,184	67,652	14,451	107,832	
Seasonal %		1	35	8	56	
Grand Total (ha)		192,119				

* range of vegetation / fuel ages as at July 2003

Number of prescribed burns conducted within south-west forest regions in each season for various purposes in 2003–2004

Dominant purpose	Forest regions	Winter		Spring		Summer		Autumn		Total No. of burns	No. of escapes
		Aero	Hand	Aero	Hand	Aero	Hand	Aero	Hand		
Community strategic protection	Swan	1		5	6			5		17	1
	South West	1		6	1			3	1	12	1
	Warren		1	6	5	5	6	7	6	36	7
Biodiversity conservation	Swan									–	–
	South West							3		3	–
	Warren			4	1	4	2	8	1	20	1
Hardwood silviculture	Swan			2						2	–
	South West			5				2		7	–
	Warren			1	12		15		13	41	3
Plantation silviculture protection	Swan			2	2			2	2	8	–
	South West			3	3			4	8	18	–
	Warren			1	1					2	–
Parks and visitor protection	Swan			2	6			1	1	10	–
	South West			2				2	1	5	1
	Warren				2		2	1		5	–
Total		2	1	39	39	9	25	38	33	186	14

Highlights of 2003–2004

State's newest marine park...

The WA coastline extends for more than 13,500 km from Eucla in the south-east to the tropical waters off Wyndham in the north-east. The waters off part of this coast, from Rottnest Island to North West Cape, are one of the world's marine biodiversity 'hotspots', ranking seventh in terms of biodiversity and second in terms of the number of species within a limited range. However, only a relatively small area of the marine environment is actively managed for biodiversity conservation.

That area increased on 31 August 2003 when the waters off the 'Turquoise Coast' – stretching 100 km from Wedge Island to Green Head – were officially declared the State's newest marine park, and the first declared since 1990.

The key ecological values of the marine park include extensive and diverse marine habitats such as limestone reefs and perennial seagrass meadows, a rich fauna that includes an unusual mix of tropical sub-tropical, and temperate species, breeding and 'haul out' areas for the Australian sea lions that are endemic to Australia, and high water quality essential to the maintenance of a healthy marine ecosystem.

The area is also valuable for the commercial rock lobster fishery and is heavily used for recreational activities including fishing, swimming, surfing and boating.

The creation of Jurien Bay Marine Park, together with associated features such as Nambung National Park and its internationally-renowned Pinnacles, Lesueur National Park with its incredibly rich plant diversity, and the offshore islands means the central coast has a range of attractions that can be managed sustainably to create greater economic and social benefits for the region.

... and more are planned

The planning and community consultation processes to create other marine reserves and extend two existing reserves also progressed.

An indicative management plan to create a marine conservation network – including two marine parks and a marine management area – around the Montebello and Barrow islands was released for public comment. A draft management plan for Rowley Shoals Marine Park – 200 km west-north-west of Broome – was released. This plan proposes to extend the area of the park from the present 22,000 ha to more than 87,500 ha. The waters of the Rowley Shoals are considered among the most pristine marine environments around the Australian coast and its reef fauna is exceptionally rich and diverse, representing the oceanic coral reef community types

characteristic of the Indo-West Pacific Region. The biodiversity values of the Rowley Shoals are of global significance.

Community advisory groups were established for proposed new marine parks in the waters off the Leeuwin-Naturaliste Ridge between Busselton and Augusta, and in the Walpole-Nornalup inlets on the south coast.

An issues paper was released in relation to the Ningaloo Marine Park and Cape Range National Park. The issues paper was part of the community consultation process to extend Ningaloo Marine Park to cover the entire 290 km of the reef.

Further progress was made in the preparation of an indicative management plan for a marine park in the waters around the Dampier Archipelago and Cape Preston, off the State's north-west coast.

Community involvement in managing the State's marine environment was enhanced with the release of the Marine Community Monitoring Program, a collaborative initiative between CALM and the Natural Heritage Trust's Coastcare program. The focus of the program is to foster community involvement in the management of the marine environment through active participation in a variety of projects such as monitoring seagrass and coral communities.

The program includes a number of components that are all aimed at helping the community become involved in marine conservation. A Marine Community Monitoring Manual also was released to assist marine conservation groups around the State in monitoring the marine environment.

A world-class parks system

Legislation to create the first nine of 30 proposed new national parks in the State's south-west forests was introduced into State Parliament in June. The legislation also proposes increasing the size of Wellington National Park near Collie and creating six new nature reserves and six new conservation parks.

The proposed new parks are being created under the State Government's *Protecting our old-growth forests* policy.

The proposed nine new national parks are Boorara-Gardner, Jane, Boyndaminup, Greater Dordagup, Greater Beedelup, Greater Kingston, Forest Grove, Yelverton and Greater Preston. The boundaries of the proposed new parks were determined after extensive consultation with stakeholders and the wider community.

During the year, indicative boundaries for other proposed new national parks and other reserves were released as part of the community consultation process. These included Mundaring, Pickering Brook, Canning, Helena, Wandoo, Easter, Hawke, Greater Hawke, Whicher, Dalgapur, Lake Muir, Tone-Perup, Hester and Kerr.

The community also was consulted extensively to assist in the development of concepts for a visitor centre in the proposed Walpole Wilderness Area. In March, the locations of three tourism facilities for the proposed \$1 million Walpole Wilderness Area Discovery Centre were released. The locations are Mt Frankland, the Valley of the Giants and Swarbrick forest north-west of Walpole. The aim of the Discovery Centre is to create inspirational focal points for visitors and promote an appreciation for the special values of the Walpole Wilderness Area.

The Tree Top Walk, a major attraction in the Valley of the Giants, was awarded the Environmental Experience category of the prestigious international British Airways Tourism for Tomorrow Awards. It was the only Australian attraction to win an award.

Premier's Award for MATES

CALM's Mentored Aboriginal Training and Employment Scheme won the major Premier's Award for Excellence in Public Sector Management for 2003.

CALM introduced the scheme to improve employment outcomes for Indigenous people on conservation lands and waters. The multi-faceted program is run in conjunction with non-Government training providers and land management organisations. The program is part of CALM's aim to achieve just and equitable Aboriginal employment outcomes through a 10-year plan to ensure Indigenous people make up 10 to 15 per cent of its full-time workforce.

The theme of MATES is *Dan-joo Dabacaan*, which means 'together, steady, steady' and describes CALM's approach to ensuring that Indigenous people are strongly represented, and involved, in conservation and land management employment. CALM recognises the role and expertise that Aboriginal people can have as both 'traditional owners' with cultural responsibility to care for country, and as managers of conservation lands and waters for the State. MATES is regarded as a role model for the public sector and makes a significant contribution to social, environmental and economic outcomes.

During the year CALM also instigated processes to develop joint management of many parts of the conservation estate.

Purnululu now a World Heritage Property

WA's world-renowned Purnululu National Park was granted World Heritage Listing in July 2003. Purnululu National Park has exceptional natural beauty and rich biodiversity. The 239,723 ha park is home to the Bungle Bungles, which rise to 250 m above the surrounding plain and are recognised internationally as being among the most spectacular landforms on Earth. The listing by the World Heritage Committee acknowledges these values and will ensure the park's natural assets and cultural values are protected in perpetuity.

The World Heritage Committee accepted the nomination for listing Purnululu under the natural criteria of World Heritage Listing requirements. Though the park had been nominated for World Heritage listing as a mixed property of both cultural and natural significance, the World Heritage Committee decided to defer listing it on its cultural value until 2005.

During the year, CALM began the process to nominate Ningaloo Marine Park and the adjoining Cape Range National Park on the North-West Cape for World Heritage listing.

Forests

A new 10-year management plan for the south-west native forests came into effect on 1 January 2004. The Forest Management Plan 2004-2013 was prepared by CALM, in consultation with the Forest Products Commission, on behalf of the Conservation Commission.

The preparation of the plan began in March 2001. Public consultation was extensive and involved the release of a discussion paper, a draft plan, and the final plan, which was approved by the Minister for the Environment in the latter part of 2003. During the community consultation phase on the draft management plan around 5,600 submissions were received. An analysis of these submissions was published.

The Forest Management Plan 2004-2013 is a blueprint to protect forests and improve forest management. In particular, it formalises the end to logging in old-growth forests, the identification of a comprehensive, adequate and representative system of national parks and other conservation reserves in the south-west, and the adoption of internationally-agreed principles of ecologically sustainable forest management.

The plan also improves protection for wildlife through the establishment of a network of fauna habitat zones across those areas of the south-west forests available for timber harvesting. The development of these fauna habitat zones is an outcome of CALM's forest research in the Kingston forest south-east of Manjimup, which was implemented to examine the impact of forest practices on flora and fauna. The results of this research also underpin measures to retain more habitat trees and reduce the culling of understorey vegetation to facilitate regeneration in logged areas.

Combating dieback

A new CALM policy and set of best practice guidelines to tackle *Phytophthora* dieback, one of the greatest threats to WA's world-renowned biodiversity, were released in March.

Studies have revealed that just under 50 per cent of the State's 350 threatened plant species and 2,000 of the 9,000 known plant species in the south-west are susceptible to the pathogen.

The new policy framework includes:

- a new dieback response group to include representatives from the Dieback Consultative Council, the Dieback Working Group, the Conservation Commission, the Murdoch University Centre for Phytophthora Science and Management, the Department of Environment and CALM;
- development of a dieback atlas for WA;
- preparation of guidelines for other land tenures such as private and local government land;
- preparation of a generic dieback risk assessment methodology for broad community use;

- an action plan specifically to tackle the dieback threat to Fitzgerald River National Park, one of our most significant conservation reserves; and
- a whole-of-government policy on dieback management.

Good neighbour policy

CALM began discussions with the farming and pastoral sectors and with local government to establish a good neighbour policy that will strengthen relationships between CALM and the farming community. The policy will cover issues such as boundary fencing, feral animal and weed control and fire management. It will provide for beneficial outcomes for both agriculture and conservation of the State's natural environment.

The proposal for the good neighbour policy was part of CALM's response to concerns among some sectors of the rural community when two farmers were charged with offences under the *Wildlife Conservation Act 1950*. The two prosecutions were subsequently withdrawn on the grounds that they were not in the public interest.

A further part of that response was an independent review of CALM's prosecutions policy and practices instigated by the Minister for the Environment. As a result of that review, CALM accepted a recommendation to set up a prosecution advisory panel to consider public interest issues before charges are laid for breaches of wildlife conservation laws.

The report of the panel made 11 recommendations that the Government and CALM accepted. Significantly, the review did not find any major flaws in CALM's prosecution policy and practices.

CALM volunteers recognised

The commitment and contribution of CALM's volunteers to conserving the State's environment was recognised at a function to announce CALM's annual Volunteer of the Year and Outstanding Service Awards. Volunteers dedicate hundreds of thousands of hours of their time each year to help conserve WA's biodiversity and other natural features.

The three Volunteer of the Year recipients were:

- Melissa Charles of Denham – for her administration support in the CALM Shark Bay office;
- Carleen Edwards of Mirrabooka – for her role in the CALM Bush Rangers program; and
- Jim Freeman of Mandurah – for his role in the Bibbulmun Track Foundation and on the Bibbulmun Track.

The Outstanding Service Award was presented to James Wishart of Bedford for his commitment and contribution to assisting with CALM's shopping centre displays and the Royal Show Land Experience display.

Three Wildcare Helpline Volunteers were also honoured with Outstanding Service Awards for the Wildcare Helpline. These were Marilee D'Souza of Orelia, Veronica Garratt of Gooseberry Hill and Margaret Porter of Warnbro.

The range of programs volunteers contribute to is as varied as the people who volunteer, and cover such things as urban bushland restoration, native fauna care, salinity work, nature-based tourism services, feral animal baiting programs, research, education and promotion.

Wildlife protection

A joint operation by CALM Nature Protection Officers and Australian Customs resulted in the seizure of 210 reptiles, frogs, and insects at Perth International Airport in October. A British national was arrested and charged under State and Commonwealth laws with attempting to smuggle the animals out of the country.

The detection occurred following a tip-off by a member of the public to a CALM Nature Protection Officer in Jurien Bay. The animals, including skinks, frogs, snakes, geckos, and insects, had been collected from as far away as Carnarvon, Coolgardie, Cervantes, Badgingarra and Mundaring.

The successful outcome of this operation was a direct result of the continued and important cooperation between CALM and other Government agencies. It was one of the largest detections of attempted reptile smuggling out of Australia.

Fire management

Although the 2003–2004 fire season in the southern half of WA was generally drier than the long-term mean, CALM took advantage of favourable conditions to undertake prescribed burning in the south-west karri and jarrah forests. The large autumn burn program that was achieved in the forest regions (107,832 ha) meant that the total area for the full year of 192,119 ha was only slightly below the nominal annual target of 200,000 ha.

During the year, CALM fire crews attended 462 wildfires, which is 10 per cent below the long-term annual average. The total area of wildfires attended by CALM throughout the State was 800,086 ha of which 14,198 ha were on CALM-managed lands in the south-west.

CALM's fire fighting resources were heavily involved in a fire at Bridgetown that burned out 4,621 ha, of which 3,367 ha were private farmland and 1,254 ha were CALM-managed lands.

The State Government provided an additional \$3 million for CALM's fire management budget to improve the Department's capacity to respond to wildfires and to complete programmed prescribed burns in the south-west. The additional funds were used to appoint 38 seasonal fire crew members in the south-west forest regions, as well as at Kalbarri, Jurien, Albany and Esperance.

Strategic Planning Framework

During 2003–2004, CALM worked progressively towards meeting the strategic directions set for the WA public sector in the State Government's *Better Planning: Better Services – A Strategic Framework for the Western Australia Public Sector*.

CALM's contributions to outcomes under the framework's five strategic goals of People and Communities, The Economy, The Environment, The Regions and Governance are detailed throughout this report in the Output sections. Key CALM achievements under each goal included:

Goal 1 – People and Communities

- A positive difference to the lives of people with disabilities by providing universal access to many tourism sites in areas of natural attractions (see Disability services in Obligatory Compliances section).
- Improving economic and social opportunities for Indigenous people through CALM's Mentored Aboriginal Training Scheme (MATES) (see Output 4: Parks and Visitor Services).
- Lifelong learning opportunities for all through CALM's Bush Rangers Cadet program for school children and Community Involvement program, which provides people with the opportunity to become involved in conservation activities such as wildlife caring, urban bushland revegetation and regional herbaria networks (see Output 1: Nature Conservation and Output 4: Parks and Visitor Services).

Goal 2 – The Economy

- Provision of greater recreation and tourism facilities at WA's natural attractions and the proposed creation of 30 new national parks under the State Government's *Protecting our old-growth forests* policy, generating greater social and economic benefits for regional communities (see Output 4: Parks and Visitor Services).

Goal 3 – The Environment

- CALM worked progressively towards the establishment of a world class system of national parks, marine parks and other conservation reserves. Legislation to create the first nine proposed new national parks in the State's south-west forests was introduced into State Parliament (see Output 2: Sustainable Forest Management for proposed new national parks and Output 1: Nature Conservation for establishment of marine parks).

- Effective management of diverse ecosystems through CALM programs including *Western Shield* and *Land for Wildlife*, and the preparation of the Forest Management Plan 2004-2013; and the coordination of policy, planning, advice and implementation for the protection of the State's biodiversity (see Output 1: Nature Conservation).
- The WA Herbarium and CALM's Science Division progressively worked towards the aims of understanding and protecting the State biological diversity (see Output 1: Nature Conservation).

Goal 4 – The Regions

- CALM instigated comprehensive community consultation and participation in the establishment of proposed new national and marine parks, enhancing Government decision-making based on understanding regional issues (see Output 4: Parks and Visitor Services).
- CALM progressively worked towards improving environmental management of the conservation estate by providing improved regional infrastructure in many areas of the estate.

Goal 5 – Governance

- CALM provided better opportunities for the community to participate in and make effective contributions to Government processes through its comprehensive community consultation process, Community Involvement program, and Bush Rangers Cadets program and worked towards achieving Indigenous ownership and joint management of conservation lands in WA (see all Outputs).
- CALM continued its partnerships with the private sector, local government authorities and the wider community in the delivery of a number of its programs including the Bibbulmun Track, *Western Shield* and management of regional parks in the Perth metropolitan area.
- CALM continued its commitment to using better information communications and technology to provide better services to the community through its Internet site, NatureBase, and publications such as the *Bush Book* series and *Roebuck Bay: Life along land's edge*.

The obligatory reporting requirements of the Strategic Planning Framework, including a report on CALM's compliance with the Public Sector Standards and Code of Conduct, Disability Service Plan outcomes, EEO and diversity management, and a statement detailing advertising expenditure as required by the *Electoral Act 1907*, are met in the Obligatory Compliances section of this report.

Government strategic goal	Desired outcome(s)	Output(s)
To ensure that WA has an environment in which resources are managed, developed and used sustainably, biological diversity is preserved and habitats protected.	Conservation of biodiversity* *the variety of life forms; the different plants, animals and microorganisms, the genes they contain, and the ecosystems they form.	1. Nature Conservation 2. Sustainable Forest Management 3. 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.	4. Parks and Visitor Services 5. Astronomical Services

Nature Conservation – Output 1

Highlights

- The 82,375-ha Jurien Bay Marine Park was formally declared on 31 August 2003. As well as surrounding major sea lion and seabird breeding areas, the park contains temperate reefs populated with a unique mix of temperate and tropical plants and animals, due to the Leeuwin current. The area is also home to extensive seagrass meadows, which are vital nursery habitats for juvenile western rock lobsters and other marine wildlife.
- Emergency actions began for long-term recovery of seven important caves within Yanchep National Park. These caves support tiny aquatic animals (stygofauna) known from nowhere else. Most of the caves support occurrences of the Critically Endangered 'Aquatic Root Mat Community of the Swan Coastal Plain'.
- The *Land for Wildlife* scheme won the 'Promoting Behaviour Change' category of the WA Environment Awards, and nominated a *Land for Wildlife* landholder who won the 'Bushcare' category of the State Landcare Awards.
- A Ministerially-appointed panel of three independent experts reviewed CALM's prosecution policy and guidelines and administrative procedures relating to prosecutions. The panel did not find any major flaws in CALM's prosecution policy or practices. The report, which has been made public, makes 11 recommendations that will assist CALM with the prosecution process.
- Ten species of native animals were translocated to locations around the south-west under the *Western Shield* program.
- A new management plan was prepared for the management of saltwater crocodiles and freshwater crocodiles in WA.

Outcome achieved by

The conservation of indigenous plants, animals and ecological processes in natural habitats.

Output description

The development and implementation of programs for flora and fauna conservation, for threatened species and ecological communities and for commercially-exploited species according to the principles of ecological sustainability, the acquisition, conservation and

protection of representative ecosystems; and encouraging public awareness, understanding and support for nature conservation services and policies.

Note: CALM uses the National Strategy for the Conservation of Australia's Biological Diversity definition of 'conservation', i.e. 'the protection, maintenance, management, sustainable use, restoration and enhancement of the natural environment.'

The Output performance can be best measured in five key areas:

1. Establishment of a comprehensive, adequate and representative (CAR) terrestrial and marine conservation reserve system.
2. Maintenance of a terrestrial and marine protected area network.
3. Conservation of landscape and seascape scale ecological systems and processes.
4. Recovery of threatened species and ecological communities, and conservation and sustainable use of other significant species.
5. Providing community involvement and encouraging understanding, and support of biodiversity conservation and other CALM programs and activities.

Establishment of a CAR terrestrial and marine conservation reserve system

Systematic biological inventory and assessment

A major biological survey program in the Pilbara continued into its second year. Over the past year the Pilbara Biological Survey sampled stygofauna in 270 bores throughout the Pilbara on pastoral leases, mine leases, in town water supplies, and in reserves and national parks. The Main Roads Department's system of roadside bores was used extensively, as well as the Department of Environment's monitoring bores. Forty-four new species of stygofauna were described and it was shown that some species previously thought restricted to areas of a few square kilometres occur across most of the Pilbara. The existence of 10 undescribed species of *Acacia* in the Pilbara was also confirmed. Pit-traps for terrestrial invertebrates and small ground-dwelling vertebrates were installed at 150 sites. Updates on the project were provided to the Pilbara community via numerous meetings with Land Conservation District Committees, Aboriginal communities, landholders and through talks on ABC regional radio and articles in local newspapers.

Other biological survey and monitoring programs continued in specific areas such as on Lorna Glen Station, a property purchased through the Gascoyne-Murchison Strategy for addition to the conservation reserve system, as well as Potter Island and Giralia Station in the Pilbara.

In the Kimberley, staff from the region and CALM's Science Division undertook a survey targeting mammals that included sub-fossil work. This project was the result of concerns about the apparent loss of what are termed critical weight range mammals from other parts of northern Australia. This involved the survey of mammals at 12 Kimberley sites including re-sampling three sites in Drysdale River National Park, previously sampled in 1975, and sampling nine sites along rainfall gradients in the King Leopold Range and Devonian Reef systems of the south-west

Kimberley. Results indicate that most (probably all) species persist in the wettest coastal areas of the north Kimberley but there have been extensive declines in areas of lower rainfall. Management issues include inappropriate fire regimes and cattle grazing, including feral cattle.

Conservation reserve system establishment

Formal declaration of Jurien Bay Marine Park in August 2003 saw this reserve move from the planning phase to a period of implementation that included the establishment of management structures and monitoring programs. This included the employment of a Marine Park Coordinator and the initiation of employment processes for additional marine park management staff.

In conjunction with the Marine Parks and Reserves Authority (MPRA) and the wider community, CALM continued working on the establishment of new marine conservation reserves in the Montebello and Barrow islands, the Dampier Archipelago and Cape Preston area, the Geographe Bay, Leeuwin-Naturaliste and Hardy Inlet area, and the Walpole-Nornalup inlets.

The indicative management plan for the proposed Montebello and Barrow islands marine conservation reserves was released for public comment in February 2004. These proposed reserves cover about 212,000 ha and include two marine parks and a marine management area surrounding Barrow Island, which is an important area of petroleum exploration and production. Public submissions on these proposed reserves closed in May 2004. Also in the Pilbara, extensive community consultation was carried out in planning for the proposed Dampier Archipelago and Cape Preston marine conservation reserves.

A community-based advisory committee was formed in August 2003 to assist planning for the proposed Geographe Bay, Leeuwin-Naturaliste and Hardy Inlet marine conservation reserve and extensive additional community consultation was undertaken through additional public workshops and meetings. The proposed reserve comprises an area of 124,687 ha and extends from the Capel and Busselton Shire boundaries in the north to Flinders Bay in the south and includes most of the Hardy Inlet. As a region in which the marine flora and fauna of northern and southern Australia overlap, this area is of major conservation significance. The proposed reserve also supports significant commercial fishing and tourism industries, and is highly valued by people from a wide area for activities such as surfing, diving, fishing, boating and nature appreciation. A draft indicative management for the proposed 'Capes' Marine Park was completed for consideration by the advisory committee in June 2004.

Planning for the proposed Walpole-Nornalup inlets marine conservation reserve on the south coast of WA began early in the year with the formation of a community-based focus group of 37 members. The proposed reserve represents a discrete estuarine system comprising the connected Walpole and Nornalup inlets and the tidal reaches of the Frankland, Deep and Walpole rivers. The proposed reserve, which is largely surrounded by the Walpole-Nornalup National Park, is among the few estuaries in the region that are permanently open to the ocean, and is biologically diverse compared to most other estuarine systems.

Extensive negotiations continued with pastoral station leaseholders as part of the Government's 2015 pastoral lease renewal process. CALM is identified as the acquiring authority for 57 leases

across the State where parts of the leases have been identified that should be added to the conservation estate. A final report on progress with these negotiations is due with the Minister for Planning and Infrastructure in October 2004.

CALM staff worked constructively with the Shire of Dundas to continue progress on several significant land administration proposals at Eucla, Cocklebidy, Dundas, and Esperance, including the proposed Abrakurrie National Park and a newly proposed conservation reserve at Shark Lake.

Maintenance of a terrestrial/marine protected area network

Management of conservation reserve system (IUCN I – IV)

A significant advance this year was the implementation of the MPRA and CALM performance assessment framework for marine conservation reserves. The framework includes the preparation of annual work plans for each reserve, to facilitate the implementation of respective management plans by detailing the nature and resourcing of annual work programs. Early in 2004, the first annual status review for all existing marine conservation reserves was undertaken under the new framework. Notwithstanding the need for improved information for some of the State's key marine ecological and social values, the review's preliminary assessment indicated that, overall, the health of marine values in marine conservation reserves was in a satisfactory to good condition.

Review of management plans for the existing Rowley Shoals and Ningaloo marine parks continued throughout the year.

The Rowley Shoals Marine Park draft management plan and indicative management plan for extensions to the existing marine park were released for public comment in January 2004. The proposed extension would increase the boundaries of the marine park from 100 metres (m) seaward of the reef edge at Clerke and Imperieuse reefs to the three nautical mile limit of State waters. With these extensions the marine park will cover an area of more than 87,000 ha. The three-month public comment period for this plan closed during April 2004 and the MPRA provided advice, based on an analysis of responses, to Government in June 2004.

The Coral Coast Parks Advisory Committee (CCPAC) reviewed the Ningaloo Marine Park management plan, and proposals to extend the marine park south to Red Bluff, and establish a marine management area around the Muiron and Sunday islands. Consideration of amendments to the current zoning scheme was also undertaken through a consultation process involving the CCPAC, key stakeholders and the community. Proposed changes to the zoning scheme aim to increase the representation in sanctuary zones of particular habitats and increase the size of sanctuary zones along similar lines to the recent extensions of such areas in the Great Barrier Reef Marine Park.

'Marine information systems' which provide a data management framework for spatial information, along with computer-based tools and procedures to assist decision making in day-

to-day reserve management, were delivered to Ningaloo, Shark Bay, Shoalwater Islands, Swan Estuary and Marmion marine parks. These systems help with the collection of information to verify progress towards auditable targets set out in marine park management plans. The marine information systems also provide for regional aggregation of information to facilitate management at all spatial and institutional levels.

In the Kimberley, signs in Indonesian promoting turtle protection were installed at Browse Island Nature Reserve. This was a joint initiative involving Environment Australia, with helicopter transport donated by the oil company Inpex Browse. At the same time a preliminary survey of inter-tidal benthic habitats at Browse Island Nature Reserve was undertaken.

Conservation of landscape/seascape scale ecological systems and processes

Provision of private land biodiversity conservation support and advice

CALM's *Land for Wildlife* scheme is a voluntary program that aims to increase the area of wildlife habitat on lands under voluntary private management. To achieve this, landowners or leaseholders are invited to register their properties in the scheme. An assessment is made of the quality of the wildlife habitat and advice is provided to encourage land management based on sound ecological methods. Advice is also provided to allow landholders to obtain assistance in fencing, replanting and managing wildlife habitats.

During the year, 163 properties were assessed and 151 properties were registered in the scheme. The total area of properties visited was 240,155 ha, with a total area of 114,124 ha being dedicated wildlife habitat – a nine-fold increase from last year. To 30 June 2004, a total of 1,291 properties have applied to join *Land for Wildlife* and those properties that were assessed cover a total of 934,159 ha, and include 227,628 ha of land where the primary management purpose is nature conservation.

While *Land for Wildlife* does not provide any direct financial support, the scheme is accredited as a non-binding 'voluntary management agreement', which assists landholders in seeking grants. Staff assisted 16 landholders with funding applications during the year, resulting in successful grants totalling \$234,000.

During the year the *Land for Wildlife* scheme was successful in winning the 'Promoting Behaviour Change' category of the WA Environment Awards. A *Land for Wildlife* landholder was also successful in winning the 'Bushcare' category of the State Landcare Awards.

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 13 new covenants in perpetuity, bringing the total number of registered covenants with the program to 40, on 46 land titles. Covenants now protect a total area of 2,852 ha of land, including a number of threatened species and ecological communities. A further 41 covenants are in negotiation covering 5,851 ha.

The program has been actively building relationships with other State agencies and non-government organisations. The program continues to work with the World Wide Fund for Nature's (Australia) Woodland Watch Program to improve the delivery of covenants in the central and northern Wheatbelt. Guidelines for covenants required as a condition of property development are being progressed through negotiations between the Nature Conservation Covenants Program, other covenant providers, and the Department for Planning and Infrastructure.

CALM provides the administrative support for the Minister for the Environment's Community Conservation Grants. This grant scheme provides financial assistance in the categories of Major Conservation Organisations, Nature Conservation Projects, and Fauna Rescue and Rehabilitation.

Identification, protection and management of regionally-significant areas to increase landscape connection and function

The ability to rapidly and accurately assess the conservation value of a vegetation remnant is a critical step in landscape management aimed at integrating the goals of conservation and agricultural production. A collaborative three-year research program involving CALM, CSIRO Division of Plant Industry, and Land and Water Australia, is directed towards addressing this issue by investigating those factors that will be critical for the survival of plant populations in remnant vegetation. The importance of factors such as remnant size, shape, quality and connectivity are being assessed in relation to the viability and persistence of populations of a number of key plant species in the Dongolocking area of the Wheatbelt. Preliminary studies indicate that despite high levels of gene flow between remnants for some species, increased inbreeding and reduced reproductive output are likely to be significant long-term problems for the survival of plant species in small remnants.

The concept of regional-scale macro corridors in the South Coast Region outlined in the Macro Corridor Project was adopted in the *Southern Prospects 2004–2009 South Coast Regional Strategy for Natural Resource Management* and continues to be used as a biodiversity planning tool.

Natural Diversity Recovery Catchments and related salinity projects

Buntine-Marchagee Natural Diversity Recovery Catchment

The Buntine-Marchagee Catchment is one of six Natural Diversity Recovery Catchment identified by CALM. It targets a naturally saline wetland system that is at risk from hydrological changes, including salinity, following the clearing of perennial native vegetation. Due to its biodiversity values, the area was selected for ongoing investment in recovery and protection.

CALM contracted the Department of Agriculture to undertake a surface water management assessment for the catchment. This included the production of an interactive compact disc on soil and landscape mapping, that is proving to be a very useful planning tool.

Planning for a revegetation program to be undertaken in 2004–2005 was completed. This targeted the highest priority areas identified in the focal bird species project undertaken by

CSIRO. Small mammal and invertebrate surveys were conducted in nature reserves of the recovery catchment by CSIRO to complement the work on focal bird species.

Sampling of a selection of representative wetlands across the catchment was completed to provide baseline data for future studies. Characterisation and prioritisation of wetlands across the catchment also began.

A catchment landholder survey was conducted to provide baseline information for future assessment of the program and work began on a communications plan.

Toolibin Lake Natural Diversity Recovery Catchment

A feasibility study into establishing a commercial salt harvesting operation using saline water beneath Toolibin Lake was undertaken. This study concluded that although the site, climatic conditions and water chemistry at Toolibin were suitable for the operation of a solar salt field, existing capacity to supply saline groundwater, transport costs and market prices meant the project would not be commercially viable. The information from the feasibility study will help others investigating salt harvesting elsewhere in the south-west.

Lake Magenta - Upper Fitzgerald River Catchment

An environmental impact assessment of proposed surface water management works in Lake Magenta Nature Reserve was undertaken. An important project to collect topographic survey data for Lake Magenta-Fitzgerald River Catchment using photogrammetry acquisition methods was also accomplished.

Farm plans were completed with all landholders and these formed the basis of cost-sharing discussions and negotiations. Cost-sharing agreements with four of the five landholders were reached. Works that resulted included the construction of seven new dams to detain water high in the catchment and stop it from entering the Lake Magenta Nature Reserve, and 30 km of fencing of waterways on three properties. Five shallow bores were installed in 2003 to add value to the bore network that already existed.

Lake Bryde Natural Diversity Recovery Catchment

Investigations undertaken included an inventory of private property remnants and condition to contribute to a revegetation strategy, germination trials for *Meulenbeckia horrida* subsp *abdita*, yate hydrologic requirements, topographical surveys of major lakebeds, flow paths and potential drainage alignments and on-going monitoring of surface water and groundwater movement patterns in the catchment. An additional 24 shallow bores were drilled in the catchment to supplement the monitoring program.

Surface water management structures were planned in conjunction with landowners, which resulted in cost-sharing agreements with landholders in the catchment. Works included the construction of six new dams, to stop water from entering the Lake Bryde Nature Reserve, and 15 km of grade banks.

Lake Warden Natural Diversity Recovery Catchment

Several research programs were initiated including a survey of vegetation condition and the determination of groundwater storage volumes. Some 120 farmers in the 145,000-ha catchment were surveyed about their current and proposed perennial land uses. Sediment coring at Lake Warden showed that the lakes in the area were under immediate threat of inundation.

Tarin Rock Representative Landscape Project

Through the Avon Catchment Council, South West Catchment Council, and Department of Agriculture's (Agriculture Protection Board) Declared Species Group, funding totalling \$58,000 was secured. Works included 10,000 mixed seedlings of local provenance planted on one site and 34 km of fencing of remnant vegetation totalling 171 ha funded on six properties. Fox baiting of four conservation reserves and 12 private properties was carried out in October 2003.

In October 2003, 70 delegates from the State Landcare Conference toured the project and a 'Flora and Fauna' day for landholders was held at Tarin Rock.

Other

A biophysical survey of reserves in the Kondinin and Hyden area was completed as part of a potential recovery catchment area centred on the Kondinin Salt Marsh Nature Reserve. In addition, studies on vegetation assessment, vegetation health mapping and soil and water chemistry were carried out at Seagroatt Nature Reserve to determine the impact of the Narembeen drainage system on the reserve. This and related work will improve our knowledge of hydrological processes and their management.

Development and establishment of native vegetation services, and spatial integration of those activities with nature conservation activities to bring about increase in landscape functionality

A four-year project by CALM's Revegetation Systems Unit identified a number of native plants that could form the basis of new agricultural industries and help combat salinity. From the outset, the project was designed to integrate environmental and commercial outcomes. An economic analysis showed that farming systems using fast growing native plant crops could be competitive with traditional agriculture as well as help control salinity and protect biodiversity.

The project – known as *Search* and funded by CALM and the Commonwealth Government's Natural Heritage Trust – was the single biggest ever survey of the commercial potential of native WA plants. The work focused on plants that could supply materials for bulk commodity products and regional processing industries. The major product areas explored were paper made from pulp, panel boards, including particle board and medium density fibreboard, and solid fuel for producing electricity (bioenergy).

Large-scale markets are required so that new industries might help drive planting of perennials on farms on a scale that will help manage salinity and other threats to our natural resources. The importance of this approach has been emphasised in the State's Salinity Strategy and the State Government's response to the Salinity Taskforce Report.

The best performing species in tests conducted to date were native or white cedar (also known as wattle), two grevilleas, the lilac hibiscus, flooded gum, swish bush, yellow tailflower, orange wattle, corkybark and native poplar.

The *Search* project won a national following and the concept has been adopted as a priority for further research by national research and development corporations and by the Cooperative Research Centre for Plant-based Management of Dryland Salinity, a national research and development group based at The University of Western Australia.

The Revegetation Systems Unit made a significant contribution to the development of the Integrated Wood Processing Pilot Plant for mallees at Narrogin. For some time this project was stalled, however, recent injections of funds have ensured that the project will now go to proof-of-concept phase. The success of this project is critical to the development of new industries based on native plants, and this in turn is critical to achieving the recharge control elements of the salinity management package.

Reconciliation of competing/conflicting land uses

CALM undertakes significant work in assessing mining proposals that might impact on the biodiversity conservation assets of the State, whether that be involving the conservation reserve system or important flora, fauna and ecological communities. This work often requires extensive negotiations and interaction with a number of stakeholders. For example, in the Goldfields, staff continue to have significant input into the environmental and management conditions for Portman's expansion of their Koolyanobbing iron ore operation. Western Mining Corporation's (WMC) exploration and development of the Yakabindie deposit alongside the Wanjarri Nature Reserve commenced and discussions were initiated concerning the possible expansion of Wanjarri Nature Reserve linked to this mining proposal and the WMC-owned Yakabindie pastoral lease.

Other areas include the expansion of the Jurien gypsum mine, mineral sands development at Cataby and provision of advice for environmental impact assessment of iron ore exploration at Koolan Island.

Community-based natural resource management (NRM)

Regional strategic planning dominated the work of officers of the Natural Resources Branch during the year. Extensive work by other officers, at the regional level in particular, was undertaken to help the regional NRM groups write the biodiversity components of their plans. There also was important work at a corporate level, particularly the production of a compact disc holding all relevant, corporate data that could be collated at the scale of the south-west agricultural region. Information Management Branch, along with the relevant departmental data custodians, undertook this work.

Programs relevant to management of the State's marine ecological and social values were progressed with the financial support of Natural Heritage Trust grants totalling approximately \$500,000. The Marine Community Monitoring Program finalised a revised manual of monitoring

methods, developed a database and web site for data management, implemented a schools program in the central west coast region and continued to facilitate a number of community-based monitoring programs around the State. Other activities include mapping and risk assessment for key marine wildlife species in Perth's metropolitan coastal waters, ecological and social resource inventories for Roebuck Bay and adjacent waters and, for Jurien Bay Marine Park, trialing video and internet-based surveillance monitoring techniques for large marine fauna (e.g. sea lions), baseline water quality and human usage monitoring, development and installation of a marine information system, and an education and interpretation campaign.

Amelioration of landscape/seascape threatening processes, such as disease

Within CALM's salinity program, while on-ground works and investigations continued, final recovery plans have taken longer to develop than planned due largely to the unexpected need for much more intensive investigation of complex hydrologic systems and management options. The appointment of a hydrologist and the completion of phase one and significant progress with phase two of the salinity investment framework during 2003–2004 facilitated recovery planning and improved the strategic direction of recovery programs.

The complexity of managing landscape scale processes combined with the impact of a sequence of dry years – which had both positive and negative effects – continues to underline the difficulties of managing salinity.

CALM's wildlife recovery program *Western Shield* continued to bait around 3.5 million ha of conservation lands to control foxes and cats with more than 800,000 poison baits used annually. Valuable corporate sponsorship was provided to *Western Shield*, notably from Alcoa Australia Limited and Tiwest Pty Ltd.

The objective of *Western Shield* is to achieve the recovery of native wildlife populations by reducing the impacts of introduced predators and, where necessary, reintroducing native mammals. Monitoring of fauna populations across the south-west shows the effectiveness of predator control in fauna recovery. In many cases, native wildlife populations recover naturally once the devastating impacts of introduced predators are reduced.

Research continued to develop suitable baits for feral cats and to improve baits for foxes. Development of a salami-style fox bait, 'Pro-bait', progressed during the year with research trials completed on bait longevity and the inclusion of taste enhancers to increase uptake.

