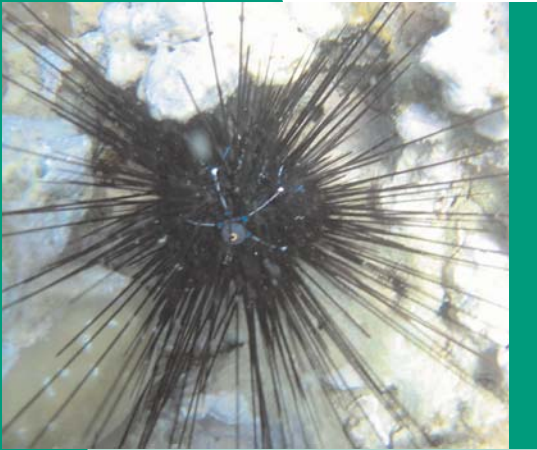




Environmental Protection Authority

# Environmental Protection Authority



ANNUAL REPORT  
2004 - 2005



## **Cover**

*(From top left)*

Burrup Peninsula from Nicol Bay side. Pilbara.  
(Marine Ecosystems Section, EPA Service Unit).

Needle Spined Urchin. (*Diadema setosum*).  
(Marine Ecosystems Section, EPA Service Unit).

Grand spider orchid. (*Caladenia huegelii*).  
(Terrestrial Ecosystems Section, EPA Service Unit).

View east from Mt Henry Bridge, Perth.  
(From Riverplan, Swan River Trust)



**Environmental Protection Authority**

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ENVIRONMENTAL  
PROTECTION  
AUTHORITY

**ANNUAL REPORT**

2004 • 2005

## TRANSMITTAL TO THE MINISTER

Hon Dr Judy Edwards MLA  
MINISTER FOR THE ENVIRONMENT; SCIENCE

In accordance with s21 of the *Environmental Protection Act 1986*, I submit the Environmental Protection Authority's Annual Report for the year ended 30 June 2005.

It is with pleasure that, on behalf of the EPA, I advise that for the reporting period to 30 June 2005, the EPA has conducted its functions such that it has met its objectives outlined in s15 of the *Environmental Protection Act 1986*. This has been achieved with the assistance of the services and facilities of the Department of Environment.

A handwritten signature in black ink, appearing to read 'W. J. Cox', is written over a light grey rectangular background.

Dr Walter Cox

CHAIRMAN

12 September 2005

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## CHAIRMAN'S OVERVIEW

The Environmental Protection Authority (EPA) was established by Parliament to provide independent advice, and with the broad objective of protecting the State's environment. This role is undertaken by providing overarching environmental advice to the Minister for the Environment; Science through the preparation of environmental protection policies and the assessment of development proposals and management plans, as well as providing public statements about matters of environmental importance. One of the avenues for public statements is this Annual Report.



*EPA Chairman  
Dr Walter Cox*

The report is structured in a manner which introduces the members of the EPA, and then provides a discussion of the major environmental issues on the EPA agenda, followed by information on the environmental assessment of proposals and planning schemes, strategic assessments and policy development. Towards the end of the report there are details of information on legislation issues, consultation, site visits undertaken by the EPA and the work of the Advisory Council to the EPA.

In response to international commodity demand and price increases, the EPA has received an increased number of mining projects for assessment. This included assessment of proposals for Marillana Creek (Yandi), Life of Mine, Wheelarra Hill iron ore mine extension, Goldsworthy extension iron ore mine and Ellendale 4 Diamond project, West Kimberly.

The EPA also completed assessment of the Fortescue Metals Group's Pilbara Iron Ore and Infrastructure Project, Port and North-South Railway (Stage A). The assessment of Stage B and a new proposal for a mine at Cloudbreak is progressing.

As part of the Western Power Procurement Program, the EPA assessed all short listed tender proposals. These were Kwinana gas-fired power station, Griffen B power station – Griffen Energy, Griffen B power station – Wesfarmers and Bluewaters Phase I and Phase II.

The EPA identified a number of site-specific issues relating to coal fired power proposals at Collie. This included sulphur dioxide emissions, noise, access to groundwater and disposal of saline wastewater.

The key issue identified by the EPA related to the differential greenhouse gas emissions, with coal fired power stations generating about one million tonnes of greenhouse gases more than an equivalent sized gas fired power station.

Assessment, at the level of ERMP, for the proposed Wagerup alumina refinery expansion by Alcoa, Worsley alumina refinery expansion, Gorgon Barrow Island LNG plant and Straits Resources solar salt field is progressing, with the first two out for public comment with the last two expected to be released for public comment in early 2005/06.

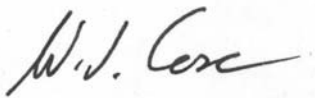
The EPA has committed to the timelines coming out of the Keating Review and this along with the peak workload arising from the mining 'boom' requires additional resources.

Government has approved additional resourcing for both the peak workload and effective 1 July 2006 resourcing for implementation of the Keating Review recommendations. There is, however, a significant issue in retaining and attracting experienced staff given the substantial differential in remuneration offered by the mining sector and its consultancy service providers, and the public sector.

The EPA also has an expectation at all times, and particularly during this peak workload, that proponents/consultants submit quality documentation supported by a thorough public consultation process.

I take this opportunity to thank proponents of proposals, members of the community and advisers to the EPA from both the public and private sectors. I thank also the staff of the EPA Service Unit for the part each officer has played in assisting the EPA in doing the work of protecting the environment. I'm delighted by the quality of advice received by EPA members. It is very important that all those involved have confidence that the process will deliver outcomes that give full attention to environmental protection.

The Minister for the Environment; Science, Dr Judy Edwards MLA continues to take a deep interest in issues addressed by the EPA, and her interest and support is appreciated.

A handwritten signature in black ink, appearing to read 'W. J. Cox', is written over a light grey rectangular background.

Dr W. J. Cox  
CHAIRMAN



## MEMBERS

The EPA has five members: a full-time Chairman, a part-time Deputy Chairman and three part-time members. However, members work far in excess of their part-time appointments. A record of members' attendance at EPA meetings is provided in Appendix 9.

### **Dr Walter Cox**

*EPA Chairman. Commenced as a member in January 2003 and as Chairman from 31 March 2003, for a term ending 30 March 2006.*

Prior to taking up his position as EPA Chairman, Dr Cox was Executive Dean of the Faculty of Business and Public Management and Pro Vice-Chancellor at Edith Cowan University.

Dr Cox has a Bachelor of Science (Agriculture) degree from the University of Western Australia (WA) and a PHD in Soil Science from the University of California, Davis.

He has previously held a number of chief executive officer positions in Government including Executive Director, Department of Conservation and Land Management, East Perth Redevelopment Authority, Subiaco Redevelopment Authority and Managing Director of the Water Authority of Western Australia.

Dr Cox is the Chairman of the Independent Audit Group that audits water use in the Murray-Darling Basin and reports to the Murray-Darling Basin Ministerial Council.

He has served on a number of Boards and Committees including WA State Planning Commission, Water Services Association of Australia (Chairman), Workpower and is presently the President of the Institute of Public Administration of Australia (WA Branch), Chairman of Leadership Western Australia and Chairman Agricultural Research Western Australia. He is also a Commissioner on the National Water Commission.



### **Dr Andrea Hinwood**

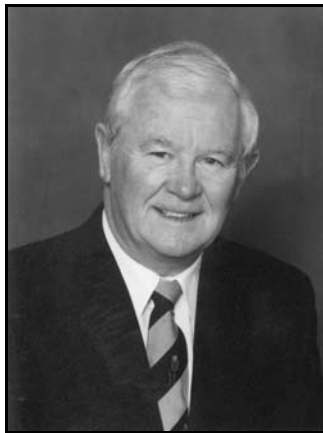
*Member from 7 May 2003 to 10 May 2005. Deputy Chairman 11 May 2005 until 6 May 2008.*

Dr Hinwood is a senior lecturer in Environmental Management at Edith Cowan University and has a Masters in Applied Science from RMIT, Victoria and a PhD in environmental epidemiology from Monash University, Victoria.

Dr Hinwood has worked in the environmental protection area for over twenty years and has a wide experience in investigation, monitoring and management. She has managed the areas of contaminated sites, chemicals management and emergency response

for the Victorian EPA prior to managing air quality with the Department of Environmental Protection in Western Australia. Dr Hinwood's research interests are in the areas of exposure assessment, hazardous air pollutants, health and environmental impacts of chemicals in the environment.

Dr Hinwood has a breadth of national and international experience, participating in a range of Ministerial and National Environmental Protection Council (NEPC) working groups. She chaired one of the United Nations Environment Program (UNEP) Technical Options Committees on substances that deplete the ozone layer and was a member of the Technology and Economic Assessment Panel under the Montreal Protocol for a period of five years.



**Mr Denis Glennon**

*Member from 1 January 1998 until 30 March 2006*

Mr. Glennon recently retired from the private sector following a lengthy career at senior levels in the environmental management business in Australia. He has specialist knowledge in industrial waste practices, and waste treatment technology development and

implementation. He served as Chairman of Environment Business Australia for three years (then called Environment Management Industry Association of Australia).