Trials continued with the feral cat bait, 'Eradicat', to determine the most appropriate baiting density in areas where alternative prey (e.g. rabbits) was present or absent, timing of baiting and the frequency of baiting determined by cat reinvasion. Much of CALM's work in feral cat control research is generously sponsored by the Wind Over Water Foundation. In collaboration with CALM's Science Division, staff from the Goldfields Region assisted with continued research into feral cat control on Lorna Glen Station and in the Gibson Desert Nature Reserve.

In conjunction with the Department of Agriculture, CALM provided a final year of funding as joint sponsors of a four-year research project by CSIRO and the CRC for Australian Weed Management. The project investigated new rust strains for the biological control of blackberry. The strains of leaf rust completed quarantine requirements in early 2004 and a release occurred in April 2004, on CALM-managed lands near Manjimup. CALM will continue to provide support to CSIRO via assistance in future rust introductions and ongoing monitoring requirements.

Weed management actions on CALM-managed lands are prioritised within each region according to the policy outlined in the Environmental Weed Strategy of WA (1999). The large area of land managed and number of neighbours, and available resources are ongoing management issues. During the year CALM spent a total of \$950,000 on weed management activities, including the control of arum lily, bridal creeper, blackberry and other significant environmental weeds.

A program of note was the control of date palms and water fern at Millstream in the Millstream-Chichester National Park where results far exceeded expectations. This work included the assistance of the Department of Justice, which gave prisoners from the Roebourne Regional Prison the opportunity to serve some of their time working in the national park.

Tuart conservation and management

In 2003–2004 the Tuart Response Group conducted a further five business meetings. The Group's work mainly concerned the completion of the Government's *Tuart Conservation and Management Strategy*. In developing the draft tuart strategy the Response Group oversaw and coordinated the following key contributory processes:

- Established a sound scientific basis for the future conservation and management of tuart woodlands. This was achieved through the award of a collaborative Australian Research Council Linkage Grant investigating tuart health. Research work began on 1 July 2003 on aspects of whole-of-tuart woodland health, the role of water relations and hydrology, fire and understorey competition, insects and fungal pathogens and tuart decline at Yalgorup.
- The report, *Tools for Identifying Indicative High Conservation Tuart Woodland*, which was derived from the *Atlas of Tuart Woodlands of the Swan Coastal Plain* data, was developed by intersecting areas of low understorey disturbance tuart woodlands with soil systems and rainfall – the factors that control tuart distribution – and the presence of uncommon taxa and ecological communities.

The *Tuart Conservation and Management Strategy* proposed outcomes for enhancing conservation and management of remnant tuart trees and woodlands on the Swan Coastal Plain, researching tuart's biological values and tuart health, increasing community awareness about the value and benefits of tuart trees, woodlands and ecosystems, developing effective tuart partnerships between Government and community groups, promoting land development that takes account of tuart conservation, and providing incentives for improved tuart management on private land.

The Wandoo Recovery Group

Since the establishment of the Wandoo Recovery Group in 2003 by the Minister for the Environment, six meetings have been held. Working closely with State Government agencies, Natural Resource Management groups, local communities and research institutions, the Group aims to identify the cause of wandoo decline, to protect wandoo woodlands throughout their natural range and to raise understanding and concern about the decline problem.

As a member of the Recovery Group, The University of Western Australia has undertaken ecophysiological research to examine the health status of wandoo and other co-occurring eucalypt species at 30 sites across the range of wandoo. Results confirm that the average health of other eucalyptus species (at 64 per cent) is better than that of wandoo (at 48 per cent). Similarly, research is identifying wandoo tolerance to environmental stresses. Phytopathological research undertaken in 2003 identified an interaction between a particular woodboring insect and a fungal pathogen that is likely to be responsible for some of the damage observed in declining wandoo canopies. Further research work has been undertaken to identify changes to water tables in specific forests to assess the likely impact on wandoo.

To inform the community of the wandoo decline problem the Wandoo Recovery Group prepared brochures and organised a workshop with key community stakeholders.

Recovery of threatened species and ecological communities and conservation and sustainable use of other significant species

Recovery of threatened species and ecological communities

The Threatened Species Scientific Committee's (TSSC) recommendations for changes to the lists of threatened flora and fauna under the Wildlife Conservation Act were endorsed by the Minister for the Environment during 2003–2004 following an extended consultation period with regard to several proposed listings. The recommendations of the TSSC were to be gazetted in July 2004, and hence the formal listings had not changed from the previous year as at 30 June 2004.

Flora

With respect to flora, the Minister for the Environment endorsed 12 additions to and seven deletions from the list of declared rare flora (DRF). Once gazetted, there will be 356 taxa of extant DRF and 15 listed as presumed to be extinct.

Six taxa to be added will be ranked as Critically Endangered, four as Endangered, and two as Vulnerable under IUCN criteria. Four of the taxa being added, *Caladenia melanema*, *Caladenia williamsiae*, *Chamelaucium* sp. *Hammersley* and *Muelleranthus crenulatus*, are currently known from single populations.

Two of the deletions (*Adenanthos cunninghamii* and *Eucalyptus bennettiae*) were confirmed to be hybrids whose progeny were not consistent with agreed taxonomic limits. The other deletions (*Bentleya spinescens*, *Eremophila veneta* ms, *Eucalyptus cerasiformis*, *Lechenaultia pulvinaris* and *Pleurosphascum occidentale*) were shown to be more common than previously thought, and no longer meet IUCN criteria for listing.

A further 58 taxa were added to CALM's Priority Flora list, and 15 taxa were deleted from the list on the basis of further survey and taxonomic review. A total of 2,129 taxa were listed as Priority Flora as at 30 June 2004. Once the new DRF notice is gazetted, the 12 additions to DRF will be transferred from the Priority Flora List, and five of the deletions (excluding the two hybrids) will be added to the Priority Flora List. At that time there will be a total of 2,122 listed priority flora.

The three-year phase one of the WA component of the Millennium Seed Bank Project will be completed by September 2004 and has resulted in a dramatic increase in CALM's efforts to collect and store seed of rare, priority and threatened flora for future reintroduction and revegetation programs. The nine-year program involves a benefit sharing agreement between the Royal Botanic Gardens Kew (United Kingdom) and two WA partner agencies, CALM and the Botanic Gardens and Parks Authority. CALM's Threatened Flora Seed Centre has made 458 collections of Priority Flora and key species from threatened ecological communities (TECs) as part of this program. These collections have now been added to the 208 Declared Rare Flora currently stored as seed in the Centre for CALM's threatened flora recovery programs.

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

- A total of 86 new populations of declared rare flora were discovered throughout the State during the year.
- A partnership with Moora C Y O'Connor TAFE was developed whereby students were instructed in basic seed collection techniques. Students collected local provenance seed from native species associated with *Caladenia drakeoides*. These seeds were used to grow more than 200 seedlings for habitat rehabilitation.
- A further 100 *Symonanthus bancroftii* plants were grown for translocations in winter 2004.
- Phosphite was applied to 150 ha of *Phytophthora cinnamomi*-affected vegetation, targeting threatened flora populations, many of which were in either the Eastern Stirling Range threatened ecological community (TEC) or Montane Mallee TEC. All sites are being monitored to assess the effectiveness of phosphite applications. Critically Endangered threatened flora sprayed in autumn 2003 include *Banksia brownii*, *Dryandra anatona*, *Dryandra montana*, *Andersonia axilliflora*, *Daviesia glossosema*, *D. pseudaphylla*, *Leucopogon gnaphalioides* and *Persoonia micranthera*. Other threatened taxa sprayed include *Daviesia obovata*, *Darwinia oxylepis*, *D. collina*, *D. squarrosa*, *Darwinia* sp *Stirling*, *Lambertia fairallii* and *Sphenotoma drummondii*.
- A new population of *Diuris purdeii* was protected through development of a fire management strategy.
- A seed orchard was established for the Critically Endangered species *Dryandra montana*.
- Seed was collected from *Banksia oligantha*, *Goodenia integerrima*, *Muehlenbeckia horrida* subsp. *abditata* and *Roycea pycnophylloides* by the Threatened Flora Seed Centre.
- Monitoring of translocations was undertaken for *Brachysema papilio*, *Eremophila nivea*,

E. scaberula, *Grevillea maccutcheonii*, *Lambertia echinata* subsp. *occidentalis* and *Petrophile latericola* by CALM's Science Division. Further plantings were also undertaken for *E. nivea* and *E. scaberula*.

- Survey of a number of taxa including *Centrolepis caespitosa* (a new subpopulation in a reserve near Perth where the species was known to occur), *Conospermum densiflorum* subsp. *unicephalatum* (no new populations were located), *Frankenia parvula* (one new population was located north of Yellowdine), *Frankenia conferta* (five new populations of this species, north and south of Koorda were discovered), *Roycea pycnophylloides* (10 new large populations of the species were discovered), *Calytrix breviseta* subsp. *breviseta* (no new populations were located), *Conostylis setigera* subsp. *dasys* (no new populations were located), *Goodenia integerrima* (no new populations were discovered), *Ptilotus fasciculatus* (four new populations of this species were discovered in Narrogin and Merredin districts) and *Caladenia drakeoides*.
- A framework for monitoring three rare Wheatbelt taxa (*Frankenia parvula*, *F. conferta* and *Roycea pycnophylloides*) was developed.

Fauna

Four fauna taxa were endorsed for addition to the threatened species list. These were the Margaret River marron (*Cherax tenuimanus*), Walpole burrowing crayfish (*Engaewa walpolea*), Dunsborough burrowing crayfish (*Engaewa reducta*) and Margaret River burrowing crayfish (*Engaewa pseudoreducta*). These additions bring the fauna listing to 191 taxa threatened with extinction.

In addition, the dwarf Nullarbor bettong (*Bettongia pusilla*) was endorsed for addition to the list of fauna presumed to be extinct. This is the first mammal species to be added to the list of Presumed Extinct fauna in more than 20 years. This species was believed extant at the time of European settlement and has been recorded in the sub-fossil material from a number of caves on the Nullarbor, but there are no records of it being collected as a live specimen. Eighteen taxa of fauna are now presumed to be extinct in WA.

Monitoring of Gilbert's potoroos (*Potorous gilbertii*) on Mt Gardner in Two Peoples Bay Nature Reserve indicates that populations remain stable. A research project was completed relating to the availability of truffles, on which potoroos are highly dependent; the Gilbert's Potoroo Action Group was established; and the recovery plan was endorsed.

The recovery plan for Carnaby's black-cockatoo (*Calyptorhynchus latirostris*) was endorsed. The project officer continued work on identifying and improving management of priority areas for feeding and breeding habitats, community involvement and captive breeding.

Work on *Project Eden* at Shark Bay continued where bilby (*Macrotis lagotis*) releases have continued and surveys indicated a good increase in the range of the population across Peron Peninsula. Four new malleefowl (*Leipoa ocellata*) mounds were located in autumn 2004 and there was an increase in captures of hairy-footed dunnarts (*Sminthopsis hirtipes*) and fat-tailed dunnarts (*Sminthopsis crassicaudata*). A large increase in sightings of adult male woma pythons (*Aspidites ramsayi*) in late summer and autumn 2004 resulted in nine animals being monitored in an attempt to understand their ecology and habitat requirements.

A regular fauna monitoring program continued in autumn and spring, with assistance from LANDSCOPE Expeditions. Research took place on the physiology of several species including the banded hare wallaby (*Lagostrophus fasciatus*), western barred bandicoot (*Perameles bougainville*) and bilby at Peron Captive Breeding Centre by researchers from Germany.

Following the removal of feral cats from Faure Island (a pastoral lease owned by the Australian Wildlife Conservancy), reconstruction of the mammalian fauna on the island continued with the introduction of banded hare wallabies in partnership with the Conservancy.

CALM also conducted translocations of black-footed rock-wallabies (*Petrogale lateralis*) (to Avon Valley, Walyunga and Cape Le Grand national parks), tammar wallabies (*Macropus eugenii*) (to Walyunga and Nambung national parks), woylies (*Bettongia penicillata*) (to Julimar Forest and Nambung National Park), quenda (*Isoodon obesulus*) (to Julimar Forest, Boyagin Nature Reserve and Avon Valley National Park), boodie (*Bettongia lesueur*) and bilby (both to Dryandra Forest), numbat (*Myrmecobius fasciatus*) (to Stirling Range National Park), dibbler (*Parantechinus apicalis*) (to the proposed Peniup nature reserve), banded-hare wallaby (*Lagostrophus fasciatus*) (to Faure Island) and western ringtail possum (*Pseudocheirus occidentalis*) (to Leschenault Peninsula Conservation Park and Yalgorup National Park).

Thirty bird species are specially protected because of their listing under Migratory Bird Agreements Australia has with Japan and China, and 11 taxa are specially protected for other reasons, including high values for poaching or competition with commercial industries. The Priority Fauna List is unchanged at 196 taxa.

Threatened Ecological Communities (TECs)

Emergency actions were implemented for the long-term recovery of seven important caves within Yanchep National Park. These caves support aquatic animals (stygofauna) known from nowhere else. Most of the caves support occurrences of the Critically Endangered 'Aquatic Root Mat Community of the Swan Coastal Plain'.

The decline in groundwater of the Gngangara Mound has resulted in the streams and ponds in these caves drying up, threatening the survival of the community and other fauna. In Crystal Cave, the only known habitat for the Critically Endangered Crystal Cave amphipod (*Hurleya sp.*), a small shrimp-like animal, the groundwater is now more than a metre below the cave floor.

Following extensive trials over the past two years, CALM began funding a large-scale project to recharge the seven Yanchep caves with water. The project is being conducted in cooperation with the Water Corporation, which is providing project management, and the Department of Environment. This emergency system for the seven target caves will use groundwater from the western side of the national park, and has been designed to last at least 10 years.

Although the overall recharge project is largely to prevent the extinction of fauna, other positive outcomes will result. These include returning the aesthetic values of Crystal Cave (a popular tourist cave) with the return of water to the ponds and streams as well as a possible halt to tuart (*Eucalyptus gomphocephala*) decline in the area due to the falling groundwater.

A 50-ha area in Busselton containing four TECs, and six species of flora on CALM's priority list, was purchased. The TECs include the critically endangered Busselton ironstone community, an endangered shrublands on dry clay flats community, a vulnerable *Eucalyptus calophylla* woodlands on heavy soils of the southern Swan Coastal Plain community and an endangered southern wet shrublands community.

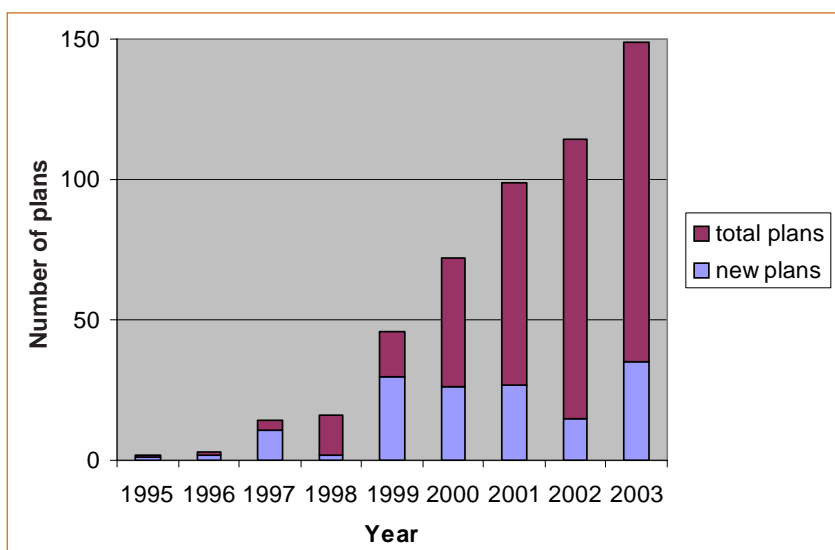
The following actions were undertaken for the Lake Bryde TECs: investigations of a range of hydrologic reviews, remnant vegetation inventory, assessment of vegetation health using satellite imagery, lake coring, topographical surveys, assessment of storage capacity within the catchment, and greenhouse trials to determine the salinity tolerance of the endangered plant *Muehlenbeckia horrida* subsp *abdita*. This information provided a much clearer understanding of the distribution of assets within the catchment, their condition, rate of decline and the nature of threats facing them.

Some highlights for the recovery actions addressing the Lake Clifton thrombolites TECs include: modelling of Lake Clifton hydrology undertaken by CSIRO, development of a protocol for monitoring the health and composition of the thrombolites, development of a poster to inform the public about the community and a review of the current literature on the evolution, hydrology and biota of the lakes comprising the Yalgorup wetland complex, of which Lake Clifton is a part.

Recovery teams and recovery plans

CALM sets up recovery teams to coordinate the preparation and implementation of recovery plans and interim recovery plans, and provides membership to national recovery teams where the species or ecological community occurs in WA and elsewhere. Where appropriate and cost-effective, one recovery team coordinates the conservation of multiple species and/or ecological communities within a CALM region or district or within any other defined area.

Recovery teams for species or ecological communities wholly or predominantly occurring in WA are chaired by a CALM employee and include representatives of stakeholder groups who are



Approved interim recovery plans as at June 2004

willing to work towards and/or financially support the recovery of the species or ecological community concerned. These groups include conservation managers, scientists, landowners or land managers, local government, and appropriate local non-government conservation or community organisations or individuals. Community representatives provide critical input to most recovery teams.

A new threatened flora recovery team was set up for the Goldfields Region, and another recovery team was set up for the Margaret River marron (*Cherax tenuimanus*). Annual reports on recovery team progress for the 2003 calendar year were received from 15 recovery teams.

The Minister for the Environment endorsed recovery plans for the western swamp tortoise (*Pseudemydura umbrina*), Gilbert's potoroo (*Potorous gilbertii*), Carnaby's black-cockatoo (*Calyptorhynchus latirostris*) and the dibbler (*Parentechinus apicalis*).

A total of 46 interim recovery plans (IRPs) were approved during 2003–2004. These include one for fauna, three for TECs and 42 for flora:

Fauna

Thick-billed grasswren (western subspecies), *Amytornis textilis textiles*

Flora

Club-leafed synaphea, *Synaphea* sp. Pinjarra

Net-veined gyrostemon, *Gyrostemon reticulatus*

Large flowered short-styled grevillea, *Grevillea brachystylis* subsp. *grandis* ms.

Bussell's spider orchid *Caladenia busselliana* and Dunsborough spider orchid, *Caladenia viridescens*

Pingaring spider orchid, *Caladenia hoffmanii* subsp. *graniticola*

Pinnate-leaved eremophila, *Eremophila pinnatifida*

Branched hemigenia, *Hemigenia ramosissima*

Pine featherflower, *Verticordia staminosa* subsp. *cylindrifera* var. *erecta*

Underground orchid, *Rhizanthella gardneri*

Quartz-loving synaphea, *Synaphea quartzitica*

Split-leaved grevillea, *Grevillea althoferorum*

Spreading grevillea, *Grevillea humifusa*

Ironstone grevillea, *Grevillea elongata*

Green Hill thomasia, *Thomasia* sp. Green Hill

Western prickly honeysuckle, *Lambertia echinata* subsp. *occidentalis*

Wing-fruited lasiopetalum, *Lasiopetalum pterocarpum* ms.

Remote thorny lignum, *Muehlenbeckia horrida* subsp. *abdita*

Gypsum goodenia, *Goodenia integerrima*

Varnish bush, *Eremophila viscida*

Recurved-leaved swordfish dryandra, *Dryandra mucronulata* subsp. *retrorsa*

Abba bell, *Darwinia* sp. Williamson

Gingin wax, *Chamelaucium* sp. Gingin

Hinged dragon orchid, *Caladenia drakeoides*

Whorled eremophila, *Eremophila verticillata*

Narrow-petalled featherflower, *Verticordia plumosa* var. *pleiobotrya*

McCutcheon's grevillea, *Grevillea maccutcheonii*

Small-flowered snottygobble, *Persoonia micranthera*

Giant andersonia, *Andersonia axilliflora*

Trigwell's rullingia, *Rulingia* sp. Trigwell Bridge
 Wongan Hills triggerplant, *Stylidium coroniforme*
 Boscabel conostylis, *Conostylis setigera* subsp. *dasys*
 Beaked eremophila *Eremophila rostrata*
 Blunt wattle *Acacia aprica*
 Hughan's featherflower, *Verticordia hughanii*
 Granite featherflower, *Verticordia staminosa* subsp. *cylindraceae* var. *cylindraceae*
 One-headed smokebush, *Conospermum densiflorum* subsp. *unicephalatum*
 Three Springs daviesia, *Daviesia bursarioides*
 Dandaragan mallee, *Eucalyptus dolorosa*
 Rough emu bush, *Eremophila scaberula*
 Spiral flag, *Patersonia spirifolia*
 Paynes Find mallee, *Eucalyptus crucis* subsp. *praecipua*
 Moresby Range drummondita, *Drummondita ericoides*

Threatened Ecological Communities

Aquatic root mat communities of caves of the Swan Coastal Plain and the Crystal Cave Cragongyctoid
 Thrombolite Community of Coastal Freshwater Lakes (Lake Richmond)
 Thrombolite Community of a Coastal Brackish Lake (Lake Clifton)

Translocation proposals approved for threatened fauna 2003–2004

Species	Source and destination
Banded hare wallaby	From CALM <i>Project Eden</i> breeding facility to Faure Island (Shark Bay WA)
Woylie	From Batalling Forest to Nambung National Park
Tammar wallaby	From Tutanning Nature Reserve to Nambung National Park
Black-footed rock-wallaby	From Mount Caroline Nature Reserve and Querekin Rock to Cape Le Grand National Park
Quenda	From the Swan Coastal Plain to Julimar State Forest
Western ringtail possum	From Busselton to Leschenault Peninsula Conservation Park and Yalgorup National Park

Management of marine fauna

A total of 102 whale-watch boat-tour operators are licensed Statewide, a decrease of seven (6.5 per cent) on last year. While these tours were primarily based on humpback whales, southern right whales are the focus of whale watching activities in the Albany and lower south-west areas.

There were 79 boat-based dolphin interaction licences, three in-water dolphin interaction licences and two boat-based dugong interaction licences issued. Forty-three boat-based Australian sea lion and New Zealand fur seal interaction licences were issued.

Fifteen whale shark interaction licences were issued for the year. Passenger numbers increased to record levels from 4,975 (2002–2003) to 5,832 (2003–2004), a 17.2 per cent increase.

CALM officers attended 20 reported whale and dolphin strandings throughout the year, involving both live and dead animals. There was one mass stranding involving nine sperm whales. The strandings involved 28 individual animals, representing 10 species – bottlenose dolphin, Hector's beaked whale, Gray's beaked whale, melon-headed whale, short-finned pilot whale, humpback whale, Minke whale, southern right whale, false killer whale and sperm whale. The most commonly stranded cetacean was the bottlenose dolphin.

Officers responded to five reports of entangled humpback whales this year. One whale was successfully disentangled and four escaped detection by the disentanglement response team after the initial sighting. CALM staff were involved in the training of other conservation agency staff in disentanglement techniques at a national workshop in New South Wales and at two other training sessions in South Australia and Tasmania.

Officers also attended 10 reported pinniped strandings throughout the year, comprising two sub-Antarctic fur seals, one New Zealand fur seal, one elephant seal and six Australian sea lions. In most cases these animals were ill or injured. One sub-Antarctic fur seal and one New Zealand fur seal were taken into captive management. The sub-Antarctic fur seal was rehabilitated and subsequently returned to the wild and the New Zealand fur seal was still undergoing rehabilitation. One Australian sea lion pup was rescued and successfully returned to its mother. The elephant seal rested and returned to sea.

One sub-Antarctic fur seal and one Australian sea lion were reported entangled in fishing gear. Both were captured, disentangled and released.

Marine research and management continued at Monkey Mia focusing on dolphins. This included: mother-calf relations; male alliance behaviour; and the response of dolphins to boat traffic at Monkey Mia and the eastern gulf of Shark Bay. There was also ecological research on green turtles, tiger sharks and sea snakes.

In the Pilbara there was significant work on the monitoring and management of turtles. A turtle-tagging program took place at Rosemary Island, Barrow Island and Mundabullangana Station. A project was implemented to protect the turtle nesting beaches at Ningaloo. This included successfully closing a beach near Coral Bay to four-wheel-drive vehicles during the nesting season from 15 October to 30 April. A baiting program for foxes at a beach near Coral Bay was successful with only two per cent of nests recorded as being disturbed during the 2003–2004 season. A baiting program was initiated at a newly identified turtle nesting beach at Janes Bay, Ningaloo Marine Park, following two years of negotiations with the neighbouring pastoralist. At this location prior to baiting there was a loss of more than 50 per cent of newly-laid nests whereas following baiting this was reduced to 10 per cent.

Other activities associated with turtle management included: the development of a TAFE-accredited training program for turtle interaction guides to facilitate turtle and visitor interactions that are non-disturbing; and the expansion of the Ningaloo Community Turtle Monitoring Program, a collaborative project between CALM, WWF, Murdoch University and the local Cape Conservation Group.

CALM was involved in whale shark conservation including: supporting a web-based whale shark photo library, which uses a mathematical program to match the finger-print like pattern of whale sharks; and supporting research, which led to the application of 15 pop-off archival tags this season that are set to transmit a signal after eight months. CALM also involved whale shark spotter pilots to record the exact location of whale sharks to allow for the estimation of abundance.

Providing community involvement and encouraging understanding, and support of biodiversity conservation and other CALM programs and activities

Communicating with and providing information to the public

The document, *Managing Natural Biodiversity in the Western Australian Wheatbelt – A Conceptual Framework* (K.J. Wallace, B. C. Beecham, B. H. Bone 2003), was published by CALM during the year. The framework provides a context for developing and implementing management strategies in agricultural areas, and is being used in CALM's Wheatbelt Region as a tool for biodiversity conservation.

The World Wide Wattle website (<http://www.worldwidewattle.com/>) was launched by Agriculture Minister Hon Kim Chance MLC via a webcast in March 2004. This site is designed to deliver authoritative information relating to Australian species of Acacia in order to inform, educate and promote the conservation, utilisation and enjoyment of this important group of plants. World Wide Wattle is a collaborative project between CALM, the Shire of Dalwallinu and CSIRO (Forestry and Forest Products).

Publication of the *AcaciaSearch* book saw the completion of work which identifies, evaluates and provides detailed information for Acacia species considered prospective as new woody crop plants in the agricultural region of southern Australia (within the 250–650 mm rainfall zone). This project involved collaboration between CALM and the Rural Industries Research and Development Corporation.

Public participation and involvement programs

During the year, \$75,000 was allocated under the Wetlands Conservation program across five new wetland conservation projects. A further two projects continued from the previous year that involved longer term monitoring activities. Projects included the development and implementation of management plans, research, survey, monitoring and education/information (including visitor facilities). Successful projects involved wetlands that are listed under the Ramsar Convention, the Directory of Important Wetlands of Australia, the Register of National Estate, and as TECs.

Management of commercial interests

CALM ensures that wildlife-based activities are licensed, in accordance with the Wildlife Conservation Act, and conducts monitoring and investigations to ensure compliance with legislation and the licences issued.

Management of the commercial harvesting of kangaroos continued throughout the year, with input from the Kangaroo Management Advisory Committee. Under the 2003–2007 management plans, commercial harvest quotas were set for each species for the 2004 calendar year. During 2003, aerial kangaroo population surveys were undertaken over the central survey zone as part of the triennial survey program.

The management program for saltwater crocodiles and freshwater crocodiles in WA expired on 31 December 2003, and a new management plan was prepared and submitted to the Commonwealth for consideration by the Federal Minister for the Environment and Heritage. The management program covers all aspects of crocodile management, including crocodile population surveys and regulation of crocodile harvests, farming, processing and export.

Under the management program, commercial harvests of live crocodiles for farm breeding stock development, and limited harvest of eggs and hatchlings, can be approved. For management purposes, these harvests are primarily restricted to the Cambridge Gulf area, where monitoring ensures that the wild crocodile populations are conserved. Surveys were again undertaken of saltwater crocodile and freshwater crocodile populations in the Cambridge Gulf to Lake Argyle area during the year.

The Western Australian Flora Industry Advisory Committee met once during the year, and provided flora industry management advice to CALM and the Minister for the Environment.

In addition to the four existing flora industry management teams (South West, Swan and Warren regions and Northern Sandplains), a new flora industry management team was formed to cover the Wheatbelt, Goldfields and South Coast regions. These groups meet as is necessary to coordinate the industry and to discuss management issues relevant to their respective regions.

Intensive management of *Banksia hookeriana*, *Boronia megastigma*, *Stirlingia latifolia*, *Verticordia nitens*, and *Eucalyptus* stems used for making didgeridoos continued during the year. Monitoring of *Banksia hookeriana*, *Boronia megastigma* and brushwood (*Melaleuca uncinata*) continued, to determine their regeneration following disturbance, such as fire, and harvesting.

During the year, specific attention was given to the harvesting of timber products from private property. CALM was previously involved in the development of a 'National Approach to Firewood Collection and use in Australia' through the Australian and New Zealand Environment and Conservation Council (now Natural Resource Management Ministerial Council) and was involved during the year in the development of an implementation model for an accreditation scheme for firewood suppliers. Two firewood industry workshops were held to develop the model, and explain WA's regulatory requirements. Management and compliance of the firewood industry in the Goldfields was a significant issue for staff. Prosecutions are pending for illegal harvesting and sale of firewood and investigations continued as illegal operators refused to curtail their activities.

A general information strategy was also implemented for firewood collection and timber harvesting from private property. This involved the mail-out of an information package to known industry participants, and two presentations at industry forums. The requirement for timber harvesting from private property was developed to be compatible with the requirements under the vegetation clearing amendments to the *Environmental Protection Act 1986* so as to minimise confusion when these amendments come into force in July 2004. The regulation of private property harvesting is designed to ensure such harvesting is sustainable, and does not cause environmental harm.

Liaison, consultation and negotiation with Commonwealth and local government and other State agencies

CALM continued to provide biodiversity advice to the Commissioner for Soil and Land Conservation as part of the assessment process for notices of intent to clear native vegetation. Where applicable, site visits were conducted to assess the potential impacts of the proposed clearing. In addition to providing advice to the Commissioner, verbal and written advice also was provided to landholders intending to clear vegetation or applying for conservation subdivision. A total of 154 registered clearing notifications were received during the year, covering 7,868 ha.

CALM assisted the Department of Environment in developing the regulations and procedures for implementing the new land clearing assessment process introduced under the *Environmental Protection Amendment Act 2003*. In so doing, a GIS system was developed for assessing the potential biodiversity values of areas notified to be cleared, and for recording and mapping proposal areas.

CALM continued to facilitate externally-driven research for the conservation of the State's marine ecological and social values through initiatives such as: representation on joint venture management and technical advisory committees of the Strategic Research Fund for the Marine Environment; representation on the steering and technical committees of the North West Shelf Joint Environmental Management Study; representation on the steering committee that developed the WA Marine Science Institution application to the Government's Major Research Facility Program; representation on the Western Rock Lobster Effects of Fishing on the Ecosystem Scientific Reference Group, to facilitate research relevant to the fishery's accreditation under the Marine Stewardship Council; collaborations in funding initiatives and on-the-ground marine research projects with Australian Institute of Marine Science, CSIRO and local universities; seed funding of honours, masters and doctoral programs for marine research through local universities; facilitation of CALM's terms of collaboration in and preparation of the bid for a second seven-year phase for the Cooperative Research Centre for Coastal Zone, Estuary and Waterway Management; and the facilitation of collaborative programs with local and interstate research organisations for strategic monitoring on the effectiveness of zoning in the State's marine conservation reserves.

The Roadside Conservation Committee (RCC) coordinates and promotes the conservation and effective management of native vegetation on road and rail reserves for the benefit of the environment and the people of WA. CALM meets the cost of servicing the Committee and obtains contributions towards the Committee's operations from Main Roads WA.

In the absence of statutory authority, the RCC seeks to facilitate best practice management of remnant vegetation in transport corridors by raising awareness, liaison and cooperation. The RCC is aware of the need for a safe and efficient road system, but endeavours to ensure that this is achieved in a balanced way for the sustainability of the many values present within road reserves.

Roadside conservation value maps were completed for nine shires during the year: Kojonup, Murray, Augusta-Margaret River, Beverley, Bridgetown-Greenbushes, Dalwallinu, Nungarin, Mukinbudin and Carnamah. A further four shires, Mt Marshall, Westonia, Wyalkatchem and Brookton, completed roadside surveys but the data are still to be processed. Maps are produced by CALM's Information Management Branch, and provided to shires with accompanying reports free of charge by the RCC. Roadside survey data from 13 shires were made available for the preparation of the Regional Natural Resource Management Strategy for the Avon Catchment Council. Roadside survey data from eight shires were provided to Main Roads for inclusion in a proposed revegetation strategy.

CALM continued to chair the State's Wetlands Coordinating Committee (WCC) and was actively involved in the implementation of the Wetlands Conservation Policy for Western Australia (1997). CALM is represented on the working groups for classification and evaluation, wetland buffer zones, drainage evaluation, the Wetlands Management Manual and wetland loss.

CALM was a key stakeholder in the first meeting of the WA Weeds Committee (WAWC), held in May 2004. The WAWC is comprised of Government and community representatives and is responsible for coordinating the implementation of the State Weed Plan. CALM provides guidance to the group on policy and planning direction, plus technical advice in the context of biodiversity conservation. The formation of the Committee was a key recommendation of the State Weed Plan and it sits under the Natural Resource Management Council.

Involvement of Indigenous people and other key stakeholders in conservation and management

An example of a collaborative conservation effort was the work undertaken with the Australian Wildlife Conservancy that led to the release of seven banded hare wallabies onto Faure Island in May 2004.

Significant resources continued to be allocated to the implementation of the signed Memorandum of Understanding (MoU) with the Goldfields Land and Sea Council to progress joint management and involvement of Aboriginal groups in reserve management. This resulted in two full-time Aboriginal trainees completing Certificate Level III and commencing Conservation and Land Management Certificate Level IV. The working group continued to work towards the implementation of the MoU five-year strategic plan. CALM staff visited conservation reserves and met with native title claimant groups throughout the Goldfields Region.

Liaison with the Ngaanyatjarra Council over joint management planning for the Gibson Desert Nature Reserve continued with significant consultation with Aboriginal communities throughout the Goldfields including the continuation of agreements with Ngaanyatjarra people for assistance with the operation of black-footed rock-wallaby (Warru) and bilby monitoring work in the Gibson Desert. Staff from the Goldfields Region continued joint management negotiations for Lorna Glen and Earahedy with the Wiluna Native Title claimants through the Ngaanyatjarra Council.

Regulation

A total of 6,422 fauna (other than damage, but including non-commercial) licences were issued during the year, an increase of five per cent from the previous year (see table on page 65). The increase was due primarily to continued interest in pet herpetofauna (reptile) licensing. The total number of flora licences and permits issued was 2,261, an increase of 3.7 per cent from the previous year, mainly due to an increase in the number of Commercial Purposes and Commercial Producer's Licences issued. CALM issued 470 Commercial Purposes Licences and 545 Commercial Producer's Licences and Nurseryman's Licences in 2003–2004.

Officers in the Kimberley received three reports of problem crocodiles. Licences to remove the three saltwater crocodiles from the wild were issued because of the threat they posed to public safety. Other dangerous fauna licences were issued for magpies (43) and butcherbirds (1).

Licences issued for the control of fauna causing damage included: 82 licences issued for emus; 557 licences for grey kangaroos; 40 licences for little corellas; 30 licences for twenty-eight parrots; 24 licences for galahs; and 24 licences for Australian ravens. The total number of damage licences issued for birds was 270, a decrease of 25 per cent from 2002–2003.

During the year, CALM staff provided guidance to many people regarding the legal requirements of conservation legislation. Written cautions were issued for minor offences as appropriate. Written reports were prepared for 171 offences under the Wildlife Conservation Act and Regulations and 45 offences under the CALM Act and Regulations. To date, action in 139 matters under both statutes has been completed.

A Ministerially-appointed panel of three independent experts reviewed CALM's prosecution policy and guidelines and administrative procedures relating to prosecutions. The panel consulted with the Minister for the Environment, met with the Executive Director and the Chief Wildlife Officer, analysed Parliamentary debates and media statements, surveyed comparative materials, called for submissions from the public and organisations and took oral submissions in three instances to allow enlargement of written submissions. The panel did not find any major flaws in CALM's prosecution policy or practices. Their report, which has been made public, makes 11 recommendations that will assist CALM with the prosecution process.

The Government and CALM accepted the recommendations of the panel and will act on them. The recommendations will assist CALM in determining prosecution action and provide a more transparent process.

WA Herbarium

The Herbarium is responsible for taxonomic research on WA's rich flora and manages and increases the State Collection so that up-to-date taxonomy supports conservation. At the end of the year, the Herbarium collection comprised the following total number of specimens:

Algae	9,709
Mosses	6,059
Liverworts	1,658
Myxomycetes	258
Fungi	9,818
Lichens	9,380
Ferns	3,143
Gymnosperms (pines, cycads)	1,791
Flowering plants (Monocots)	93,600
Flowering plants (Dicots)	461,943
Total number of databased specimens	597,759

There was a significant increase in the number of specimens of algae as a result of a grant to database algal backlog specimens as part of an ongoing externally funded algal databasing project.

Records of all specimens incorporated in the WA Herbarium are entered into the Herbarium Specimen Database (WAHERB), which is updated constantly. During the year, 32,488 records were added to WAHERB. This included 1,389 Priority Flora and 209 declared rare flora (DRF) specimens that were added to the State Collection, bringing the total collection of Priority and DRF to 33,958 specimens.

Significant accessions added to the State Collection were as follows:

- SWALE (Surveying Western Australia's Land Edge) Project;
- Woodland Watch (World Wildlife Fund);
- Priority taxa for Swan Region by F. Hort;
- Salinity Strategy biological survey vouchers;
- specimens from the survey of Jaurdi Reserve, Coolgardie by L. Sage;
- Goldfor Survey (specimens from ground proofing of woodland/forest areas to validate remote sensing of vegetation from Esperance to Shark Bay, National Forest Inventory);
- vouchers from System 6 survey, 1994–1995;
- Hunger and Kilian Pilbara vouchers, 1995;
- Eleanor Bennett vouchers from the Ord River, 1999;
- Don Cooper SEARCH vouchers;
- Nathan Sammy lichen collection;
- Malcolm Trudgen vouchers;
- Malcolm Trudgen and Barbara Rye vouchers of small flowered Myrtaceae; and
- Anne Cochrane and Andrew Crawford vouchers of seeds of Threatened Flora.

Vitally important taxonomic studies on WA taxa are carried out in other herbaria, especially in Australia. The specimen loan program ensures that WA specimens are made available to

researchers so that they can be properly determined and labeled before they are returned to the WA Herbarium. During the year, 4,362 specimens were loaned to other institutions, and 1,749 specimens were received on loan from other herbaria. The WA Herbarium received 1,050 exchange specimens from other institutions to add to its collection and distributed 1,436 others.

Significant curatorial work was accomplished in the genera *Gastrolobium*, *Hibiscus*, *Oligochaetochilus*, *Caladenia*, *Drakonorchis*, *Cyanicula*, *Rubus*, *Senecio*, *Olearia*, and *Eucalyptus*.

Implementation of a program to recruit and maintain volunteers for a variety of tasks to manage and add to the collection continued. During the year, volunteer participation was significant, totaling 19,544 hours (equivalent to 11.3 full time employees). Tasks carried out and/or assisted by volunteers were as follows:

- mounted 16,222 specimens;
- assisted in the curation of specimens;
- assisted in the incorporation of 28,819 specimens that were added to the collection this year;
- completed the DELTA scoring of another genus, *Grevillea* (287 species);
- began DELTA scoring for *Dryandra*;
- completed the *Hakea* interactive key and made it available on the Intranet;
- validated 1,073 out of 1,290 plant chemistry vouchers;
- validated 2,870 doubtful location outliers;
- continued the validation of the 6,000 specimens of the W. E. Blackall collection;
- curated Droseraceae, *Austrostipa*, *Eucalyptus*, *Verticordia*, *Calandrinia* and native grasses;
- photographed type specimens;
- captured and prepared composite images for FloraBase;
- increased the collection and documentation of Myxomycetes to 27 genera and 70 species;
- maintained and increased the number of taxa represented in the Reference Herbarium (see below);
- maintained and supported the statewide regional herbaria; and
- successfully recruited volunteers to participate in a program to supply the Herbarium with images linked to specimen vouchers to populate FloraBase.

A substantial overhaul was done on the WAHerb database to provide enhanced support for the GDA 94 datum. This process necessitated a revamp of how coordinate precision is managed in the database. Substantial coordinate information was cleaned and FloraBase updated to reflect the newly available GDA information.

Minor works to ease temporarily the problems of specimen storage space were undertaken and a work environment was fostered to ensure that volunteers found fulfillment and satisfaction in their involvement with the Herbarium.

A highlight of the year was the November 2003 launch by the Minister for the Environment of Stage 2 of the Herbarium's information delivery system that is available through CALM's

NatureBase. FloraBase is the WA Herbarium's on-line information system, which provides access to descriptive, nomenclatural, geographic and image data. CALM staff, notably survey teams and regional ecologists, and a range of other conservation researchers are the main users of FloraBase. The new look FloraBase included detailed descriptions of 1,500 genera, a huge undertaking that took more than 10 years to accomplish. It is now possible to obtain descriptions and a map of WA distribution of most genera – a significant development.

During the past year, the Australian Virtual Herbarium (AVH) project progressed databasing of the backlog of herbarium specimens at the WA Herbarium, curating, identifying, databasing and validating the material to be incorporated into the main herbarium collection. To date, 47,410 specimens have been processed as part of the AVH since the project began in 2001. Of these, 13,828 records were processed during 2003–2004, a reduction on last year's figures due to a change of emphasis from initial databasing to validation of geocodes and specimen identity. The project remains on target to complete databasing the entire backlog of specimens by the end of the five-year national project.

Biosystematics and conservation studies of the flora continued, with specific work on Proteaceae (*Isopogon*, *Petrophile*), Poaceae (*Amphipogon*, *Austrodanthonia*), Epacridaceae (*Leucopogon*, *Brachyloma*), Myrtaceae (*Baeckea* group of genera), Asteraceae, Stylidiaceae (*Stylidium*), Portulacaceae (*Calandrinia*), Amaranthaceae (*Ptilotus*), and Lichens. Studies on Asteraceae, Myrtaceae and Stylidiaceae were supported by grants from Australian Biological Resources Survey (ABRS). Targeted taxonomic work was also undertaken on declared rare and priority flora. Name updates were regularly contributed to, or checked for, on the Census of WA Plants and brief descriptions provided for newly-listed species in the online flora information system, FloraBase.

As at 30 June 2004, the public access Reference Herbarium in Perth comprised 13,397 specimens, with 11,000 taxa represented. Each specimen is linked to a databased specimen in the main Herbarium collection. The Reference Herbarium is extensively used by CALM staff and both professional and amateur botanists (including members of Wildflower Society, Landcare and Bushcare groups) for flora identification and verification. During the year, 1,600 visitors used this resource to identify plant specimens.

There are some 60 active regional herbaria in the WA Regional Herbarium Network Project, which plays a significant role in both the collection of flora information and the dissemination of this knowledge to the regional community. Training workshops were held and the number of trained collectors continued to increase. The project continued to make a positive impact on the location of rare and threatened plant species, with 57 reports on plants in this category received, as well as making discoveries of new taxa. During the year Regional Herbarium Network volunteers added 1,700 specimens to the WA Herbarium collection. Contributions from regional herbaria now total 21,776 specimens. Regional herbaria continued to provide most of the new specimens lodged in the Herbarium.

Although Natural Heritage Trust funding to the Weed Information Network (WIN) was discontinued, the system previously established continued to be maintained largely by

volunteers, including links with Department of Agriculture and quarantine authorities. The team of trained volunteers continued to score and code data for presentation in FloraBase; approximately 600 species have been fully described.

The Census of Western Australian Plants (WACENSUS) reached more than 18,025 records, representing 13,832 currently recognised vascular plant species and infraspecies for the State.

The Plant Image Database continued to grow, through the assistance of volunteers who scan and edit photographs before archiving them at high-resolution. Around 27,340 images have been scanned to date. Composite images illustrating habitat, habit and detail of 4,940 species are now available on-line via FloraBase.

The Herbarium successfully tendered for the Perth Urban Bushland Fungi Project to be housed at the Herbarium. A fungi taxonomist and education officer will begin duties in 2004–2005 and will be responsible for education and research programs on fungi of Perth urban areas

In a collaborative project with CALM's Marine Conservation Branch, external funds were received to database collections of marine plants housed at WA herbaria other than the CALM collection. There are extensive collections of marine algae and flowering plants at The University of Western Australia, Murdoch University and CSIRO. The initial grant financed the completion of a strategic plan as well as initial databasing of collections from Murdoch University. Further funding was applied for in order to extend the Marine Plants Project. The ultimate aim is to add information on WA algae to FloraBase to support CALM marine studies and the conservation of marine areas.

MAX, a species database utility, became an indispensable tool for many CALM staff and collaborators in maintaining their species database. It forms a vital component of the Regional Herbaria Network with many country users. There are now some 300 registered users of this software, including a number of commercial clients. More than 5,400 records were added to WAHERB using MAX, thereby avoiding re-keying specimen collection data.

Nature Conservation

Performance Measures

Output 1

	2003–2004 Target	2003–2004 Actual	Explanation of significant variation between 2003–2004 Estimated and 2004–2005 Target
Quantity			
Area managed (ha)	25 million	25 million	
Quality			
Threatened species	549	538	Gazettal notice not published by 30 June 2004
Change in threatened species	(+)11	0	
Timeliness			
Completion of management plans within specified timeframes	100%	100%	
Cost (Efficiency)			
Average cost per hectare managed	\$2.58	\$2.76	

Wildlife licences issued in 2003–2004

Fauna licences	Licences issued	Fauna licences (cont.)	Licences issued
SCIENTIFIC		KANGAROO	
Scientific collection (Reg 17)	363	Take kangaroos for sale (Reg 6)	319
Bird/Bat banding (Reg 23)	118	Deal in carcasses (Reg 8)	31
EDUCATION & PUBLIC		Skin dealing (Reg 10)	17
(to take) (Reg 15)		Processing (Reg 7)	25
Marine interaction	255		
Other	344	EXPORTS INTERSTATE	
EDUCATION AND PUBLIC		Skins of fauna (or other dead fauna)	85
(to hold) (Reg 16)	100	Fauna (live)	232
AVIAN FAUNA		Herpetofauna (reptiles and amphibians)	13
Keep and breed in captivity (Reg 12)	3,133		330
Deal (Reg 13)	49	EXPORTS OVERSEAS	
Breed for commercial purposes (Reg 14)	0	Skins of fauna (or other dead fauna) from WA	42
Trap (Reg 11)	3	Emu eggs or products (personal items) from WA	5
SPECIES TRAPPED COMMERCIALY	Number	Fauna (avian) from WA (live)	4
Twenty-eight parrot	242		51
Red-capped parrot	88	IMPORTS INTERSTATE	
Western rosella	276	Skins of fauna (or other dead fauna) into WA	7
Long-billed corella (Eastern ssp)	38	Australian fauna (live)	279
FAUNA		Live exotic birds and other animals	193
Keep in captivity (Reg 12A)	101	Herpetofauna (reptiles and amphibians)	13
HERPETOFAUNA (reptiles and amphibians)			492
Keeping	624	Total fauna licences	6,422
Dealing	19	Flora licences	
Farming	2	Commercial Purposes	470
Taking	15	Commercial Producers	545
EMUS		Scientific/Prescribed Purposes	1,099
Emu farming (Reg 14)	17	Sandalwood (from Crown land)	48
Dealing (Reg 8)	3	Sandalwood (from private land)	14
Dealing (emu eggshells Reg 13)	5	Permits To Take Declared Rare Flora	85
Processing (Reg 7)	2		
CROCODILES		Total flora licences	2,261
Crocodile farming (Reg 14)	2		
Skin dealing (Reg 10)	0		
Processing (Reg 7)	2		

Summary of damage licences and dangerous fauna licences issued in 2003–2004

	No. of licences issued	Total no. of each species authorised to be taken		No. of licences issued	Total no. of each species authorised to be taken
OTHER AVIAN FAUNA			WATERFOWL		
Australian raven	24	320 destroy & 25 scare	Eurasian coot	3	260 trap and relocate
Galah	24	8096	Little pied cormorant	1	Scare only
Little corella	40	6160	Maned geese	18	315 destroy & 120 scare
Magpie lark	3	6	Mountain duck	4	70
Osprey	4	12 scare only	Pacific black duck	7	15 destroy & 566 trap and locate
Red-capped parrot	5	150 destroy & 10 scare	Pied cormorant	4	6
Silver gull	1	100	EMU	82	20581 destroy & 50 scare
Twenty-eight parrots	30	1,005			
Wedge tailed eagles	3	1 destroy & 2 scare only	MAMMALS		
Welcome swallow	3	2 destroy & 1 x 300 trap & relocate	Euro	42	5981
Western long-billed corella	1	Scare only	Grey kangaroo	557	83,275 destroy & 100 scare only
Baudin's black cockatoo	1	50 scare only	Red kangaroo	48	16,420
Carnaby's black cockatoo	11	550 scare only	DANGEROUS FAUNA		
Silvereye	1	300	Butcherbirds	1	3
			Magpie	43	64
			S/W crocodile	3	3

**Offences under the Conservation and Land Management Act and Regulations
and Wildlife Conservation Act and Regulations, 2003–2004**

Charges	Recomm'd charges	Convic- tions	Fines \$	Costs \$	Dismissed	Letter of warning	No further action	Pending
CONSERVATION and LAND MANAGEMENT ACT								
Illegal taking or possession of forest produce	20	5	\$1,550.00	\$288.50	0	8	4	3
Offences relating to the occupation of CALM land	1	0	0	0	0	0	1	0
Offences relating to marine parks and reserves	0	0	0	0	0	0	0	0
CONSERVATION and LAND MANAGEMENT REGULATIONS								
Offences relating to disease risk areas.	0	0	0	0	0	0	0	0
Offences relating to activities on State forests, nature reserves and national parks	24	1	\$200.00	\$442.70	0	5	8	10
Totals	45	6	\$1750.00	\$731.20	0	13	13	13
WILDLIFE CONSERVATION ACT								
Use of illegal devices in taking fauna	0	0	0	0	0	0	0	0
Illegal taking or possession of protected fauna	53	32	\$10,200.00	\$555.40	0	6	2	13
Illegal importation, selling or taking for sale of fauna	12	0	0	0	0	8	1	3
Offences relating to the taking or possession of rare or threatened fauna	18		0	0	0	2	7	9
Illegal taking of protected flora	33	3	\$1,600.00	\$1,142.35	0	10	3	17
Offences relating to the sale of protected flora	4	1	\$500.00	\$57.70	0	0	3	0
Taking declared rare flora without the Minister's consent	8	0	0	0	0	6	1	1
Offences against wildlife officers	4	1	\$200.00	0	0	1	2	0
Failing to comply with licence conditions	17	0	0	0	0	5	1	11
WILDLIFE CONSERVATION REGULATIONS								
Offences relating to the acquisition, possession, control and disposal of fauna	22	0	0	0	0	5	7	10
Totals	171	37	\$12,500.00	\$1,755.45	0	43	27	64
	30-6-03			Revised			30-6-04	
Total offences reported	409			428			216	
Convictions	53			84			43	
Dismissals	0			0			0	
Letters of warning	152			168			56	
No further action	102			151			40	
Pending	102			12			7	
Total fines	\$12,200.00			\$18,400.00			\$14,250.00	
Total costs	\$1,100.30			\$4,639.00			\$2,486.55	

Note: Figures for 2002–2003 reported offences are updated from those included in last year's report under the Revised column.

Sustainable Forest Management – Output 2

Highlights

- Ongoing implementation of the State Government's *Protecting our old-growth forests* policy.
- Completion of the proposed and final forest management plans for the Conservation Commission.
- Commencement of implementation of the approved Forest Management Plan (FMP) 2004-2013 on 1 January 2004.
- Completion of all indicative boundaries for new conservation reserves proposed in the State Government's forest policy.
- Provision of integrated forest management, monitoring and planning services.

Outcome achieved by

The development and implementation of management plans and systems for sustainable management of State forest and timber reserves.

Output 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.

Consistent with the statutory purpose of State forests and timber reserves as defined in the CALM Act, this Output provides for their management on an ecologically sustainable basis, including:

- implementing the *Protecting our old-growth forests* and other Government policies;
- ensuring values are maintained on an ecologically sustainable basis; and
- providing for the harvesting, regeneration and growth of forest products in accordance with approved forest management plans and guided by the principles of ecologically sustainable forest management.

The Sustainable Forest Management (SFM) Output addresses five key areas of activity:

1. Implementation of approved forest management plans and Government policies and programs.
2. Inventory and assessment of forest 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.
5. Partnerships.

Working arrangements

On the commencement of the Forest Management Plan (FMP) 2004–2013, CALM and the Forest Products Commission (FPC) instituted a process of examining the implementation of the actions in the FMP with respect to each organisation's responsibilities and the working arrangements between them. The process will be ongoing for at least the medium term.

Implementation of approved forest management plans and Government policies and programs

Protecting our old-growth forests policy

As part of its forest policy, the State Government committed to create 30 new national parks, including the 12 new national parks proposed under the Regional Forest Agreement (RFA), and two new conservation parks. CALM completed the design work on the indicative boundaries for all the new conservation reserves proposed in the policy. During the year, indicative boundaries were prepared for public release for comment for the proposed Mundaring, Pickering Brook, Canning, Helena, Wandoo, Easter, Hawke, Greater Hawke, Whicher, Dalgarpur, Lake Muir and Tone-Perup national parks and the Hester and Kerr conservation parks.

The indicative boundaries for the proposed Mundaring, Pickering Brook, Canning, Helena, Wandoo, Easter, Hawke, Greater Hawke, Whicher, Dalgarpur, Lake Muir, Yelverton, Bramley, Forest Grove and Tone-Perup national parks were advertised for two-month comment periods during the year, as part of a consultation process developed for new parks as a result of the *Protecting our old-growth forests* policy. Mapping to support this process was undertaken and submissions received were reviewed.

Community forest inspection program

The program of community forest inspections continued. They are designed to provide community representatives with the opportunity to inspect first-hand the systems and processes that are in place to sustainably manage the harvest of native timbers 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 CALM inspected harvest coupes in the Perth Hills District in April 2003, and planning began for an inspection in the Warren Region in winter 2004.

New Forest Management Plan

The development of the new FMP continued with production of the Proposed FMP for the Conservation Commission. The Proposed FMP was informed by public comments on the Draft FMP and supporting technical work. The technical work completed included a new system for the protection of soil from heavy machinery based on soil dryness index, a review of the management of significant flora values in the forests and associated ecosystems, and review of management options for poorly represented vegetation complexes. The Environmental Protection Authority (EPA) assessed the Proposed FMP and CALM completed the Final FMP by incorporating the conditions imposed on its implementation by the Minister for the Environment after her consideration of the assessment of appeals on the EPA report and recommendations.

The Minister for the Environment's approval of the Final FMP was published in the Government Gazette on 19 December 2003 and the FMP 2004-2013 came into operation on 1 January 2004.

Implementation of the Regional Forest Agreement (RFA)

The RFA included a number of commitments by the State Government that were the responsibility of CALM. Although a number of commitments were achieved through the completion and commencement of the FMP, the intended timelines for implementation of other RFA commitments were altered as a result of policy changes and the allocation of resources into completion of the FMP. The following commitments were fulfilled during the year:

- preparation of a forest management plan to implement the commitments of the RFA;
- revocation and replacement of Ministerial Conditions consistent with the FMP;
- assessment, databasing and integration of cultural heritage resources into forest planning;
- completion of the external review into the sustained yield estimating process for the development of the FMP;
- development of a set of sustainability indicators;
- establishment of the proposed new informal reserves in the FMP;
- publication of a commitment to the principles of ecologically sustainable forest management in the FMP; and
- establishment of a committee to advise on research priorities within CALM.

Progress was also made on the commitment to establish new formal reserves.

Inventory and assessment of forest resources

Throughout the year the Forest Management Branch of the SFM Division performed a diversity of tasks relating to the maintenance, analysis and provision of datasets for the south-west forests and softwood plantations on behalf of the FPC, other Divisions and external clients. This included:

- the provision of data, analysis, technical and policy advice to the Conservation Commission, review committees, independent consultants and Government agencies;
- planning to integrate timber harvesting, fire protection and other values within the landscape, including the coordination of planning services for some nature conservation and estate management outcomes;
- the ongoing maintenance of timber inventory and forest resource datasets;
- initiation of enhancements to computer applications to accommodate the new silvicultural and planning settings in the FMP;
- the enhancement of spatial reference datasets of the status and history of management activities within south-west forests, including the extension of databases summarising the occurrence of *Phytophthora cinnamomi* on lands vested in the Conservation Commission, and prescribed fire extent;
- compilation of digital datasets for prescribed and wildfire history dating back to the 1930s to be used for biodiversity analysis and fire regime planning;
- survey of boundaries of features sensitive to disturbance within harvest areas on behalf of the FPC;
- the design and execution of timber inventories and resource mapping in FPC softwood plantations to assess sustainability, audit requirements, asset valuation and to assist harvest planning;

- validation of sharefarm contract areas, plantation surveys for the 2003 planting season, and stratification of timber resource by productivity classes on behalf of the FPC; and
- services including resource inventory, photogrammetry, GPS survey, vegetation mapping and *Phytophthora cinnamomi* disease mapping services, to other Divisions within CALM, other Government departments, private companies and individuals on a recoup basis.

Maintenance and enhancement of biodiversity and other values of forests

Activities conducted by SFM Division incorporate measures to sustain or where possible enhance biodiversity and other forest values. In particular, staff deliver information services and the mapping of dieback occurrence for disease management and are responsible for setting standards for prescribed burns for silvicultural objectives that incorporate biodiversity requirements. Other SFM outcomes are delivered through Regional Services Division, and Science Division undertakes research to enhance management for biodiversity.

Disease in native forests

The mapping of the presence of symptoms of disease caused by *Phytophthora cinnamomi* (dieback) was carried out by accredited interpreters to determine protectable areas and specify hygiene requirements for activities likely to result in soil movement on lands managed by CALM. A total of 34,244 ha were mapped to assist the planning of roading and harvesting operations undertaken by the FPC. This included 17,301 ha of previous mapping that was rechecked for further spread. Mapping and hygiene planning was also undertaken on a further 268 ha for the Parks and Visitor Services Output, 456 ha for the Nature Conservation Output, 2,643 ha for the SFM Output, and 1,953 ha for external requests.

Silviculture guidelines

Following commencement of the FMP, silvicultural practice was implemented according to the silviculture guidelines as amended by the requirements of the FMP. A more comprehensive review of silviculture guidelines for the jarrah, karri and wandoo forests, with an emphasis on specific practices to be applied in the field, continued during the year.

BugBase

A Gordon Reid Foundation for Conservation and Lotterywest grant to the WA Insect Study Society assisted CALM in the databasing of more than 17,000 insect specimens found in WA's south-west forests. This database, known as BugBase, is a large and valuable resource of key information about the biodiversity of insect fauna in jarrah, karri, wandoo and tingle forests.

Wandoo decline

Foliage death in an extensive area of wandoo (*Eucalyptus wandoo*) woodland in Talbot forest block has been monitored since 1999. A series of wandoo crowns were photographed in June 1999, then rephotographed in July 2000, May 2001, September 2002 and May 2004 to facilitate an objective assessment of changes in crown condition. From this time series of photographs it

is apparent that individual tree responses to the causal agents of decline are an important part of the decline process. Photographic monitoring of the site will continue so that long-term changes in crown condition can be documented.

Gum leaf skeletonizer

A spatial analysis of an outbreak of gum leaf skeletonizer was undertaken in marginal jarrah forest on poorly drained sites that are prone to flooding in winter and drought in summer. This analysis showed that neither logging or prescribed burning induce increases in the pest populations on these sites.

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

Monitoring of timber harvesting and treatment activities

Forest Management Branch undertook the monitoring of harvesting, silvicultural treatments and land disturbance activities carried out by the FPC or other organisations during the year. In the 12 months to December 2003, 8,520 ha of jarrah forest were harvested with the following silvicultural or management objectives:

Promote growth on retained trees (thinning)	1,300 ha
Release of regeneration	770 ha
Establishment of regeneration	4,330 ha
Single tree selection	1,010 ha
Selective	1,110 ha
Other (mining and utilities)	not available
Total	8,520 ha

Silviculture

The Jarrah Forest

Harvesting in the jarrah forest is undertaken to achieve a variety of silvicultural objectives (silviculture is the art and science of establishing and tending forests). Where there is a predominance of vigorously growing trees, the stand is thinned; where this is not the case the stands are harvested with the object of regenerating them. This is achieved either by harvesting in a way that will release existing lignotubers to grow unimpeded into saplings; or, where there are inadequate lignotubers, harvesting to create a shelterwood under which seedlings are established. The proportion of each area that is harvested to each of these objectives, and the degree of intermixing, vary according to the existing stand structure and condition.

In many areas the desirable silvicultural objective is achieved completely or nearly completely by the harvesting operation itself. A proportion of the remainder is completed by silvicultural tending operations one or two years after harvesting. In more marginal forest types harvesting is done by selective cutting. In some areas harvesting precedes clearing for mining or the construction

of public utilities such as reservoirs or power lines. Cleared areas are not regenerated immediately but where possible are rehabilitated later.

The Karri Forest

Karri forest harvesting is also dependent on the structure and age of the existing forest, though it is less complex than jarrah harvesting. Patches of even-aged and vigorously growing forest which are greater than two hectares in size are identified for thinning. When the stand is old enough to yield saleable products, it is thinned to an appropriate density by commercial harvesting. No further tending is necessary.

Mature forests and forests of mixed structure created by past logging activities are harvested under a clearfelling system. Regeneration following harvesting is achieved within the following year or two by means of planting with nursery-raised seedlings. Regeneration may be achieved through temporarily retained seed trees or by broadcast seeding, however, this is because good seed years are infrequent and seed is very expensive to collect, making extensive broadcast seeding impractical.

Silvicultural objectives for approximately 60 ha of the harvested area were achieved through the commercial harvesting operations. Silvicultural objectives for a further 2,520 ha harvested in this or previous years were achieved by follow-up treatment during the year.

In the 12 months to December 2003, 720 ha of karri forest were clearfelled or partially cut, and 485 ha were thinned. Regeneration was completed on 1,370 ha harvested in either this or previous years.

Forest monitoring

The FORESTCHECK monitoring initiative was implemented for a third year with a further eight sampling grids established in jarrah forest. In total, there are now 27 sample sites. The purpose of FORESTCHECK is to provide forest managers with timely information about the status of forest ecosystems and the effects of management activities and natural climatic variation on a broad range of organisms. Sites established in 2003 were located east and north east of Dwellingup, and north of the Brookton Highway in the Perth Hills District, and included areas of forest harvested to gap and shelterwood silvicultural treatments, as well as sites in previously unharvested forest. A report on the results from FORESTCHECK monitoring undertaken in 2002–2003 is available on CALM's website, NatureBase.

Impacts of silvicultural practices

Monitoring of groundwater levels and streamflow 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 intermediate rainfall zone (900–1000 mm/annum) of the northern jarrah forest. Three years after the harvesting treatments, the results show that groundwater rose to a small extent in response to the intensive treatment but was not affected by the application of the current guideline. Stream water quality and quantity were not affected by either silvicultural treatment.

Armillaria root disease

Data from a thinning experiment in Warren forest block showed that intensive thinning in karri regrowth stands infested with *Armillaria luteobubalina* may result in a significant increase in disease incidence and severity in residual trees. Other results from below ground surveys for Armillaria root disease in high quality karri regrowth showed that disease levels could be underestimated by 20–40 per cent if based solely on above-ground symptoms because only about one-half of the infected trees were detected. Ongoing collaborative work with the FPC on methods of disease control, including stump removal, following thinning was initiated.

Regional indicative harvest plans

The Division was involved in the preparation of the 2004 Indicative Timber Harvest Plan, which was released in December 2003 and identified areas for detailed planning and coupe design. The one-year plan included new operations in parts of 28 forest blocks and formed the basis for regional consultation. The FMP requires the development of a three-year timber harvest plan by the end of 2005 and preliminary work began on its production.

Adaptive management

The FMP provides for conducting adaptive management trials. CALM, in cooperation with the FPC, planned and set up two adaptive management trials to test the use of vegetation laid on landings and snig tracks to protect soil in the snigging and loading phase of timber harvesting. The trial will be implemented in winter 2004.

Introduction of fauna habitat zones

A major initiative of the FMP is the introduction of approximately 300 fauna habitat zones of a minimum of 200 ha in State forest and timber reserves. The purpose of the zones is to provide a sufficiently extensive network of areas excluded from timber harvesting in the mid-term to maintain fauna populations within themselves and to provide a source for recolonisation of nearby areas after timber harvesting. The indicative location and shape of the zones for the initial map published in January 2004 involved the spatial analysis of information to meet the criteria published in the FMP. The location of the zones was reviewed, particularly in relation to mining activities, as required by the FMP by the end of June 2004. Maps of the location of indicative fauna habitat zones are published on CALM's website NatureBase.

Partnerships

Throughout the year effective communication and interaction continued with:

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

The SFM Division contributed to the work of the Primary Industries Ministerial Council, the Natural Resource Management Ministerial Council, and the National Forest Inventory and to other national forums on ecologically sustainable forest management. This included the provision of technical expertise to the development of a Continental Forest Monitoring Framework, private native forest inventory and national initiatives in carbon accounting.

Sustainable Forest Management

Performance Measures	Output 2		
	2003–2004 Target	2003–2004 Actual	Explanation of significant variation between 2003–2004 Estimated and 2004–2005 Target
Quantity			
Forest area managed (ha)	1,308,000	1,252,300	
Quality			
Compliance with management standards	>95%	91%	The figure represents the unweighted average of the level of compliance with the measures of the Key Effectiveness Indicator reported in the Performance Indicator section of this report.
Timeliness			
Satisfaction of programmed management	100%	100%	
Cost (efficiency)			
Average cost per hectare managed	\$25.11	\$27.50	

Trends in the area of native forest harvested

	<u>Jarrah forest</u>	<u>Jarrah/Wandoo forest</u>	<u>Karri forest</u>	
	ha	ha	Clearfelled or cut to seed trees	Thinned
	ha	ha	ha	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	Nil	720	485

* Jarrah/wandoo harvested included in jarrah total.

Parks and Visitor Services – Output 4

Highlights

- Progress towards the creation of proposed new national parks in WA's south-west forests.
- Advancement of management plans and recreational site development for the proposed new parks.
- Advancement of joint management of parks with Aboriginal custodians.

Outcome achieved by

Community enjoyment of wildlife, land and waters without compromising conservation and other management objectives.

Output description

Management of lands and waters; dealing with public involvement, visitation and appreciation of the natural environment on lands and waters managed by CALM, 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 CALM 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 experience and help develop greater community awareness and support for parks, natural areas, nature-based tourism and recreation services and policies.

The output performance is reported in eight key areas:

- Planning for management.
- Acquisition and administration of protected areas.
- Park presentation and resource protection.
- Visitor communication and management.
- Community involvement.
- Liaising and working with Indigenous people.
- Business management.
- Legislation and policy for parks and visitor services.

There are several other significant projects, such as the Bibbulmun Track and Munda Biddi Trail, Regional Parks and Regional Services that merit reporting separately.

Planning for management

Section 33 of the CALM Act requires CALM to manage all land to which the Act applies according to a 'management plan' where there is a management plan for that land. A management plan contains a statement of the policies or guidelines proposed to be followed, as well as a summary of the proposed operations. Management plans are prepared by CALM on behalf of the Conservation Commission and the Marine Parks and Reserves Authority (MPRA).

Management plans are prepared for a period of 10 years but may be replaced by a new management plan before and after the 10-year period.

The Minister for the Environment approved one area-specific management plan during 2003–2004 (Turquoise Coast Island Nature Reserves). A Forest Management Plan 2004-2013 also was approved, which replaced three existing 1987 regional management plans (Northern Forest, Central Forest and Southern Forest) and the Forest Management Plan 1994-2003. The total number of management plans under the CALM Act is 45. A further 28 plans are in various stages of completion.

During 2003–2004, draft management plans for Thomsons Lake Nature Reserve, Forrestdale Lake Nature Reserve and Rockingham Lakes Regional Park were released for public comment. A draft management plan/indicative management plan for the Rowley Shoals Marine Park and proposed extensions was also released, as was an indicative management plan for the proposed Montebello/Barrow Islands Marine Conservation Reserves.

The CALM Act specifies that the public be given an opportunity to contribute to the content of management plans. CALM achieves this through public and stakeholder workshops and meetings, advisory committees, newsletters and inviting comments on draft plans. During 2003–2004, 45 public or stakeholder meetings, 77 meetings of 15 advisory committees and three meetings of two Aboriginal Park Councils were held to facilitate community input into the planning process (excluding marine reserves—see Output 1 Marine Conservation).

The 'Managing our Parks and Reserves' component of CALM's NatureBase web page has features that enable electronic public submissions and the downloading of information relevant to management planning. This includes issues papers, 'Have Your Say' brochures, final and draft management plans, analysis of public submission reports and copies of the 'Planning Diary' newsletter. The latter is aimed at keeping stakeholders up-to-date with progress on each management plan in preparation. Three issues of the diary were produced during 2003–2004, with the most recent being sent directly to approximately 600 stakeholders.

The two tables list the area of each tenure category managed by CALM for which plans are completed, and the status of plans in preparation or already approved as at 30 June 2004.

Management plans as at 30 June 2004

Final Management Plans (completed and approved)	Region	Effective from
Mooradung Nature Reserve	Swan	21/2/86
Nature Reserves in the Shire of Wyalkatchem	Wheatbelt	21/2/86
Forrestdale Lake Nature Reserve (five-year term)	Swan	10/7/87
Nature Reserves in the Shire of York-Northam	Swan	10/7/87
Shannon and D'Entrecasteaux National Parks	Warren	8/1/88
Benger Swamp Nature Reserve (five-year term)	South West	12/2/88
Leeuwin-Naturaliste National Park	South West	21/4/89
Yanchep National Park	Swan	29/9/89
Ningaloo Marine Park	Pilbara	24/11/89
Waroona Reservoir and Catchment Area	South West	16/3/90
Logue Brook Reservoir and Catchment Area	South West	16/3/90
Cape Range National Park	Pilbara	23/3/90
Dampier Archipelago Nature Reserves	Pilbara	31/8/90
Lane Poole Reserve	Swan, South West	14/12/90
Fitzgerald River National Park	South Coast	19/7/91
South Coast Region	South Coast	13/3/92
Marmion Marine Park	Swan	15/5/92
Walpole-Nornalup National Park	Warren	3/7/92
Shoalwater Islands Nature Reserves	Swan	20/10/92
Matilda Bay Reserve	Swan	21/5/93
John Forrest National Park	Swan	19/8/94
Goldfields Region	Goldfields	24/2/95
West Cape Howe National Park	South Coast	4/8/95
Yalgorup National Park	Swan	15/8/95
Lesueur National Park – Coomallo Nature Reserve	Midwest	13/10/95
Dryandra Woodland	Wheatbelt	14/11/95
Purnululu National Park and Conservation Reserve	Kimberley	5/3/96
Two Peoples Bay Nature Reserve	South Coast	7/6/96
Wanjarri Nature Reserve	Goldfields	2/7/96
Shark Bay Marine Reserves	Midwest	7/3/97
Canning River Regional Park	Swan	5/12/97
Nambung National Park, Wanagarren, Nilgen and Southern Beekeepers Nature Reserves	Midwest	11/9/98
Leschenault Peninsula Conservation Park	South West	8/1/99
Esperance Lakes Nature Reserves	South Coast	11/5/99
Karijini National Park	Pilbara	15/6/99
Stirling Range and Porongurup National Parks	South Coast	3/12/99
Swan Estuary Marine Park and Adjacent Nature Reserves	Swan	7/4/00
Jurabi, Bundegi Coastal Parks and Muiron Islands	Pilbara	25/08/00
Serpentine National Park	Swan	3/10/00
Shark Bay Terrestrial Reserves	Midwest	3/10/00
Rowles Lagoon Conservation Park and Clear and Muddy Lakes Nature Reserve	Goldfields	19/1/01
Carnac Island Nature Reserve	Swan	4/10/03
Yellagonga Regional Park	Swan	28/06/03
Forest Management Plan	Swan, Warren and South West	1/1/04
Turquoise Coast Islands Nature Reserves	Midwest	Approved 22/5/04 – awaiting gazettal

Management plans as at 30 June 2004 (continued)

Final Management Plans (being prepared)	Region	Submission Period
Beeliar Regional Park	Swan	14/11/01-14/2/02
Forrestdale Lake Nature Reserve	Swan	27/10/03-30/1/04
Herdsmen Regional Park	Swan	5/6/01-5/9/01
Jurien Bay Marine Park	Midwest	5/10/00-5/1/01
Proposed Montebello/Barrow Islands Marine Conservation Reserves	Pilbara	17/02/04-17/05/04
Shoalwater Islands Marine Park	Swan	26/10/95-26/12/95
Thomsons Lake Nature Reserve	Swan	27/10/03-30/1/04
Rockingham Lakes Regional Park	Swan	27/10/03-27/2/04
Rowley Shoals Marine Park and Proposed extensions to the existing marine park	Kimberley	12/1/04-12/4/04
Woodman Point Regional Park	Swan	30/09/02-30/11/02
Draft Management Plans (in preparation)	Region	
Cape Range National Park	Pilbara	
Dampier Archipelago	Pilbara	
Indicative Management Plan for the proposed Dampier Archipelago/Cape Preston Marine Conservation Reserves	Pilbara	
Esperance Coastal Parks and Reserves	South Coast	
Indicative Management Plan for the proposed Geographe Bay- Leeuwin Naturaliste-Hardy Inlet Marine Park	South West	
Jandakot Regional Park	Swan	
Kalbarri National Park	Midwest	
Kennedy Ranges National Park		
Kimberley Region	Kimberley	
Lane Poole Reserve	Swan and South West	
Parks of the Leeuwin Ridge, Gingilup Swamp Nature Reserve and Scott National Park	South West	
Millstream-Chichester National Park and Mungaroo Range Nature Reserve	Pilbara	
Ningaloo Marine Park and Indicative Management Plan for proposed extensions	Pilbara	
Shannon-D'Entrecasteaux National Park (Revision)	Warren	
St John Brook and Jarrahwood Conservation Parks	South West	
Indicative Management Plan for the proposed Walpole- Nornalup inlets Marine Park	Warren	
Walpole Wilderness	Warren	
Wellington National Park, proposed national park extensions and proposed Westralia Conservation Park	South West	
Wheatbelt Region	Wheatbelt	
Yanchep and Neerabup National Parks and Neerabup Nature Reserve	Swan	

Areas covered by management plans as at 30 June 2004

Tenure classification	Area covered by plan (ha)	Total tenure# area (ha)	% covered
National Park	1,751,553	5,092,689	34.4
Nature Reserve	361,050	10,827,872	3.3
Marine Reserve	1,115,125	1,226,978	90.9
Other Recreation/ Conservation Reserves	93,710	850,818	11.0
Total CALM Conservation Estate	3,321,438	17,998,357	18.5

Note: Figures exclude some Regional Park management plan areas.

Total tenure area excludes State forest and timber reserves (see Sustainable Forest Management Output).

Acquisition and administration of protected areas

Reserve acquisition

The formal process of adding land to the protected area system was completed for land purchased in preceding years in the shires of Irwin, Gingin, Kent and Trayning.

In addition to CALM's land acquisition program, lands were added to the conservation estate through involvement with other programs and processes. Additions in the past year included land ceded to the State as a condition of subdivision, land swaps and reserves no longer required by other organisations. Additions finalised included land ceded to the State and to be added to the Leeuwin-Naturaliste National Park, the transfer of a Water Corporation reserve in the Shire of Yilgarn and the creation of a new conservation park at Harvey.

Also, work began on the implementation of tenure proposals in the Forest Management Plan 2004-2013.

CALM made appropriate excisions to the State's conservation and forest estates to accommodate proposals which have a community benefit or provide an appropriate conservation offset, e.g. the widening of Great Eastern Highway.

CALM continued its role in providing advice on land tenure issues referred from other organisations such as the Department for Planning and Infrastructure and the Water Corporation, commenting on hundreds of proposals, from the use of unallocated Crown land for camel harvesting to the change in purpose of Crown reserves or the disposal of those reserves.

A consultant undertook a review of the tenure recommendations in management plans and began actions on outstanding proposals, including the consolidation of the Leeuwin-Naturaliste and Walpole-Nornalup national parks.

The State Government announced that the undeveloped areas of Rottnest Island would be vested in the Conservation Commission as a national park.

Leasing activities

CALM has 168 current formal arrangements for a wide range of purposes. The majority of such arrangements are in the form of leases for uses including recreation, tourism, sporting accommodation, utilities and education facilities. Other arrangements include permits for sawmills and licences for other activities where exclusive use is not appropriate, such as agencies co-locating on CALM communication towers.

During the year 10 new agreements were finalised. These included the provision of communications facility licences to the Palcon Group, St John Ambulance, Department of Justice, Telstra and the Commissioner for Police. Arrangements were also made to enter into 15 Memoranda of Understanding with other agencies that are joint owners of CALM communication

towers. Leases also were finalised for the Motoring South West facility at Collie and for the Cape Leeuwin Lighthouse precinct for the operation of recreation and tourism services. Work was undertaken on the development of two new lease agreements for sawmills at Palgarup and Dwellingup.