He has a comprehensive knowledge of environmental management and pollution prevention systems, environmental engineering, sustainable industry development, and environmental management policy formulation.

He is the recipient of an Order of Australia (AO) for his "service to environmental protection through the management, control and treatment of industrial and hazardous wastes, and to the community".



**Ms Joan Payne**

*Member from 31 March 2003 until 30 March 2006*

Ms Payne, former President of the Waterbird Conservation Group, has developed expertise in a broad range of environmental issues through interaction with conservation and community groups as well as Government Departments (State and Federal) since 1976.

Ms Payne was an Executive Member of the Conservation Council of WA from 1988 to 2001 including holding the position of Vice President for a number of years.

Her membership, both past and present, of Government committees and working parties, includes:

- The Western Australian Water Resources Council;
- Water Planning and Policy Standing Committee;
- Darling Range Regional Park Community Consultative Committee;
- National Wetlands Advisory Committee;
- Department of Environmental Protection's System 6 Implementation Group;
- Water and River Commission Stakeholders Council;
- Water and River Commission State Water Reform Council;
- System 6 Update Technical Advisory Group;
- Department of Conservation and Land Management's Wetlands Coordinating Committee;
- National Consultative Committee on Kangaroos; and
- National Shorebird Conservation Taskforce.

**Professor Steven Halls**

*Member from 11 May 2005 until 10 May 2007*

Professor Steven Halls is an Engineer/Biologist by training with BSc (Hons) and PhD degrees from the Universities of Manchester and London respectively and has been an Environmental Scientist and Researcher for the past 25 years. His fields of

professional expertise include environmental policy analysis and review; technology, risk and impact assessment; industrial ecology, eco-innovation and eco-efficiency; and the design and implementation of environmental management and associated education programs.



Currently Professor Halls is Director of Murdoch Environment at Murdoch University where he is responsible for the development and implementation of integrated environmental projects. He is also Professor in the School of Environmental Science and International Research Co-ordinator for the Environmental Biotechnology CRC. Until recently he was the Director of United Nations Environment Programme International Environmental Technology Centre (IETC) based in Japan (<http://www.unep.or.jp>). Previously Professor Halls was Project Team Leader for the European Commission Environment Directorate concerning the accession of Central and East European Countries into the European Union (EU). He has held appointments at several UK Universities and was Research Scientist/Assistant Professor at the University of Texas in the USA.

Recently he has been appointed as a member of the European Commission Steering Group on Waste Management Policy and Strategy for Europe. Currently he is an external advisor and reviewer to the EC RTD Directorate on the development of an European Environmental Technology Action Plan and the European Union 6<sup>th</sup> Framework Programme on Research, Technology and Development respectively.

### **Advisory Positions**

- External Adviser (1988 - 1990) to US EPA on development of:
  - Risk assessment methodology for hazardous waste sites; and
  - Innovative technologies for remediation of hazardous waste sites (US EPA "SITES" Program).
- Member of European Commission Project on development of the Eco-Management and Audit Scheme ("EMAS") Regulation
- Member Advisory Committee on UK Postgraduate Education and Training in Environmental Management
- Advisory Member, UK Department of the Environment panel on Contaminated Land, 1994
- Chairperson of the Bedfordshire Local Agenda 21 Steering Group, 1996
- Member, European Commission DGXI Strategy Group for "Waste Management in Europe", 1996
- Member, UK Bio-Industry Association Environmental Biotechnology Committee, 1998
- Adviser, European Commission DG Research and Technology Development 2003
- Member of the Asia Productivity Organization "Green Productivity" Advisory Committee (GPAC) 2004



### **Dr Roy Green, Deputy Chairman from 13 May 2003 to 6 May 2005**

*Previously a member from May 1998 to May 2000 and Deputy Chairman from 1 January 2000 to 6 May 2000.*

Dr Green has a Bachelor of Science degree from the University of Liverpool, a PhD from the University of Toronto and a DSc from Curtin University.

Dr Green has a wealth of national and international experience. He is currently:

- Visitor, Cooperative Research Centre for Greenhouse Auditing;
- Board Member, Cooperative Research Centre for Coastal Zone, Estuary and Waterway Management; and
- Member, Technical Advisory Committee, Australian Nuclear Science and Technology Organisation.

Dr Green's experience on boards, committees and advisory bodies includes a Federal Cabinet appointment to chair three (Agriculture, Fisheries, and Forestry) of the nine working groups which reported to Government on Ecologically Sustainable Development (1990-1991).

From December 1994 to February 1996 Dr Green was Chief Executive/Acting Chief Executive, Commonwealth Scientific and Industrial Research Organisation, after heading the CSIRO Institute of Natural Resources and Environment from 1988 till 1994.

From April 1996 to November 1997 he was an expert consultant with UNESCO's Intergovernmental Oceanographic Commission, based in Paris.

Dr Green was Chair of the Advisory Council for the National Land and Water Resources Audit (1997-2002), President of the Murray Darling Basin Commission (2000-2003) and Member of the Natural Heritage Trust Advisory Committee (1997-2003).

Dr Green has also served as:

- Chair of the Pulp and Paper Research Advisory Board (1989-1994);
- Member of the Commonwealth State of the Environment Advisory Council (1994-96); and
- Member of the Australian Space Council (1993-96).

## **MAJOR ENVIRONMENTAL ISSUES**

The Environmental Protection Authority (EPA) has overarching responsibility for the provision of advice to Government on environmental matters, and the public expectation is that the EPA will assume a broad custodial, or guardianship role in relation to the protection of air, water, soil, flora, fauna and the maintenance of biodiversity.

In fulfilling this role, the EPA has available an array of mechanisms, including provision of advice of either a general or particular nature under s16 of the *Environmental Protection Act 1986* (EP Act), and preparing assessment reports and Environmental Protection Policies (EPPs), State Environmental Policies (SEPs) as well as Guidance Statements and Position Statements. In addition, the EPA retains a close link with the Government departments which have a responsibility for the management of natural resources. Further information on the role of the EPA is provided in Appendix 1.

Some elements of the EPA's custodial responsibilities are discussed below.

There are a number of emerging issues which require the attention of governments, the business sector, the community and individuals.

The biggest issue is climate change. While the EPA's focus is on the environmental impacts of climate change, the reality is that all sectors of the community will be affected.

The predictions for south west Western Australia are a further reduction in mean rainfall, an increase in temperature and an increase in extreme events. Reduced rainfall and increased temperatures are predicted to significantly reduce stream flow and groundwater intakes. This in turn will significantly affect groundwater dependent ecosystems, with changes in vegetation already reported on the Gnamptara Mound following some 30 years of below average rainfall. While many other sectors, such as agriculture and water services will be affected, there are opportunities for adaptive

management. There is little opportunity to address impacts of natural ecosystems including biodiversity.

It is generally accepted that the driving force behind climate change is a build-up in greenhouse gases. Australia produces about 15% of the World's greenhouse gases and in isolation there is nothing Australia can do to prevent climate change. We have, however, a moral obligation to contribute to initiatives to reduce greenhouse gas production.

There is an urgent need for a policy framework at Commonwealth and State levels to address this urgent issue.

The EPA, in line with Guidance Statement 12 (*Minimising Greenhouse Gasses*) has an expectation that proponents will address measures to minimise greenhouse gas production for their proposals.

The other key issue the EPA wishes to highlight is the state of the Peel-Harvey Estuary. The EPA is currently preparing with Commonwealth financial assistance, a Water Quality Improvement Plan. Recent advice to the EPA that nutrients entering the Peel-Harvey Estuary now exceed those before the Dawesville cut was constructed. Most nutrients come from the Serpentine, Murray and Harvey Rivers with increasing contributions from the urban components of the catchments. With urbanisation the nutrient input to the Estuary increases on a per hectare basis over the previous rural land use.

Urgent action is required to provide 'in fill' sewerage to currently unsewered areas, for compulsory connection in areas previously serviced under the 'in

fill' program and increased effort to reduce nutrient in flow from rural sectors of the catchment.

When the Water Quality Improvement Plan is finalised, the EPA foreshadows the need to put in place appropriate governance arrangements to ensure the community's multifaceted values for the Peel-Harvey Estuary are maintained and enhanced.

### **Application of 'Principles' in the Environmental Protection Act**

In October 2003, the *Environmental Protection Act* was amended to include five Principles, and the object of the Act changed to protect the environment of the State having regard for them.

The Principles (s.4A) address: the precautionary principle; intergenerational equity; conservation of biological diversity and ecological integrity; improved valuation, pricing and incentives mechanisms; and waste minimisation.

The Authority reviewed its legal obligations with respect to the Principles and subsequently amended its procedures for environmental impact assessment to ensure that these obligations were being met. Proponents are now asked to actively consider them in putting forward their environmental assessment documentation to the extent practicable.

### **State of the Environment Reporting**

The State of Environment (SoE) Reporting Program continued to be a major undertaking for the EPA during

the year. Cabinet endorsed the approach of the EPA and the role and support of State agencies in the Program. In 04/05 the majority of the activity has been in progressing the steps required to produce a Draft SoE Report by late 2005.