During the year, progress was made on the preparation of lease arrangements to facilitate future extraction of basic raw materials by local government authorities and Main Roads WA under the provisions of either the Local Government Act or the Mining Act respectively.

Apiary site management

At the year's end there were 3,226 current apiary site permits issued over Crown lands within the State. Of these, 1,646 permits were on lands managed by CALM – 990 were located on State forest, 98 on timber reserves, 224 on national parks, 237 on nature reserves and 97 on conservation parks or other reserves. During the year there were 138 permits transferred, 735 permits renewed, 25 sites relocated and 179 applications processed for new and previously issued sites.

In May 2004, the Minister for the Environment announced approval for the trading of apiary site permits, subject to the introduction of amended regulations relating to beekeeping on Crown lands to allow for site trading. Trading of apiary sites was a matter recommended for consideration as part of the National Competition Policy Review of CALM legislation. Considerable public and industry consultation on the issue has occurred over several years. The National Competition Policy legislation review process also identified two provisions in the *Forest Management Regulations 1993* applicable to the granting of apiary site permits that were considered to be restrictions on competition that were not in the public interest. These provisions were repealed under the *Forest Management Amendment Regulations 2003*.

The Beekeeping Consultative Committee, which provides input to CALM on matters relating to the beekeeping industry, met twice during the year to discuss and progress a range of issues that affect beekeepers' access to Crown lands. These included trading of apiary sites, review of policy, feral bees, communication procedures between CALM and apiarists during wildfires, access to pastoral leases and the proposed Walpole Wilderness Area management planning process.

Park presentation and resource protection

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

Master plans, site development and/or concept plans were completed for many projects around the State. These plans were prepared to assist with strategic planning decisions, funding applications and to enable capital works projects to be undertaken according to plan. Some examples included: plans for access and visitor facilities on the Mitchell Plateau in the Kimberley; day-use areas on the newly developed scenic drive in Lesueur National Park; new visitor facilities in conjunction with traditional owners in Millstream-Chichester National Park; new

camping and day-use area at Skippy Rock in Stokes National Park; new beach parking at Buffalo Beach in Leschenault Conservation Park; renovation of the Pemberton Arboretum; and a new Bandicoot Drive Trail in Dryandra Woodlands. Planning for visitors to Leeuwin-Naturaliste, Millstream-Chichester and Cape Range national parks continued.

Design and/or construction documentation drawings were prepared for many projects including: interpretive structures at Canal Rocks; a new amphitheatre at Conto's Campground and new steps at Sugarloaf Rock in Leeuwin-Naturaliste National Park; new toilets at Hellfire Bay in Cape Le Grand National Park; and a new camping shelter for the Munda Biddi Trail. Other structures such as boardwalks, steps and lookouts were designed and prepared for construction, including Serpentine Falls in Serpentine National Park and Guillotines in Leeuwin-Naturaliste National Park.

Concept, site and documentation plans were prepared to facilitate ongoing implementation of the Government's *Protecting our old-growth forests* policy. Projects included: upgrading the campsite at Sues Bridge on the Blackwood River; improving campsites at Honeymoon Pool and a new riverside walk on the Lower Collie River; new entry information sites into Wellington National Park; improving day-use sites on the Mundaring Weir Road; a new lookout and day-use facilities at Mt Dale; visitor access and facilities at Lake Yeagarup; upgrading camping at Banksia Camp and building camping huts at D'Entrecasteaux National Park; upgrading Shannon campground at Shannon National Park; upgrading the walk track to Mt Lindesay; defining day-use at Lake Unicup; resolving day-use at the Knolls and a new toilet for Circular Pool in Walpole-Nornalup National Park.

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

Planning, training and design advice were provided as needed. Informal training in recreation and tourism planning and design was provided to CALM staff on a project-by-project basis throughout the year. Participation in formal training in project management was undertaken. Advice was given on numerous projects associated with CALM and representation occurred on working groups including the Ningaloo Carnarvon Coastal Strategy and the Coastwest Technical Assessment Group. A new Small Structures Album was produced to help CALM staff determine the best small structure, such as a toilet, shelter or lookout for a particular site.

Visual impact assessment, recommendations, guidelines and specialist advice were provided for a number of proposals throughout the year. Other impacts commented on included telecommunications towers, mining, gravel extraction, infrastructure development, housing and tourism developments. Visual landscape management processes and operational guidelines for a wide range of impact and development types continued to be developed between the Department for Planning and Infrastructure, Main Roads WA, Department of Environment and CALM.

Progress towards new national parks

Significant progress was made during 2003–2004 towards the creation of proposed new national parks in the south-west forests under the State Government's *Protecting our old-growth forests* policy.

At the end of June 2004, indicative boundaries for all 30 of the proposed new national parks had been released. Of these, final boundaries for 19 of the new national parks had been considered and approved by Government. A key part of the process towards finalising the boundaries was consultation with the community and stakeholders. Comment was invited from community groups, conservation groups, mining and timber industry groups, local government authorities, native title claimants, Aboriginal representative bodies, State Government agencies, utilities and the public. Government will progressively consider final boundaries for the remaining parks after completion of consultation processes.

A Reserves Bill to create nine of the new national parks, provisionally known as Greater Kingston, Greater Dordagup, Greater Preston, Greater Beedelup, Boorara Gardner, Jane, Yelverton, Forest Grove and Boyndaminup, and add more than 14,000 ha to the existing Wellington National Park was introduced into State Parliament on 23 June 2004. The Bill will also implement a number of other land tenure changes proposed in previous forest management plans, endorsed in the Regional Forest Agreement and carried forward in the Forest Management Plan 2004–2013. The contribution of the Department of Land Information and the Department for Planning and Infrastructure in the preparation of reserve plans, technical descriptions and advice for the Bill is gratefully acknowledged.

It is intended that a further Bill or Bills will be introduced to create the remaining proposed new national parks. Reservation of these areas is important for the protection of old-growth forests, biodiversity, landscape values, heritage and cultural values and will provide opportunities for sustainable recreation and tourism.

Visitor communication and management

Interpretive planning

Communication with visitors is an integral function within the Parks and Visitor Services Output. Visitor communication planning is an essential component of CALM's management planning process. Officers provided interpretive perspectives into the preparation of management plans, recreation site development plans and interpretive projects.

Interpretive communication was integrated into the Warren Region Visitor Services Plan and its prescriptive Precinct Plans. This included the planning for the proposed Walpole Wilderness Area and the three sites that make up the Wilderness Discovery Centre.

Progress with the Swan Region Communication Strategy involved more than 100 regional staff within nine workshops looking at communication issues in the region.

Interpretive design

The Unit's Sign Design Studio continued to meet regional needs for signs and displays in managing visitors to CALM-managed lands and water. Designs were prepared for more than 190 projects. A number of these projects were funded through the Government's New Parks program under the *Protecting our old-growth forests* policy and included Wellington National Park and the Golden View Lookout in the proposed Mundaring National Park.

Interpretive products of particular note include the innovative interpretive display installed near Exmouth at the Jurabi Turtle Centre, which explored the life cycle of turtles, threats to their survival and how visitors can help care for turtles.

Interpretive feature signs were produced for Hawks Head and Natural Bridge in Kalbarri National Park; Bluff Knoll in the Stirling Range National Park; Canal Rocks in Leeuwin-Naturaliste National Park; and the Boorara Tree 'Cabin' near Northcliffe.

Interpretive shelters were installed at Mundaring Sculpture Park in collaboration with the Munda Biddi Foundation, Shire of Mundaring and the National Trust WA; Rowles Lagoon; Barrabup Pool and Barrabup Settlement in Nannup; Noggerup in Busselton; Belvidere in Leschenault Peninsula; Workman's Pool near Kirup; Mt Chudalup near Northcliffe; and Windy Harbour in D'Entrecasteaux National Park.

Trailside signs for interpretive walks were developed for Windy Harbour/Point D'Entrecasteaux; Belvidere on Leschenault Peninsula; Australind; Old Timberline Trail near Kirup; Barrabup Settlement Trail in Nannup; Calgardup Cave in Leeuwin-Naturaliste National Park; and the Walyunga Aboriginal Heritage Trail.

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

Management signs were produced for Jurien Bay Marine Park identifying and explaining the marine park zones and the appropriate activities within each zone.

Community liaison, consultation and advisory services

Community involvement assisted in the production of interpretive signs for two walk trails for the Friends of Crooked Brook, signs for Birds Australia for the protection of the hooded plover, and an information/orientation sign for the Department of Defence at the Lancelin Defence Training Area.

Unit staff continued their close association with CALM's Indigenous Heritage Unit in planning for cultural interpretation for visitors. Unit staff worked closely with the new regional working parties of the South West Land and Sea Council to facilitate Indigenous consultation on cultural sites throughout the Wheatbelt.

Interpretation projects are tangible expressions of sound relationships with Indigenous communities across the State.

Guided interpretation programs

Guided interpretive activity programs were conducted in more than 30 parks and reserves throughout WA. More than 140 staff are involved in leading these guided experiences – more

than 10 per cent of CALM's workforce. Participants enjoy an enriched experience while learning to support sound management of our heritage. Regular activity programs attract more than 300,000 participants.

Major guided interpretive programs were run at Geikie Gorge, Mirima and Purnululu national parks in the Kimberley; Karijini and Millstream-Chichester national parks in the Pilbara; Monkey Mia in the Midwest; and Pemberton and the Valley of the Giants in Warren Region. Yanchep National Park, Perth Observatory, Penguin Island and the Nearer to Nature program based at The Hills Forest Discovery Centre provided experiences in and around the Perth metropolitan area.

Two trailer displays were produced for the Nearer to Nature program, one for guided marine activities and one for guided forest activities.

The Big Bush Heritage Celebration at Wharncliffe EcoDiscovery Centre in Margaret River on Easter Sunday was successful again this year, attracting more than 500 people. The event, which celebrated the natural and cultural values of this area, involved the local community, employed local guides and benefited local businesses.

Training and professional development

CALM conducted a Recreation Planning and Management Course for CALM staff and others during 2003–2004. Visitor management through communication strategies of information, interpretation, community involvement, consultation and public participation was a core component of the six-day course.

Staff presented a workshop in interpretive planning for staff at Perth Zoo and a two-day workshop in interpretation was presented at Jurien Bay, funded through Land Skills, for local people interested in environmental management and ecotourism. Presentations on guiding issues in WA with national relevance were made in Melbourne to the Interpretation Association Australia conference; on the principles of designing interpretive experiences to the Ecotourism Association Australia conference in South Australia; on the principles of interpretive communication to the International Sustainability Conference in Fremantle; and the Volunteer Botanical Garden Guides National Conference in Perth on innovative interpretive guiding.

Nature-based recreation and tourism research

CALM's cooperative nature-based recreation and tourism research program with WA's major tertiary institutions continued to grow during the past 12 months. This partnership seeks to utilise and apply the universities' expertise and knowledge in the social and environmental sciences on various field-based recreation and tourism projects. Students can gain valuable field experience and CALM can benefit from the results of these studies. At the end of 2003–2004, 68 research projects were either completed, in progress or available. CALM's website NatureBase has a comprehensive listing of these completed projects as well as potential research topics that can be undertaken by students as honours, masters or PhD studies.

A Research Reference Group facilitated the coordination of students and projects, and comprised academic staff from the five State universities as well as CALM staff. Dr Sue Moore from Murdoch University's Environmental Science faculty is the chairperson of the group.

The main functions of the Reference Group are:

- identify potential research studies of relevance and importance to the planning, development, management, monitoring, marketing and financing of sustainable recreation and tourism opportunities in natural areas;
- act as 'research brokers' by finding and allocating these studies to tertiary students and/or faculty members who are interested in pursuing a particular topic or field of inquiry; and
- assist in disseminating the results of these studies to CALM's regions, districts and specialist units and to other interested parties.

The Research Reference Group also hosted a one-day research forum in conjunction with CALM's annual Parks and Visitor Services Workshop. Several students who either completed or are currently undertaking nature-based recreation and tourism research projects presented the results of their field research at this forum.

CALM also was an active member of the Sustainable Tourism Cooperative Research Centre (CRC) and was represented on a number of steering committees overseeing research projects including visitor impact monitoring, technology for remote capture and transmittal of data and information and visitor monitoring models. The CRC through research undertaken by the Curtin Sustainable Tourism Centre completed research into the economic value of tourism in national parks, marine parks and forests of WA.

Community involvement

CALM's Community Involvement program continued to remain an effective means of enlisting the support of the community and providing meaningful and interesting opportunities for volunteers to participate in conservation and other land management activities. Two thousand seven hundred volunteers contributed 355,000 hours during 2003–2004.

Volunteers continued to participate in many ongoing projects such as the Bibbulmun Track Foundation office and track maintenance, wildlife carers, WA Herbarium and campground hosts.

There were 30 new projects registered for the year, ranging from a bird survey in the Drummond Natural Diversity Recovery Catchment to an interpretive activity program with ecoguides at Shark Bay.

Many four-wheel-drive (4WD) clubs worked closely to support CALM field staff in the rehabilitation and enhancement of the natural landscape in projects such as the Leschenault Conservation Park and Lake Mason homestead cleanup and maintenance projects.

During the year, volunteer wildlife carers supported CALM staff on displays educating the public and highlighting community involvement at a series of events including the Caravan and Camping Show, 4WD and Camping Show and the Royal Agriculture Show Landcare displays.

Further training opportunities were provided in Senior First Aid, Basic Fire Awareness, Emergency Radio Awareness and the Honorary CALM Officer program for volunteers in the Campground Host program in addition to the training they receive at the annual information day.

The Perth Zoo veterinary staff and CALM liaised closely to provide a new basic wildlife carers course that was attended by approximately 200 participants during the year with an advanced wildlife carers course due to commence early in July.

The course provides wildlife carers with the knowledge and information they require to properly care for native wildlife, however, it has also become a tool for environmental and veterinary students to access further information for their education and learn about CALM and its management practices as a reference for future employment.

The Community Involvement program continued to provide work experience opportunities for students ranging from office assistance to fauna relocation and land management throughout the year.

CALM also received valuable feedback and support through managing parks in partnership with community-based advisory committees and friends of parks groups.

CALM would like to acknowledge its partnership with the Department of Justice for its support with the Bibbulmun Track, Munda Biddi Trail and regional parks, and Conservation Volunteers Australia for assistance with providing groups of volunteers in many areas.

Community involvement volunteers

Year	No. registered	New projects	No.volunteers contributing	No. of hours
1998–99	2,400	19	836	108,630
1999–00	3,800	12	1,400	121,000
2000–01	4,499	26	1,600	190,000
2001–02	5,683	20	2,500	217,000
2002–03	5,160	32	3,150	264,000
2003–04	6,100	30	2,700	355,000

CALM Bush Rangers cadet program

CALM Bush Rangers has operated as part of the State Government's Cadets WA program since 1998. The program fosters competence and confidence in life skills such as teamwork and leadership, and within the CALM Bush Rangers network, an ethic for conservation community service.

In the 12 months to December 2003, Bush Rangers spent approximately 227,000 volunteer hours in the program on the study of nature conservation and in voluntary nature conservation work, and were assisted by more than 100 CALM staff and supported by 114 Bush Rangers Instructors.

Bush Rangers cadet program

Year	No. school units	No. of CALM Bush Rangers cadets	No. of hours
2000–01	21	800	105,600
2001–02	29	1,100	180,000
2002–03	28	960	200,000
2003–04	28	945	227,000

Liaising and working with Indigenous people

The Indigenous Heritage Unit (IHU) continued to work towards increasing the understanding of local Aboriginal culture by CALM and the wider community. To fulfil this charter the unit developed strong partnerships with schools, educational institutions, the State and Commonwealth governments, local communities and catchment groups.

IHU developed a diverse collection of educational programs to meet the needs of industry, community and Government. As a small team of professional presenters the unit continued to diversify services to meet the changing needs of a growing client group.

Education

- Conducted 78 school educational presentations for 5,148 participants.
- Delivered seven Cross Cultural Awareness training sessions across the State to regional and metropolitan sites.
- Delivered 'Cultural Knowledge' to Certificate II and III Cultural Tourism students at Swan TAFE.
- Developed 'CALM Staff Professional Development - Walyunga Cultural Experience'. Seventy-five staff participated in three courses.
- Delivered education programs to universities, primary and secondary schools and community groups. Education programs continue to be well used by Government schools with a growing market from the private school system.

Liaison

IHU increased its liaison role within CALM and with Aboriginal community groups to assist CALM's regional staff in meeting with local Aboriginal communities. Organisations that were provided with presentations and advice included:

- Wagin Aboriginal Corporation;
- Department of Education and Training;
- WA Police Service;
- Murdoch University;
- Marr Mooditj Foundation;
- Cockburn Wetlands Education Centre;
- South West Land and Sea Council;
- University of WA;
- World Vision;
- Central Desert Rangers;
- Swan Catchment Group;
- Challenger TAFE;
- Bennett Brook Catchment Group;
- City of Melville – Djitty Djitty Corp;

- Department of Environment;
- City of Joondalup;
- City Wanneroo;
- City of Stirling;
- Men's Group – Maam Moort Boodgah;
- Bunbury Prison; and
- Nyandi Prison.

Other achievements of IHU

Work continued on the development of an Indigenous Heritage Unit Business plan, to help the unit meet the needs of CALM in working with Aboriginal communities in the southern regions of the State.

Business management

Providing accurate park information, promoting acceptable and responsible use by all visitors to the conservation estate and providing services to the tourism industry are important functions of CALM.

The suite of three brochures, featuring the Northern, Central and Southern regions of WA were re-designed to be a more efficient informational tool for visitors to CALM-managed areas, providing improved maps and an easy-to-read guide to the facilities and services available in national parks and reserves. With Australia-wide distribution, the brochures continued to be one of CALM's most valuable communication tools.

CALM attended a number of consumer events during the year where it distributed brochures, sold National Park Passes and CALM publications and answered queries from the general public. During November 2003, CALM linked with Tread Lightly Australia and Track Care WA in a joint display at the 4WD Drive and Adventure Show to promote and encourage responsible visitor behaviour. In March 2004, staff from Park Policy and Services Branch and Wildlife Branch attended the Perth Caravan, Camping and Park Home Show to build the public's awareness and appreciation of nature conservation and the facilities and services available within the CALM-managed estate. CALM also participated in all interstate caravan shows through partnerships with the WA Tourism Commission.

Brochures and National Park Passes continued to be distributed and sold through 40 independent retail outlets as well as CALM offices and some national parks. A greater awareness of the park pass renewal system resulted in an increase in renewal numbers over the previous financial year. The renewal of the Annual All Park Pass rose by 18 per cent and the renewal of the Annual Local Park Pass by 10.5 per cent.

Breakdown of Pass distribution 2003–2004 (includes sales and passes sent to CALM offices but not yet sold)

Holiday Park Pass – 4 weeks	10, 420	(up 11.5%)
Annual Local Park Pass – 1 park, 12 months	7,240	(up 10.5%)
Annual All Park Pass – All parks, 12 months	4,523	(up 9%)
Goldstar Park Pass – All parks, 12 mths & 1 year <i>Landscape</i> subscription	1,030	(down 6%)

CALM hosted the WA Nature-Based Tourism Exchange and Supplier Workshop (previously called CALMTIE) in August 2003 as a full day event in partnership with the Australian Tourism Export Council. This progressive full-day event allowed regional tourism organisations not only to showcase their products to the inbound tourism market and build important industry relationships, but also to further their knowledge, understanding and appreciation for sustainable tourism within our State's natural areas. This exchange explored existing and new opportunities for sustainable nature-based tourism experiences while educating CALM on the current needs and concerns of the nature-based tourism industry.

CALM continued to work closely with the tourism industry on the quarterly newsletter *Touring Western Australia* and discussions on major policy-related issues with key industry representatives through CALM's Tourism Industry Reference Group. The email broadcast system continued to be an effective communication tool that notified tour operators, visitor centres and a range of other stakeholders of current and important park information.

The Marketing and Tourism Unit provided regular articles to the RAC Road Patrol magazine, promoting responsible and sustainable recreational opportunities within the CALM estate to the WA self-drive market. This has proved to be an effective promotional and educational tool.

Environmental consultants were engaged early in the year to help CALM develop sustainability criteria to be used to assess future calls for expressions of interest for accommodation on CALM-managed land. These sustainability criteria will guide accommodation operations towards becoming environmentally, structurally and socially sustainable through modified practices and business decisions and are a major step forward in increasing awareness of operator impacts on the CALM estate.

To assist in the management and conservation of WA's protected areas, CALM licenses commercial tourism activities in accordance with section 101 of the CALM Act. The issuing of licences enabled CALM to monitor and manage visitor access and use of lands and waters vested in the Conservation Commission and the MPRA.

As at 30 June 2004, 376 commercial activity licences were in issue for activities in marine and terrestrial reserves. This was composed of 326 general 'T' class licences and 50 special 'E' class licences. E class licences apply to those tourist operations that require restricted numbers or are in areas that are particularly sensitive – e.g. whale shark interaction at Ningaloo. The total number of commercial activity licences was down from 405 licences in issue at the end of 2002–2003. This was consistent with a general downturn in the tourism industry for reasons relating to world events and an increase in operating costs (such as fuel and public liability insurance).

Streamlining of the licensing process continued this year with delegated authority to sign pre-approved licences provided to manager level. This aided the management of tour operators and their licences by reducing processing timeframes with most licence applications being dealt with in seven working days.

Accreditation of tour operators was strongly encouraged by CALM. Accreditation assists the industry in raising the standards of operation and promotes greater awareness of the impact of commercial tourism on the conservation estate. Tour operators that achieve accreditation can obtain longer-term licences. At the end of 2003–2004 there were 36 Eco Certified (formally Nature and Ecotourism Accreditation Program or NEAP) and 115 National Tourism Accreditation Program (NTAP) accredited tour operators. This was an increase from 12 NEAP and 94 NTAP accredited operators in 2002–2003.

CALM worked in partnership with other Government agencies and Indigenous groups in the management of jointly-vested areas. These include the Commonwealth Department of Environment and Heritage (Rowley Shoals Marine Park), Purnululu Park Council (Purnululu National Park) and the Exmouth Shire (Muiron Islands).

Policy for Parks and Visitor Services

During the year a review of the Department's Policy No. 41 'Beekeeping on Public Land' was undertaken and the draft revised policy was released in June 2004 for public comment.

A process of stakeholder consultation also began in relation to CALM's revised draft Policy No. 18 'Recreation, Tourism and Visitor Services'. The draft policy will also be available for general public comment.

Drafting instructions for proposed amendments to the *Conservation and Land Management Regulations 2002* also were released for public consultation.

Tracks and Trails Unit

The Tracks and Trails Unit draft strategic plan was completed in December 2003. The responsibilities for the unit outlined in the plan are:

- coordinate development, management and maintenance of CALM's long icon trails;
- consultancy service to CALM regions regarding tracks and trails matters;
- coordinate development and application of standards across CALM for tracks and trails development, information and publications;
- provide a CALM point of contact for the community and other agencies for tracks and track-related activities, policy and issues;
- integrate CALM tracks and trails with other trails around the State; and
- coordinate marketing and information dissemination about CALM's tracks and trails, and others, both internally and externally.

The unit comprised four full-time staff, two of whom were dedicated to the Munda Bididi Cycle Trail development.

The Department of Justice Walpole Work Camp crew continued to work on CALM Bibbulmun Track maintenance and improvement projects. A crew from Karnet Prison Farm worked on construction of the first stage of the Munda Bididi Cycle Trail between Dwellingup and Collie and on Bibbulmun Track campsite reconstructions.

A new system of Tracks and Trails Log Books began a trial run at the 48 Bibbulmun Track and five Munda Biddi Trail campsites. The system allowed trail users to record details of their trip to provide CALM with data about trail users and patterns of usage and as an additional strategy in visitor risk management. Details in the books can be used to trace walkers' whereabouts in the event of them becoming lost, or in other emergencies such as wildfire. This system will be implemented on other CALM trails in the coming year and the data obtained will be captured centrally in the RATIS database. Another system tested is group and general public notifications for users of CALM tracks and trails. The first component aimed at education groups using the Bibbulmun Track, and 20 schools that regularly use the Bibbulmun Track began testing the Munda Biddi Trail.

Bibbulmun Track

The Bibbulmun Track Walker Survey Report and methodology was completed in January 2004 and announced by the Premier of WA in May 2004. The methodology delivered a set of tools that can be adapted to allow similar surveys to be conducted on any long trail. The key findings of the survey were:

- Walkers made an estimated 137,500 visits to the Bibbulmun Track over a 12-month period. These visits varied in length between short day walks and multi-day hikes but averaged just over two days for each visit.
- An estimated 280,000 user days were spent by walkers on the track over a full year, representing an increase of 65,000 user days since a survey conducted by CALM in 1999.
- Seventy-two per cent of walkers walked for one day or less; 20 per cent walked for two to three days; and eight per cent did longer hikes.
- Most track use, particularly the day walks, was concentrated along relatively short sections around major tourist sites and population centres.
- One in three overseas and interstate visitors using the track intended to walk the track before arriving in WA.
- An even distribution between male and female walkers, a great improvement from seven years ago when a significant majority of Bibbulmun Track walkers in all age categories were male.
- An even spread across the middle age groups, with more than 80 per cent of walkers being between 25 to 60 years of age and the rest distributed evenly between youth and the over 60s.
- A telephone survey showed that a massive 91 per cent of people in the south-west and 81 per cent in the Perth metropolitan area knew about the Bibbulmun Track.
- An estimated \$21 million annually was spent by track walkers on a range of goods and services such as equipment, transport, accommodation and meals and food supplies. Much of this extra income is being injected directly into regional economies.

The even distribution of track walkers across all age groups and gender, and the track's high profile in the community all indicated the important role the track plays in the recreation, physical activity and health of the WA community. Increasing numbers of interstate and overseas walkers, who generally undertake longer walks, provide important tourism and economic benefits for the south-west.

The second editions of the Bibbulmun Track Southern Maps and Map Pack were released in January 2004. Map and guidebook sales continued at a steady rate with proceeds providing valuable revenue for Bibbulmun Track coordination and administration.

Planning for reconstruction of Mt Cooke and Nerang campsites that were destroyed by wildfire in January 2002 was completed. Volunteers undertook Mt Cooke campsite construction in June 2004 with Nerang due for completion by Bibbulmun Track Foundation volunteers in August 2004.

The partnership between CALM and the Bibbulmun Track Foundation continued to produce positive results for the track. The second of three \$50,000 payments was provided by CALM to the Foundation to fund the management of the volunteer maintenance program and the provision of walker information services. Other collaborations and achievements over the past year included:

- joint submissions that were a finalist in 2003 WA Tourism Awards, and winner of the Commitment to Participation category in 2003 Sport and Recreation Industry Awards;
- survey interviews coordinated and conducted by Foundation volunteers across 17 locations along the track over six-month period;
- Mountain Designs Bibbulmun Team Challenge supported by the Department through a CALM team and operational support of district and Tracks and Trails Unit staff;
- six maintenance volunteer training field days conducted by the Foundation and CALM district and Tracks and Trails Unit staff;
- a complete review of the volunteer database was completed and resulted in confirmation of 227 active maintenance volunteers – all track sections in the Mundaring, Dwellingup, Collie, Blackwood and Albany sections of the track are now completely covered by volunteer teams and many sections in other districts have been assigned to volunteers;
- an information folder on the Bibbulmun Track was compiled and distributed to all district and regional offices, all visitor centres along the track and many outdoor equipment stores;
- the Foundation's Bibbulmun Track website scored 56,000 hits per week; and
- the Foundation restructured its budgeting and financial reporting processes to streamline strategic planning.

Munda Bidli Off-Road Cycle Trail

The first 180 km of the trail from Mundaring to Dwellingup was officially opened by the Minister for the Environment at the Bidjar Ngoulin campsite south of Dwellingup in December 2003. The next section between Dwellingup and Collie (150 km) was completed in late June 2004. This completed the first stage from Mundaring to Collie (333 km). Two new campsites also were built in the second section of the trail along with several new touring diversions. This was made possible with more than \$130,000 in funding from the State Government's New Parks program and \$120,000 through the CALM/ALCOA Forest Enhancement program.

A feasibility and alignment planning study was completed for the proposed Munda Bidli alignment in the Warren area in March 2004. Detailed planning for the Collie to Northcliffe second stage was progressed. A series of community forums was held in the major towns along the trail route as part of the Stage 2 planning process.

The jointly-built trailhead and terminus for the tracks and trails in the Mundaring area was developed in Sculpture Park, Mundaring by CALM, the National Trust and the Shire of Mundaring.

More than 2,500 maps were sold in the 2003–2004 financial year. A set of three new and improved maps and a comprehensive 'Off-Road Cycling Guide' were produced in conjunction with the Munda Biddi Foundation. A paper on *Cycle Tourism - a new niche market for WA* was jointly produced by CALM and the Foundation to promote the social and economic benefits of cycle-specific trails to regional economies.

The partnership between CALM and the Munda Biddi Trail Foundation continued to produce positive results for the trail and its visitors. Achievements included:

- a Lotteries Trails funding grant for \$50,000 for the development of trailheads and campsite interpretation for the northern stage;
- \$5,000 from local government for the development of trail-related services in the regional towns between Mundaring and Albany;
- a Strategic Planning Workshop to set a vision and priorities for the organisation;
- 270 financial members and 16 corporate members;
- compilation and production of the Munda Biddi Trail 'Off-Road Cycling Guide';
- an average 500 visits per week (24,000 annual visits) to the Foundation Website: <http://www.mundabiddi.org.au/> received;
- an on-line Accommodation and Tourism Guide, Trip Planner and Display Poster for selected retail and tourism outlets;
- eight community displays including the Royal Show in October 2003; and
- a series of Trail and Gear Information nights at Mountain Designs including the UWA Extension program.

A series of events also was run, including two women's off-road cycling clinics, a members' party at Wungong and an organised bike ride during Bike Week that attracted more than 60 riders.

Regional parks

CALM continued its role in coordinating the management of Perth's regional parks. A significant change in the management of the parks was the reorganisation of Darling Range Regional Park in light of the proposed new national parks under the State Government's *Protecting our old-growth forests* policy.

CALM's coordinating role in regional parks encompasses:

- Managing lands within regional parks owned by the WA Planning Commission, formerly managed by the Department for Planning and Infrastructure.
- Managing lands vested in the Conservation Commission. The Regional Parks Unit now manages all reserves vested in the Conservation Commission in regional parks.
- Managing reserves vested in the Recreation Camps and Reserve Board formerly managed by the Department of Sport and Recreation.
- Preparing management plans for each of the parks and ensuring an integrated management approach to works within the parks.

Major achievements in parks management during the past 12 months include:

Planning works

- The Rockingham Lakes Regional Park Draft Management Plan 2003–2013 was released for public comment in October 2003.
- Planning for the reorganisation of Darling Range Regional Park was finalised. The reorganisation was undertaken in conjunction with the planning for the proposed new national parks in Perth Hills District.
- A rehabilitation plan for South Lake was completed.
- Significant planning works were completed for Rockingham Lake Regional Park in preparation for the development of transport corridors such as the Perth to Mandurah rail line and the duplication of Dixon Road.
- Input into the preparation of Thomsons Lake Nature Reserve Management Plan continued including the completion of planning for water supplementation and kangaroo management.
- Staff at the Regional Parks Unit provided input into establishing plans for regional parks in Peel and Bunbury.

Conservation works

- Weed control and rehabilitation works continued at numerous sites within the parks. The Regional Parks Unit regularly liaised with local government authorities, volunteer groups, individuals and other organisations in completing the works. Conservation Volunteers Australia also organised rehabilitation works in the parks and both BP and BHP Billiton sponsored conservation works in the parks.

On ground park improvements

- Beeliar Regional Park – Stage Two of the Jervoise Bay Recreation and Conservation Enhancement Project was completed, providing new parking areas, viewing platforms and interpretive displays at Henderson Cliffs and Mt Brown, along with several kilometres of walk trails and shared paths.
- Herdsman Lake Regional Park – a section of shared path approximately two kilometres in length was constructed adjacent to Moondyne Drive, linking with existing paths and completing a trail circuit around the lake. Additionally a footbridge and bird-viewing platform were upgraded.
- Darling Range Regional Park – major works began to enhance the safety and useability of Stathams and Mountain Quarries sites for rock climbers, abseilers and other visitors.
- Yellagonga Regional Park – work began on approximately three kilometres of shared paths, adding to the park's already extensive path network. A bridge linking Perry's Paddock and Beenyup Park also was upgraded.
- Canning River Regional Park – the production of a series of interpretive signs describing some of the park's key natural and cultural values was begun.

Community involvement

The Regional Parks Unit continued to administer eight Community Advisory Committees for the regional parks (one each for the parks on the Swan Coastal Plain and one for the parks in the

Darling Range). In total, the Regional Parks Unit administered 49 committee meetings for the year.

In addition to the Community Advisory Committees meetings, the Regional Parks Unit organised a community workshop to assist in the assessment of Regional Parks Community Grants. A meeting between the chairs of the Community Advisory Committees and the Minister for the Environment to discuss regional park management also took place.

The Regional Park Community Grants Scheme was successfully administered for the second year running. The grants were established to help community volunteer groups undertake projects that rehabilitate, conserve, enhance or restore natural areas and values, as well as for activities that raise public awareness and appreciation of nature conservation at a local level. A total of \$50,000 was offered for grants ranging from \$500 to \$5,000. Twenty-one community groups were successful in securing funding for a variety of projects including rehabilitation works, weed control works, education programs, interpretive signage and administration costs.

In addition, volunteers contributed almost 6,400 hours working on CALM-managed lands within the regional parks during the past 12 months. This work primarily related to weed control and rehabilitation.

Maintenance contracts

A number of large maintenance contracts required renewal during the year. The contracts were advertised and covered various maintenance services across all the regional parks including grass maintenance, toilet and barbecue cleaning, chemical weed control, pruning, felling and chipping and reticulation maintenance.

Other initiatives

Visitor Information and Statistics (VISTAT) program

The aim of the VISTAT program is to provide accurate information on visitor use, needs and expectations and on levels and patterns of use throughout lands and waters managed by CALM. The VISTAT and Visitor Survey databases contained within the Recreation and Tourism Information System (RATIS) provide an effective and efficient means of collating and storing visitor use monitoring data and visitor feedback form results. CALM continued to upgrade both the RATIS database and the hardware required to monitor visitor use.

Visitor use monitoring

Visitor use is monitored at 200 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 visitation to lands and waters managed by CALM during the year was 10.9 million visits. This represents an increase from the 10.1 million visits recorded during 2002–2003. This increase reflects a continuing interest by the public in visiting natural areas managed by CALM.

Total visits to CALM-managed lands and waters

Year	Number of data collection sites	Total number of visits (million)
1997–1998	144	8.1
1998–1999	149	8.7
1999–2000	158	8.9
2000–2001	158	9.7
2001–2002	185	9.8
2002–2003	190	10.1
2003–2004	200	10.9

Visitor Survey program

The visitor satisfaction survey program continued to provide visitor feedback used to assess visitor needs and expectations as well as satisfaction with recreation and tourism facilities and services.

Those 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 survey provided feedback from visitors regarding the management of these areas, their overall level of satisfaction during their visit, their main purpose of visit and the activities undertaken. This information helped in the planning and management of these recreation areas by providing vital information for site planning and design, visitor communications, business and marketing plans and performance evaluation.

Project Management training

In 2003, CALM initiated a Best Practice course in Project Management for staff who are involved in the planning and development of new visitor facilities and other Parks and Visitor Services projects. The CPMGroup, an external training provider who prepared the national competency standards on project management, was engaged to deliver a series of three-day courses to meet CALM requirements. Another course was held during the year and a further 20 staff completed this training program.

Recreation training

During the year, CALM staff conducted two week-long training courses on recreation planning and management for recent graduate officer recruits and other CALM staff at the Department of Sport and Recreation's Point Walter Conference Centre. Several staff from the Rottne Island Authority also participated in this training program, which explored the theory and practice of recreation resource planning, visitor management and communications in natural areas.

Staff also presented lectures on various aspects of recreation resource planning and management and landscape design to students at Curtin, Edith Cowan and Murdoch universities and assisted in the delivery of other in-service training programs.

Road Classification System

CALM engaged BSD Consultants during the year to undertake a comprehensive review of its existing road classification for both sealed and unsealed roads on land it manages. The main aim of this review was to develop a classification system and accompanying design standards and maintenance intervention levels for the various types of roads that exist on CALM-managed lands.

When operational, it is expected the classification system will be compatible with the ROMAN road asset management system that is currently used by the majority of local government authorities throughout WA. A related aim of this project was to develop a road risk assessment methodology that will assist in identifying road assets that present a high safety risk to road users and that require some form of preventative maintenance or upgrading. Work will continue on the development and implementation of the consultant's recommendations over the coming two to three years.

Involvement with the WA 4WD Association, Track Care WA and Tread Lightly! Australia

Regional, district and park staff across the State continued to promote the tread lightly message and to work actively with the WA 4WD Association and member clubs and with Track Care WA on various projects. These included various track rehabilitation, dune stabilisation and beach clean-up projects. CALM also participated with Tread Lightly! Australia and Track Care in the annual WA 4WD Show.

Regional services

Through Service Provider Agreements, CALM's nine regions continued to provide a full range of management, maintenance and development services to implement effectively and efficiently actions under the Parks and Visitor Services Output. Highlights from the regions included:

Goldfields

- Upgrade of camping and day-use facilities at Boondi (inside the Goldfields Woodlands National Park), Cave Hill and Burra Rock recreation sites.
- A renewable energy solar system was installed at Lorna Glen Station to provide caretakers and staff with a consistent power supply.
- Main Roads WA funds enabled the upgrade of more than three kilometres of road into Boondi recreation site off Great Eastern Highway, and 14 km into Goongarrie Homestead off Goldfields Highway, improving visitor access.
- A Memorandum of Understanding with the Coolgardie Shire allowed the completion of a road upgrade from Burra Rock to Widgiemooltha via Cave Hill.
- The region continued to establish effective and meaningful liaison with Indigenous groups such as the Goldfields Land and Sea Council, through the development of a joint management agreement.
- CALM remained involved in other Goldfields community-based initiatives such as the Golden Quest Discovery Trail and Golden Pipeline drive trails and utilised unemployed-based programs in the construction of interpretation shelters and tables.
- The region also continued to be involved in CALM Bush Rangers programs at Coolgardie CAPS and Goldfields Baptist schools.

Kimberley

- Various projects were completed at Purnululu National Park including the development of footpaths and seating at Walanginji lookout; shade shelters at Echidna Chasm and Frog Hole; and three new bores and solar installation to improve water supply at the park.
- Halls Creek Shire carried out a health and safety audit of Purnululu National Park's commercial accommodation and new water lines were laid at Kurrajong, Three Ways and Bellburn campgrounds. New roadside barriers were installed on roadsides areas at strategic points in the park and a geotechnical assessment was carried out on the condition of walks, tracks and roads to improve visitor safety and improve visitor access. Heritage clearances were completed for a range of development activities including bore sites and road works.
- Aboriginal trainees from Mitchell River assisted Purnululu National Park staff during peak periods. The inaugural Aboriginal Park Council meeting was held in August 2003, and a second meeting held in March 2004. Conservation Volunteers Australia assisted with conservation and park management programs including the removal of *Calotropis*, maintenance of infrastructure and general weed removal.
- Purnululu National Park received World Heritage listing in 2003 for its natural values. An executive officer for the World Heritage Area was appointed to coordinate World Heritage issues and provide effective liaison with traditional owners. The first stage of an expression of interest process began for the provision of safari camp accommodation services in the park.
- Ongoing negotiations with Wunambaal Gaambera regarding joint management of the King Edward River/Mitchell Plateau area continued and CALM provided continued support and assistance for projects conducted by Wunambaal Gaambera at Munurru (King Edward River).
- Prescribed burning operations were undertaken at Mitchell Plateau to protect assets. A weed control program was implemented throughout the Plateau, and interpretive activities including slide shows and talks were introduced. CALM staff were involved in two search and rescue operations, and a new emergency plan was developed.
- At Parry Lagoons Nature Reserve, external funding was secured to construct an interpretive walk around the World War I telegraph hill site.
- Trials using molasses as a dust suppressant on dirt roads were very successful, with positive feedback received. Rehabilitation works were also undertaken, closing down illegal access tracks and revegetating degraded areas.

Midwest

- Geraldton District made presentations at the State Coastal Conference and the Midwest Indigenous Tourism Forum and designed the boardwalk for Pelsaert Island, Abrolhos for the Department of Fisheries.
- The access road to Hawks Head and Ross Graham recreation sites in Kalbarri National Park was sealed, and ongoing liaison with Nanda Native Title Working Group continued regarding clearance for proposed site development works and progress towards joint management.
- Expressions of Interest were conducted for the operation and development of Cobra tourism facilities in the Gascoyne Murchison area.
- The Kennedy Range National Park Interim Management Guidelines were completed and the management plan commenced.
- Midwest staff participated in implementing the Gascoyne Murchison Outback Pathways project and prepared homestead site plans for Cobra, Mooloogool and Muggon. A caretaker was appointed at Doolgunna Homestead.

- The Pinnacles in Nambung National Park received 212,000 visitors – an increase of 3.5 per cent on the previous year. Moora District continued with the planning of a visitor interpretation centre in the park, which involved the Department of Housing and Works and a consultant architect.
- Preparation of the 'Turquoise Coast Recreation Master Plan' to plan for recreational opportunities and future visitor management between Lancelin and Cervantes was completed.
- Jurien Bay Marine Park was created on 31 August 2003 and a Marine Parks Coordinator was appointed to oversee implementation of the management plan. Natural Heritage Trust Funding was received through the Northern Agricultural Catchment Council to conduct community education, baseline water quality monitoring and human usage monitoring. A Marine Conservation Officer was appointed to implement these programs. Nine hundred school students from 11 schools in the local region visited the park as part of the community education program.
- Shark Bay District constructed two new lookouts at Skip Jack Point and completed rectification works at Monkey Mia Visitor Centre.
- The District also conducted the 'Wonderfully Wild' holiday activity program in partnership with the Shark Bay Tourism Association and the Yadgalah Aboriginal Corporation. Coastwest funded the program. An EcoGuide school holiday program was initiated with volunteer school teachers.
- The restoration of the shearing shed and quarters at Peron Homestead was completed and a 'Back to Peron' community event hosted by CALM staff.

Pilbara

- Progress was made towards the development of a Karijini National Park Long Distance Walk Trail Network.
- The second stage development at Turquoise Bay to allow for improved vehicle and pedestrian access, additional car and bus parking to the popular Cape Range National Park recreation site was completed.
- Management Planning and Recreation Master Planning processes were undertaken in Cape Range and Millstream-Chichester national parks, Dampier Archipelago and the Burrup Peninsula.
- The first stage upgrade to seal (6.5 km) of Dales Road in Karijini National Park was completed. The second stage began for the remaining section of Dales Road in conjunction with the Shire of Ashburton, Main Roads WA and CALM funding contributions. Total funding by CALM to complete 11 km of Dales Road is \$730,000.
- Savannah Camp became operational under a Section 33 Temporary Lease arrangement in Karijini National Park. This 90-site campground development enabled the closure of Joffre and Weano campgrounds in the western precinct of the northern recreation area.
- The master plan for the Karijini National Park Headquarters and visitor and staff accommodation, and facility upgrades was completed. Capital funding of \$122,000 was expended in 2003–2004.
- Jurabi Turtle Interpretation Centre was completed near Vlamingh Head in the Jurabi Coastal Park. The joint development between CALM and the Shire of Exmouth was completed with assistance from external funds to provide interpretive signage and facility, car and bus parking and improved coastal access.
- The Karijini National Park Safety Advisory Committee (KNPSAC) formed in March 2004 to help CALM address safety issues and improve tour operator communications in the park.

Subsequent to the meeting in March, there were a number of deaths in the Karijini gorges and there were additional KNPSAC meetings held in Perth and Karratha to concentrate on gorge safety issues related to visitor risk management.

- *Bushwalks in the Pilbara*, a walk trails publication that was produced over two years, was completed to provide visitors to the region with information about existing and potential bushwalking and outdoor recreation opportunities.
- The partnership between the Royal Flying Doctor Service and CALM continued for the provision of safety information in Karijini National Park.
- *Caring for Country*, an interpretive activities program across the Pilbara national parks continued to provide experience-based education opportunities for visitors.
- Forums for discussion on issues related to the management and management planning of CALM-managed lands and waters in the Pilbara took place for Cape Range, Ningaloo, Dampier Archipelago and Islands, Burrup Peninsula, Millstream-Chichester, Rudall River and Karijini national parks. These included formalised park council meetings, park advisory meetings and also workshops for community input.
- Volunteers in the Pilbara region continued to assist the achievement of conservation and land management outcomes.
- Investigation of business opportunities in the Pilbara region occurred with an expression of interest for commercial developments in the Dampier Islands and a new business approach to managing the Karijini Visitor Centre with emphasis given to sustainability and local Indigenous employment.
- Park councils were established in Exmouth and Millstream in 2003–2004. These forums provide the opportunity for CALM to engage appropriately with the local Indigenous communities on issues related to management and management planning on CALM estate. Exmouth District held its inaugural park council meeting in June 2004 with Gnulli community representatives, and Millstream Park Council met six times in the past 12 months with the Yindjibarndi community.
- The Karijini Park Council continued to meet and discuss important issues and progress joint management according to State Government and CALM policy.
- The successful Roebourne Regional Prison Work Camp continued to provide the assistance of eight prisoners and a prison officer all-year-round on conservation and land management projects in Millstream-Chichester National Park.

South Coast

- Redevelopment of the Thomas River campsite and work began on Stage 1 of the redevelopment of the Hellfire Bay day-use recreation site.
- Maintenance work was completed on the Eyre Bird Observatory.
- At Peak Charles delineation of the car park, installation of a sealed vault toilet and erection of information shelter were completed.
- Liaison continued with the Bay of Isles Aboriginal Corporation (BoIAC) who helped maintain 15 km of Cape Le Grand Coastal Trail (walk trail).
- The first Landscape Expedition to be held on the South Coast was undertaken at Cape Arid National Park in May 2004.
- New and additional visitor risk management signage was erected in Cape Arid, Cape Le Grand and Stokes national parks, and in the Nuytsland, Lake Shaster and Woody Lake nature reserves. As part of ongoing visitor risk management, fencing was erected around two Nullarbor caves.

- To complement the new facilities completed at Bluff Knoll carpark in 2003–2004, interpretation and mural panels containing park information and Indigenous messages were installed.
- At Fitzgerald River National Park, the whale watching platform at Point Ann Heritage Trail and the Barrens Beach access steps were completed and provided for increased visitor access to popular sites.
- The South Coast Region continued to work closely with the Great Southern Development Commission (GSDC), Department of Indigenous Affairs (DIA), Office of Aboriginal Economic Development, Shire of Gnowangerup and Gnowangerup Aboriginal Corporation, through a Steering Committee to plan and promote a visitor centre at Stirling Range National Park.
- Ongoing liaison continued with the local Indigenous community through establishment of a CALM-Noongar Stirling Range Visitor Centre Planning Group with support from GSDC and DIA.
- Pardelup Work Camp crew continued their work on various park projects and numerous volunteer hours were recorded from CALM volunteers on programs including campground hosts, visitor centre hosts, various nature conservation projects and the Albany Wildflower Society.
- To reduce visitor risk, improved visitor risk management hazard signs were installed at the Salmon Holes recreation site within Torndirrup National Park.

South West

- Visitor risk management remained a high priority, with particular emphasis on mitigating risk in the karst and cliff areas of Leeuwin-Naturaliste National Park. The region continued to conduct formal quarterly and annual reviews to monitor progress on achieving risk mitigation targets. Specialist consultants undertook geotechnical inspections of cliff and cave sites.
- Significant progress was made towards completion of management plans for Wellington, Scott River and Leeuwin-Naturaliste national parks and the proposed Bramley, Yelverton and Forest Grove national parks and Gingillup Nature Reserve (Capes Parks), and St John Brook and Jarrahwood conservation parks.
- Ecoeducation programs continued at Wellington Discovery Forest and began at Margaret River Eco Discovery Centre. Wellington Discovery Forest conducted 112 excursions and nine professional development days including one whole school development day. Community volunteers, including CALM Bush Rangers groups, had increased involvement in developing facilities for the ecoeducation activities. Long-term relationships continued to develop with several schools and the Collie Nyoongar community. At the Margaret River Eco Discovery Centre progress was made on new facilities for schools and three excursions were conducted.
- The visitor interpretation program expanded across the region, with interpretation plans completed for Leschenault Peninsula and St John Brook conservation parks, and interpretation projects completed at Belvidere, and Honeymoon Pool sites, St John Brook Conservation Park, Wellington National Park information bay and the proposed Greater Preston National Park. Holiday activity programs at Margaret River (including Bush Heritage Day) and Leeuwin-Naturaliste National Park were popular.
- At Leschenault Peninsula, the sealing of Buffalo Road, the J. B. O'Reilly car park and Buffalo Beach car park was completed in a joint project with the Harvey Shire. Redevelopment of Belvidere Picnic area was also completed and this fully wheelchair-accessible facility now

includes gas barbecues, sealed pathways, a new toilet block, and interpretation information.

- In a joint project with the Augusta-Margaret River Shire, Ellensbrook Road was upgraded and sealed, providing safe all-weather access to the historic Ellensbrook homestead and beach.
- Several new stairways and walkways were installed at Calgardup and Giants Caves as part of the ongoing program to improve public safety and protect cave features.
- The Cape to Cape Track continued to be maintained and promoted by an enthusiastic group of volunteers – The Friends of Cape to Cape. During the past 12 months a lookout on the cliffs overlooking Canal Rocks and a stepping stone crossing over the Wilyabrup Brook were completed.
- Developments in St John Brook Conservation Park included new parking areas, picnic facilities and the completion of a footbridge over the brook at Barrup Pools.
- The Old Timberline Trail – a scenic walk trail that extends from Nannup to Cambray Siding via Barrabup Pool – was completed.
- In the proposed Blackwood River National Park, an ethnographic and archaeological study covering the river valley between Chapman Pool and Sues Bridge was completed in consultation with the local Aboriginal community (South West Boojarrah Native Title claimants).

Swan

- The upgrading of the koala enclosure at Yanchep National Park was completed and the old exhibit demolished.
- Work continued on the implementation of Fred Jacoby Park masterplan in the proposed Mundaring National Park.
- Upgrading and redevelopment of recreation sites along Mundaring Weir road continued and included Pimelia and Grevillea Mycumbene, and Farrell Grove. The areas now include facilities for horses, walkers and picnickers, and have new car parking and signs.
- Work at the Lesley recreation site in the proposed Canning National Park included a new toilet, parking and picnic facilities.
- Work at the proposed Wandoo National Park included redevelopment of a degraded recreation site at Mt Observation to build a new toilet, walk trails, parking, retaining walks and bird hides. Significant input from local community groups assisted in achieving these outcomes.
- The Bibbulmun Track shelter at Mt Cooke, destroyed by a wildfire in the previous year, was rebuilt in conjunction with a community group.
- The Munda Bidli Trail was extended to south of Dwellingup and included the construction and signing of trails and construction of a new shelter.
- The walkway, viewing platform and pool access at Serpentine Falls, Serpentine National Park, was completed improving visitor safety and site aesthetics.
- Remodelling of the main picnic and barbecue area at Walyunga Pool, Walyunga National Park, began with significant Indigenous heritage surveys and Indigenous community liaison.
- The Crystal Cave car park in Yanchep National Park was designed and completed.
- The Len Howard car park in Yalgorup National Park was upgraded.
- Yanchep Workshop Access Road, used by CALM heavy fleet vehicles, was re-sheeted with new limestone and sealed.
- A new purpose-built boat ramp was constructed at Matilda Bay Reserve to replace an old cracked and slippery concrete ramp.

- The Nearer to Nature interpretation and educational program continued to consolidate its spread of activity programs throughout the entire metropolitan area. New partnerships were formed with several community groups and specific activities developed for more than three new activity locations. Visitor figures for all Nearer to Nature activities increased by more than 30 per cent on the previous year (12,858 to 15,245 visitors).
- The Nearer to Nature marine school education program expanded to include activities run in conjunction with Point Peron Camp School on the beach at Shoalwater Islands Marine Park. Activities conducted at Marmion Marine Park continued to generate strong support from northern suburbs schools. Visitor numbers remained stable with more than 1,600 students attending activities in metropolitan marine parks.
- Two interpretive activity trailers were completed, enabling even greater flexibility and mobility for the Nearer to Nature team.

Warren

- Work to develop the Warren Region Recreation Framework Plan included comprehensive community consultation on provision of recreation facilities. The framework planning process provided input into the Draft Walpole Wilderness Management Plan. A feasibility study and community consultation led to commencement of planning for the Walpole Wilderness Discovery Centre (formerly known as the Karri-Tingle Centre).
- Day-use recreation sites in Giblett forest were completed as part of the Karri Forest Explorer Drive.
- At Lake Yeagarup initial surveys and planning were completed for redevelopment that reduces environmental impacts of recreation, and preserves Indigenous values.
- Redevelopment work at Perup Forest Centre was completed, including a solar/wind energy system and passive solar design buildings. Expressions of interest for Indigenous interpretive artworks were called.
- Detailed site and user analysis was undertaken to manage use of the Mt Lindesay summit walk trail, which is in a threatened ecological community. A partnership was brokered with Denmark Greenskills to undertake much of the trail renovation work.
- The Coalmine Beach precinct redevelopment proceeded with community consultation leading to agreement on levels of redevelopment proposed to reduce visitor impacts.
- A wheelchair-accessible viewing platform was constructed at Circular Pool, and improvements to paths and car parks work began.
- The replacement of dangerous and non-compliant squatters' huts began in D'Entrecasteaux National Park.
- Viewing platforms were commissioned to increase visitor safety at some coastal locations and visitor facilities at Mt Chudalup were relocated to a more environmentally sustainable site.
- Negotiations continued to develop a partnership with South West Aboriginal Land and Sea Council to research Indigenous issues in proposed national parks, and to work towards developing a protocol and practical management for community involvement prior to capital works.
- The Valley of the Giants – Tree Top Walk won the British Airways 'Tourism for Tomorrow' Award for the 'Environmental Experience' category. While the facility experienced a slight decline in visitor numbers, it continued to attract greater interstate and international visitor numbers (around 60 per cent of visits).

Wheatbelt

- The region upgraded the audio and solar equipment on the popular Sounds of Dryandra Audio Drive Trail. The upgrade began of the Irabina building at Dryandra Woodland, which is used by schools and other groups for educational activities.
- Additional interpretive material was provided at Barna Mia, the animal viewing facility at Dryandra Woodland, in the form of a wall mural that depicts a woodland scene and the unique range of animals that are found at Dryandra.
- An interpretive shelter and signs were erected at Boyagin Rock Nature Reserve recreation site and included information on the Indigenous cultural significance of the area, which was developed in consultation with local Indigenous people.
- Main Roads WA funding saw the access road into Lake Dumbleyung Nature Reserve in Katanning District upgraded and stage one of a new drive trail at Dryandra Woodland completed. The Darwinia Drive Trail will comprise five stops where interpretive information is provided on Dryandra's unique plant, animal and landscape relationships.

Parks and Visitor Services

Performance Measures

Output 4

	2003–2004 Target	2003–2004 Actual	Explanation of significant variation between 2003–2004 Estimated and 2004–2005 Target
Quantity			
Visits to sites managed	11,000,000	10,921,000	
Quality			
Mean level of visitor satisfaction with their visit overall	85%	83%	
Timeliness			
Visitor services/activities delivered within advertised timeframes	100%	100%	
Cost (efficiency)			
Average cost per visit	\$4.80	\$5.01	

Astronomical Services – Output 5

Highlights

- New annual star-viewing attendance record.
- Construction and implementation of an Internet sky camera.
- Internet broadcast of the transit of Venus.
- Three new supernovae discovered.

Outcome achieved by

Astronomical information and services for the benefit of the community.

Output description

Providing public information and awareness directly beneficial to the WA community, and contributing to scientific research in astronomy by cooperating with national and international institutions in the acquisition, analysis, interpretation and dissemination of information.

Observatory activities during 2003–2004 remained focused on its three core functions of education and public outreach, information services and research. Some areas experienced significant improvement, while others continued with relatively steady output or increased capability.

In 2003–2004 a new star-viewing attendance record of 7,246 was achieved. This accomplishment was mainly the result of significant public interest in the two-month period that recurs about every 15 years, when Mars is relatively close to the sun and significantly larger and brighter than usual. These Mars viewing sessions were conducted towards the end of winter 2003 and included an up-to-date computer presentation. The Observatory's display room was modified to house a model of the Martian landscape to complement the special viewing sessions.

Star viewing was provided to rural and metropolitan schools and communities. In total, more than 1,520 people viewed the stars with Observatory telescopes transported to their locality for one of 19 'astronomy field nights' conducted during the financial year. Observatory staff also conducted 49 lectures to a total audience of 1,283 people. These lectures included a basic astronomy course conducted off-site, an Honours-level astrophysics course at Curtin University and a multi-disciplinary first-year course containing a large component of astronomy at the University of WA. Three university students were supervised in their research projects.

Public awareness of the Observatory remained high. In 2003–2004 the number of people who visited, phoned for information (22,511 calls), attended talks or astronomy field nights totalled 35,068 compared to 26,240 in 2001–2002. Observatory staff informed the public of astronomical events in 82 radio and two television interviews, and 63 newspaper articles. A significant portion of this media interaction concerned the opposition of Mars in August 2003, the lunar eclipse of 5 May 2004 and the transit of Venus on 8 June 2004.

Observatory visitors' satisfaction remained high as in previous years with 98 per cent satisfied with both their visit and the educational quality of the services in which they participated.

Volunteers again most ably assisted permanent staff in many activities, notably the star viewing nights, archiving and at displays. Volunteer assistance totalled 0.8 FTEs in 2003–2004 and continued to make an important contribution to the Observatory output.

A new initiative in Observatory astronomy service provision was the establishment of an Internet sky camera. This instrument, built in the Observatory workshop, operated from the roof of the Observatory's main building and acquired a wide-angle image of the night sky every 15 minutes. These images were forwarded to the Observatory website where they could be accessed by the public. This generated significant community interest and has the added advantage of being accessible to the disabled who can actually view what is visible in the sky from their home. This project will be developed in the future as resources allow.

On 8 June 2004, the planet Venus passed in front of the sun (called a transit). This event was well publicised because of its historical association with Captain James Cook and his voyage that discovered eastern Australia. The Internet system developed for the sky camera was employed in the daytime for this project. Images of the sun (with Venus superimposed) were acquired by the Observatory's solar telescope at around one-minute intervals. These images were made accessible on the Observatory's website and also transferred to Swinburne University in Victoria. There was great public demand on the Internet for access to the live images from the Observatory. In total, this resulted in about 30Gb of Internet traffic for the Observatory's city internet service provider from the approximately 300 images (that totalled 15Mb) acquired during the event.

Automation of the telephone accounting system used to tally the number of telephone calls led to a more accurate measure of incoming telephone calls, the vast majority of which concerned requests for astronomy information or enquiries about Observatory services. Operation of this new system also reflected the significantly increased tally of telephone calls received.

Research activities were more productive in terms of useful observations acquired. Following the successful installation of the cloud detector and the implementation of a scheduler, the number of PLANET observations doubled in comparison to previous years. The PLANET project is an international collaboration that involves searching for planetary transits (where a planet blocks out the light of the star it orbits, for a few hours at a time) as well as the previous gravitational microlensing-based technique (where a star's brightness is enhanced by the passage of a faint foreground star in front of it). Perth Observatory hosted this project's homebase (team coordination and data management) in June 2004 and also constructed and updated the web pages for the PLANET site. Two refereed papers were published from this program that provided unique insights into the atmospheres of stars.

Three new supernovae (SN2003jg, SN2004S and SN2004ch) were discovered during the 2003–2004 financial year, and two other new supernovae were detected just after their discovery by other researchers. Also, a detailed set of photometric light curves (brightness as a function of time) was determined for SN2004S and preparation of a paper detailing this began. The collaborative project with Mt Stromlo Observatory to automatically optically detect newly discovered Gamma Ray Burst (GRB) supernovae continued.

Work on variable stars led to the publication of a refereed paper concerning the evolution of a particularly unusual star, zzCeti. Also, a student project was conducted to search for transient brightness variations from the star SS2883 that orbits around a pulsar. Comet and asteroid observations were undertaken as appropriate targets became available.

Site testing was conducted over several nights at a site in WA's Midwest. An additional set of site testing observations also was undertaken at various locations on the Perth Observatory site. These data were analysed during the course of a student project and indicated that the remote site experiences atmospheric conditions of comparable, if not better, quality than at existing major Australian astronomical facilities.

Astronomical Services

Performance Measures

Output 5

	2003–2004 Target	2003–2004 Actual	Explanation of significant variation between 2003–2004 Estimated and 2004–2005 Target
Quantity			
Tour visitors	8,900	9,750	
Enquiries	19,100	25,854	This measure increased because of the implementation of an automated system to record the number of telephone calls, as well as substantial public interest in several 'high profile' astronomical events.
Refereed scientific research papers number	5	3	This decrease reflects the inherent fluctuation in the of papers associated with the ongoing, protracted and complex nature of the research output, the external collaboration required, and the relatively small number of papers involved each year.
Quality			
Positive responses to 'quality' measures in visitor surveys	99%	98%	
Submitted research papers published in international refereed journals	100%	100%	
Timeliness			
Satisfaction of information requests as they occur	95%	92%	
Timely publication of research papers in international refereed journals	100%	100%	
Effective study of astronomical targets	57%	98%	This increase reflects the efficiency being obtained with the automation of Observatory telescopes.
Cost (efficiency)			
Average cost per tour visitor	\$19.00	\$41.69	This measure increased owing to the large number of Star viewing nights scheduled in order to accommodate the record number of customers requiring this service. This activity has substantial operating costs.
Average cost per enquiry	\$33.24	\$14.91	This measure decreased owing to the improved capture of workload statistics afforded by new technology.
Average cost of research activities per refereed research paper	\$86,000	\$124,011	This increase reflects the inherent fluctuation in the number of papers associated with the ongoing, protracted and complex nature of the research output, the external collaboration required, and the relatively small number of papers involved each year.
Cost of research per 1000 head of population	\$200	\$188	

We have attempted to comply with the requirements of relevant written law as originally enacted and as variously amended. Steps have been taken to rectify minor errors and omissions detected during 2003–2004. The relevant Acts and amendments to legislation are noted in this section of the annual report.



Keiran McNamara
EXECUTIVE DIRECTOR
31 August 2004

Public Sector Standards and Code of Conduct Compliance Statement

In the administration of the Department of Conservation and Land Management, I have complied with the Public Sector Standards in Human Resource Management, the WA Public Sector Code of Ethics and the Code of Conduct.

CALM has adopted guidelines and processes supporting the public sector standards in human resource management. I am pleased to say there were no breach findings made against any standard for the reporting period 2003–2004.

Policies and supporting procedures are detailed in the People Services Manual, which, like the Code of Conduct is accessible to most staff on-line via the Department's intranet. Hard copy or CD-ROM versions are available for those staff in remote areas that have difficulty accessing the intranet at present.

Individual managers are responsible for ensuring compliance with CALM policies and the Code of Conduct, with the Manager, People Services Branch, undertaking a monitoring and advisory role. In addition, staff in Workforce Services and Planning section monitor all transactions for recruitment, selection and appointment, secondment, transfer, temporary deployment, performance management and grievance resolution to ensure adherence with current CALM policy. Staff in the Employee Relations section are responsible for termination and disciplinary cases.

Management Audit Branch in accordance with the Department's policy has undertaken an annual system review with a complete compliance audit on three of the standards. The audit identified that

- CALM's policies and procedures identified with and reflected the requirements of the standards;
- compliance with the standards was satisfactory; and
- there was no evidence of non-compliance with any standards.

CALM's Code of Conduct is subject to ongoing review and this process will continue in 2004–2005.



Keiran McNamara
EXECUTIVE DIRECTOR
31 August 2004

Legislation

Acts administered

- *Conservation and Land Management Act 1984*
- *Sandalwood Act 1929*
- *Wildlife Conservation Act 1950*

On behalf of the people of WA, CALM manages national parks, conservation parks, marine parks, State forests, timber reserves, nature reserves, marine nature reserves, other reserves, lease areas and any associated fauna, flora and forest produce under the legislation that it administers. It is also responsible for conserving flora and fauna throughout the State.

The *Conservation and Land Management Act 1984* (CALM Act) established the Department. There are also two statutory bodies established under the Act, namely the Conservation Commission of Western Australia and the Marine Parks and Reserves Authority. Both are responsible to the Minister for the Environment. Their functions and proceedings are described in separate annual reports to the Minister.

Mining and Government Agreement Acts

The CALM Act does not generally protect CALM-managed land from mining or development projects. Section 4 of the CALM Act provides that nothing in the Act shall take away from the operation of any Act relating to minerals or petroleum or any Agreement Act for a development project (except in marine nature reserves and certain zones in marine parks, which are protected from petroleum drilling and production).

The CALM Act cannot impose restrictions on mining or development projects subject to an Agreement Act. The requirements for mining and development projects with respect to land and waters managed by the Department are stated in the *Mining Act 1978* and the individual Agreement Acts. The requirements of the *Environmental Protection Act 1986* also need to be satisfied with such projects on CALM-managed land.

The following mining and petroleum Acts generally prevail over the CALM Act: *Mining Act 1978*; *Petroleum Act 1967*; *Petroleum Pipelines Act 1969*; *Petroleum (Submerged Lands) Act 1982*.

Agreement Acts which involve clearing CALM-managed land, or which require access to forest resources, also include specific responsibilities for CALM. Bauxite and coal operations predominantly require permission to be given by CALM for the relevant companies to harvest timber before mining.

The Agreement Acts that affect CALM responsibilities include: *Alumina Refinery Agreement Act 1961*; *Alumina Refinery (Worsley) Agreement Act 1973*; *Collie Coal (Griffin) Agreement Act 1979*; *Collie Coal (Western Collieries) Agreement Act 1979*; *Dardanup Pine Log Sawmill Agreement*

Act 1992; Silicon (Kemerton) Agreement Act 1987; Wesply (Dardanup) Agreement Authorisation Act 1975; Wood Chipping Industry Agreement Act 1969; Wood Processing (Wesbeam) Agreement Act 2002; Wood Processing (WESFI) Agreement Act 2000.

Where an Agreement Act involves contracting in relation to forest products, this is undertaken by the FPC under the *Forest Products Act 2000*.

The *Mineral Sands (Eneabba) Agreement Act 1975* affects CALM's management of the land involved in that project.

Management of the Barrow Island Nature Reserve is affected by the *Barrow Island Act 2003*.

Other relevant Acts

The *Bush Fires Act 1954* has important requirements for CALM with respect to fires on the land that it manages.

Other State Acts which have relevance to CALM's operations or role as an employer include: *Aboriginal Heritage Act 1972; Aerial Spraying Control Act 1966; Agriculture and Related Resources Protection Act 1976; Agriculture Protection Board Act 1950; Animal Welfare Act 2002; Beekeepers Act 1963; Civil Liability Act 2002; Control of Vehicles (Off-road Areas) Act 1978; Country Areas Water Supply Act 1947; Dividing Fences Act 1961; Electricity Corporation Act 1994; Electronic Transactions Act 2003; Energy Operators (Powers) Act 1979; Environmental Protection Act 1986; Equal Opportunity Act 1984; Explosives and Dangerous Goods Act 1961; Financial Administration and Audit Act 1985; Fines, Penalties and Infringement Notices Enforcement Act 1994; Fish Resources Management Act 1994; Forest Products Act 2000; Freedom of Information Act 1992; Government Employees' Housing Act 1964; Health Act 1911; Heritage of Western Australia Act 1990; Industrial Relations Act 1979; Land Administration Act 1997; Local Government Act 1995; Long Service Leave Act 1958; Metropolitan Water Supply, Sewerage and Drainage Act 1909; Minimum Conditions of Employment Act 1993; Misuse of Drugs Act 1981; Occupational Safety and Health Act 1984; Occupiers Liability Act 1985; Pearling Act 1990; Public Interest Disclosure Act 2003; Public Sector Management Act 1994; Public Works Act 1902; Reserves (Dampier to Bunbury Natural Gas Pipeline Corridor) Act 2003; Soil and Land Conservation Act 1945; State Records Act 2000; State Superannuation Act 2000; State Supply Commission Act 1991; Swan River Trust Act 1988; Titles (Validation) and Native Title (Effect of Past Acts) Act 1995; Town Planning and Development Act 1928; Transfer of Land Act 1893; Volunteers (Protection from Liability) Act 2002; Water and Rivers Commission Act 1995; Water Corporation Act 1995; Water Services Licensing Act 1995; Waterways Conservation Act 1976; Workers' Compensation and Rehabilitation Act 1981.*

Commonwealth Acts relevant to CALM's activities include: *Australian Heritage Council Act 2003; Environment Protection and Biodiversity Conservation Act 1999; Native Title Act 1993; Regional Forest Agreements Act 2002; Trade Practices Act 1974; Workplace Relations Act 1996.*

International agreements relevant to CALM's activities: *Agreement between the Government of the People's Republic of China and the Government of Australia for the Protection of Migratory Birds and their Environment*; *Agreement between the Government of Japan and the Government of Australia for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment*; *Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention)*; *Convention on International Trade in Endangered Species of Wild Fauna and Flora*; *Convention for the Protection of the World Cultural and Natural Heritage*; *Convention on the Conservation of Migrating Species of Wild Animals*; *Convention on Biological Diversity*.

Regulations administered

- Conservation and Land Management Regulations 2002
- Forest Management Regulations 1993
- Sandalwood Regulations 1993
- Wildlife Conservation Regulations 1970
- Wildlife Conservation (Reptiles and Amphibians) Regulations 2002

Changes to legislation

Changes to the *Conservation and Land Management Act 1984*

The CALM Act was amended five times during the year.

Under the *Labour Relations Reform (Consequential Amendments) Regulations 2003* a reference in the CALM Act to the *Work Place Agreements Act 1993* was deleted.

The CALM Act was amended as a consequence of repeal of the *Timber Industry Regulation Act 1928* under the *Statutes (Repeals and Minor Amendments) Act 2003*. Minor amendments also were made to the CALM Act under the *Statutes (Repeals and Minor Amendments) Act 2003*.

The *Economic Regulation Authority Act 2003* amended the CALM Act to provide for citation of the *Water Services Licensing Act 1995*.

Under the *Acts Amendment and Repeal (Competition Policy) Act 2003* two provisions of the CALM Act were repealed because they were found to be restrictions on competition that were not in the public interest.

Two offence provisions in the CALM Act had penalties that included imprisonment for six months. These imprisonment penalties were deleted by the *Sentencing Legislation Amendment and Repeal Act 2003*.

Changes to the *Sandalwood Act 1929*

A provision of the *Sandalwood Act 1929* that was found to be a restriction on competition not in the public interest was repealed under the *Acts Amendment and Repeal (Competition Policy) Act 2003*.

Changes to the *Wildlife Conservation Act 1950*

A minor textual amendment was made to the *Wildlife Conservation Act 1950* by the *Statutes (Repeals and Minor Amendments) Act 2003*.

Changes to regulations

Two provisions in the *Forest Management Regulations 1993* applicable to the granting of apiary site permits were found to be restrictions on competition that were not in the public interest. These provisions were repealed under the *Forest Management Amendment Regulations 2003*.

Additional purposes of reservation for indigenous State forests and timber reserves can be prescribed in regulations. Under the *Conservation and Land Management Amendment Regulations 2004*, removal of water and storage of water were prescribed as purposes for which indigenous State forests and timber reserves could be reserved.

Disability services

During the past two decades, CALM has sought to progressively improve public access and upgrade or provide new visitor facilities and services so all members of the community including people with disabilities can enjoy them. The size, remoteness and ruggedness of many of our parks, reserves and forest areas have presented numerous challenges in achieving this goal. Nevertheless, CALM has made and continues to make considerable progress in implementing its policy of 'universal' or 'access for all'.

This policy, as detailed in CALM's Disability Services Plan 2001–2006, includes outcomes that reflect a focus on improving access to buildings, information, public participation mechanisms and employment, as well as visitor services and facilities. It is available on CALM's website, NatureBase, and can be accessed through the Register of Disability Discrimination Act Action Plans on Human Rights and Equal Opportunity Commission website.

During the past year, CALM further improved visitor access at a number of recreation areas and facilities around the State. Some of the more noteworthy access improvements completed or begun include:

- completion of the wheelchair accessible Jurabi Turtle Centre in collaboration with the Shire of Exmouth;
- further access improvements to coastal gorge sites in Kalbarri National Park;
- development of a new accessible koala viewing enclosure at Yanchep National Park;
- commencement of major improvements to visitor facilities at Serpentine National Park, including the construction of a new wheelchair accessible elevated ramp-way and lookout near the falls;
- completion of an accessible walkway and ramp surrounding the historic oak in Fred Jacoby Park near Mundaring;
- access and other improvements to a number of visitor sites including Grevillea and Pimelia Mycumbene, Lesley and Mt Dale in the proposed new national parks east of Perth under the State Government's *Protecting our old-growth forests* policy;

- completion of wheelchair accessible facilities, including a new camper's kitchen and toilets at the Chuditch Campground in the Lane Poole Reserve near Dwellingup;
- completion of wheelchair accessible facilities and other access improvements within the Belvidere picnic area in Leschenault Peninsula Conservation Park;
- commencement of major access improvements to facilities surrounding the Wellington Dam kiosk in Wellington National Park near Collie;
- continuation of works at Honeymoon Pool in Wellington National Park, including the prefabrication of walkways and bridges; and the realignment and levelling of riverside trails;
- preparation of designs for the construction of a fully accessible camping area at Sues Bridge in the proposed Blackwood River National Park;
- completion of several viewing decks along the Warren River in association with riverside camping areas and other facilities including a campers' kitchen in Warren National Park near Pemberton; and
- improved pedestrian access for visitors including the ambulant disabled at Little Beach in Two Peoples Bay Nature Reserve east of Albany.

CALM's Disability Access Audit Online Information Program provides managers with readily accessible information on how to conduct a disability access audit in a work area, and includes checklists for access to buildings, information, staff awareness and public participation.

A department-wide audit on access to buildings was completed and CALM will engage a disability access consultant to prioritise the results and to work with managers in the planning of new offices and office upgrades.

In the area of employment, CALM's new EEO and Diversity Management Plan 2003–2006 contains various strategies aimed at increasing the recruitment and retention of people with disabilities. One strategy involves referring all advertised vacancies, short term and casual employment opportunities to employment agencies specialising in the recruitment of people with disabilities. A fund has been established to assist in providing improved access for employees and volunteers with disabilities. Funding requests approved to date include assisting with modifications to a work environment for a volunteer, modifications to an employee's house to cater for a family member with a disability and minor improvements to access at The Hills Forest Discovery Centre.

EEO and diversity management

Two-hundred and three managers and supervisors completed the online self-paced interactive training course on Workplace Discrimination and Sexual Harassment – Legal Compliance. New managers and supervisors will be required to complete the course during 2004–2005.

An in-house online training program in EEO Legal Compliance is currently being developed by CALM, in conjunction with the Equal Opportunity Commission. The program is expected to be completed by the end of the 2004 calendar year and will be accessible to all CALM employees with computer access.

Following the addition of 12 new Grievance Contact Officers to the network during 2002–2003, a new poster with contact details of all network members was produced and distributed early in 2003–2004.

EEO and diversity training was conducted at a number of CALM work centres, as well as for participants in the Public Sector Training Program, Mentored Aboriginal Training and Employment Scheme and Graduate Recruit Program.

CALM's EEO and Diversity Management Plan 2003–2006 was completed and launched in March 2004. The Equity and Diversity Sub-Committee and Taskforce developed the plan in consultation with a wide range of employees from all levels and streams across CALM during the preparation process. The plan affirms CALM's commitment to achieving greater workforce diversity and effecting an inclusive corporate culture and work environment that is free from discrimination and harassment. It contains strategies that provide for the effective management of CALM's diverse workforce and will assist in meeting its performance objectives identified in the Equity and Diversity Plan 2001–2005 and its statutory obligations under the *WA Equal Opportunity Act 1984*. Though Indigenous Australians and women have been identified in the plan as two key groups, the plan's strategies aim to maximise the potential and well-being of all employees.

Electoral Act 1907

In accordance with the requirements of Section 175ZE of the *Western Australian Electoral Act 1907*, the Department of Conservation and Land Management incurred the following expenditures in the financial year ended 30 June 2004:

Advertising agencies: \$1,502.60 (Effective Advertising Marketing)

Media advertising organisations: \$229,909.96 (Marketforce Productions) and \$20,900.00 (Media Decisions WA).

There was no expenditure in the market research, direct mail and polling areas by the Department.

Total expenditure was \$252,312.56.

Energy Smart

In accordance with the State Government's Energy Smart Government policy CALM committed to achieve a 12 per cent reduction in non-transport related energy use by 2006–2007.

The targeted reduction for 2003–2004 was six per cent from the 2001–2002 baseline data.