The EPA has managed the program on a limited budget and is grateful for the significant contributions of time and expertise by the 120 or so individuals and State agency staff who have been actively participating in the program.

The SoE Steering Group continued to provide high-level strategic direction and guidance to the SoE Team throughout the year. The Steering group met 5 times. There were a number of changes in membership of the Steering Group during the year: Mr Noel Nannup was replaced by Mr Paul Bowers, Professor David Wood was appointed, Dr Roy Green continued as a member after ceasing to be an EPA member and Dr Steve Halls was appointed as a new EPA member.

Key actions of the Steering Group were:

- consideration of public input to SoE Discussion Papers #3 “Environmental Themes and Issues” (July '04);
- appointment of Theme leaders and members of Working Groups (September '04);
- consideration and endorsement of the environmental issues to be addressed in this SoE report and the reporting templates (December '04);
- appointment of lead agencies to Sector Working Groups (December '04);

- establishment of an SoE web page at [www.soe.wa.gov.au](http://www.soe.wa.gov.au) (June '05);
- an agreed approach to the evaluation of actions arising from the 1998 SoE report by agencies (June '05); and
- continued strategic direction of the program(on-going).

Working Groups for the Themes were established in September 2004. The Theme leaders are;

**Fundamental Pressures** - Dr Roy Green, SoE Steering Group;

**Land** - Mr Rex Edmondson, SoE Steering Group;

**Biodiversity** - Dr Libby Mattiske, SoE Steering Group;

**Atmosphere** - Professor Frank Murray, Murdoch University;

**Inland Waters** - Dr Bruce Hamilton, Consultant;

**Marine** - Dr Simon Woodley, Consultant;

**Human Settlements** - Professor David Hedgcock, Curtin University;

**Heritage** - Mr Ian Baxter, Heritage Council WA; and

**Towards Sustainability** - Dr Wally Cox, EPA.

Working Group membership is diverse with individuals from State and Commonwealth Government agencies, local government, universities, consultants, conservation groups, indigenous groups, peak bodies, research organisations, NRM groups, business, industry and other special interest groups. They bring a broad range of experience and expertise and this has enabled them to begin drafting parts of the SoE Report in collaboration with the SoE Team and Steering Group. Working Groups members range in number from 10 to 14 per group.

**Table 1. Key Environmental Issues being addressed in the '05/'06 SoE Report.**

<b>THEME</b>							
<b>Fundamental Pressures</b>	<b>Biodiversity</b>	<b>Atmosphere</b>	<b>Land</b>	<b>Inland Waters</b>	<b>Marine</b>	<b>Human Settlements</b>	<b>Heritage</b>
Climate change	Climate change	<i>Particulates</i>	Land salinisation	Salinisation of inland waters	Marine contamination	Population and urban form	Statutory identification and recognition
Population and consumption	Pathogens / Dieback	Photochemical smog	Erosion (wind & water)	Altered water regimes	Degradation of marine habitat and biota	Energy	Conservation and loss
	Feral & introduced animals	Stratospheric ozone depletion	Soil acidification	Sedimentation & erosion	Introduction of exotic species	Water	Awareness, appreciation and support
	Weeds	Sulphur dioxide	Contamination	Eutrophication	Cumulative impacts	Waste	
	Changed fire regimes	Carbon monoxide	Loss of soil health:	Contamination (eg. pesticides, heavy metals, herbicides, toxicants)		Transport	
	Clearing of native vegetation (terrestrial and marine)	Nitrogen oxide		Acidification		Environmental health	
	Grazing	Indoor air		Loss of wetlands			
		Toxics		Loss / degradation of fringing and instream vegetation			
		Greenhouse gas emissions: Emissions in greenhouse gases only.		Loss of floodplain connectivity (landscape functioning, fragmentation)			

In December 2004 Working Groups identified the key environmental issues to be considered in each Theme. The Steering Group endorsed the issues shown in Table 1 below.

Sector Working Groups were established between December 2004 and February 2005.

The lead agencies for each sector are:

**Agriculture** - Department of Agriculture;

**Water Supply** - Department of Environment;

**Pastoralism** - Department of Agriculture / Pastoral Lands Board;  
**Tourism** - Western Australian Tourism Commission;  
**Forestry** – Department of Conservation and Land Management;  
**Energy** - Sustainable Energy Development Office;  
**Mining & Petroleum** - Department of Industry & Resources; and  
**Fisheries** - Department of Fisheries

Subject to satisfactory progress and availability of resources a draft SOE



Report is expected to be released at the end of 2005.

## **Review of Perth Groundwater Extraction Conditions**

The EPA reported in Bulletin 1155 on the proposal by the Water and Rivers Commission (WRC) to change some of the conditions and commitments applying to the Jandakot and Gngangara Mounds. This section 46 review was initiated in 2001, the first stage in a two-stage review process.

In undertaking this review, the EPA placed considerable emphasis on ensuring that any changes should not compromise the protection of environmental values on the Jandakot and Gngangara Mounds. The EPA expressed concern that over the last decade there has been increasing stress on the groundwater-dependent ecosystems on the mounds resulting from factors including pumping, climate change and land use impacts, such as commercial pine forests..

On both the Jandakot and Gngangara Mounds, maintenance and support of wetlands and phreatophytic vegetation has been an important consideration by the EPA over the past two decades. The EPA reaffirmed this position recently in its audits of compliance by the WRC with environmental conditions on the Jandakot and Gngangara Mounds (EPA 2004a and 2004b). In doing so, the EPA acknowledged the increasing complexity under which protection of water-related values must be achieved. The EPA reported on non-compliance with criteria at a number of the sites subject to the Stage 1 section 46 review examining the proposed changes in the broader context

of environmental values. The EPA expects the WRC to ensure that management of groundwater delivers protection to those environmental values.

EPA's increasing concern about climate change has been reinforced in recent work by the Department of Environment (DoE) and others on the Stirling Dam Catchment, which predicts a further 11 per cent decline in rainfall over the next thirty years. Declines in rainfall and its contribution to groundwater over the Jandakot and Gngangara Mounds can be expected. What this will mean for the future management of the mounds will be a key issue, and the DoE will need to ensure that climate change prediction and also measures of change are built into management of the mounds. It is relevant to point out that the Water Corporation has de-rated its existing surface storages by two-thirds over the past twenty five years, but groundwater allocations have increased over the same time, including over the past decade. This, in the view of the EPA, is not sustainable.

Many of the sites on the Jandakot Mound with environmental criteria established in 1992 have experienced substantial urban development, leading to the loss of the value to be protected. In some other instances, there has been a change in the environmental value such that a different criteria may be more appropriate. Under these circumstances the EPA has accepted the proposed changes. However, the EPA has also pointed to the need to review the adequacy of the remaining vegetation criteria sites to ensure that groundwater levels are managed to protect significant areas of phreatophytic vegetation and wetlands.

The EPA has not been prepared to accept some other proposed changes to criteria and to criteria sites on the Jandakot Mound. In the EPA's view, any change would be premature on the basis of existing information and would be likely to affect unacceptably, environmental values.

Fewer changes have been proposed for sites on the Gngangara Mound at this time. The EPA has accepted that values would not be further threatened by the deletion of three sites along with Coogee Springs. The EPA has not supported changes to environmental criteria for Lake Nowergup.

The EPA understands that the Stage 2 section 46 report is likely to be submitted to the EPA in late 2006.

### **Implementing the National Water Quality Management Strategy**

Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Guideline No 4) and Australian Guidelines for Water Quality Monitoring and Reporting (Guideline No 7).

Of the 20 National Water Quality Management Strategy (NWQMS) Guidelines, Guidelines Nos 4 and 7 are environmentally the most significant. The State Government's implementation policy for these two guidelines was published in 2004 as the State Water Quality Management Strategy No 6. It can be sourced on the internet at: [http://portal.environment.wa.gov.au/pls/portal/docs/PAGE/DOE\\_ADMIN/TECH\\_REPORTS\\_REPOSITORY/TAB1019688/SWQ%206.PDF](http://portal.environment.wa.gov.au/pls/portal/docs/PAGE/DOE_ADMIN/TECH_REPORTS_REPOSITORY/TAB1019688/SWQ%206.PDF)

Following publication, the Minister for the Environment; Science requested the EPA to take prime responsibility for implementing this Government policy. To assist the EPA the Minister for the Environment; Science requested the Department of Environment (DoE) to be the day-to-day manager for implementation and informed the DoE that implementation would have to be to the satisfaction of the EPA.

### Environmental issues to be addressed by the Government's policy

The following issues were considered to be of prime importance for rectifying WA's deteriorating water quality problems:

- Abating the discharge of point source wastewater effluents and diffuse source contamination to many water resources (eutrophication and industrial contamination);
- Reversing poor land use practices that impact on many water resources (land clearing, salinity, soil erosion and sedimentation);
- Discouraging inappropriate land development (poor planning practices) in proximity to some water resources including wetlands (contamination);
- Stopping unsustainable allocation of water away from the environment especially in areas subject to population growth pressure (groundwater draw down, loss of wetlands, aquatic habitats and biodiversity); and
- Ensuring that a proper water resource management strategy be developed to deal with the drying

climate in the southwest of WA over the past 20 years.

### The Essence of the Government Policy

The policy requires that:

- All significant water resources in WA be defined spatially, on a priority basis;
- Through a thorough consultative process involving the community, environmental values (EVs) for water quality be developed for each significant water resource;
- For each EV, a set of broad environmental quality objectives (EQOs) be developed, which should reflect the desired state of water quality;
- For each EQO, environmental quality criteria (EQC) and or targets – otherwise known as environmental performance benchmarks - be set;
- The day-to-day water resource manager for water quality (DoE) adopt an environmental management system for each significant water resource to be protected;
- The EPA signs off the EVs, EQOs and EQC and targets as appropriate; and
- The DoE has the day-to-day environmental management responsibility for the water resource protection.

### Progress towards implementing the Government's Policy

The EPA has requested a briefing from the DoE on the above environmental issues and how DoE proposes to address

implementing the policy as part of its responsibilities. The EPA also requested DoE to prepare a comprehensive program for about 20 of the State's most significant water resources for which the EPA and DoE can commence the process of setting 'EVs', 'EQCs' and 'EQC and/or targets'.

While the briefing on the comprehensive program is yet to take place, the EPA is reviewing closely how the key components of the policy are being applied to water allocation from the Gnamagara and Jandakot Mounds and in environmental assessment work being done for the South West Yarragadee water source proposal.

### **State Environmental Policies**

A State Environmental Policy (SEP) is a non-statutory Government policy position on a particular aspect of the environment. It is enabled under Part II section 17(3) of the *Environmental Protection Act (1986)* whereby the EPA can "consider and make proposals as to the policy to be followed in the State with regard to environmental matters".

The process for developing a SEP is largely based on the statutory requirements for developing an EPP under Part III of the Act. A SEP is developed in its first stages by the EPA. Following a public consultation process, a SEP can be approved by the Minister for the Environment; Science and adopted by Cabinet on a whole-of-Government basis.

A SEP is a relatively new policy instrument. The concept of SEP's was developed in 2004 following amendments to the *Environmental*

*Protection Act* which provided wider reaching powers of environmental protection, such as Environmental Harm provisions and clearing controls. These Act amendments shifted policy emphasis away from statutory Environmental Protection Policies (EPP's) developed under Part III with the force of Law. There became a greater need for a more flexible policy instrument which would provide guidance on matters of environmental significance without the need for coercive powers.

A SEP could have the scope to provide the following:

- Establish environmental values and environmental quality objectives for a particular environment;
- Identify a framework for implementation using existing statutory mechanisms under the Act (such as Environmental Impact Assessment, Licensing, Regulations and/or Environmental Protection Policies) and by guiding other agency mechanisms (such as Town Planning Scheme provisions and Statement of Planning Polices). New funding initiatives can also be used to facilitate the implementation of SEP's; and
- Define environmental performance criteria against which to audit environmental performance.

The EPA released *State Environmental Policies (SEPs): An Explanatory Document* in November 2004.

The first SEP was released by the Government in January 2005 for the protection of Cockburn Sound. This, however, was developed by the EPA via the EPP process and was finalised in its latter stages as a SEP. The EPA has since initiated the development of a SEP for the coastal zone which is the first SEP to be initiated through the SEP process.

### **Managed Aquifer Recharge using Treated Wastewater on the Swan Coastal Plain**

In August 2004 the EPA was requested by the Minister for the Environment; Science to provide advice under section 16(e) of the *Environmental Protection Act 1986* on managed aquifer recharge (MAR) using treated wastewater on the Swan Coastal Plain.

As a first stage in providing this advice, the EPA released a Discussion Paper on 4 April 2005 for a 12 week public comment period. During the public comment period, the EPA held discussion forums in Mosman Park, Hillarys, Riverton, Wanneroo, Bibra Lake and Midland.

The Discussion Paper addressed the key issues associated with MAR, and risks and benefits associated with a number of potential applications of MAR on the Swan Coastal Plain. The potential applications include: MAR for environmental benefits, such as increasing water allocations to lakes and wetlands; horticultural irrigation; integrated water management in new residential areas, and MAR to augment public drinking water supplies.



*MAR Forum Wanneroo 23 May 2005*

The forums were held to provide members of the public with an opportunity to learn about and raise issues related to MAR. At the forums, representatives from the key Government agencies: Department of Health; Department of Environment and Water Corporation, presented the key issues associated with MAR, and potential applications on the Swan Coastal Plain. The attendees then formed groups to discuss the potential applications, the risks, benefits and further information needed.

The EPA considered the issues raised at the forums, and written submissions received during the public comment period, in developing its section 16(e) advice. The draft advice, which provides a strategic framework for the further consideration of MAR on the Swan Coastal Plain, is expected to be released on 25 July 2005 for a four week public comment period. Following consideration of any further comments received, the EPA will finalise its section 16(e) advice.

## **Review of the Fire Policies and Management Practices of the Department of Conservation and Land Management**

The management of fire in the south west of WA polarises the community, broadly into three factions: those who consider that prescribed burning practices is an inappropriate tool for the preservation of biodiversity values; those who think that not enough prescribed burning is done to protect life and property; and those whose main concern is the effects on human health from smoke inhalation coming from prescribed burning.

Following a request from the Minister for Environment the EPA in mid-September 2003 undertook a review of the Department of Conservation and Land Management's fire management policy and practices in its Swan, South West and Warren administrative regions. The area extends from Lancelin in the north, to the south coast and eastwards to Albany.

Information gathered from across the community was incorporated into a Discussion Paper on the issues surrounding fire management. The EPA used this information, specialist advice from consultants, and responses from submissions on the Discussion Paper to prepare its advice and recommendations to the Minister for Environment.

The EPA met with representatives from the forestry industry, forest conservation and biodiversity interests, government planners, farmers, local government, the insurance industry, and the Fire and Emergency Services Authority. The EPA also sought views from the general

community and interest groups via public information exchange days at Albany, Walpole, Manjimup, Bunbury, Perth and Swan View. These information exchange sessions enabled the community to raise issues of importance about CALM's fire practices and how they performed in creating a realistic and effective balance between human health, safety of humans and property, and the requirements of forestry management to optimise biodiversity.

The Discussion Paper titled *Fire, for what purpose? Review of the fire policies and management practices of the Department of Conservation and Land Management* was released in June 2004 for public comment. It addressed why prescribed burns were undertaken by CALM, the consequences of bushfires and asked how best practice fire management might be achieved. It discussed factors arising from climate change and recognised the often-conflicting aims to be accommodated. The EPA made no recommendations in its Discussion Paper.

In October 2004 the EPA provided its advice and recommendations to the Minister, *Review of the Fire Policies and Management Practices of the Department of Conservation and Land Management* (Bulletin 1151). The EPA found that, while CALM's fire management was highly rated nationally and internationally, it could do more to educate its many affected communities as to why it does what it does, include them in its planning of prescribed burns, make its operations more transparent, and should have the burn programs outcomes independently audited. The EPA also considered that funding for fire management and research should be

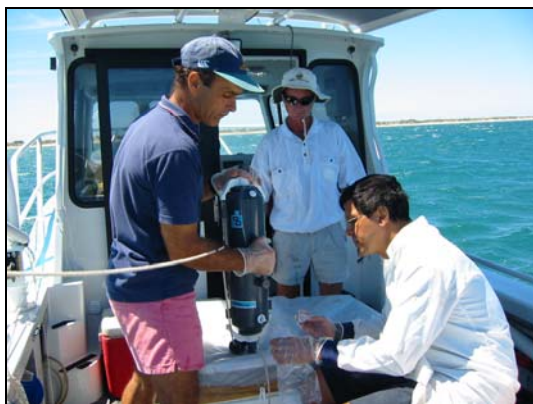
adequate for the task. Some key recommendations were that:

- in planning the annual burn program, assessment of fire requirements for biodiversity outcomes should be the priority;
- for each prescribed burn CALM should:
  - a) document the rationale for, and mode of operation to achieve the stated objectives;
  - b) report on whether the performance indicators have been met; and
  - c) develop and apply indicators to measure burn outcomes against the stated objectives;
- the Conservation Commission be responsible for auditing the prescribed burning program;
- CALM further develops and supports appropriate community involvement programs to provide an effective interface in relation to its prescribed burn programs;
- CALM should document for the public and make readily available its planning and operational processes for prescribed burning;
- the funding for CALM's fire management operations should be reviewed and adjusted to enable CALM to reach its objectives;
- CALM undertake periodic forward-planning to ensure readily deployable equipment and a skilled workforce of the appropriate size are available to handle wildfires;
- CALM's research budget be at least maintained in real terms and that collaborative, peer-reviewed research programs with universities and other agencies be encouraged; and
- the Conservation Commission's Research Advisory Committee be

tasked formally to advise on CALM's fire research activities.