During the year the following initiatives were undertaken:

- an Executive Energy Smart Committee was formed to promote energy conservation within CALM;
- installation of a hybrid renewable energy power generation system and a solar-powered water pumping system to replace diesel-powered systems at Lorna Glen station (a proposed Conservation Park); and
- a project officer allocated to coordinate implementation of renewable energy systems in Regional Services Division.

Energy Smart Government policy

Performance Indicators	Baseline data	2003–2004 Actuals # #	Variation %
Energy consumption (GJ)	23,929	23,686	-1.1
Energy cost (\$)	928,638	860,147	-7.4
Greenhouse gas emissions (tonnes of CO ₂)	4,247	4,093	-3.7
Performance indicators by end use category			
<i>Office – Combined services</i>			
MJ/sqm	249	230	
MJ/occupancy	10,207	9,936	
<i>Office – Tenant services</i>			
MJ/sqm	264	174	
MJ/occupancy	7,784	5,926	
<i>Laboratories – MJ/sqm</i>	415	421	
<i>Public buildings – MJ/sqm</i>	492	214	
<i>Parks and wildlife facilities # –GJ</i>		8,958	
<i>Other buildings # – MJ/sqm</i>		363	
<i>Other uses – GJ</i>	10,655	903	
<i>Residential buildings # – MJ/occupant</i>		8,186	

New reporting categories.

Some figures may vary slightly as final accounts are received.

External funding, grants and sponsorships

This report focuses primarily on revenue to CALM from grant programs administered by Commonwealth or State government agencies, and other significant support such as sponsorships, partnerships and donations. Other operating revenue (including licence fees and national parks entrance fees) are detailed elsewhere in the report.

Grants or funding programs provide a major source of financial support for CALM. Commonwealth funding improved in 2003–2004, primarily due to the endorsement of the *Framework for the implementation of the Natural Heritage Trust extension* (in October 2002) leading to funding being available through the four major NHT programs – Landcare, Bushcare, Rivercare and Coastcare. In addition, projects for which CALM is the lead agency, began under the newly established *Cooperative Research Centre for Plant-Based Management of Dryland Salinity*. Significant support also was received from other Commonwealth sources, including the Australian Biological Resources Study, the Department of Employment and Workplace Relations, the National Action Plan for Salinity and Water Quality and the Rural Industries Research and Development Corporation.

It should be noted that the figures in the table on the right include several programs and/or projects for which CALM is a joint proponent. The figures in the table may differ from Commonwealth funding amounts shown in the financial statements, which reflect the timing of actual funding receipts, rather than approved program or project funding.

Year	Amount (million \$)
1995–96	4.80
1996–97	5.14
1997–98	8.67
1998–99	9.71
1999–00	7.55
2000–01	11.96
2001–02	7.71
2002–03	3.12
2003–04	4.82

Support from the State Government continued, with recurrent funding being provided through programs that included the Salinity Strategy (\$4.65 million), Main Roads Western Australia (\$2 million), Management of Perth's Regional Parks (\$0.83 million) and the Gascoyne/Murchison Strategy for targeted land acquisition (\$1.05 million). Government funds, as part of the State Government's *Protecting our old-growth forests* policy, also were provided for the creation of proposed new national parks and their staffing (\$4.5 million) and a further \$2.25 million for proposed new national parks capital works and visitor services. In response to an analysis of the 2002–2003 fire season by the Department, the State Government provided an extra \$3 million for fire management resources in CALM's south-west forest regions, and the Midwest and South Coast regions. Other State Government support included funding for the upgrade of Silent Grove and Walpole airstrips, the continued support for the redevelopment of the Matilda Bay Reserve boat ramp and several State Coastcare projects, all of which were funded through the Department for Planning and Infrastructure.

The 'Western Australian Millennium Seed Bank Flora Conservation Project' continued to receive funding. This project was originally established in September 2001 between CALM, the Botanic Gardens and Parks Authority and the Royal Botanic Gardens, Kew, United Kingdom. The Royal Botanic Gardens will fund the project for up to 10 years, with total funds estimated to be about

\$1.2 million. The project involves the collection and storage of seed from more than 1,400 rare or threatened WA plant taxa.

CALM continued to receive valued support through corporate sponsorship. Sponsors included SITA (Kalgoorlie Arboretum waste management), BHP Billiton (heath mouse research), Cable Sands (endangered plant research), Robe River Iron Associates (four research projects in the Pilbara Region), Wind over Water Foundation (cat research), Tiwest Joint Venture and Alcoa World Alumina Australia (*Western Shield*).

CALM was actively involved with Conservation Volunteers Australia (CVA) and was fortunate to secure (in partnership with the City of Melville and City of Cockburn) the only 'Revive our Wetlands' project selected in WA. 'Revive our Wetlands', a partnership between CVA and BHP Billiton, will support works for significant wetlands within Beeliar Regional Park.

Other important partnerships included Greening Australia/Job Futures Green Corps program, which included projects supporting the endangered western swamp tortoise and mapping of creek-lines and reserves in the Perth Hills area.

The BankWest LANDSCOPE Visa card raised about \$15,000 for the conservation of endangered species and ecological communities. Projects supported by this funding included captive breeding of the central rock rat, monitoring of the Lancelin Island skink and publication of a 2005 calendar that will feature the declared rare flora of Wongan Hills.

The community also continued to support CALM in numerous ways by providing both cash and in-kind contributions. These included small donations of cash into CALM's collection-boxes and through community fundraising activities, the loan of specialised tools, help with relocating animals and participation in biological surveys. For example, CALM's efforts to conserve the Gilbert's potoroo (Australia's rarest mammal) were bolstered by cash and in-kind donations from the Gilbert's Potoroo Action Group and Brian and Robyn Foley.

The Bibbulmun Track Foundation and Mundi Bididi Foundation continued to support CALM in meeting its management obligations for the Bibbulmun Track and the Mundi Bididi Trail. Support included interpretation and signage, walker surveys and information packages.

Occupational safety and health

CALM maintained its gold status as recognised by the Industrial Foundation for Accident Prevention (IFAP) Safe Way Awards. Gold status recognises only the most outstanding of systems, procedures and performance in occupational safety and health.

Performance indicators

	2003–04	2002–03
Lost Time Injury Frequency Rate	9	11
All Injury Frequency Rate	40	36
Number of Lost Time Incidents	26	29
Average Days Lost (per LTI)	18	10
Workers' Compensation Premium	\$704,674	\$739,886

The IFAP Safe Way Awards further acknowledge excellence in the field of occupational safety and health, and are designed for organisations whose commitment to safety and health can be measured by the effectiveness of their occupational safety and health management systems.

To achieve gold status, organisations must be able to demonstrate 'best practice' in their management system. The rating method also requires the application of continuous improvement processes across the integral components of the system.

Record keeping

CALM's Recordkeeping Plan was accepted by the State Records Commission, and CALM's on-line Recordkeeping Awareness Training package received the Award for Excellence in Records Management in 2003 from the Records and Information Management Liaison Group. The project to replace CALM's existing records management system with an electronic document and records management system continued with the development of a business case and implementation plan, and the progressive implementation of a corporate Keyword Classification Thesaurus.

Waste paper recycling

CALM follows the State Government's policy to recycle all waste paper generated by government metropolitan agencies and utilises the 'Whole of State Government Contract' administered by the Department of Treasury and Finance for Waste Paper Recycling.

The primary objectives of the contract are to:

- improve waste management and recycling practices within the public sector;
- maximise the volume of waste paper collected from all metropolitan agencies for recycling;
- reduce the volume of waste paper going to landfill; and
- help foster recycling within the community.

During the 2003–2004 financial year, CALM provided 6.96 tonnes of paper for recycling under the contract.

Publications produced in 2003–2004

General

Annual Report of the Department of Conservation and Land Management 2002–2003
 Arbor Day 2004 (poster)
 Annual Research Activity (report)
 CALM Bush Rangers Annual Plan 2004
 CALM Bush Rangers Annual Report 2003
Conservation News (newspaper, 10 issues)
LANDSCOPE Calendar 2004
LANDSCOPE Expeditions – Roebuck Bay (report)
LANDSCOPE Expeditions Program 2004 (booklet)
LANDSCOPE magazine (4 issues)
 Marine Community Monitoring Program (manual)
 Peer Support (leaflet)
 Proposed Montebello/Barrow Islands Marine Conservation Reserve Marine Park Indicative Management Plan 2004
 Review of CALM's Prosecution Policy (report)
 Review of the Statutory Authorities (report)
 Rockingham Lakes Regional Park – Draft Management Plan
 Rowley Shoals Marine Park Draft Management Plan and Proposed Extensions 2004
 Safety in Bushfire Control (booklet)
 Stars and Telescopes Perth Observatory Visitor Activities (leaflet)

Nature Conservation

A League of Their Own – *LANDSCOPE* extract (leaflet)
 A Vision Splendid – *LANDSCOPE* extract (leaflet)
 Banksia Road Nature Reserve (leaflet)
 Beaked Eremophila (poster)
 Best Practice Guidelines for the Management of Dieback (booklet)
 Biodiversity Audit: Avon Wheatbelt 2 Case Study
 Biodiversity Audit: North Kimberley 1 Case Study
 Buntine, Marchagee Catchment News (2 newsletters)
 Bush Walks in the Pilbara (book)
 Common Fungi of the Perth Region (poster)
 Conservation Science Western Australia (report)
 Declared Rare Flora (leaflet)
 Draft Greenhouse Strategy Summary Sheet (newsheet)
 EcoEducation (3 newsletters)
 EcoEducation programs 2004 – Primary School Students (leaflet)
 EcoEducation Strategic Plan for Wellington National Park (report)
 Ecoplan News (3 newsletters)
 Feast for the Soil – *LANDSCOPE* extract (leaflet)
 Fire for Life – *LANDSCOPE* extract (leaflet)
 Forest Detectives Trail (Manual) Have Your Say for the Montebello/Barrow Islands Marine Conservation (leaflet)
 Lake Clifton Thrombolites (poster)
 Living with Possums (leaflet)

Living with Quendas (leaflet)
Managing Natural Diversity in the Wheatbelt : A Conceptual Framework (report)
Managing Your Bushland (book)
Marine Conservation Matters (newsletter)
Marine Life of Ningaloo Marine Park and Coral Bay (leaflet)
Premier Park – *LANDSCOPE* extract (leaflet)
Project Eden – Introductions to Francois Peron National Park (leaflet)
Project Eden – Reconstructing an Australian Ecosystem (leaflet)
Sea Lions and Fur Seals (leaflet)
Silky Eremophila (poster)
State Salinity Action Plan Review of CALM's Programs January 1987 to June 2001 (report)
The Way Ahead – *LANDSCOPE* extract (leaflet)
Threat Abatement for *Phytophthora cinnamomi* (Dieback) Policy (booklet)
Threatened Ecological Communities (leaflet)
Threatened Flora Seed Centre (leaflet)
Threatened Seed Centre – MSBP Achievements (booklet)
WA Greenhouse Strategy (report)
Watch Out! (poster)
Western Swamp Tortoise Recovery Plan (report)
Western Wildlife Newsletter (4 issues)
Wongan Hills Nature Reserve – Visitor Information (leaflet)
Wongan Hills Rare Flora (leaflet)

Parks and Visitor Services

A Guide to Lane Poole Reserve (magpaper)
Barna Mia Dryandra Reserve (leaflet)
Calgardup Cave (postcard)
Crocodiles (leaflet)
Dog Owners Beware (leaflet)
Dryandra Woodland Visitor Information (leaflet)
Easter Activity Program - VOTG (leaflet)
Esperance National Parks (leaflet)
Experiencing Whale Sharks in the Ningaloo Marine Park (leaflet)
Francois Peron National Park (leaflet)
Giants Cave (postcard)
Going to the Coast in D'Entrecasteaux National Park (leaflet)
Have Your Say : Rowley Shoals Marine Park (leaflet)
Have Your Say: Cape Range National Park, Ningaloo Marine Park (leaflet)
Jurien Bay Marine Park (poster)
Kalbarri National Park (leaflet)
Karijini National Park Visitor Information (leaflet)
Lane Poole Reserve Rules: Dry Future (leaflet)
Millstream – Chichester National Park (leaflet)
Mitchell River National Park (leaflet)
Monitoring and Evaluating Biodiversity Conservation Projects (report)
Monkey Mia News (newsletter)
Mt Lesueur National Park (leaflet)
Munda Biddi Messenger (2 newsletters)
Munda Biddi Trail Information (leaflet)
Nambung National Park (leaflet)
National Park Visitor Information and Walk Trail Guide (leaflet)
Nearer to Nature (4 leaflets)

Parks of the Coral Coast (leaflet)
 Purnululu National Park (leaflet)
 Saving the Giants (booklet)
 Sharing the Dreaming (booklet)
 Southern Forest (magpaper)
 Summer Activity Program – Valley of the Giants (leaflet)
 Swimming with Whale Sharks: Code of Conduct (poster)
 The Whale Shark Experience (poster)
 Tour Operators Information (leaflet)
 Touring Western Australia (3 newsletters)
 Valley of the Giants: Easter Activity Program 2004 (leaflet)
 Wolfe Creek Crater (leaflet)
 World Heritage Property: Shark Bay (poster)
 Yanchep National Park – Visitor Guide and Map (leaflet)
 Yanchep National Park – Perth's Natural and Cultural Meeting Place (leaflet)

Sustainable Forest Management

Application of Modern Inventory Techniques in Forests of WA (report)
 Forest Management Plan 2004 – 2013
 Tuart Forest Atlas
 Wandoo Recovery Group News Sheet

Scientific publications

1. Abbott, I., Mellican, A., Craig, M.D., Williams, M., Liddelow, G. and Wheeler, I. (2003). Short-term logging and burning impacts on species richness, abundance and community structure of birds in open eucalypt forest in Western Australia. *Wildlife Research* **30**. pp. 321-329.
2. Algar, D., Angus, G.J., Brazell, R.I., Gilbert, C. and Tonkin, D.J. (2003). Feral cats in paradise: focus on Cocos. *Atoll Research Bulletin* **505**. pp. 1-12.
3. Algar, D., Angus, G.J., Williams, M.R. and Mellican, A.E. (2004). An investigation of bait uptake by feral cats on Peron Peninsula, Western Australia. Department of Conservation and Land Management, Western Australia, 66 p.
4. Auckland, C., Shearer, B.L. and Hardy, G.E. St. J. (2003). The dilution of phosphite in rapidly growing plants and how soil and plant phosphate levels interact with phosphite and its ability to induce host-resistant responses when challenged by *Phytophthora cinnamomi* (POSTER ABSTRACT). In: *Phytophthora in Forests and Natural Ecosystems: 2nd International IUFRO Working Party 7.02.09 Meeting, Albany, W. Australia, 30th Sept-5th Oct, 2001* (eds J. McComb, G. Hardy & I. Tommerup). Centre for *Phytophthora* Research and Management, Murdoch. pp. 244-245.
5. Baldwin, R., Hughes, G.R. and Prince, R.I.T. (2003). Loggerhead turtles in the Indian Ocean. In: *Loggerhead Sea Turtles* (eds A.B. Bolten & B.E. Witherington). Smithsonian Books, Washington. pp. 218-232.
6. Barrett, B. (2004). Hit the ground running!. *South Coast Threatened Birds Newsletter* **8**. p. 8.
7. Barrett, B. (2004). Western ground parrot recovery project. *Western Australian Bird Notes* **109**. pp. 13-14.
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- Ecosystems: 2nd International IUFRO Working Party 7.02.09 Meeting, Albany, W. Australia, 30th Sept-5th Oct, 2001* (eds J. McComb, G. Hardy & I. Tommerup). Centre for *Phytophthora* Research and Management, Murdoch. pp. 132-137.
9. Barrett, S. (2003). Rare flora threatened by *Phytophthora cinnamomi* in the Albany area, Western Australia (ABSTRACT). In: *Phytophthora in Forests and Natural Ecosystems: 2nd International IUFRO Working Party 7.02.09 Meeting, Albany, W. Australia, 30th Sept-5th Oct, 2001* (eds J. McComb, G. Hardy & I. Tommerup). Centre for *Phytophthora* Research and Management, Murdoch. p. 245.
 10. Barrett, S., Shearer, B.L. and Hardy, G.E. St. J. (2003). Control of *Phytophthora cinnamomi* by the fungicide phosphite in relation to *in planta* phosphite concentrations and phytotoxicity in native plant species in Western Australia. In: *Phytophthora in Forests and Natural Ecosystems: 2nd International IUFRO Working Party 7.02.09 Meeting, Albany, W. Australia, 30th Sept-5th Oct, 2001* (eds J. McComb, G. Hardy & I. Tommerup). Centre for *Phytophthora* Research and Management, Murdoch. pp. 138-143.
 11. Bellgard, S., Crane, C. and Shearer, B. (2003). Variation exhibited by isolates of *Phytophthora megasperma* causing seedling and tree decline in south-western Australian coastal national parks. In: *Phytophthora in Forests and Natural Ecosystems: 2nd International IUFRO Working Party 7.02.09 Meeting, Albany, W. Australia, 30th Sept-5th Oct, 2001* (eds J. McComb, G. Hardy & I. Tommerup). Centre for *Phytophthora* Research and Management, Murdoch. pp. 144-147.
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 15. Burbidge, A.A., Drew, M., Pearson, D. and Kendrick, P. (2003). Mammal monitoring, Barrow Island Nature Reserve, October 2003. Department of Conservation and Land Management, Western Australia, 32 p.
 16. Burbidge, A. and Mather, S. (2003). Western Australian bird notes: quarterly newsletter of Birds Australia Western Australia Inc. - No. 105, March 2003. 36 p.
 17. Burbidge, A. and Mather, S. (2003). Western Australian bird notes: quarterly newsletter of Birds Australia Western Australia Inc. - No. 106, June 2003. 36 p.
 18. Burbidge, A. and Mather, S. (2003). Western Australian bird notes: quarterly newsletter of Birds Australia Western Australia Inc. - No. 107, September 2003. 44 p.
 19. Burbidge, A. and Mather, S. (2003). Western Australian bird notes: quarterly newsletter of Birds Australia Western Australia Inc. - No. 108, December 2003. 36 p.
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I certify that the performance indicators are based on proper records, are relevant and appropriate for assisting users to assess the performance of the Department of Conservation and Land Management and fairly represent the performance of the Department of Conservation and Land Management for the financial year ended 30 June 2004.



Keiran McNamara
EXECUTIVE DIRECTOR
13 August 2004

Nature Conservation – Output I

Outcome achieved by

The conservation of indigenous plants, animals and ecological processes in natural habitats.

Output description

The development and implementation of programs for flora and fauna conservation, for threatened species and ecological communities, and for commercially exploited species according to the principles of ecological sustainability; the acquisition, conservation and protection of representative ecosystems; and encouraging public awareness, understanding and support for nature conservation services and policies.

Note: The Department uses the National Strategy for the Conservation of Australia's Biological Diversity definition of 'conservation', i.e. "the protection, maintenance, management, sustainable use, restoration and enhancement of the natural environment".

The Output performance can be best measured by effectiveness and efficiency indicators in three key areas:

1. Wildlife and habitat management;
2. Wildlife utilisation; and
3. Threatened species management.

Key effectiveness indicators

1. Wildlife and habitat management

Land is set aside for the management of wildlife and habitat. Management strategies are developed to ameliorate threatening agents, such as fire, pests, weeds and diseases, which can impact on the functioning of native ecosystems, and threaten the survival of species.

Performance indicator: example population estimates of native fauna following control of a threatening process.

Research by CALM scientists demonstrated in 1988 that fox predation was a major cause of small fauna decline in the south-west of WA. This led to the baiting for foxes in selective areas of

land managed by CALM, which resulted in the recovery of several species of threatened fauna at those sites. In 1994 the baiting program was extended as Operation Foxglove, where 500,000 ha of the northern jarrah forest was baited on a regular basis. In 1996, this program was further expanded as *Western Shield* with fox baiting now occurring over 3.5 million ha of the State.

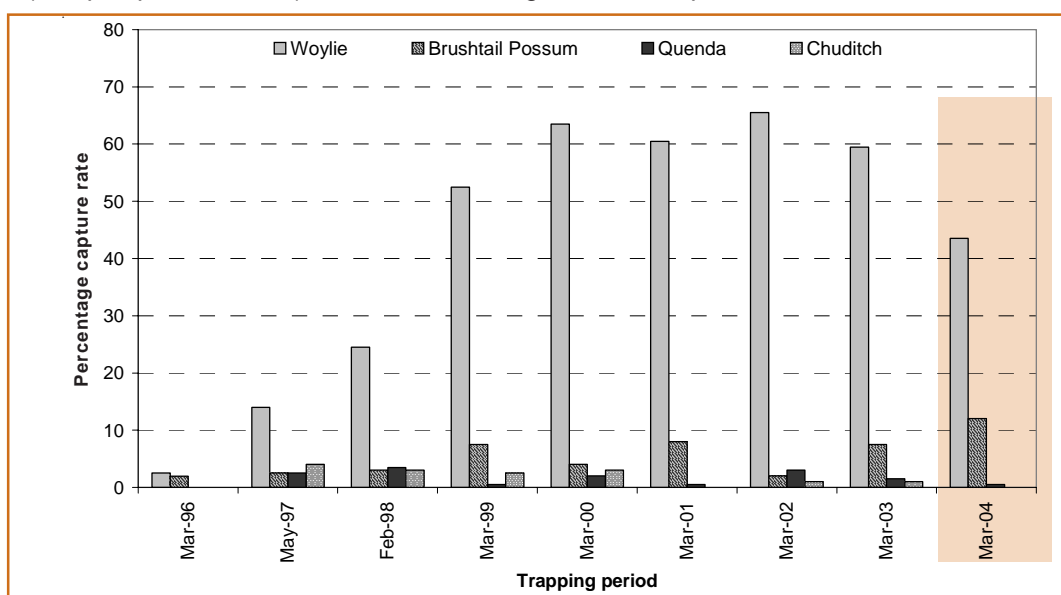
If baiting for foxes is successful in reducing fox predation as a threatening process, then it would be expected that fauna in the size range susceptible to fox predation would, in the absence of other factors, firstly stabilise, and then recover to an equilibrium level for the area of suitable habitat. To monitor the implementation of *Western Shield*, monitoring sites are being established across the range of the baiting program.

Measure

Population estimates for native fauna susceptible to fox predation in areas where fox baiting is occurring, as shown by monitoring sites where *Western Shield* is operating.

Note: the full Western Shield program commenced in 1996, and hence only eight years of monitoring data are available for areas where baiting was not previously undertaken. An example set of data from an area baited under Western Shield is presented below.

The woylie *Bettongia penicillata* is listed as a Priority Four species on CALM's Priority Fauna List. It was previously listed as a threatened species but was removed in 1996 as it no longer met the criteria for threatened status. The species has shown remarkable recovery at several sites in the south-west that have been subject to ongoing fox control. In the Perup area east of Manjimup, the woylie survived in the absence of fox control but the population has expanded and increased in density since regular fox control has been implemented under the *Western Shield* program. Other species present in this area include chuditch *Dasyurus geoffroi* (threatened), brushtail possum *Trichosurus vulpecula* and quenda *Isoodon obesulus* (priority four). The figure below shows the results of predator (fox) control on these species in the 4,775 ha timber reserve 140/25 (Moopinup forest block), on the eastern edge of the Perup forest.



Percentage capture rates of medium-size mammals in Moopinup forest block

Woylie capture rates have increased rapidly and well beyond the criterion for successful recovery (7.5 per cent capture rate) as set out in the Woylie Recovery Plan. Since woylies are more likely to encounter traps at higher population densities due to their foraging behaviour, they effectively exclude other species from traps, hence the low capture rates of brushtail possum, chuditch and quenda. The populations of these species are therefore likely to be greater than what the capture rates suggest, and the figure at least shows that these species are sufficiently abundant to compete for a portion of available traps in the presence of high woylie abundance.

This response to fox baiting is typical of the response over the range of fox baiting activity where medium-sized mammals are already established, although drought between 2000 and 2002 caused some variation in the maintenance of fauna levels with continued fox baiting. Other examples have been presented in previous annual reports.

2. 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.

Performance indicator: example population levels of harvested wildlife.

Notes

The management of flora is based on the non-destruction of the harvested plants and is therefore sustainable. Limited harvesting of breeding crocodiles, eggs and hatchlings occurs from the wild. Kangaroo harvesting, however, 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. The management programs for red and western grey kangaroo harvesting were first published in 1973. These programs outline the basis of sustainable harvesting using population estimates and harvest quotas.

From 1981 to 1993, triennial aerial surveys were undertaken for red and western grey kangaroos over the pastoral region of WA. Since 1995 the surveys have been done annually, each covering one third (330,000 km²) of the pastoral region. These data are used to estimate the populations of these species which are subject to commercial harvest.

Annual population estimates of red kangaroos are calculated from the survey data, with the estimates for the between-survey areas being extrapolated using population trend information, while western grey kangaroo populations are only recalculated when the southern pastoral region, where this species mainly occurs, is surveyed.

Sustainable harvest quotas have been determined from historical monitoring, and are set at a maximum of around 25 per cent of the population estimate, with the actual quota based on:

- current population trends;
- seasonal conditions;
- review of previous harvests;
- the proportion of the habitat and population not subject to harvesting;
- current land use practice and trends in land use; and
- significance of the take outside the commercial quota.

Measure

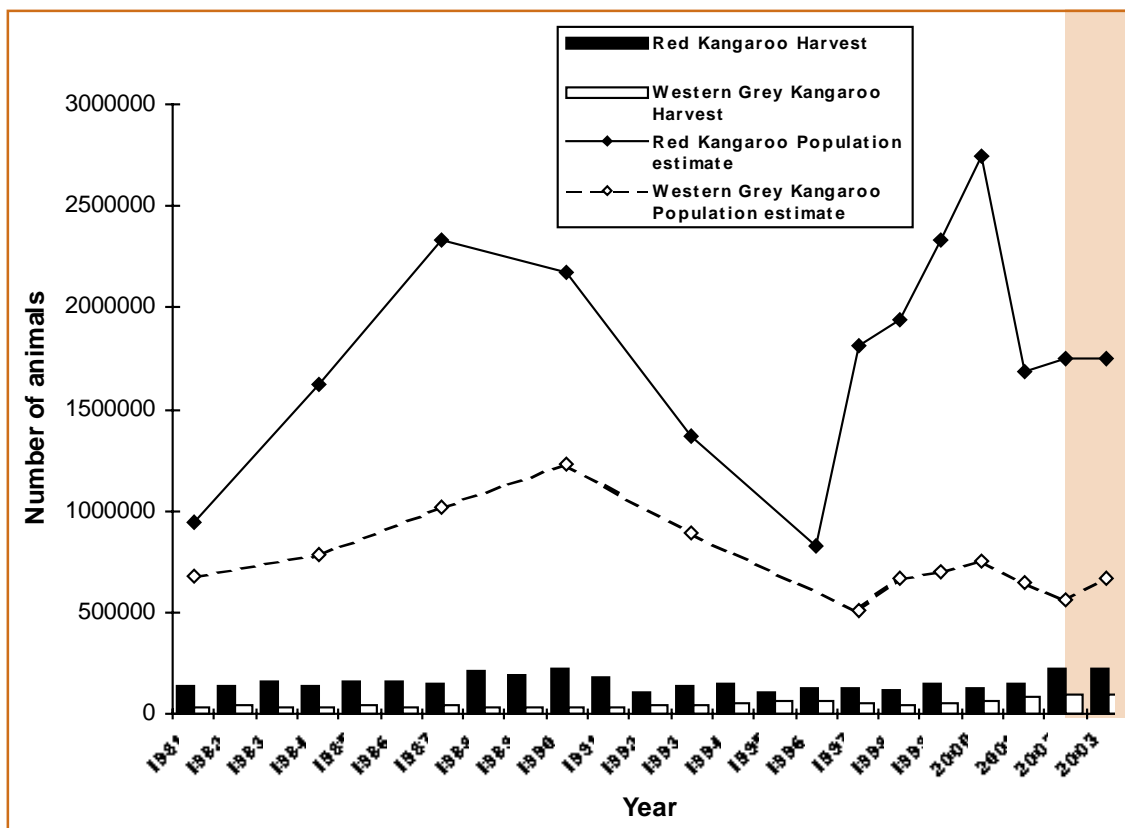
The graph below illustrates the management of harvest levels that allow for the maintenance of kangaroo populations in areas where commercial harvesting occurs.

Notes

Harvest levels are recorded for the previous calendar year as delays occur in receiving harvest reports. Minor corrections may also occur to previous years' data as late harvest returns are incorporated.

As from 1998, population estimates for kangaroos have been corrected for temperature. This gives a more realistic estimate of kangaroo numbers. Previous years' population data have also been recalculated using the temperature correction.

The variations observable in the populations of the kangaroo species mainly reflect rangeland condition, primarily as determined by rainfall, rather than the level of harvest permitted. As a natural feature of kangaroo population data, these fluctuations are taken into account over the longer term in setting sustainable harvest levels.



Population estimates and harvest levels for managed kangaroo populations in WA

3. Threatened species management

A management system is in place to identify, protect and recover flora and fauna that is threatened with extinction or otherwise in need of special protection.

Performance indicator: the identification and management of wildlife taxa that are threatened or requiring special conservation attention.

Note: Threatened taxa conservation in WA involves two phases:

- i) the identification and listing in appropriate categories as determined by the level of threat and the level of available knowledge; and
- ii) management to enable threatened taxa to be de-listed, or re-listed in less threatened categories, and to obtain the necessary information for poorly known taxa to categorise them properly.

Indicators (a) and (b) below address these two phases.

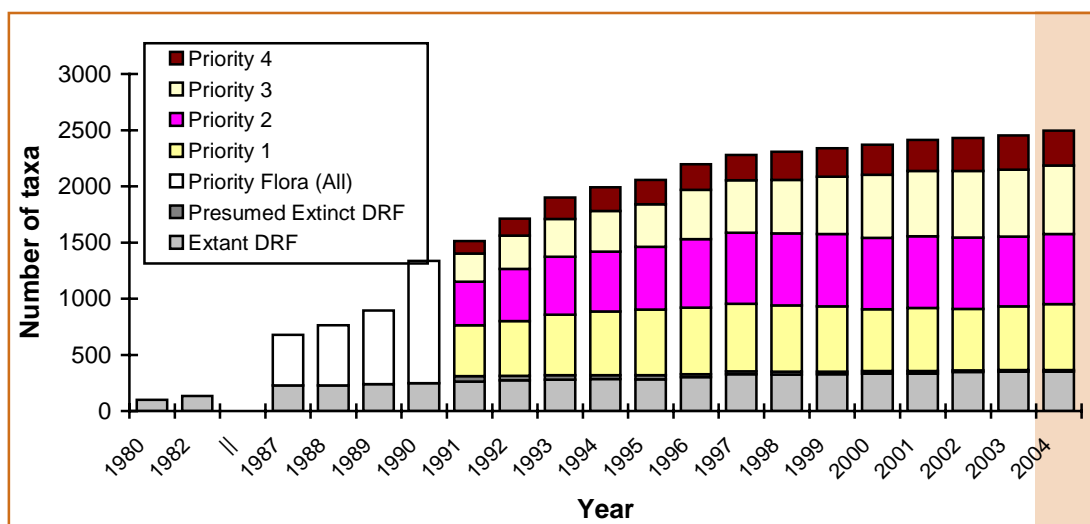
a) The number of the State's wildlife taxa identified and listed as either threatened or requiring special conservation attention, compared to previous years.

Note

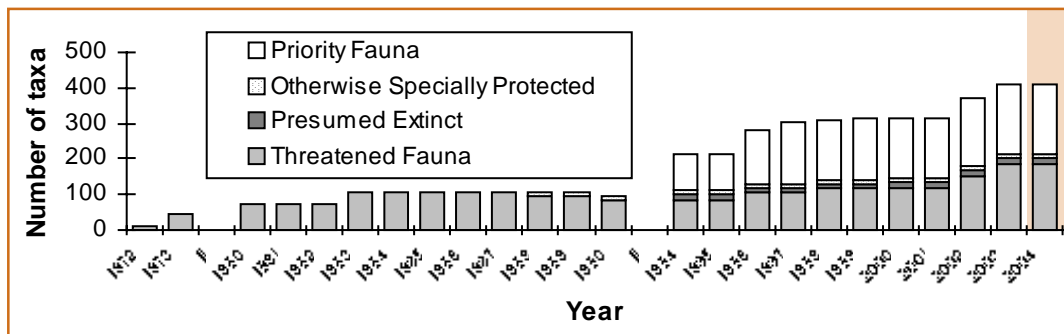
As from 1998–1999 the measure relates to actual listing changes to the declared lists of specially protected fauna and flora made by the Minister for the Environment and the lists of priority fauna and flora prepared by CALM. Recommendations made by the Threatened Species Scientific Committee, but not yet declared by the Minister are not included.

Measure

As shown in the cumulative graph below, at 30 June 2004 a total of 2,906 taxa (2,495 flora and 411 fauna) were declared to be threatened or specially protected, or included on CALM's priority flora and fauna lists. This represents an increase of 1.5 per cent in the number of taxa listed as requiring special conservation status compared to 2002–2003.



Number of declared rare (DRF) and priority flora taxa



Number of threatened, otherwise specially protected and priority fauna taxa

No changes were made to the lists of threatened or specially protected flora or fauna due to a delay in the gazettal of the lists. Fifty-eight (58) flora were added to the Priority Flora List, and 15 flora deleted from this list. Additions were due to taxonomic revisions or curation of the State flora collection identifying new taxa that were poorly collected. Deletions were mainly due to survey effort determining that the flora were more common and protected than previously known, or taxonomic revision had shown the flora to be the same as other more common taxa.

Notes

Migratory bird species listed under Schedule 3 of the fauna notice are not included in the numbers of taxa requiring special protection as most are not WA species.

A taxon (plural taxa) is a term for any classificatory group of organisms, including species, subspecies and varieties. The indicator refers to the number of the State’s wildlife taxa that are either:

- declared to be specially protected by the Minister for the Environment under the *Wildlife Conservation Act 1950*, that is, taxa that are considered to be either rare, likely to become extinct, or otherwise in need of special protection; or
- listed by CALM as priority flora or fauna, that is, taxa that are either poorly known but potentially in need of special protection based on the information available (Priorities 1 to 3), or rare but not currently threatened and in need of monitoring (Priority 4).

The increase in the number of taxa listed mainly reflects CALM’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.

b. The recovery of threatened taxa as a consequence of specific management actions as demonstrated through case examples.

Note

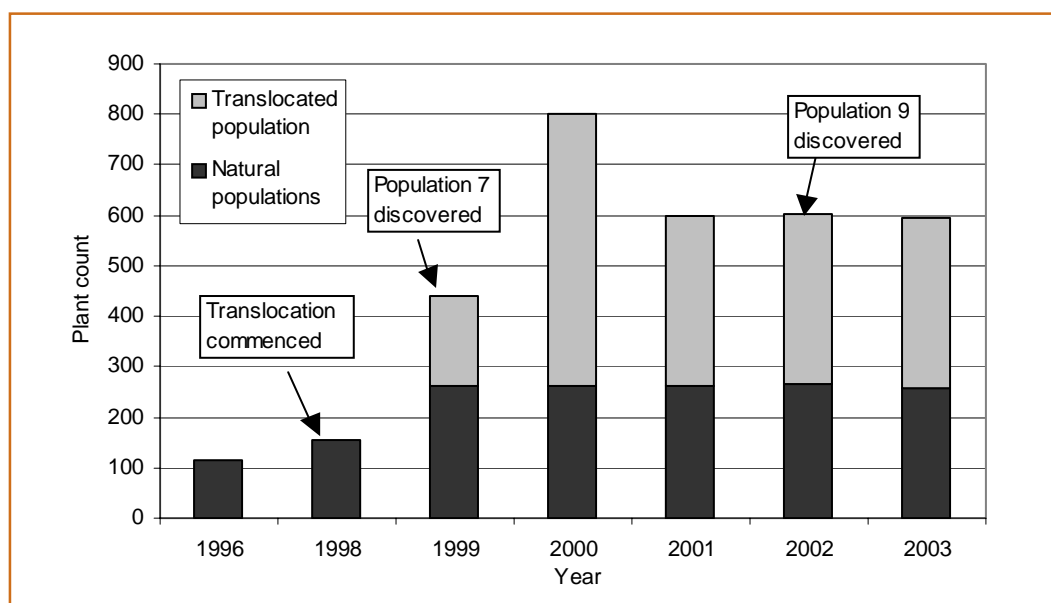
Given the probabilistic nature of the categories of threat, and the long-term nature of threatened taxa recovery, significant management actions may occur before a taxon moves from one category to a lower risk category. The measure of such movements thus will occur over long time periods.

Measure

- i) *Acacia aprica* was first collected in 1957 by J. W. Green near Carnamah. Extensive surveys in the mid-1990s found just five populations of this species, all of which were confined to narrow road verges in a 45-km radius north of Coorow. In 1999 it was formally named *A. aprica*, meaning sun loving or open to the sun, referring to the open nature of the shrub. It was listed as Declared Rare Flora and ranked as critically endangered in 1997 due to the small population sizes, restricted distribution and threats of weed invasion, accidental damage from road maintenance activities and chemical drift from adjacent farms.

An Interim Recovery Plan was written in 1999 (Stack and English 1999), which recommended the translocation process begin. A translocation program was initiated in 1997, when the Interim Recovery Plan was still in draft. A translocation site was selected in a Shire reserve 8.5 km from the nearest natural population. A translocation proposal was written and approved in 1998. One thousand five hundred (1,500) seeds were planted at the translocation site in August 1998, but seed germination failed. In August 1999, 181 seedlings were planted at the translocation site. Seedling establishment was compared with and without the addition of mulch. In 2000, a further 361 seedlings were planted at the translocation site. The need for protecting the seedlings against herbivory was tested with this planting.

At the most recent monitoring in July 2003, plants given mulch had a survival of 86 per cent whereas plants not given mulch had a survival of 91 per cent. Seedlings protected from grazing had a survival of 59 per cent, whereas only 39 per cent of those not protected survived. After three years of planting, a total of 543 seedlings and 1,500 seeds had been planted. By 2003, 62 per cent of these seedlings (including from one seed that germinated on site) had survived and all of these had flowered. The amount of viable seed on an average branch of the translocated plants (135 viable seed in 2003) has been compared to a similar sized branch on plants from the natural populations (16 and 15 viable seed in 2003 in Population 1 and 3). This suggests that the translocation has met several of the short-term success criteria.