## **Environmental Values and Objectives; Pilbara Coastal Waters Consultation**

The State Water Quality Management Strategy No 6 sets out the framework for implementing Guidelines 4 and 7 of the National Water Quality Management Strategy in Western Australia and gives EPA, assisted by the Department of Environment, prime responsibility for its implementation.



*Researchers from Marine Ecosystems Branch and CSIRO sample WA marine waters to characterise natural background concentrations of contaminants. (Kevin McAlpine, Tim Daly, Simon Apte-CSIRO)*

The framework requires that environmental values (EVs) and environmental quality objectives (EQOs) be developed for all significant water resources in WA through community consultation, on a priority basis. The EQOs represent the desired state of water quality and, for each EQO, environmental quality criteria are to be developed which act as benchmarks for assessing environmental monitoring

results and triggering management actions if the EQOs are shown not to be met.

The framework will assist environmental protection through more focussed management of water bodies and their catchments, and the setting of Ministerial and Licensing Conditions on activities subject to the EP Act 1986.

Within this context the Department of Environment has undertaken community consultation to assist the EPA in developing environmental values and quality objectives for the marine waters from Exmouth to Cape Keraudren.

Over one hundred and fifty submissions were received in total, including Pilbara and Exmouth residents and businesses, community groups and indigenous organisations, industry and resource corporations, peak bodies, local and state government agencies as well as tourists and youth.

A public report to the EPA and the Rangelands NRM Region Coordinating Group will be prepared. The report will contain a summary of the consultation undertaken, a synopsis of community/stakeholder views and issues expressed, and how these may be addressed, and a proposed set of environmental values and quality objectives for the Exmouth Gulf and Pilbara marine waters.

The next phase of the Pilbara Coastal Water Quality project will be to develop specific criteria for water and sediment quality indicators. The Department has completed surveys of background water and sediment quality for the region. This regional data will be used together with approaches recommended by the



Australian and new Zealand Water Quality Guidelines (ANZECC & ARMCANZ, 2000) to develop the criteria. Once developed and approved by the EPA, the criteria will be used as benchmarks against which to assess the results of monitoring programs and as triggers for management actions designed to protect the environmental values of the region.

### **Local Government Biodiversity Planning Guidelines**



*Motorbike frog (Litoria moorei) on reeds*

The EPA has endorsed Local Government Biodiversity Planning Guidelines prepared by the Western Australian Local Government Association. Under the State Government's *Urban Bushland Strategy* (1995), responsibility for locally significant bushland areas is assigned to local government. *Bush Forever* (2000) established the regional framework for biodiversity conservation in the Perth area, but also recognised the importance of conserving local bushland areas and commits state government support to assist in this process.

The Western Australian Local Government Association (WALGA) has developed Local Government Biodiversity Planning Guidelines in consultation with the:

- Department of Planning and Infrastructure (Bush Forever Office);
- Department of Environment (incl. Terrestrial Ecosystems Section);
- Department of Conservation and Land Management;
- Local Government; and
- Various community groups (including the Swan Catchment Council, Greening Australia and Urban Bushland Council).

The Local Government Biodiversity Planning Guidelines have been endorsed by the EPA.

The Strategies meet the EPA's expectation that Local Governments will prepare Local Bushland Protection Strategies as proposed in the Urban Bushland Strategy and Bush Forever. They should also help Local Governments address the EPA's *Guidance Statement No. 10: Guidance for the Assessment of Environmental Factors – Level of assessment for proposals affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1.*

The Guidelines assist Local Governments to prepare Local Biodiversity Strategies, to protect, retain and manage specific natural areas (a selection of locally significant natural areas), where this is possible within their control or influence. This includes:



- The assessment and approval of developments, including rezonings and subdivisions;
- The management of local natural areas;
- The offering of incentives to landowners with important natural areas;
- The clauses and zones in their Town Planning Schemes.

These Guidelines have been widely supported by Local Government with several local governments using them in the preparation of Biodiversity Strategies. WALGA have now gained National Heritage Trust (NHT) funds to extend the Local Government Biodiversity Planning framework to local governments in the South West Integrated Catchment Council Natural Resource Management Area. This project will be undertaken in a partnership arrangement with DoE and the Swan Bioplan Project.

## **Swan Bioplan**

Swan Bioplan is a new collaborative project designed to promote biodiversity, conservation and ecological sustainability on the Swan Coastal Plain and the Darling and Whicher Scarps from Moore River to Dunsborough, excluding the Perth Metropolitan portion of the Swan Coastal Plain. The project complements Bush Forever in the metropolitan area and will supersede the EPA System 6 and System 1 recommendations for conservation in this region.

The Swan Coastal Plain region is a priority for a strategic review of biodiversity conservation and ecological sustainability. The Region is part of the

South West Botanical Province, one of the worlds recognised mega-diverse regions as a centre for plant and animal endemism and one of the world's 25 biodiversity hot spots. The hot spot ranking, recognises areas with both exceptional biodiversity and threats to that biodiversity. The southern Swan Coastal Plain is extensively cleared and supports more than 80% of the population in Western Australia and is expected to be the major focus of population growth and land use pressures in the state.

A strategic approach is needed to integrate conservation planning into local and regional planning, and natural resource management to promote ecologically sustainable outcomes and provide improved clarity for development expectations.

Swan Bioplan will be based on a comprehensive knowledge of the regional flora and vegetation, together with other biodiversity and natural resource characteristics, using data sets that are consistent with those supporting Bush Forever. Swan Bioplan will also promote information transfer between partners and decision-makers, awareness of the natural heritage in our region and new approaches to help plan for its retention. A review of environmental and planning mechanisms that may be used to promote ecologically sustainable development will also be an important component of the project.

Retaining the regions biodiversity, and encouraging strategic restoration of habitat and ecological linkage, is necessary to realise community and government expectations that future development should be sustainable. Areas of natural bushland and wetlands will be increasingly important for social,

recreational and landscape values as regional open space, as well as for biodiversity conservation and broader sustainability reasons as the population in the region expands.

Swan Bioplan is a collaborative project, coordinated by the Department of Environment working jointly with the Department of Conservation and Land Management and the Department of Planning and Infrastructure. Participation with local government, through a partnership with WALGA and with the regional NRM Councils is also proposed. The project will also involve active participation of community conservation expertise, including a partnership with the Wildflower Society to support flora and vegetation surveys.

### **University Linkage Projects**



*Keren Raiter of Murdoch University receives the EPA Prize in Conservation Biology from EPA Chairman Dr Wally Cox (Photo: Brian Richards)*

The EPA is mindful of the assistance provided by University staff within the environmental disciplines when matters of concern to the EPA are being discussed and a wider area of expertise is needed.

In recognition of the desire to foster excellence in environmental assessment standards, to obtain additional intellectual input and to raise University awareness of current environmental issues, the EPA in recent years decided to set aside a small amount of money to assist post graduate students in areas of work of particular interest to the EPA.

The assistance provided funding for travel and accommodation, field work and other encouragements such as prizes for outstanding performance by students in a relevant environmental area.

The program commenced in October 2000. The outcomes of one of the University projects funded in previous years was reported to the EPA this financial year being 'Impact of Human Activity on the Use of Cockburn Sound, Western Australia, by Bottlenose Dolphins'.

The EPA also sponsored awards for the top graduate in the Bachelor of Environmental Science and the top graduate in Conservation Biology at Murdoch University. The sponsorship of these awards concluded in 2005.

## **ENVIRONMENTAL ASSESSMENT OF PROPOSALS**

The EPA assessed a diverse range of development proposals covering resource development, industrial processing, infrastructure and land use developments, as well as planning schemes and amendments.

A total of 468 development proposals and planning schemes were referred to the EPA for consideration, a small (10

**Table 2: Environmental Protection Authority's Completed Assessments  
in 2004-05**

<b>Level of Assessment</b>	<b>Assessments</b>
Environmental Review and Management Program (ERMP)	0
Public Environmental Review (PER)	15
Planning Scheme Environmental Review (ER)	1
Consultative Environmental Review (CER)	1
Environmental Protection Statement (EPS)	5
Assessment on Referral Information (ARI)	8
Formal under Part IV	0
Proposal Unlikely to be Environmentally Acceptable (PUEA)	2
Section 46 Change to Conditions	4
Section 16 Strategic Advice	4

per cent) decline from last year. Of these, the EPA determined that 47 proposals required formal assessment, reporting and recommendations to the Minister for the Environment; Science. A further 162 required informal review with specific advice to the proponents.

During the year, 40 formal assessments were completed. The Level of Assessment for each proposal or planning scheme depends on the significance of the environmental impacts. The number of assessments completed in each Level of Assessment categories in 2004-05 is shown in Table 2. A list of all assessments completed is set out in Appendices 2 to 5. Some of the more significant assessments are discussed below, preceded by a brief discussion of some overarching issues in relation to the environmental assessment process.

### **Demonstrating Environmental Acceptability**

The environmental impact assessment (EIA) process is predicated upon a proponent being responsible for demonstrating that a proposal is

environmentally acceptable. During the process the EPA works with the proponent to assist in identifying what are the environmental issues that need to be addressed and indicating what is considered acceptable for the project.

An important part of the process is the proponent undertaking the necessary environmental studies and surveys and preparing the environmental review document. Environmental review documents prepared by the proponent need to:

- describe the potential impacts on the environment of the proposal;
- show that 'best practicable' steps will be taken to avoid and minimise impacts;
- commit to appropriate actions and measures to manage impacts and to mitigate for unavoidable environmental losses resulting from the proposal; and
- justify the proposition that the impacts of the proposal, both individually and collectively, should be judged by the EPA to be environmentally acceptable.

The EPA recognises that, in some circumstances, proponents will not have advanced sufficiently with the design of the project and selection of technology to demonstrate best practicable measures during the EIA process. In these circumstances, the EPA expects that proponents will commit to demonstrating 'best practicable' measures, both during the design phase of the project and before an application for Works Approval is submitted. This commitment would then become part of the conditions of approval for the project.

The EPA accepts that it is not always possible for proposals to avoid all impacts on biological and physical systems. However, where impacts are unavoidable, the EPA does expect proponents to develop appropriate mitigation measures as part of their proposal. This applies particularly to the loss of vegetation and wetlands. Proponents should develop mitigation strategies which seek to increase protection of, and/or restore, environmental values elsewhere for those lost as part of the project. The EPA believes that as part of good corporate environmental responsibility, proponents should seek to ensure that a proposal results in a 'net environmental benefit', as far as is reasonable.

Mitigation measures are usually outlined in the environmental review document and described in more detail in environmental management plans (EMPs). An important issue is when is the most appropriate time for EMPs to be prepared. For some time, there has been a trend towards leaving much of the management approach to be developed in EMPs prepared in compliance with Conditions set by the Minister, after the

assessment by the EPA. While this may often be the best time in relation to some issues, there is increasing concern that some environmental matters are being deferred to post-approval EMPs, whereas they should be considered during the public process of assessment by the EPA.

The EPA believes that proponents should only be deferring details of matters that are relatively routine and certainly not significant in relation to whether a proposal should be approved. As a consequence, the EPA will ensure that the assessment scoping identifies those issues that should be addressed in some detail, including management measures, in the environmental review document. Some proponents prepare draft EMPs and include them in their environmental review document, with the intention of informing all stakeholders and the EPA of their management objectives, approach and options. The EMP is then finalised after project approval has been given. This approach is encouraged by the EPA.

To assist proponents in the EIA process, the EPA prepares Position Statements and Guidance Statements to provide information about the EPA's thinking in relation to aspects of the assessment process, including environmental acceptability, to guide proponents on the standards and information requirements for assessment. One substantially revised Guidance Statement was published during 2004-05, Environmental Guidance for Planning and Development (Appendix 7).

The EPA is continuing to encourage proponents to establish peer review panels of specialists to provide guidance

in the environmental studies and review environmental documents before submission to the EPA and release for public comment.

The EPA strongly encourages meaningful consultation by proponents with relevant public and government agency stakeholders during the preparation of their environmental review reports, as part of best practice EIA. This consultation should continue through project implementation and operation, and decommissioning where this is relevant. Establishing an on-going relationship with stakeholders, including Aboriginal people, is important. It is the EPA's experience that when proponents clearly embrace the EIA process and their responsibility to define and manage the impacts of a proposal (considering the proposal in a broader bioregional, ecosystem, and social surroundings context) the EIA process is more timely, less burdensome with a higher quality project in terms of environmental outcomes achieved.

### **Timelines for Environmental Impact Assessment of Proposals**

The EPA recognises that proponents are usually keen to obtain environmental approval for the projects as early as possible to assist with establishing 'bankability' for the projects. However, proponents need to appreciate that the EIA process is an important one in demonstrating the environmental acceptability of projects, and that adequate time must be allowed for the necessary surveys and studies to be undertaken, for public input and government agency review, and for the EPA to evaluate the impacts and to provide its report and recommendations

to the Minister. Time must also be allowed for the Minister for the Environment; Science to consider any appeals against the EPA's report, and to consult with other Ministers and decision-making authorities regarding Ministerial Conditions of approval.

While the EPA is continually seeking to improve timelines for assessments, adequate time must be allowed to undertake responsible EIA. The EPA's experience is that, generally, where proponents allow adequate time in the project feasibility and planning stage to undertake thorough EIA studies, consult with the community and evaluate ways to minimise and mitigate the environmental impacts of the project, progress through the EIA process is expedited and the overall development schedule is met.

Where a proponent seeks to compress the period for undertaking environmental assessment and consultation, difficulties often arise during the review by government agencies and the EPA's evaluation, such that the EPA's reporting to the Minister for the Environment; Science is delayed.

Table 3 indicates the mean time and range of times taken to complete assessments for major projects in 2004/05 compared with previous years. The data shows that timelines for projects completed in 2004/05 increased significantly, primarily as a result of proponent's taking much longer to submit their environmental report following the setting of Level of Assessment. Proponents for two projects each took more than four years to prepare their environmental report. The timeframe for the EPA's reporting from the end of the public review

process was consistent with previous years but was longer on average than last year. The data continues to highlight that for major project assessments, proponents need to allow 1 to 1½ years to undertake the necessary studies and prepare the environmental report, for the public review and response to issues, with the publication of the EPA Assessment Report. It also highlights that the assessment of some projects can be significantly delayed due to issues that are more related to project economics than environmental issues, but which have a major effect on timeframes.

Since 1999, the EPA has provided two streamlined assessment processes for proposals where the impacts were expected to be reasonable and manageable. These are now referred to as 'Assessment on Referral Information' (ARI) and 'Environmental Protection Statement' (EPS). During the year, thirteen projects were assessed under these streamlined processes (see Appendix 3). This is an increase over the nine proposals assessed as ARI or EPS last year. The data in Table 2 does not include projects subject to streamlined assessment as ARI or EPS or where changes to approval conditions has been sought by the proponent. Where a project is subject to one of these levels of assessment, the EPA expects the proponent to have consulted with the community and government agencies while undertaking environmental studies and preparing the environmental document, and to have addressed issues raised, so that once the EPA has received the environmental document there is no need for a formal public review period. Under these circumstances the EPA aims to provide its report and recommendations to the Minister for the

Environment; Science within 10 weeks of receiving the proponent's final environmental document. Table 3 indicates that the EPA normally completed its report well within that time.

For projects which are suitable for assessment through these streamlined processes, the EPA's experience has been that this has significantly reduced timelines over what would be required for the full EIA process. To assist in better communication and reporting of timelines for EIA, the EPA has been placing project-specific timelines on its website, so that proponents and the community can identify the current stage of a project in the assessment process. This also provides advanced notice of timing for the next step in the assessment. In addition, the EPA includes in its assessment reports the timeline taken for each phase of an assessment and the total time taken.

The EPA has been closely involved in implementation of a number of the recommendations from the 2002 Independent Review Committee's Review of the Project Development Approvals System (the Keating Review). This review made a number of recommendations which directly or indirectly affect the EPA's assessment process for State Development portfolio projects. Two major thrusts have been the desire to improve timeliness of approvals and also to reduce duplication of requirements. The EPA has strongly supported initiatives to address both of these issues through the development of administrative time limits on the key steps in the formal assessment process.

**Table 3: Timelines for major projects (in weeks)**

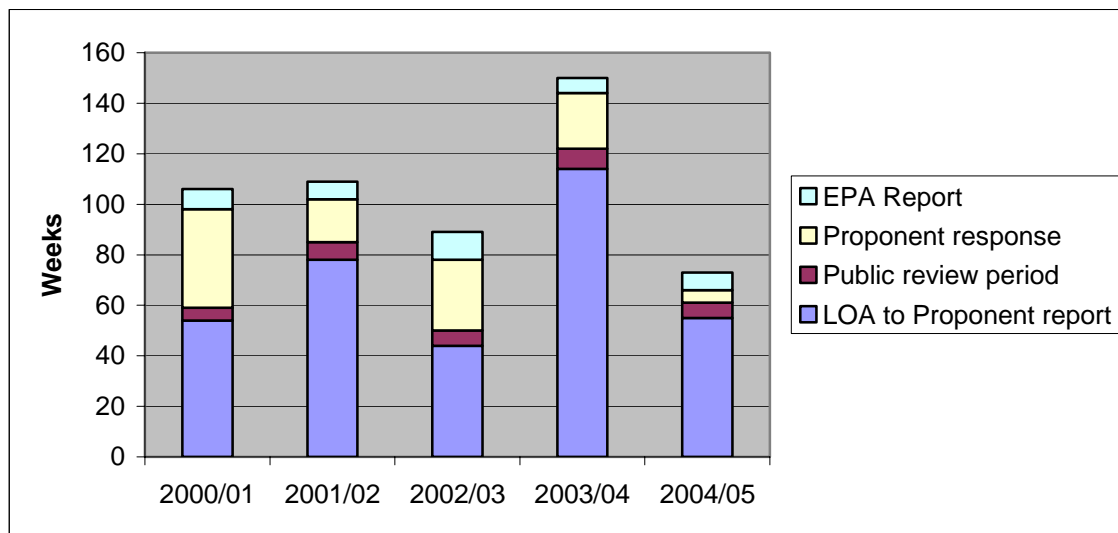
Assessment Phase		2000/01	2001/02	2002/03	2003/04	2004/05
From Level of Assessment set to proponent report release+	Mean	54	78	44	114	55
	Low*	11	16	4	29	9
	High*	213	291	187	240	223
Public Review Period	Mean	5	7	6	8	6
	Low*	4	2	4	4	4
	High*	10	12	11	10	8
End of Public Review period to proponent response to EPA+	Mean	39	17	28	22	35
	Low*	6	1	3	6	5
	High*	171	36	82	45	149
EPA Assessment to release of EPA Report	Mean	8	7	11	6	7
	Low*	1	1	3	2	3
	High*	28	15	39	11	23
Total, from level of assessment set to EPA Report	Mean	107	109	90	149	103
	Low*	34	29	22	54	25
	High*	398	313	271	295	273

\* Represent extremes across separate projects. Total is not cumulative.