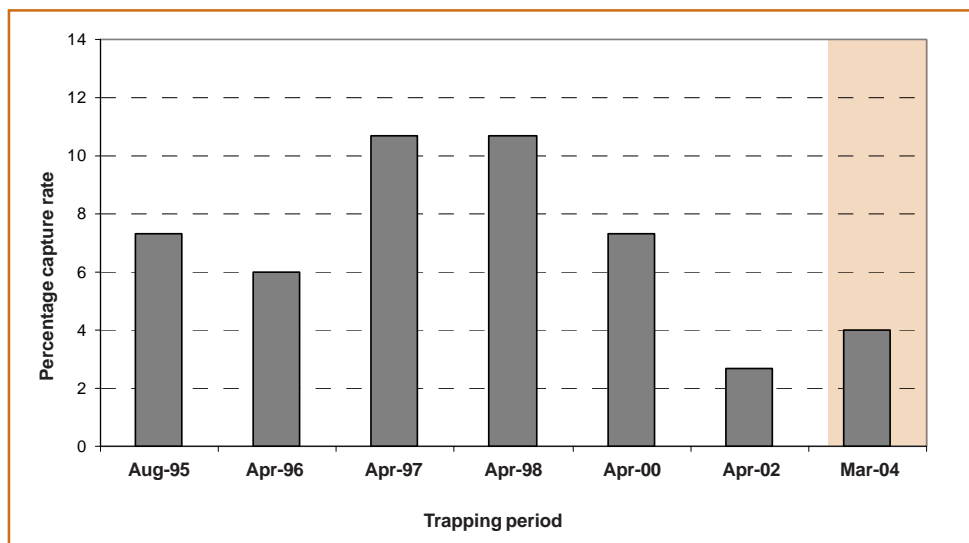
Acacia aprica plant counts

Opportunistic surveys of the species were successful in locating two new populations of this species in 1999 (Population 7) and 2002 (Population 9). Population 7 is located in a large area of remnant vegetation on private property. Negotiations with the landowners resulted in the fence around the vegetation being upgraded. A three-year ecological study was undertaken on this species in order to understand factors limiting population growth and provide valuable ecological data (Yates and Broadhurst 2002). These data have proved invaluable for providing a baseline for comparison of the translocated populations performance.

Management actions including survey, liaison, ecological research and translocation have resulted in the number of plants of this species increasing from 116 to 594 individuals. In addition there is now a population located on a reserve and a population occurring in a significant area of remnant vegetation. The management actions implemented appear to have significantly improved the long-term future of this species.

- ii) Medium-sized mammals in the south-west of the State have generally declined in their population size and range due to loss of habitat and predation by foxes. Fox control under the *Western Shield* program may assist the recovery of these species in areas where animals still occur. In other areas where species have become locally extinct, translocation programs in conjunction with fox control to remove this threatening process, may be implemented to re-establish the species in secure conservation reserves.

The figure below shows the results of a translocation program with supporting fox control, of a medium-sized mammal, the quenda *Isoodon obesulus*, into the 2,310-ha Tutanning Nature Reserve, located east of Pingelly in the central Wheatbelt. Prior to 1991, fauna surveys had failed to trap any quenda in the reserve, and it was believed to be locally extinct. Quenda were first released into the reserve in 1991 and successfully established. Monitoring of the fauna in Tutanning Nature Reserve by trapping shows that the quenda remained abundant until the population declined during the drought of 2000–2002. The figure shows that the population has remained viable and is now recovering, demonstrating the sustainability of this population.



Percentage capture rate of quenda in Tutanning Nature Reserve

Previously listed as Threatened, the quenda has been successfully recovered at a number of locations through fox control and translocations, contributing to its removal from the threatened fauna list in 1998. The quenda is now regarded as Conservation Dependent – that is, dependent on ongoing fox control provided through the *Western Shield* program.

Further examples of monitoring from other regions have been presented in previous annual reports.

Key efficiency indicator

Wildlife and habitat management

The cost per hectare managed

Note

This measure provides an indicative comparison of the accrual basis gross total cost (excluding revenues) per hectare of managing nature conservation on CALM-managed lands and waters.

Measure

1997–1998:	\$2.12 per hectare
1998–1999:	\$1.85 per hectare
1999–2000:	\$2.05 per hectare
2000–2001:	\$2.03 per hectare
2001–2002:	\$2.28 per hectare
2002–2003:	\$2.76 per hectare
2003–2004:	\$2.76 per hectare

Sustainable Forest Management – Output 2

Outcome achieved by

The development and implementation of management plans and systems for sustainable management of State forest and timber reserves.

Output 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.

Key effectiveness indicator

Satisfaction of the sustainable forest management standards of the Conservation Commission of Western Australia.

Note

The Conservation Commission adopted compliance with the Ministerial Conditions, Commitments and operational guidelines for the Forest Management Plan 1994–2003 as its standards for sustainable forest management pending finalisation of a new forest management plan. The Forest Management Plan 2004–2013 commenced on 1 January 2004 and replaced the Forest Management Plan 1994–2003 and its Ministerial Conditions. The Department has a statutory requirement to manage State forest and timber reserves and regulate access to State forest and timber reserves by the Forest Products Commission and its contractors, and to ensure that operational guidelines and standards are met. Compliance is measured through a field audit process that samples active and completed forest coupes in both jarrah and karri, in a range of rainfall zones that have or are being harvested by a range of contractors. The audits are conducted at least annually.

The Department conducted a field audit during the year, which forms the basis for compliance testing for the key effectiveness indicator. The audit tested compliance with operational standards set through the previous plan up to 31 December 2003 and as they were amended when the new plan commenced on 1 January 2004.

Measures

Output performance can best be measured in two key areas of compliance with the Forest Management Plan 1994–2003 and the Forest Management Plan 2004–2013. These are:

1. Ministerial Conditions and Commitments on the Forest Management Plan 1994–2003; and
2. Major aspects of the *Manual of Management Guidelines for Timber Harvesting in Western Australia* as amended by the Forest Management Plan 2004–2013.

1. Ministerial conditions and commitments

Compliance with the requirement to keep river and stream reserves (zones) and diverse ecotype conservation areas (zones) unharvested in perpetuity, and their boundaries protected during harvesting (unchanged for whole year).

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

Compliance with the requirement for phased logging in second order catchments

In all second order catchments in the intermediate and low rainfall zones of the multiple use jarrah forest subject to logging, there is a requirement to retain at least 30 per cent of each second order catchment at a basal area greater than 15 m²/ha for a period of at least 15 years after harvesting of the remainder of the catchment. The requirements of this Ministerial Condition were complied with for all areas sampled in 2001–2002, 2002–2003 and 2003–2004.

Compliance with the requirements for high salt risk catchments

Within each catchment identified as a high salt risk, there is a requirement to retain an increased area of river and stream zones. No harvesting was found to have occurred in these areas in 2001–2002, however one coupe was harvested in 2002–2003 and the increased area of stream zone was retained and protected in accordance with the requirements. In 2003–2004 one coupe was harvested and the additional stream zones retained.

Compliance with the requirement for the retention of habitat elements

The requirements prior to January 2004 are the identification and marking of four primary habitat trees per hectare or 20 per five hectares in all jarrah forest cut to gap. This requirement was increased to five trees per hectare from January 2004. There is also a requirement for the identification and marking of at least one example of ground habitat per hectare. The average number of habitat trees per hectare for areas sampled was found to be 5.8 in 2001–2002, 5.6 in 2002–2003 and 8.9 in 2003–2004. The average number of ground habitats per hectare was 0.2 in 2001–2002, 0.65 in 2002–2003 and 0.5 in 2003–2004.

	Stream Zone			Diverse Ecotype Zone			Other (e.g. reserves, coupe boundaries)		
	01–02	02–03	03–04	01–02	02–03	03–04	01–02	02–03	03–04
Length assessed (metres)	10,156	18,507	14,058	2,666	3,296	1,702	2,215	4,984	5,345
Number of minor incidents	28	28	19	6	3	Nil	1	6	5
Length of minor incidents (metres)	239	285	144	24	18	Nil	6	50	45
Number of major incidents	7	3	8	Nil	1	Nil	Nil	Nil	Nil
Length of major incidents (metres)	223	60	112	Nil	Nil	Nil	Nil	Nil	Nil
Percentage of edge protected intact	95.5%	98%	98%	99%	99.5%	100%	99.7%	99%	99%

Compliance with the limit on karri gap size

The requirement prior to January 2004 was that karri gap size be no larger than 80 ha. From January 2004 this was reduced to 40 ha in two-tiered forest and 20 ha in regrowth forest. The sample reported here only includes areas harvested before January 2004. All areas sampled complied. The maximum gap size recorded in 2001 was 39.3 ha, in 2002 it was 32.1 ha and in 2003 it was 41.4 ha. The average gap size was 11.2 ha in 2001, 11.8 ha in 2002 and 12.4 ha in 2003.

Compliance with the limit on the distance between retained mature karri forest

The requirement prior to January 2004 was to, where possible, ensure the distance between areas of retained mature karri forest be a maximum of 400 m. This requirement was not included in the new plan because of additional reservation of mature karri and the introduction of fauna habitat zones. The areas sampled in 2001–2002, 2002–2003 and 2003–2004 complied.

2. Major aspects of the *Manual of Management Guidelines for Timber Harvesting in Western Australia*

Compliance with planning and pre-harvest checklists

Standard documentation must be completed prior to the start of any harvesting operation on State forest. Approval of the documentation signifies formal approval for an area to be harvested. The requirements of this specification were complied with for each coupe sampled in 2001–2002 but one coupe out of 16 sampled in 2002–2003 had sections of the pre-harvest checklist not signed off as completed prior to the start of the operation. In 2003–2004 all coupes complied with the requirement.

Compliance with specifications for coupe demarcation

Management boundaries, including coupe, river, stream, travel route and diverse ecotype zones, must be identified and demarcated prior to the start of cutting. Ninety-six per cent of boundaries assessed were marked correctly in 2001–2002, 98 per cent in 2002–2003 and 99 per cent in 2003–2004.

Compliance with requirements for the protection of soil

When extraction is completed in any fellers block, and prior to machinery leaving, interceptor banks and drains must be constructed across all extraction tracks and disturbed firebreaks with exposed soil to minimise the risk of erosion. Ninety-three per cent of assessed track complied with the requirement in 2001–2002, 92 per cent in 2002–2003 and 79 per cent in 2003–2004.

Compliance with requirements for the protection of water

Effective water protection measures should be undertaken during all phases of harvesting. The level of compliance is incorporated in the table showing compliance with the Ministerial Conditions and the Commitment for the protection of river and stream zones. Compliance is also monitored through measures in place such as phased logging in the intermediate/low rainfall zone in the jarrah forest and also the identification of high salt risk catchments where an

additional area of stream zone is retained. Additional measures to protect water quality are in place, such as the requirement to construct erosion barriers in harvested areas to protect streams from turbidity.

Compliance with requirements for the protection of threatened flora

Field searches are conducted along proposed road alignments, landing and gravel pit sites before harvesting operations begin. Located populations are demarcated and protected from disturbing activity. Field searches for the presence of threatened flora populations had been conducted in all coupes sampled in 2001–2002 but in one coupe of the 16 sampled in 2002–2003 there was no record of a search having been undertaken. In 2003–2004 all 13 sampled coupes had records of searches.

Compliance with requirements for the protection of threatened fauna

Areas planned for harvesting are assessed in a desktop procedure against a matrix that determines the probability of habitats of threatened fauna occurring. Databases containing records of known habitats, populations and sightings also are consulted. The desktop procedure is yet to be formally approved. The audit found limited evidence of the procedure being followed in 2001–2002 due to a lack of records of use and results for the procedure. All coupes sampled in 2002–2003 and 2003–2004 had evidence of the procedure being implemented.

Key efficiency indicator

The average cost per hectare of managing State forest and timber reserves

Note

The figure used is the accrual basis average gross cost per hectare of managing State forest and timber reserves in accordance with relevant management plans. 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 1,252,300 ha.

Measure

The cost per hectare managed was \$27.50, an increase on the 'Target' cost of \$25.11 in the 2003–2004 Budget Statements.

2001–2002: \$17.82 cost per hectare
2002–2003: \$19.75 cost per hectare
2003–2004: \$27.50 cost per hectare

Performance of Statutory Functions by the Conservation Commission of WA – Output 3

Outcome achieved by

The provision of resources and services to the Conservation Commission of WA.

Output description

The undertaking of statutory functions by the Conservation Commission 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 of Conservation and Land Management's and the Forest Products Commission's performance against management plans.

Key efficiency indicator

The average cost per management plan/significant policy submitted for the Conservation Commission's consideration

Note

The figure used is the accrual basis average cost of consideration by the Conservation Commission of draft management plans approved for release, final management plans submitted to the Minister, significant CALM policies commented on and/or significant submissions made to third parties on other matters relevant to its functions. This is the first year this indicator has been reported hence no comparative figures have been reported.

Measure

The average cost per management plan/significant policy considered by the Conservation Commission was \$23,545. This represents a decrease of \$846 on the 'Target' cost of \$24,391 in the 2004–2005 Budget Statements.

Year	Average cost per management plan/significant policy \$	Target cost per management plan/significant policy \$	Variation from Target cost per management plan/significant policy \$
2003–2004	23,545	24,391	846

Parks and Visitor Services – Output 4

Outcome achieved by

Community enjoyment and appreciation of parks, wildlife and the natural environment without compromising conservation and management objectives.

Output description

Management of lands and waters; dealing with public involvement, visitation and appreciation of the natural environment on lands and waters managed by CALM, 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 CALM 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 experience and help develop greater community awareness and support for parks, natural areas, nature-based tourism and recreation services and policies.

Key effectiveness indicators

1. The extent to which visitors are satisfied with their visit overall to recreation areas managed by CALM

Notes

CALM's visitor survey program continued for its fourth year during 2003–2004. This survey program enhances the rigour of measuring the overall level of visitor satisfaction to recreation areas managed by CALM as well as providing for a benchmark Visitor Satisfaction Index (VSI) and the collection of other information useful for planning and management purposes. The survey is being conducted across a broad range of parks, reserves and forest areas at different times of the year to account for the geographic spread of these areas and associated seasonal variation in visitor patterns across the State.

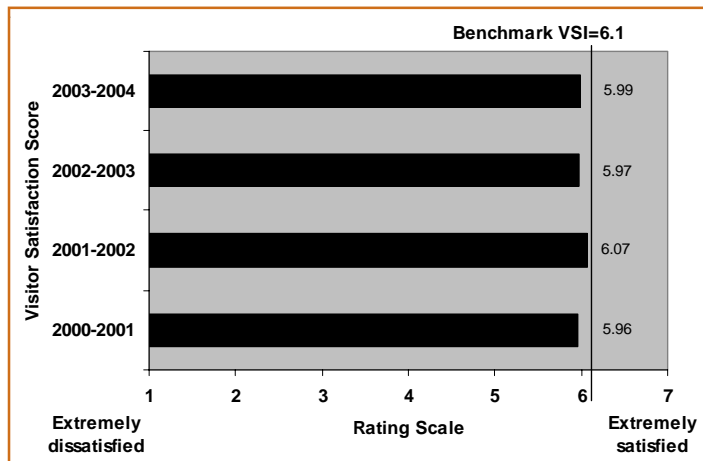
Respondents to the 2003–2004 survey program show the following characteristics:

- 54 per cent of respondents were from WA, 30 per cent from interstate and the remaining 16 per cent from overseas;
- the majority of respondents surveyed were visiting with family and/or friends as opposed to travelling on a tour, with an organised group or on their own;
- the largest proportion of respondents were in the 40–59 year age bracket, being 39 per cent of visitors, followed by the 25–39 year age bracket, which comprised 30 per cent of respondents.
- 67 per cent of respondents overall were first time visitors to the recreation areas surveyed.

Note: Approximately 3,000 surveys were distributed during specific survey periods throughout the year to visitors to 14 parks/recreation sites across the State with 705 completed surveys returned. At a 95 per cent confidence level, the survey responses reported below have a standard error within the range of ±0.03.

Measures

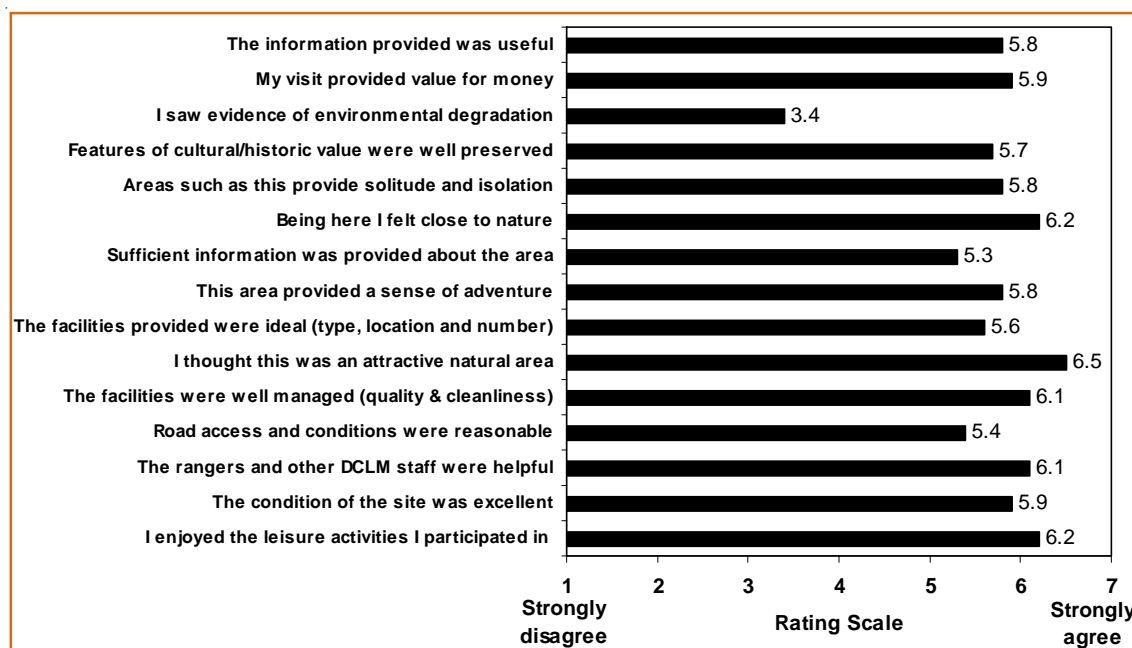
As part of the survey program, a benchmark Visitor Satisfaction Index (VSI) from which to compare visitor satisfaction levels each year has been adopted. This benchmark has been set at 6.1 on a rating scale from 1 (extremely dissatisfied) to 7 (extremely satisfied). The 2003–2004 VSI averaged from visitor responses to the survey at the selected parks, reserves and forest areas around the State was 5.99, which is slightly



Visitor satisfaction

below the benchmark VSI of 6.1. This is illustrated in the **Visitor satisfaction** graph above, along with the results from the previous three years of the survey program.

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. All these factors contribute to the visitors’ overall experience during their visit. The **Visitor experience ratings** graph indicates that the naturalness of the area, the enjoyment derived from leisure activities, helpfulness of CALM staff and rangers 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.

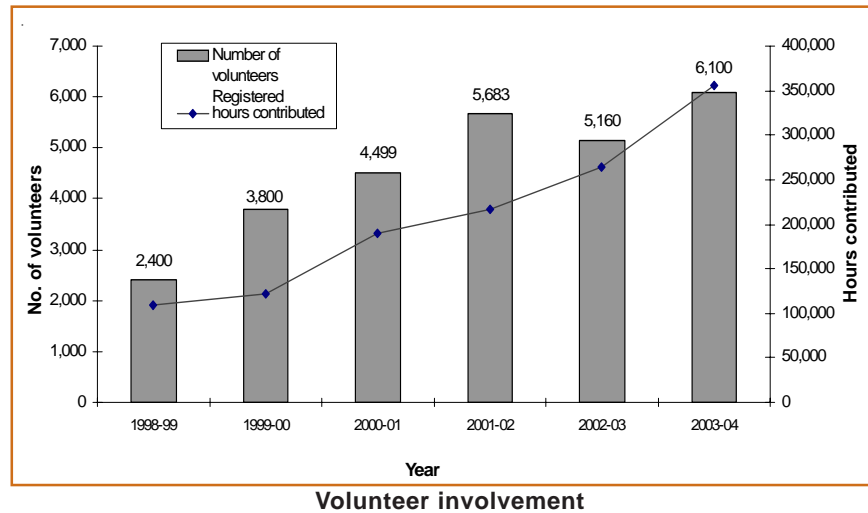


Visitor experience ratings

2. The extent to which the public has shown interest/support for CALM-managed recreation areas, facilities and services

Note

The level of volunteer involvement indicates continued public support for CALM's management programs and CALM's ability to balance competing land used to aid public enjoyment and protect conservation values.



Measures

As illustrated in the diagram **Volunteer involvement**, the number of volunteer hours spent on various nature conservation and visitor services project this year totalled 355,000 hours, an increase of 34 per cent on last year's figure of 264,000 hours. This increase was due to the large number of registered wildlife carers and volunteer carers in wildlife rehabilitation centres recording the volunteer's attendance.

The number of registered volunteers on the database at the end of 2003–2004 was 6,100 with the number of registered volunteers contributing to various projects during the year at 2,700. At the time of compiling these figures a number of incorporated organisations and project leaders had not yet submitted the figures showing the extent of their members' involvement.

The program continued to provide community members with an opportunity to view CALM's management practices and constraints and provided volunteers with enjoyable and fulfilling positions in areas of their interest.

3. The number of visits to recreation areas managed by CALM

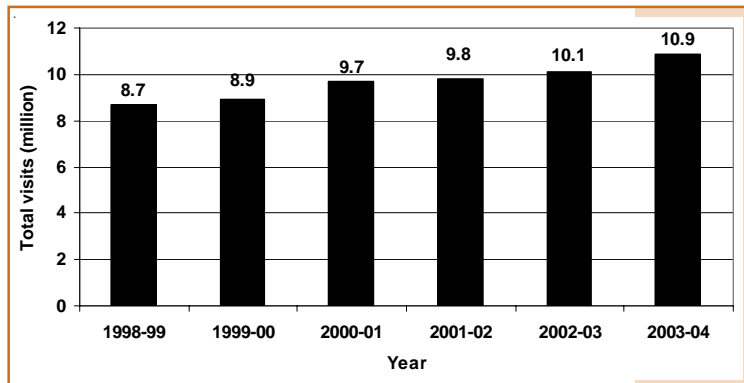
Note

The number of visits to recreation areas is based on data from the CALM's Visitor Information and Statistics (VISTAT) Program.

Measures

Data from VISTAT indicate that the number of visits to lands and waters managed by CALM for 2003–2004 totalled 10,921,000. As illustrated in the diagram on **Visitor use levels**, this figure comprises both recorded numbers of visits from traffic counter devices, surveys and other data sources as well as estimated numbers of visits based on field observation. This figure represents an increase of 7.6 per cent on the 10,145,000 visits in 2002–2003. Note: due to more accurate data becoming available, the figure of 10,155,000 reported in the 2002–2003 Annual Report was revised to 10,145,000 subsequent to the publication of the report.

This increase in visits reflects a continuing interest by the public in visiting natural areas managed by CALM, despite seasonal weather conditions limiting visitation to some recreation areas and the effects of terrorism threats on world travel.



To compare long-term trends in visitor use levels and patterns,

Cape Le Grand, Nambung and Purnululu National Parks have been selected because they represent low, medium and high levels of visitation.

Trends in visitor numbers to three national parks

National parks	2001-2002	2002-2003	2003-2004
Cape Le Grand	97,000	105,000	110,000
Nambung	173,000	206,000	212,000
Purnululu	21,000	21,000	23,000

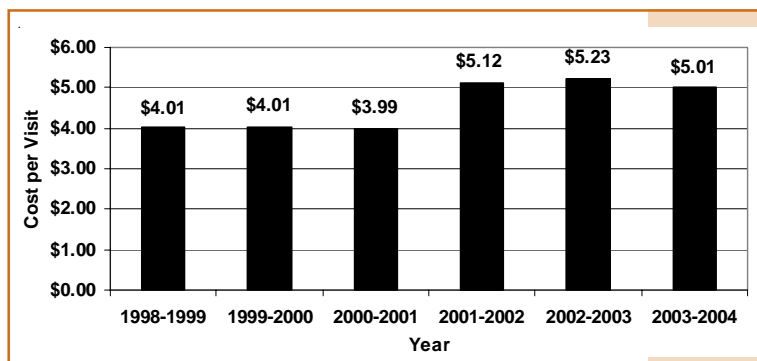
As indicated in the table **Trends in visitor numbers to three national parks**, each of the three parks has experienced an increase in visitor numbers over the previous 12 months. Over the past five years, the trend has been one of continuous growth in visitation to CALM-managed parks, reserves and forest areas throughout the State.

Key efficiency indicators

1. Cost per visit

Note

The accrual basis total cost (excluding revenues) of Parks and Visitor Services, expressed as a cost per recorded visit to CALM-managed lands and waters.



Measure

The 2003-2004 gross cost per visit was \$5.01. As shown in the **Cost per visit** graph, this represents a modest decrease of \$0.22 over the figure reported for 2002-2003.

2. Ratio of total cost of services to operating revenues

Note

The accrual basis total cost of provided Parks and Visitor Services, expressed as a ratio of operating revenue from those services.

Measure

With total expenditure of \$54,716,000 and operating revenue of \$15,490,000, the 2003-2004 ratio was 3.53:1, an increase of 0.11 on the ratio of 3.42:1 in 2002-2003.

Astronomical Services – Output 5

Outcome achieved by

Astronomical information and services for the benefit of the community.

Output description

Providing public information and awareness directly beneficial to the WA community, and contributing to scientific research in astronomy by cooperating with national and international institutions in the acquisition, analysis, interpretation and dissemination of information.

Key effectiveness indicators

1. The level of customer satisfaction with the services provided by the Observatory

Note

During 2003–2004, 9,750 people visited the Observatory, 3,416 people used the recorded information line, 19,095 telephoned and 519 emailed seeking information.

There were 502 customer survey questionnaires distributed: 458 to Observatory star viewing night, day and Sunday visitors between July 2003 and May 2004, and 44 to customers of Observatory services such as lectures and natural lighting consultancies.

Note: At a 95 per cent confidence level the survey responses reported below have a standard error of approximately ± 5.6 per cent.

Measure

The table **Overall satisfaction with Perth Observatory** shows the combined analysis of 296 (59 per cent) responses to the visitors' survey question 'How satisfied were you with the services provided by Perth Observatory?'. The responses indicate levels of satisfaction consistent across all types of visits and services.

Overall satisfaction with Perth Observatory

Response	96-97 %	97-98 %	98-99 %	99-00 %	2000-01 %	2001-02 %	2002-03 %	2003-04 %
Very satisfied	69.6	68.7	71.3	75.1	72.8	64.5	67.9	78.7
Satisfied	26.8	29.9	26.4	23.9	25.3	31.3	26.5	19.3
Neither satisfied or dissatisfied	3.0	1.2	2.3	0.8	1.9	3.4	3.0	1.4
Dissatisfied	0.4	0.2	0.0	0.0	0.0	0.7	1.1	0.3
Very dissatisfied	0.2	0.0	0.0	0.2	0.0	0.0	1.5	0.3

2. The extent to which visitors perceive the information presented during their tour of the Observatory increased their knowledge and awareness of astronomy

Note

This indicator relates to the educational role of the Observatory in meeting the demand by the community for information on astronomy and measures the extent to which that demand is met.

Measure

The **Increased knowledge and awareness of astronomy** table illustrates visitors' perception as measured by the visitors' survey described above. The analysis of the 283 (62 per cent) responses to the question 'To what extent do you agree that the information presented on the tour increased your knowledge of and awareness of astronomy?' indicates levels of satisfaction consistent across all types of visits.

Increased knowledge and awareness of astronomy

Response	96-97	97-98	98-99	99-00	2000-01	2001-02	2002-03	2003-04
	%	%	%	%	%	%	%	%
Strongly agree	48.7	45.4	52.6	54.9	57.6	42.0	45.0	59.4
Agree	46.1	50.9	45.5	43.9	38.9	53.4	49.8	38.5
Neither agree or disagree	4.2	3.5	1.9	1.2	3.5	4.6	4.4	2.1
Disagree	1.0	0.2	0.0	0.0	0.0	0.0	0.8	0.0
Strongly disagree	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3. Research findings published in internationally-recognised journals

Note

One of the aims of Perth Observatory is to further scientific research in astronomy. One method of measuring the contribution to scientific research is to determine the number of articles published in internationally-recognised scientific journals. The publishers of these journals independently evaluate articles submitted to ensure they meet appropriate standards and criteria. Publication in these journals evidences that the Observatory is adding to scientific knowledge and therefore furthering scientific research.

Measure

During 2003–2004, the Observatory had three (three in 2002–2003, five in 2001–2002) articles published in internationally-recognised journals. This is two lower than the 'Target' number of five in the 2003–2004 Budget Statements. This decrease reflects the inherent fluctuation in the number of papers associated with the ongoing, protracted and complex nature of the research output, the external collaboration required, and the relatively small number of papers involved each year. *Note: 17 (15 in 2002-2003, 18 in 2001–2002) other scientific papers related to scientific data on astronomical objects were also published as articles in educational journals, popular magazines, newsletters or internal reports.*

Key efficiency indicators

1. Cost per tour visitor

Note

The Perth Observatory conducts an on-site educational program through guided tours for school and community groups, tourists and the general public. This indicator shows the average accrual

gross cost per tour visitor based on 2003–2004 tour participation totalling 9,750 (2002–2003 9,772), i.e. night visitors: 7,246, day visitors: 2,227 and Sunday afternoon visitors: 277. This is 850 greater than the 'Target' attendance of 8,900 in the 2003–2004 Budget Statements because of increased attendance by night visitors.

Measure

The cost per visitor in 2003–2004 was \$41.69, (2002–2003 \$23.48, 2001–2002 \$20.42) an increase of \$22.69 on the 'Target' cost of \$19.00 in the 2003–2004 Budget Statements. This measure increased due to the number of star viewing nights scheduled in order to accommodate the record number of customers requiring this service. This activity has substantial operating costs.

2. Cost per enquiry

Note

This indicator shows the average accrual gross cost relating to the Observatory receiving and responding to enquiries about astronomical information by way of the information line, telephone calls and attendance at astronomy talks and field nights.

Measure

Based on a total of 25,854 enquiries in 2003–2004, the cost per enquiry was \$14.91 (16,468 enquiries at \$38.30 in 2002–2003, 18,405 enquiries at \$31.50 in 2001–2002). This is a decrease of \$18.33 on the 'Target' cost of \$33.24 in the 2003–2004 Budget Statements. This measure decreased owing to the improved capture or workload statistics afforded by new technology.

3. Cost of research activities per refereed research paper

Note

This indicator shows the average accrual gross cost of the Observatory's research activities expressed as an average per refereed scientific research paper.

Measure

In 2003–2004 the average cost per paper of the research activities supporting the three refereed research papers was \$124,011 (three papers at \$143,931 in 2002–2003, five papers at 81,836 in 2001–2002), an increase of \$38,011 on the 'Target' cost of \$86,000 in the 2003–2004 Budget Statements. This increase reflects the ongoing, protracted and complex nature of the research output, the external collaboration required, and the relatively small number of papers involved each year.

4. Cost of research activities per 1,000 head of WA population

Note

This indicator shows the accrual gross cost of the Observatory's research activities expressed as an average cost per 1,000 head of WA population.

Measure

The cost of research activities per 1,000 head of WA population was \$188 in 2003–2004, (\$223 in 2002–2003, \$213 in 2001–2002) a decrease of \$12 on the 'Target' cost of \$200.

Performance indicators



AUDITOR GENERAL

INDEPENDENT AUDIT OPINION

To the Parliament of Western Australia

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT
PERFORMANCE INDICATORS FOR THE YEAR ENDED JUNE 30, 2004

Audit Opinion

In my opinion, the key effectiveness and efficiency performance indicators of the Department of Conservation and Land Management are relevant and appropriate to help users assess the Department's performance and fairly represent the indicated performance for the year ended June 30, 2004.

Scope

The Executive Director's Role

The Executive Director is responsible for developing and maintaining proper records and systems for preparing performance indicators.

The performance indicators consist of key indicators of effectiveness and efficiency.

Summary of my Role

As required by the Financial Administration and Audit Act 1985, I have independently audited the performance indicators to express an opinion on them. This was done by looking at a sample of the evidence.

An audit does not guarantee that every amount and disclosure in the performance indicators is error free, nor does it 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 performance indicators.

Handwritten signature of D D R Pearson in black ink.

D D R PEARSON
AUDITOR GENERAL
September 30, 2004

The accompanying financial statements of the Department of Conservation and Land Management (CALM) have been prepared in compliance with the provisions of the *Financial Administration and Audit Act 1985* from proper accounts and records to present fairly the financial transactions for the financial year ending 30 June 2004 and the financial position as at 30 June 2004.

At the date of signing we are not aware of any circumstances which would render the particulars included in the financial statements misleading or inaccurate.



Keiran McNamara
EXECUTIVE DIRECTOR
13 August 2004



Ron Kawalilak
PRINCIPAL ACCOUNTING OFFICER
13 August 2004

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT
STATEMENT OF FINANCIAL PERFORMANCE
FOR THE YEAR ENDED 30 JUNE 2004

	Note	2003–04 \$'000	2002–03 \$'000
COST OF SERVICES			
Expenses from ordinary activities			
Employee expenses	4	79,996	76,050
Supplies and services	5	38,331	42,216
Depreciation and amortisation expense	6	12,107	11,247
Administration expenses	7	5,100	4,362
Accommodation expenses	8	2,163	2,273
Grants and subsidies	9	534	495
Capital user charge	10	11,276	9,865
Costs of disposal of non-current assets	15	668	592
Other expenses from ordinary activities	11	9,681	9,260
Total cost of services		159,856	156,360
Revenue from ordinary activities			
<i>Revenue from operating activities</i>			
User charges and fees	12	27,420	27,770
Commonwealth grants and contributions	13	4,973	4,275
Other grants and contributions	14	3,888	5,816
<i>Revenue from non-operating activities</i>			
Interest revenue		1,361	1,358
Proceeds from disposal of non-current assets	15	1,262	1,133
Other revenues from ordinary activities	16	8,074	5,495
Total revenues from ordinary activities		46,978	45,847
NET COST OF SERVICES		(112,878)	(110,513)
REVENUES FROM GOVERNMENT			
Output Appropriations	17	118,906	117,593
Assets assumed/(transferred)		1	0
Initial recognition of assets not previously recognised		96	171
Resources received free-of-charge		573	798
Liabilities assumed by the Treasurer		759	466
Total revenues from Government		120,335	119,028
Change in net assets		7,457	8,515
Net increase/(decrease) in asset revaluation reserve		189,555	(8,238)
Total revenues, expenses and valuation adjustments recognised directly in equity		189,555	(8,238)
Total changes in equity other than those resulting from transactions with WA State Government as owners		197,012	277

The Statement of Financial Performance should be read in conjunction with the accompanying notes.

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT
STATEMENT OF FINANCIAL POSITION
AS AT 30 JUNE 2004

	Note	2003-04 \$'000	2002-03 \$'000
CURRENT ASSETS			
Cash assets	29 (a)	32,207	27,086
Restricted cash assets	18	2,644	45
Inventories	19	2,531	3,079
Receivables	20	8,323	8,234
Amounts receivable for outputs	21	4,214	3,214
Other assets	22	737	687
Total current assets		50,656	42,345
NON-CURRENT ASSETS			
Restricted cash assets	18	0	2,275
Amounts receivable for outputs	21	21,807	14,174
Property, plant, equipment and vehicles	23	2,304,528	2,111,260
Intangible assets	24	176	221
Total non-current assets		2,326,511	2,127,930
TOTAL ASSETS		2,377,167	2,170,275
CURRENT LIABILITIES			
Payables	25	5,794	4,476
Provisions	26	12,797	11,832
Other liabilities	27	5,362	2,901
Total current liabilities		23,953	19,209
NON-CURRENT LIABILITIES			
Provisions	26	5,930	5,495
Total non-current liabilities		5,930	5,495
TOTAL LIABILITIES		29,883	24,704
EQUITY			
Equity contribution to Government	28	(235,321)	(235,220)
Equity contribution from Government		15,015	10,213
Reserves		2,160,643	1,971,088
Accumulated surplus/(deficit)		406,947	399,490
Total equity		2,347,284	2,145,571
TOTAL LIABILITIES AND EQUITY		2,377,167	2,170,275

The Statement of Financial Position should be read in conjunction with the accompanying notes.

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED 30 JUNE 2004

Note	2003-04 \$'000	2002-03 \$'000
CASH FLOWS FROM STATE GOVERNMENT		
Output appropriations	107,059	105,871
Capital appropriations	4,802	2,836
Holding account drawdowns	3,214	5,148
Net cash provided by Government	115,075	113,855
UTILISED AS FOLLOWS:		
CASH FLOWS FROM OPERATING ACTIVITIES		
Payments		
Employee costs	(68,833)	(66,774)
Superannuation	(6,168)	(5,804)
Supplies and services	(36,851)	(44,253)
GST payments on purchases	(6,251)	(6,932)
GST payments to taxation authority	0	(55)
Capital user charge	(11,233)	(10,606)
Administration	(4,364)	(4,493)
Accommodation	(2,149)	(2,244)
Other payments	(10,913)	(9,777)
Receipts		
Sale of goods and services	18,262	18,946
User charges and fees	17,019	14,283
Commonwealth grants and contributions	5,256	4,344
Interest received	1,361	1,358
GST receipts on sales	3,080	2,986
GST receipts from taxation authority	3,276	3,764
Other receipts	3,934	5,650
Net cash provided by/(used in) operating activities	29 (b) (94,574)	(99,607)
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from sale of non-current physical assets	1,151	1,129
Purchase of non-current physical assets	(16,207)	(18,433)
Net cash provided by/(used in) investing activities	(15,056)	(17,304)
Net increase/(decrease) in cash held	5,445	(3,056)
Cash assets at the beginning of the financial year	29,406	32,462
CASH ASSETS AT THE END OF THE FINANCIAL YEAR	29 (a) 34,851	29,406

The Statement of Cash Flows should be read in conjunction with the accompanying notes.