+ This part of the process is largely under proponent control.

This is represented graphically in the following figure, which shows the average periods taken for each stage of the assessment process over the period 2000/01 to 2004/05.

**Figure 1: Average time taken for the assessment of proposals over the past five years.**



Other initiatives include the formulation of a modified proponent referral form that can be used for referral to the EPA and other approval processes as well as establishing improved links with other key advising agencies.

The effective implementation of the Keating Recommendations has implications on resources. This was highlighted in the Keating Review and has been acknowledged by the State Government, with additional funding being made available to assist the EPA in meeting the assessment timelines for State Development Portfolio projects.

## **Strategic Environmental Assessment**

The *Environmental Protection Amendment Act 2003* introduced the concept of a strategic proposal. This is defined in the following terms:

*A proposal is a “strategic proposal” if and to the extent to which it identifies –*

- (a) a future proposal that will be a significant proposal: or*
- (b) future proposals likely, if implemented in combination with each other, to have a significant effect on the environment.*

It should be noted that a strategic proposal cannot be referred by a decision-making authority or a third party nor can it be called in by the EPA. It is a voluntary referral by the proponent, which is appropriate given they will need to undertake investigations and consultation to

address environmental issues that may be substantial and complex. The assessment will be called a Strategic Environmental Assessment.

Assessment of a strategic proposal by the EPA will be a ‘formal’ assessment. This means that most of the provisions set out under Part IV (Divisions 1 and 2) of the EP Act must be met, including an EPA report on environmental factors relevant to the proposal as well as conditions and procedures that should apply to any environmental approval, Ministerial decision and appeals.

Consistent with the evolutionary development of environmental impact assessment in Western Australia since the early 1970’s, the EPA believes that it is best to trial this new assessment of strategic proposals over some time under a philosophy of continuous improvement before the finalised process is articulated through administrative procedures. The EPA will therefore provide for a level of adaptation and variation to the assessment process for strategic proposals until it is confident that the process is effective. However, there needs to be guidance for proponents and the community about the EPA’s current intentions.

Where a strategic proposal will lead to a significant proposal in the future, and the strategic proposal is well defined and is implementable, the Strategic Environmental Assessment process will be consistent with Environmental Review and Management Program (ERMP), as outlined in the 2002 Administrative Procedures.



## MAJOR PROJECTS

Environmental impact assessment (EIA) ensures that the environment is protected when new developments are planned and implemented. Environmental management is most effective and least costly if it is considered at the earliest stages of project design.

The EPA's mission is to ensure that environmental issues are thoroughly and transparently examined, and then avoided, mitigated or managed properly when proposals are developed.

The EPA is very mindful of the importance of timeliness and certainty to proponents. Proposals can effectively avoid or mitigate environmental impacts without significant time or cost penalties if they are referred to the EPA early in their development.

The EPA has consistently bettered the benchmarks set for it by the Keating process this year, but to continue to do so it will require ongoing delivery of quality documentation from proponents. The EIA process adds value to a project by ensuring it properly protects the environment in a way that is transparent, robust and defensible.

A particular strength of EIA in Western Australia is the approach whereby the EPA sets environmental objectives but allows proponents to develop innovative solutions to meet those objectives. Each year a number of assessments provide significant insight into issues of environmental policy or demonstrate innovative approaches to solving environmental problems. While some are large, complex projects with a high profile in the community, others are

smaller but still yield valuable insight into environmental management and policy. A number of assessments which illustrate this point were completed during the year. Some of these are outlined below.

### Power Station Proposals

The EPA considered a number of proposed power station developments this year. These included four coal-fired proposals in the Collie area and a natural gas fired proposal at Kwinana.

The four coal-fired proposals were:

- Griffin Energy Pty Ltd's Bluewaters Power Station;
- Griffin Power Pty Ltd's Bluewaters Power station Phase II;
- Wesfarmers Energy Limited's Collie Power Station Expansion; and
- Griffin Electricity Pty Ltd's Collie B Power Station.

The natural gas-fired proposal was Wambo Power Ventures Pty Ltd's combined cycle gas turbine power station at Kwinana.

The EPA has consistently advised that its preference from an environmental perspective for providing electricity is, in declining order of rank;

- conservation and energy improvements;
- renewables, such as wind and solar energy;
- gas, including combined cycle turbines;
- new technology coal plants;
- old technology coal plants; and

- petroleum fuel plants.

The EPA considers that combined cycle gas turbine (CCGT) generation represents best practice, from a greenhouse gas point of view, for large scale, base-load electricity generation. CCGT plants produce about half the greenhouse gases of an equivalent sized coal-fired plant and in the order of one thousandth of the sulphur emissions. For example, the gas-fired Wambo plant would emit about 12 tonnes per annum of sulphur dioxide whereas the coal-fired proposals of similar capacity would emit somewhere between 9,000 and 15,000 tonnes per annum, depending on the coal source and the technology used.

The EPA expects proponents to mitigate all or a significant part of the extra greenhouse gases produced by a coal-fired plant over that from a CCGT plant of equivalent capacity. The EPA welcomes and strongly supports the announcement by Government of a Greenhouse and Energy Taskforce to develop whole of government policy on greenhouse gas emissions.

There is potential for an emerging air quality issue in Collie, especially in regard to sulphur dioxide emissions, if additional power generation and other emitting industries are developed in the area. In this regard, the EPA strongly supports the announcement by Government of a strategic air quality management framework for the Collie region. The EPA considers that emissions should not reach National Environmental Protection Measure (NEPM) limits but that trigger levels for investigation and corrective action should be set at levels below the NEPM limits. The EPA expects to further develop this point of view in its

contributions to the development of the strategic air quality framework. To assist in developing the strategic framework, the EPA recommended that any power station in the Collie area should contribute to the establishment of an air quality monitoring network.

In its reports and recommendations on the coal fired power stations, the EPA recommended that European Directive 2001/80/EC represents best practice for sulphur dioxide emission limits. In considering Principle 5 of the Environmental Protection Act, on waste minimisation, the EPA believes that proponents should implement best practicable measures for the prevention or minimisation of environmental impacts. Consistent with this, the EPA considers that the proposed strategic air quality management framework is an appropriate mechanism for determining emission limits for power stations and other industries around Collie.

The addition of flue gas desulphurisation (FGD) to new power plants would allow best practice sulphur dioxide emission limits to be met. Modelling shows that meeting best practice sulphur dioxide emission limits by the addition of FGD to new power plants could improve ground level sulphur dioxide concentrations at Collie township by 45% for the 10-minute and 1-hour averaging periods, by 18% for the 24 hour averaging period and by 26% for the annual average.

The EPA continues to support the closure of Muja A and B in 2007 as it will improve air quality closer to Collie and especially with respect to particulate emissions. Closure of Muja A and B alone will not, however, materially change the highest 1-hour sulphur

dioxide concentrations in Collie if new plants are built without FGD because emissions from the new plants to the north and east will affect Collie under different wind conditions than plants to the south-east at Muja.



*Premier Coal's Muja Pit June 2005*

In considering discharges of power station cooling water to the ocean, the EPA recommended that a water quality monitoring and management framework should be imposed which is consistent with the Environmental Quality Management Framework in the Government's State Water Management Strategy Report. Appropriate environmental values should be protected and the associated environmental quality objectives achieved.

As more industries establish around the existing Collie A power station and in the Coolangatta Industrial Estate, it will be important to meet the EPA's objective for noise. If up to eight noise sources are developed, then each one would need to meet a noise level of 26dB(A) or less to ensure that cumulative noise emissions did not exceed the objective of 35dB(A) at night at nearby residences. Best practice noise attenuation measures and appropriate

buffer zones need to be established as an increasing number of industries are proposed in the area.

## **EPA assessments of iron ore mining proposals**

A large upsurge in iron ore mining proposals occurred as part of the mining boom caused by increasing demand in China. Four EPA reports on iron ore mining proposals were released during the year as detailed below.

### ***Marillana Creek (Yandi) Mine (BHP-Billiton Pty Ltd)***

The BHP-Billiton's Yandi mine produces iron ore from a palaeo-channel (ancient river bed) deposit. On 4 April 2005 the EPA released its report (Bulletin 1166) on BHP-Billiton's proposal to expand the existing mine. The proposal was assessed through an Environmental Protection Statement.