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT
OUTPUT SCHEDULE OF EXPENSES AND REVENUES
FOR THE YEAR ENDED 30 JUNE 2004**

	OUTPUT 1 NATURE CONSERVATION (\$'000)		OUTPUT 2 SUSTAINABLE FOREST MANAGEMENT (\$'000)		OUTPUT 3 STATUTORY FUNCTIONS BY THE CONSERVATION COMMISSION (\$'000)		OUTPUT 4 PARKS AND VISITOR SERVICES (\$'000)		OUTPUT 5 ASTRONOMICAL SERVICES (\$'000)		TOTAL (\$'000)	
	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03
COST OF SERVICES												
Expenses from ordinary activities												
4 Employee expenses	36,185	35,132	18,745	17,437	349	338	24,081	22,480	636	663	79,996	76,050
5 Supplies and services	18,430	19,938	8,328	8,753	87	392	11,348	12,895	138	238	38,331	42,216
6 Depreciation and amortisation expense	3,108	3,122	1,951	1,562	15	10	6,863	6,378	170	175	12,107	11,247
7 Administration expenses	2,227	1,908	1,139	976	24	21	1,686	1,432	24	25	5,100	4,362
8 Accommodation expenses	912	908	213	289	0	20	1,022	1,039	16	17	2,163	2,273
9 Grants and subsidies	309	298	9	50	0	0	216	147	0	0	534	495
10 Capital user charge	2,895	2,160	1,822	1,760	9	8	6,392	5,781	158	156	11,276	9,865
15 Costs of disposal of non-current assets	603	456	8	33	0	0	57	103	0	0	668	592
11 Other expenses from ordinary activities	4,352	4,629	2,221	1,748	34	36	3,051	2,829	23	18	9,681	9,260
Total cost of services	69,021	68,551	34,436	32,608	518	825	54,716	53,084	1,165	1,292	159,856	156,360
Revenue from ordinary activities												
12 User charges and fees	3,698	3,574	11,707	13,319	0	0	11,859	10,715	156	162	27,420	27,770
13 Commonwealth grants and contributions	4,509	3,832	97	159	0	0	367	284	0	0	4,973	4,275
14 Other grants and contributions	462	1,006	162	284	0	0	3,264	4,526	0	0	3,888	5,816
Interest revenue	959	1,082	165	137	0	0	237	139	0	0	1,361	1,358
15 Proceeds from disposal of non-current assets	733	645	337	296	0	0	192	192	0	0	1,262	1,133
16 Other revenues from ordinary activities	3,673	1,940	2,238	1,665	0	0	2,163	1,890	0	0	8,074	5,495
Total revenues from ordinary activities	14,034	12,079	14,706	15,860	0	0	18,082	17,746	156	162	46,978	45,847
NET COST OF SERVICES	(54,987)	(56,472)	(19,730)	(16,748)	(518)	(825)	(36,634)	(35,338)	(1,009)	(1,130)	(112,876)	(110,513)
REVENUES FROM GOVERNMENT												
Output appropriations	54,656	55,493	21,594	19,993	576	556	40,947	40,466	1,133	1,085	118,906	117,593
Net assets assumed (transferred)	56	4	3	154	0	0	38	13	0	0	97	171
Resources received free-of-charge	248	345	147	205	3	5	170	236	5	7	573	798
Liabilities assumed by the Treasurer	341	213	169	98	2	2	240	149	7	4	759	466
Total revenues from Government	55,301	56,055	21,913	20,450	581	563	41,395	40,864	1,145	1,096	120,335	119,028
Change in net assets	314	(417)	2,183	3,702	63	(262)	4,761	5,526	136	(34)	7,457	8,515

The Output schedule of expenses and revenues should be read in conjunction with the accompanying notes.

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT
SUMMARY OF CONSOLIDATED FUND APPROPRIATIONS AND REVENUE ESTIMATES
FOR THE YEAR ENDED 30 JUNE 2004

	2003-04 Estimate	2003-04 Actual	Variance	2003-04 Actual	2002-03 Actual	Variance
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
DELIVERY OF OUTPUTS						
Item 71 Net amount appropriated to deliver outputs	116,417	118,720	2,303	118,720	117,438	1,282
Amount authorised by other statutes						
- Salaries and Allowances Act 1975	173	186	13	186	155	31
Total appropriations provided to deliver outputs	116,590	118,906	2,316	118,906	117,593	1,313
CAPITAL						
Item 145 Capital Contribution	4,550	4,802	252	4,802	2,836	1,966
GRAND TOTAL OF APPROPRIATIONS	121,140	123,708	2,568	123,708	120,429	3,279
DETAILS OF EXPENSES BY OUTPUTS						
Nature Conservation	64,383	69,021	4,638	69,021	68,551	470
Sustainable Forest Management	32,849	34,436	1,587	34,436	32,608	1,828
Performance of statutory functions by the Conservation Commission of Western Australia	561	518	(43)	518	825	(307)
Parks and Visitor Services	52,745	54,716	1,971	54,716	53,084	1,632
Astronomical Services	1,234	1,165	(69)	1,165	1,292	(127)
Total cost of outputs	151,772	159,856	8,084	159,856	156,360	3,496
Less total revenues from ordinary activities	(38,818)	(46,978)	(8,160)	(46,978)	(45,847)	(1,131)
Net cost of outputs	112,954	112,878	(76)	112,878	110,513	2,365
Adjustments (1)	3,636	6,028	2,392	6,028	7,080	(1,052)
Total appropriations provided to deliver outputs	116,590	118,906	2,316	118,906	117,593	1,313
Capital expenditure						
Purchase of non-current physical assets	11,964	16,207	4,243	16,207	18,433	(2,226)
Adjustment for other funding sources	(7,414)	(11,405)	(3,991)	(11,405)	(15,597)	4,192
Capital contribution (appropriation)	4,550	4,802	252	4,802	2,836	1,966
DETAIL OF REVENUE ESTIMATES						
Revenues disclosed as Administered Revenues	160	125	(35)	125	125	0

(1) Adjustments are related to movements in cash balances and other accrual items such as receivables, payables and superannuation.

The Summary of Consolidated Fund Appropriations, Variance to Budget and Actual should be read in conjunction with the accompanying notes.

This Summary provides the basis for the Explanatory Statement information requirements of TI 945, set out in Note 37.

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004****1. CALM MISSION AND FUNDING**

In partnership with the community, CALM's mission is to conserve Western Australia's biodiversity, and manage the lands and waters entrusted to CALM, for their intrinsic values and for the appreciation and benefit of present and future generations.

In 2003–2004 CALM was predominantly funded by Parliamentary appropriations. CALM provided the outputs as disclosed at Note 3. Government policy determines the fees charged.

In the process of reporting on CALM as a single entity, all intra-entity transactions and balances have been eliminated.

2. SIGNIFICANT ACCOUNTING POLICIES

The following accounting policies have been adopted in the preparation of the financial statements. Unless otherwise stated these policies are consistent with those adopted in the previous year.

General statement

The financial statements constitute a general purpose financial report which has been prepared in accordance with Accounting Standards, Statements of Accounting Concepts and other authoritative pronouncements of the Australian Accounting Standards Board, and Urgent Issues Group (UIG) Consensus Views as applied by the Treasurer's Instructions. Several of these are modified by the Treasurer's Instructions to vary application, disclosure, format and wording. The Financial Administration and Audit Act and the Treasurer's Instructions are legislative provisions governing the preparation of financial statements and take precedence over Accounting Standards, Statements of Accounting Concepts and other authoritative pronouncements of the Australian Accounting Standards Board, and UIG Consensus Views. The modifications are intended to fulfil the requirements of general application to the public sector, together with the need for greater disclosure and also to satisfy accountability requirements.

If any such modification has a material or significant financial effect on the reported results, details of that modification and where practicable, the resulting financial effect, are disclosed in individual notes to these financial statements.

Basis of accounting

The financial statements have been prepared in accordance with Accounting Standard AAS29.

The statements have been prepared on an accrual basis using historic cost accounting, except for certain non-current assets and liabilities, which, as noted, are measured at fair value.

Administered assets, liabilities, expenses and revenues are not integral to CALM in carrying out its functions and are disclosed in the notes to the financial statements, forming part of CALM's general purpose financial report. The administered items are disclosed on the same basis as is described above for CALM's financial statements. The administered assets, liabilities, expenses and revenues are those which the Government requires CALM to administer on its behalf. The assets do not render any service potential or future economic benefits to CALM, the liabilities do not require the future sacrifice of service potential or future economic benefits of CALM, and the expenses and revenues are not attributable to CALM.

As the administered assets, liabilities, expenses and revenues are not recognised in CALM's principal financial statements, the disclosure requirements of Accounting Standard AAS 33, Presentation and Disclosure of Financial Instruments, are not applied to administered transactions.

a) Output appropriations

Output appropriations are recognised as revenues in the period in which CALM gains control of the appropriated funds. CALM gains control of appropriated funds at the time those funds are deposited into CALM's bank account or credited to the holding account held at the Department of Treasury and Finance. Refer to Note 17 for further commentary on output appropriations.

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

b) Contributed equity

Under UIG 38 'Contributions by Owners Made to Wholly-Owned Public Sector Entities' transfers in the nature of equity contributions must be designated by the Government (owners) as contributions by owners (at the time of, or prior to transfer) before such transfers can be recognised as equity contributions in the financial statements. Capital contributions (appropriations) have been designated as contributions by owners and have been credited directly to Contributed Equity in the Statement of Financial Position. All other transfers have been recognised in the Statement of Financial Performance.

c) Net appropriation determination

Pursuant to section 23A of the *Financial Administration and Audit Act 1985*, the Treasurer may make a determination providing for prescribed revenue to be retained by a Department. Receipts in respect of all revenues recognised in the Statement of Financial Performance are the subject of a net appropriation determination by the Treasurer.

The net appropriation determination allows all prescribed revenues to be retained.

Prescribed revenues include moneys received other than from taxes, royalties and Commonwealth general purpose grants.

Retained revenues may only be applied to the outputs specified in the 2003–2004 Budget Statements.

d) Grants and other contributions revenue

Grants, donations, gifts and other non-reciprocal contributions are recognised as revenue when CALM obtains control over the assets comprising the contributions. Control is normally obtained on their receipt.

Contributions 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.

e) Acquisitions of assets

The cost method of accounting is used for all acquisitions of assets. Cost is measured as the fair value of the fair value of the assets given up or liabilities undertaken at the date of acquisition plus incidental costs directly attributable to the acquisition.

Assets costing less than \$1,000 are expensed in the year of acquisition.

f) Depreciation of non-current assets

All non-current assets having a limited useful life are systematically depreciated over their estimated useful lives in a manner which reflects the consumption of their future economic benefits.

Depreciation is calculated on the straight-line basis, using rates which are reviewed annually. Expected 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
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

g) Revaluation of land and buildings

CALM has a policy of valuing land and buildings at fair value.

Freehold land held in the name of the Executive Director, Crown land in the conservation estate and vested State forest are valued by the Valuer General on either a market value or current use basis. The Valuer General provided a revaluation for 2003–2004 that has been recognised in the financial statements.

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

Crown land is reserved for or held by the Conservation Commission of Western Australia for the conservation and land management purposes prescribed by the *Conservation and Land Management Act 1984*. Should the land no longer be reserved or held for these purposes the land becomes Crown land within the meaning of the *Land Administration Act 1997* and thus would no longer be vested in the Conservation Commission. Therefore land of this nature cannot be sold by the Department to meet liabilities or fund activities.

h) Recognition of revenue

Revenue from the sale of goods and disposal of other assets and the rendering of services, is recognised when CALM has passed control of the goods or other assets or delivery of the service to the customer.

i) Employee benefits

Annual leave

This benefit is recognised at the reporting date in respect to employees' services up to that date and is measured at the nominal amounts expected to be paid when the liabilities are settled.

Long service leave

Leave benefits are calculated at remuneration rates expected to be paid when the liabilities are settled. A liability for long service leave is recognised after an employee has completed four years of service. A review of long service leave undertaken by RSM Bird Cameron in July 2003 determined that the liability measured using the short hand method was not materially different from the liability measured using the present value of expected future payments.

This method of measurement of the liability is consistent with the requirements of Accounting Standards AASB 1028 'Employee Benefits'.

Superannuation

Staff may contribute to the Pension Scheme, a defined benefits pension scheme now closed to new members, or to the Gold State Superannuation Scheme, a defined benefit lump sum scheme now also closed to new members. All staff who do not contribute to either of these schemes become non-contributory members of the West State Superannuation Scheme, an accumulation fund complying with the Commonwealth Government's Superannuation Guarantee (Administration) Act 1992. All of these schemes are administered by the Government Employees Superannuation Board (GESB)

The superannuation expense comprises the following elements:

- (i) change in the unfunded employer's liability 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; and
- (ii) employer contributions paid to the Gold State Superannuation Scheme and the West State Superannuation Scheme.

The superannuation expense does not include payment of pensions to retirees, as this does not constitute part of the cost of services provided by CALM in the current year.

A revenue 'Liabilities assumed by the Treasurer' equivalent to (i) is recognised under *Revenues from State Government* in the Statement of Financial Performance as the unfunded liability is assumed by the Treasurer. The GESB makes the benefit payments and is recouped by the Treasurer.

CALM is funded for employer contributions in respect of the Gold State Superannuation Scheme and the West State Superannuation Scheme. These contributions were paid to the GESB during the year. The GESB subsequently paid the employer contributions in respect of the Gold State Superannuation Scheme to the Consolidated Fund.

Employment benefit on-costs

Employee benefit on-costs, are recognised and included in employee benefit liabilities and costs when the employee benefits to which they relate are recognised as liabilities and expenses.
(see notes 4 and 26)

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

j) Leases

CALM has entered into a number of operating lease arrangements for the rent of buildings, office equipment and motor vehicles where the lessor effectively retains all of the risks and benefits incidental to ownership of the items held under the operating leases. Equal instalments of the lease payments are charged to the Statement of Financial Performance over the lease term as this is representative of the pattern of benefits to be derived from the leased property.

CALM had no finance lease commitments during 2003–2004.

k) Cash

For the purpose of the Statement of Cash Flows, cash includes cash assets and restricted cash assets. CALM held no short-term deposits in 2003–2004.

l) Receivables

Receivables are recognised at the amounts receivable as they are due for settlement no more than 30 days from the date of recognition.

Collectability of accounts receivable is reviewed on an ongoing basis. Debts which are known to be uncollectable are written off. A provision for doubtful debts is raised where reasonable doubts as to collection exist.

m) Accrued salaries

The accrued salaries suspense account (refer note 18) 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 in that year instead of the normal 26. No interest is received on this account.

Accrued salaries (refer note 27) represent the amount due to staff but unpaid at the end of the financial year, as the end of the last pay period for that financial year does not coincide with the end of the financial year. Accrued salaries are settled within a few days of the financial year end. CALM considers the carrying amount of accrued salaries to be equivalent to the net fair value.

n) Payables

Payables, including accruals not yet billed, are recognised when CALM becomes obliged to make future payments as a result of a purchase of assets or services. Payables are generally settled within 30 days.

o) Inventories

Inventories are valued at the lower of cost and net realisable value. Costs are assigned by the method most appropriate to each particular class of inventory, with the majority being valued on a first-in first-out basis.

Inventories not held for resale are valued at cost unless they are no longer required, in which case they are valued at net realisable value.

p) Resources received free-of-charge or for nominal value

Resources received free-of-charge or for nominal value which can be reliably measured are recognised as revenues or expenses as appropriate at fair value.

q) Comparative figures

Comparative figures are, where appropriate, reclassified so as to be comparable with the figures presented in the current financial year.

r) Rounding of amounts

Amounts in the financial statements have been rounded to the nearest thousand dollars, or in certain cases, to the nearest dollar.

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

3. OUTPUTS OF CALM

Information about CALM's outputs and, the expenses and revenues which are reliably attributable to those outputs is set out in the Output Schedule. Information about expenses and revenues administered by CALM is given in note 34.

CALM's five key outputs are:

Output 1: Nature Conservation

This output comprises the conservation of indigenous plants, animals and ecological processes in natural habitats.

Output 2: Sustainable Forest Management

This output comprises the long-term maintenance of the forest ecosystem.

Output 3: Performance of statutory functions by the Conservation Commission of WA

This output comprises the provision of resources and services to the Conservation Commission of WA for the satisfaction of its functions.

Output 4: Parks and Visitor Services

This output comprises community enjoyment and appreciation of parks, wildlife and the natural environment without compromising conservation and management objectives.

Output 5: Astronomical Services

This output comprises astronomical information and services for the benefit of the community.

	2003–04	2002–03
	\$'000	\$'000
4. EMPLOYEE EXPENSES		
Wages and salaries	64,297	60,631
Superannuation	7,023	6,396
Long service leave	2,228	2,550
Annual leave	5,765	5,840
Other related expenditure (i)	683	633
	<u>79,996</u>	<u>76,050</u>
(i) These employee expenses include superannuation, workers compensation premiums and other employment on-costs associated with the recognition of annual and long service leave liability. The related on-costs liability is included in employee benefit liabilities at Note 26.		
5. SUPPLIES AND SERVICES		
Consultants and contractors	3,013	2,978
Services and contracts	17,540	13,694
Materials	11,659	20,198
Repairs and maintenance	2,299	1,808
Travel	2,290	2,094
GEHA rental expense	1,530	1,444
	<u>38,331</u>	<u>42,216</u>
6. DEPRECIATION AND AMORTISATION EXPENSE		
Depreciation		
Plant, equipment and vehicles (i)	9,604	9,031
Buildings	2,458	2,212
Total depreciation	<u>12,062</u>	<u>11,243</u>
Amortisation		
Goodwill	45	4
	<u>12,107</u>	<u>11,247</u>
(i) This includes parks and visitor facilities, previously disclosed separately.		
7. ADMINISTRATION EXPENSES		
Communications	2,289	1,899
Services received free-of-charge	573	798
Bad debts expense	54	737
Doubtful debts expense	(27)	(960)
Other staff costs	2,195	1,820
Other administration costs	16	68
	<u>5,100</u>	<u>4,362</u>

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

	2003–04	2002–03
	\$'000	\$'000
8. ACCOMMODATION EXPENSES		
Lease rentals	746	797
Electricity, power and water	1,412	1,472
Other accommodation expenses	5	4
	<u>2,163</u>	<u>2,273</u>
9. GRANTS AND SUBSIDIES		
Recurrent		
Conservation Council of WA Inc	134	139
National Trust of Australia	80	0
Perth Zoo	50	0
Forest Heritage Centre	50	50
World Wide Fund for Nature	39	0
Green Skills Inc	20	10
Urban Bushland Council	10	20
City of Cockburn	9	5
River Conservation Society Inc	6	0
Friends of Yellagonga Regional Park	5	5
Kalgoorlie Boulder Urban Landcare Group	5	5
Friends of Shenton Park Bushland Inc	5	0
Bibbulmun Track Foundation	0	100
Oil Mallee Association of WA	0	20
Mullewa LCDC	0	5
Friends of Baigup	0	5
WA Landskills Inc	0	5
Various grants under \$5,000	121	126
	<u>534</u>	<u>495</u>
10. CAPITAL USER CHARGES	11,276	9,865
<p>A capital user charge rate of 8 per cent has been set by the Government and represents the opportunity cost of capital invested in CALM's net assets used in the provision of outputs. The charge is calculated on net assets adjusted to take account of exempt assets. Payments are made to the Department of Treasury and Finance on a quarterly basis.</p>		
11. OTHER EXPENSES FROM ORDINARY ACTIVITIES		
Operating lease – motor vehicle	7,659	6,810
Operating lease – rental expense	2,019	2,450
Other	3	0
	<u>9,681</u>	<u>9,260</u>
12. USER FEES AND CHARGES		
User fees	9,409	8,738
Services rendered	18,011	19,032
	<u>27,420</u>	<u>27,770</u>
13. COMMONWEALTH GRANTS AND CONTRIBUTIONS		
Capital	791	1,524
Recurrent	4,182	2,751
	<u>4,973</u>	<u>4,275</u>
14. OTHER GRANTS AND CONTRIBUTIONS		
Capital	1,461	1,460
Recurrent	2,427	4,356
	<u>3,888</u>	<u>5,816</u>

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

	2003–04 \$'000	2002–03 \$'000
15. NET GAIN/(LOSS) ON DISPOSAL OF NON-CURRENT ASSETS		
Gain on disposal on non-current assets		
Vehicles	656	571
Land	11	41
Loss on disposal of non-current assets		
Buildings	(24)	(5)
Plant and equipment	(49)	(66)
Net gain	<u>594</u>	<u>541</u>
16. OTHER REVENUES FROM ORDINARY ACTIVITIES		
Publications revenue	509	483
Mining compensation revenue	4,211	3,525
Nursery revenue	107	148
Other revenues	3,247	1,339
	<u>8,074</u>	<u>5,495</u>
17. REVENUES FROM STATE GOVERNMENT		
Appropriations received during the year:		
Output appropriations	118,720	117,438
<i>Salaries & Allowances Act 1975</i>	186	155
Total appropriations (i)	<u>118,906</u>	<u>117,593</u>
The following liabilities have been assumed by the Treasurer during the Financial Year:		
- superannuation (ii)	759	466
The following asset has been assumed from the Forest Products Commission during the financial year		
- plant and equipment	1	0
Initial recognition of assets not previously recognised in the financial statements:		
- plant, equipment and vehicles	57	167
- buildings	39	4
Total assets not previously recognised	<u>96</u>	<u>171</u>
Resources received free-of-charge		
Determined on the basis of the following estimates provided by agencies:		
Department of Land Administration	412	547
Crown Solicitor's Office	161	158
Office of the Auditor General (v)	0	85
Agriculture Western Australia	0	8
Total resources received free-of-charge (iv)	<u>573</u>	<u>798</u>
	<u>120,335</u>	<u>119,028</u>
(i) Output appropriations are accrual amounts reflecting the full cost of outputs 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.		
(ii) The assumption of the superannuation liability by the Treasurer is only a notional revenue to offset 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 scheme.		
(iii) Where assets have been discovered or have not been previously recognised in the financial statements, CALM recognises the corresponding credit as revenue.		
(iv) Where assets or services have been received free of charge or for nominal consideration, CALM recognises revenues (except where the contributions of assets or services are in the nature of contributions by owners in which case CALM 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.		
(v) Commencing with the 2003–2004 audit, the Office of the Auditor General will be charging a fee for auditing the accounts, financial statements and performance indicators. The fee for the 2003–2004 audit (\$102,300) will be due and payable in the 2004–2005 financial year.		
18. RESTRICTED CASH ASSETS		
Current		
Cash amounts in suspense account	10	45
Accrued salaries suspense account (i)	2,634	0
	<u>2,644</u>	<u>45</u>
Non-current		
Accrued salaries suspense account (i)	0	2,275
	<u>0</u>	<u>2,275</u>
(i) 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.		

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

	2003–04	2002–03
	\$'000	\$'000
19. Inventories		
Publications	2,178	2,827
Souvenirs	348	222
Nursery stock	5	30
	<u>2,531</u>	<u>3,079</u>
The aggregate carrying amount of inventories recognised and included in the financial statements is as follows:		
Current	2,531	3,079
	<u>2,531</u>	<u>3,079</u>
20. RECEIVABLES		
Trade Debtors	6,812	7,157
Provision for doubtful debts	(305)	(332)
GST Receivable from ATO	1,129	1,128
Capital user charge	0	28
Earned revenue	687	253
	<u>8,323</u>	<u>8,234</u>
21. AMOUNTS RECEIVABLE FOR OUTPUTS		
Current	4,214	3,214
Non current	21,807	14,174
	<u>26,021</u>	<u>17,388</u>
This asset represents the non-cash component of output appropriations. It is restricted in that it can only be used for asset replacement or payment of leave liability.		
22. OTHER ASSETS		
Current		
Prepayments	737	687
	<u>737</u>	<u>687</u>
23. PROPERTY, PLANT, EQUIPMENT AND VEHICLES		
Land at fair value (ii)	2,187,746	1,995,940
Land at cost	1,082	2,794
Sub total	<u>2,188,828</u>	<u>1,998,734</u>
Buildings at fair value (ii)	32,893	32,656
Accumulated depreciation	(11,247)	(9,550)
Sub total	<u>21,646</u>	<u>23,106</u>
Buildings at cost	16,037	14,353
Accumulated depreciation	(2,666)	(1,937)
Sub total	<u>13,371</u>	<u>12,416</u>
Plant and equipment at valuation	3,478	3,600
Accumulated depreciation	(3,476)	(3,445)
Sub total	<u>2</u>	<u>155</u>
Plant and equipment at cost (i)	109,484	99,720
Accumulated depreciation	(40,240)	(33,612)
Sub total	<u>69,244</u>	<u>66,108</u>
Vehicles at cost	17,174	16,351
Accumulated depreciation	(11,660)	(10,711)
Sub total	<u>5,514</u>	<u>5,640</u>
Work in progress	5,923	5,101
Total property, plant, equipment and vehicles	<u>2,304,528</u>	<u>2,111,260</u>

(i) This includes parks and visitor facilities, previously disclosed separately.

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

	2003–04 \$'000	2002–03 \$'000
(ii) The revaluation of freehold land and buildings was performed in June 2004 in accordance with an independent valuation by the Valuer General's Office. Fair value of land has been determined on the basis of current market buying values. The fair value of buildings has been determined by reference to the current replacement cost as the buildings are specialised and no market evidence of value is available. The valuations were made in accordance with a regular policy of annual revaluation. In 2003 the revaluation of freehold land and buildings to fair value was performed in June 2003 in accordance with an Independent valuation by the Valuer General's Office as a result of the initial application of AASB 1041 (AAS 38).		

Reconciliations of the carrying amounts of asset categories at the beginning and end of the current financial year are set out below:

	2003–2004				
	Plant, equipment and vehicles(i) (\$'000)	Land (\$'000)	Buildings (\$'000)	Assets under construction (\$'000)	Total (\$'000)
Carrying amount at start of year	71,903	1,998,734	35,522	5,101	2,111,260
Additions	12,634	1,082	2,090	822	16,628
Disposals	(70)	(543)	(77)	0	(690)
Revaluation increment	0	189,555	0	0	189,555
Depreciation	(9,604)	0	(2,458)	0	(12,062)
Write off assets	(38)	0	(24)	0	(62)
Assets transferred to other					
Government departments	(65)	0	(36)	0	(101)
Carrying amount at the end of the year	74,760	2,188,828	35,017	5,923	2,304,528

(i) This includes parks and visitor facilities, previously disclosed separately.

24. INTANGIBLE ASSETS		
Goodwill	225	225
Accumulated amortisation	(49)	(4)
Total	176	221
25. PAYABLES		
Trade payables	5,794	4,476
	5,794	4,476
26. PROVISIONS		
Current		
Annual leave	5,888	5,447
Long service leave	5,641	5,213
Other (i)	1,268	1,172
	12,797	11,832
Non-current		
Long service leave	5,342	4,950
Other (i)	588	545
	5,930	5,495
Total Provisions	18,727	17,327
(i) The settlement of annual and long service leave liabilities gives rise to the payment of employment on-costs including superannuation and workers compensation premiums. The liability for such on-costs is included here. The associated expense is included under Other related expenditure (under Employee expenses) at Note 4.		
Employee benefits liabilities		
The aggregate employee entitlement liability recognised and included in the financial statements is as follows:		
Provision for employee benefits:		
Current	12,797	11,832
Non current	5,930	5,495
	18,727	17,327

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

	2003–04 \$'000	2002–03 \$'000
27. OTHER LIABILITIES		
Current		
Accrued expenditure	913	1,202
Accrued wages and salaries	4,016	1,366
Accrued superannuation	219	222
Accrued capital user charge	14	0
Unearned revenue	200	111
	5,362	2,901
28. EQUITY		
Equity represents the residual interest in the net assets of CALM. The Government holds the equity interest in CALM on behalf of the community. The asset revaluation reserve represents that portion of equity resulting from the revaluation of non-current assets.		
Distribution of equity to Government		
Opening balance	(235,220)	(235,052)
The following forestry assets and liabilities were distributed to Government for transfer to the Forest Products Commission for the year.		
Plant and equipment	(65)	0
Buildings	(36)	(168)
Closing balance	(235,321)	(235,220)
Contributed equity		
Opening balance	10,213	7,377
Capital contributions (i)	4,802	2,836
Closing balance	15,015	10,213
(i) Capital contributions have been designated as contributions by owners and are credited directly to equity in the Statement of Financial Position.		
Asset revaluation reserve (i)		
Opening balance	1,971,088	1,979,326
Net revaluation increments/(decrements):		
Land	189,555	(8,238)
Closing balance	2,160,643	1,971,088
(i) The asset revaluation reserve is used to record increments and decrements on the revaluation of non-current assets, as described in accounting policy note 2(g).		
Accumulated surplus/(deficiency)		
Opening balance	399,490	390,975
Change in net assets	7,457	8,515
Closing balance	406,947	399,490
29. NOTES TO THE STATEMENT OF CASH FLOWS		
(a) Reconciliation of cash		
Cash assets	32,207	27,086
Restricted cash assets (refer to note 18)	2,644	2,320
	34,851	29,406

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

	2003–04 \$'000	2002–03 \$'000
(b) Reconciliation of net cost of services to net cash flows provided by / (used in) operating activities		
Net cost of services	(112,878)	(110,513)
Non-cash items:		
Depreciation and amortisation expense	12,107	11,247
Superannuation liability assumed by the Treasurer	759	466
Resources received free of charge	573	798
(Profit) / loss on sale of assets	(594)	(541)
(Increase) / decrease in current assets:		
Receivables (ii)	350	98
Inventories	549	(398)
Prepayments	(51)	(78)
Other current assets	(433)	(1,223)
Increase/(decrease) in liabilities:		
Increase / (decrease) in provisions	1,400	2,775
Increase / (decrease) in other current liabilities	2,558	(246)
Payables (ii)	966	(1,044)
Accrued capital user charge	14	(712)
Net GST receipts (payments) (i)	106	(236)
Net cash used in operating activities	(94,574)	(99,607)

(i) This is the net GST paid/received, i.e. cash transactions.

(ii) Note that 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 are not reconciling items.

30. COMMITMENTS FOR EXPENDITURE

Non-cancellable operating lease commitments		
Within 1 year	4,908	4,039
Later than 1 year and not later than 5 years	14,508	17,224
Later than 5 years	4,816	4,076
	24,232	25,339

31. FINANCIAL INSTRUMENTS

(a) Interest Rate Risk Exposure

The following table details CALM's exposure to interest rate risk as at the reporting date:

	Weighted average effective interest rate	Fixed interest rate maturity				Non-interest bearing	Total
		Variable interest rate	Less than 1 year	1 to 5 years	More than 5 years		
2004	%	\$000	\$000	\$000	\$000	\$000	\$000
Financial assets							
Cash assets	5.02	32,207	-	-	-	-	32,207
Restricted cash assets	5.02	10	-	-	-	2,634	2,644
Receivables		-	-	-	-	6,812	6,812
		32,217	-	-	-	9,446	41,663
Financial liabilities							
Payables		-	-	-	-	5,794	5,794
		-	-	-	-	5,794	5,794
2003							
Financial assets	4.88	27,096	-	-	-	9,432	36,528
Financial liabilities	-	-	-	-	-	4,476	4,476

	2004 \$'000	2003 \$'000
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(b) Credit Risk Exposure

All financial assets are unsecured.

Amounts owing by other government agencies are guaranteed and therefore no credit risk exists in respect of those amounts. In respect of other financial assets, the carrying amount represents CALM's maximum exposure to credit risk in relation to those assets.

The following is an analysis of the amounts owing by other government agencies:

- State Government Agencies	5,080	4,700
- Local Government Agencies	9	44
- Federal Government Agencies	178	668
Total	5,267	5,412

(c) Net Fair Values

The carrying amount of financial assets and financial liabilities recorded in the financial statements are not materially different from their net fair values, determined in accordance with the accounting policies disclosed in Note 2 of the financial statements.

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

32. REMUNERATION OF SENIOR OFFICERS

Remuneration

The number of senior officers, whose total of fees, salaries, superannuation and other benefits received, or due and receivable, for the financial year, fall within the following bands are:

\$	2003 – 04	2002 – 03
20,001 – 30,000	1	0
100,001 – 110,000	2	0
110,001 – 120,000	4	6
120,001 – 130,000	1	1
170,001 – 180,000	0	1
210,001 – 220,000	1	0

The total remuneration of senior officers is:

1,050	995
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The superannuation included here represents the superannuation expense incurred by CALM in respect of senior officers.

No senior officers are members of the Pension scheme.

	2003–04 \$'000	2002–03 \$'000
33. SUPPLEMENTARY INFORMATION		
Write-Offs		
Losses of public money and public or other property		
Irrecoverable amounts	54	737
Other (includes obsolete)	41	7
General (includes thefts reported to Police, lost property and stock taking deficiencies)	22	20
	117	764
Public and other property, revenue and other debts due to the state written off in accordance with Section 45 of the <i>Financial Administration Act 1985</i>		
Approved by the Executive Director	21	38
Approved by the Minister / Governor	96	726
	117	764
34. ADMINISTERED EXPENSES AND REVENUES		
Expenses		
Receipts paid into Consolidated fund	125	127
Total administered expenses	125	127
Revenues		
For transfer:		
Fauna licences	124	125
Revenue from regulatory fines	1	0
Total administered revenues	125	125

35. CONTINGENT LIABILITIES

In addition to the liabilities incorporated in the financial statements, CALM has the following contingent liabilities:

- (a) Litigation in progress
Various claims for damages have been lodged against CALM. CALM has denied liability and the Accountable Officer is of the opinion that no material loss will be incurred.
- (b) Native title claims
Native title claims have been made on CALM-managed land of which some have yet to be determined.

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

36. THE IMPACT OF ADOPTING INTERNATIONAL ACCOUNTING STANDARDS

CALM is adopting international accounting standards in compliance with AASB 1 First-time Adoption of Australian Equivalents to International Financial Reporting Standards (IFRS).

AASB 1 requires an opening balance sheet as at 1 July 2004 and the restatement of the financial statements for the reporting period to 30 June 2005 on the IFRS basis. These financial statements will be presented as comparatives in the first annual financial report prepared on an IFRS basis for the period ending 30 June 2006.

AASB 1047 Disclosing the Impacts of Adopting Australian Equivalents to International Financial Reporting Standards requires financial reports for periods ending on or after 30 June 2004 to disclose:

1. How the transition to Australian equivalents to IFRS is being managed:

CALM has established a project team in its Financial Services Branch to ensure it is able to provide the Office of Auditor General an opening International Financial Reporting Standards (IFRS) balance sheet by 31 October 2004. The project team is progressing well on the review of the Australian equivalent of the IFRS's and the impact of accounting transactions and balances that may be materially different as a result of the transition to IFRS.

2. Key differences in accounting policies that are expected to arise from adopting Australian equivalents to IFRS.

CALM is aware of the IFRS and is assessing the impact on the Department. Currently there are no key differences in the accounting policies that are expected to arise from adopting Australian equivalents to IFRS.

2003–04 Estimate	2003–04 Actual	Variance
\$'000	\$'000	\$'000

37. EXPLANATORY STATEMENT

The Summary of Consolidated Fund Appropriations and Revenue Estimates discloses appropriations and other statutes expenditure estimates, the actual expenditures made and revenue estimates and payments into the Consolidated Fund. Appropriations are now on an accrual basis.

The following explanations are provided in accordance with Treasurer's Instruction 945. Significant variations are considered to be those greater than 10% or above \$3.0M.

(i) Significant variances between estimate and actual – Total appropriation to deliver outputs:

Although there was no significant variance in the total appropriation, there was significant offsetting variances in the following output expenditure and total revenues from ordinary activities:

Details of expenses by outputs	2003–04 Estimate	2003–04 Actual	Variance
	\$'000	\$'000	\$'000
Nature Conservation	64,383	69,021	4,638

The increased expenditure in this output above the estimate relates principally to works funded from external sources such as Commonwealth grants, \$2.2 million. Other significant increases were for wildfire suppression expenditure \$0.97 million and an allowance for the cost of disposal of non-current assets \$0.6 million.

Total revenues from ordinary activities	2003–04 Estimate	2003–04 Actual	Variance
	\$'000	\$'000	\$'000
	38,818	46,978	8,160

Additional revenues for 2003–2004 were attributable to increased externally funded recoupable projects \$1.50 million, mining compensation receipts \$1.31 million, proceeds from the disposal of non current assets \$1.26 million, sale of an equitable interest in land at Kemerton \$1.20 million, parks and visitor receipts \$0.88 million, specific purpose grants \$0.79 million and recoups from the Forest Products Commission for services provided \$0.76 million.

**DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT – NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2004**

2003–04 Actual	2002–03 Actual	Variance
\$'000	\$'000	\$'000

(ii) Significant variances between actual and prior year actual – Total appropriation to deliver outputs:

No significant variances.

(iii) Significant variances between estimate and actual – Capital Contribution:

Although there was no significant variance in the capital contribution, there was a significant variance in the purchase of non-current physical assets.

2003–04 Estimate	2003–04 Actual	Variance
\$'000	\$'000	\$'000

Purchase of non-current physical assets	11,964	16,207	4,243
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Capital expenditure in 2003–2004 exceeded the estimate in the following items; tourism road improvement program \$1.6 million, plant and equipment and fire fighting fleet replacement \$1.2 million, conservation land purchase \$0.9 million and parks and visitor facilities \$0.5 million.

(iv) Significant variances between actual and prior year actual – Capital Contribution:

Capital Contribution (appropriation)	4,802	2,836	1,966
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The capital contribution increased in 2003–2004 by \$1.966 million however this was offset by a reduction in Holding Account Drawdowns in 2003–2004 of \$1.934 million. Expenditure on non-current physical assets in 2003–2004 was \$2.226 million less than 2002–2003 largely due to a reduction in expenditure on conservation land purchase of \$1.71 million. Other categories of capital capital expenditure experienced minor variations.

**(v) Significant variances between estimate and actual, and actual and prior year actual
- Administered revenues:**

Revenues disclosed as Administered Revenues	160	125	-35
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Administered revenues relate to the collection of royalties for the issuing of kangaroo tags and receipts from issuing regulatory fines. Delays were experienced during 2003–2004 in fully implementing a new system for issuing infringements for breaches of the CALM Act and Regulations.

Financial statements



AUDITOR GENERAL

INDEPENDENT AUDIT OPINION

To the Parliament of Western Australia

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT FINANCIAL STATEMENTS FOR THE YEAR ENDED JUNE 30, 2004

Audit Opinion

In my opinion,

- (i) the controls exercised by the Department of Conservation and Land Management provide reasonable assurance that the receipt, expenditure and investment of moneys, the acquisition and disposal of property, and the incurring of liabilities have been in accordance with legislative provisions; and
- (ii) the financial statements are based on proper accounts and present fairly in accordance with applicable Accounting Standards and other mandatory professional reporting requirements in Australia and the Treasurer's Instructions, the financial position of the Department at June 30, 2004 and its financial performance and cash flows for the year ended on that date.

Scope

The Executive Director's Role

The Executive Director is responsible for keeping proper accounts and maintaining adequate systems of internal control, preparing the financial statements, and complying with the Financial Administration and Audit Act 1985 (the Act) and other relevant written law.

The financial statements consist of the Statement of Financial Performance, Statement of Financial Position, Statement of Cash Flows, Output Schedule of Expenses and Revenues, Summary of Consolidated Fund Appropriations and Revenue Estimates, and the Notes to the Financial Statements.

Summary of my Role

As required by the Act, I have independently audited the accounts and financial statements to express an opinion on the controls and financial statements. This was done by looking at a sample of the evidence.

An audit does not guarantee that every amount and disclosure in the financial statements 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.

D D R PEARSON
AUDITOR GENERAL
September 30, 2004

LETTER OF ACCEPTANCE