Significant features of the proposal include:

- Progressive mining and rehabilitation of the site;
- Permanent diversion of sections of Marillana Creek; and
- Permanent changes to the final landforms, including hill-like features formed by waste dumps and pit lakes created in the final voids.

### ***Wheellarra Hill Iron Ore Mine Expansion (BHP-Billiton)***

BHP-Billiton proposed to expand its existing mining operation at Wheellarra Hill, 40 km east of Newman. The proposal was assessed through an

Environmental Protection Statement and reported in Bulletin 1168.

The proposal involved extending the existing pit, creating new ones and expanding production from the currently approved eight million tonnes per annum up to 12 million tonnes per annum over the envisaged mine life of 50 years.

***Goldsworthy Iron Ore Mines Extension (BHP-Billiton)***

The proposal involved extensions to mines at Yarrie, Sunrise Hill and Nimingarra, and new mines at Cattle Gorge. As well the proposal included a decommissioning and rehabilitation plan for the entire Goldsworthy operation. The proposal was assessed through an Environmental Protection Statement and reported in Bulletin 1171.

Among other matters, the EPA recommended specific conditions to manage potential impacts to rare fauna and flora species, including specific management provisions for the Pilbara leaf-nosed bat and the ghost bat.

***Pilbara Iron Ore and Infrastructure Project: Port and North-West Railway (Stage A – Fortescue Metals Group Ltd)***

The project involves the construction of a port facility at Anderson Point in Port Hedland, including shipping facilities, reclaimed areas for iron ore handling infrastructure, stockpiles and ancillary facilities and a 345 km north-west railway to iron ore resources in the east Pilbara at Mindy Mindy. The proposal was assessed through a Public Environmental Review and reported in Bulletin 1173.

Key environmental issues associated with the proposal are impacts to mangroves and dust and noise impacts on Port Hedland. The EPA recommended a condition requiring the proponent to prevent the loss of, or serious damage to, any mangroves or their habitats other than in accordance with a mangrove protection plan and to rehabilitate those areas not required for ongoing operations. In regard to dust, the EPA considered that the contribution from the project would be minor in comparison to emissions from existing operations at Port Hedland. The EPA recommended noise levels for the proposal which are consistent with a future scenario where BHP Billiton Iron Ore's noise emissions have been substantially reduced to a level which is much closer to the prescribed limits.

The EPA also noted that it would be preferable for FMG and BHP-Billiton Iron Ore to share existing railway infrastructure, rather than to duplicate an existing railway line.

***Gingin Mineral Sands Mine***

The Gingin Mineral Sands Mine was a proposal by Iluka Resources Limited to develop a mineral sands mine near Gingin for an estimated four year mining period. The mining envelope was mainly on farmland but the proposal was to result in diversion of two streams and loss of two resource enhancement wetlands. The streams and wetlands were already seriously degraded, due to removal of the understorey by grazing, and further damage was expected to occur with time.

The proposal was assessed as an Environmental Protection Statement

(EPS) because the issues were comparatively straightforward and the proponent's consultation process was completed in advance. Of particular interest to local residents was the fact that the proposal had the potential to result in temporary draw-down of groundwater on which they were reliant. The proponent consulted with those affected and agreed to supply their water requirements if needed. The proponent also applied to the Department of Environment for a licence to abstract water from the deeper Yarragadee aquifer.

Post mining, Iluka will re-establish the streams and wetlands. They will be rehabilitated to a higher biodiversity condition. As an offset an additional one kilometre upstream will also be rehabilitated to a higher biodiversity condition and fenced to prevent subsequent degradation due to grazing pressure. Assistance will also be given to other local land-care projects.

A feature of interest with the Gingin Mineral Sands Mine is that it is located on a minerals-to-owner site and there is no mineral lease. This meant that the mine could not be managed by the Department of Industry and Resources (DoIR) under the *Mining Act 1978* and ruled out the possibility of applying a performance bond under that act. However, recent changes to the *Environmental Protection Act 1986* allowed the requirement of a performance bond through the Ministerial Statement of Conditions and the Gingin Mineral Sands Mine proposal was the first to make use of this new provision of the EP Act.

## **New Road from Tom Price to Karratha**

In January 2005, the EPA reported on a proposal by Main Roads Western Australia (MRWA) to construct a new road from Northwest Coastal Highway (near Karratha), through the Millstream-Chichester National Park (NP), to the Nanutarra-Munjina Road intersection (north of Tom Price). The proposal was assessed as a Consultative Environmental Review and released for an eight week public review period.

The proposal affects the relevant environmental factors of biodiversity and surface drainage. Under the broad environmental factor of biodiversity there were four key issues which required evaluation:

- impacts of the road within the Millstream-Chichester National Park;
- impacts and management along the rest of the road corridor;
- impacts on the *Themeda* grassland threatened ecological community; and
- rehabilitation.

In developing this proposal, MRWA has taken into account the need to avoid creating new corridors and to locate the road as close as possible to existing infrastructure. This is particularly important where the road occurs within the Millstream-Chichester National Park (NP) to avoid adverse impacts on the Park's values.

Within the constraints imposed by the topography of the Chichester Ranges and the location of existing and proposed infrastructure, MRWA identified a road alignment within the NP that is almost

entirely within a 1 kilometre corridor from the existing railway and associated infrastructure. In addition to locating the road in close proximity to existing infrastructure MRWA committed to restricting the width of disturbance during construction and also aligned some sections of the road to cover existing tracks and disturbed areas to effect further reductions in clearing.

In relation to the impacts of the road on the *Themeda* grassland threatened ecological community (TEC), it was noted that a relatively small proportion of the remaining extent of this TEC will be permanently impacted by the proposal and that MRWA committed to restrict the width of disturbance through this sensitive area to less than 20 metres. The EPA recommended legally binding conditions to restrict disturbance widths through the TEC to 20 metres. During the assessment CALM advised that MRWA's commitment to fence a 200 metre road reserve through the TEC will be a positive outcome for biodiversity conservation as the major threat to this community appears to be overgrazing by livestock.

MRWA also developed an environmental offset package to mitigate the impacts of the proposal. The offset package consists of the rehabilitation of redundant access tracks and material pits both within and outside the NP (approximately 205 hectares), and contributions towards the management of the NP, including the re-construction of the fence along the northern boundary of the NP and the control of weeds in focus areas within the NP, such as Millstream.

During the environmental investigations MRWA recognised the significance of

areas containing mulga associations and watercourses as important fauna habitats. For areas supporting mulga, MRWA committed to undertake detailed drainage surveys to design the road to maintain sheet flows by way of a Surface Drainage Management Plan. While the road would necessarily affect watercourses in that a small proportion of riparian vegetation would need to be cleared, the function of watercourses should not be significantly affected, provided that MRWA undertakes a process of flow investigations, hydrological modelling, and subsequent bridge, culvert and floodway design. This process is aimed at preventing unnecessary flow constriction or alteration, loss of riparian vegetation, sedimentation and the effects of backwaters and scouring associated with poorly designed bridges, floodways and culverts.

The EPA concluded that the proposal could be implemented subject to Ministerial Conditions.

### **Expansion of Monkey Mia Dolphin Resort**

In February 2005, the EPA released its report and recommendations (Bulletin 1165) on the proposal by Monkey Mia Dolphin Resort Pty Ltd to expand the existing Monkey Mia Dolphin Resort at Monkey Mia, Shark Bay. The proposal involved an increase in the overnight accommodation capacity of the resort from approximately 600 to 1200 guests, the provision of staff accommodation and infrastructure and the upgrading the site's wastewater treatment plant.

The proposal was assessed as a Public Environmental Review with a 6 week public review period.



*Monkey Mia Dolphin Resort  
September 2004*

The EPA decided that the environmental issues relevant to the proposal included:

- (a) Impacts associated with the proposal's footprint; and
- (b) Ongoing management.

Environmental issues associated with the proposal's footprint include the potential for impact on the vulnerable Thick-billed Grasswren (*Amytornis textilis*) which is common in the vicinity of the Resort. A condition has been recommended which provides for any clearing of vegetation to occur after the completion of nesting and after fledglings have left the nests. Information suggests that the Grasswrens will continue to use the developed area provided there is sufficient habitat and refuge areas.

The ongoing management of the activities at Monkey Mia, in particular those flowing from the increase in capacity of the Resort, will need to be managed in a way that ensures the values of the World Heritage Area are not compromised. Amongst its recommendations to the Minister for the

Environment; Science, the EPA advised that in order for the proposal to be adequately managed, it will be necessary for the vesting of the public area for visitor services adjacent to the Monkey Mia Dolphin Resort to be transferred solely to the Conservation Commission and that the proposal should not be implemented before this can be achieved. The current vesting does not allow the *Conservation and Land Management Act 1984* to be applied to the management of the area, as such, the management regulations are not able to be applied and used in effecting management of visitors and impacts on wildlife. A change to the vesting will allow for the management of potential impacts on wildlife, including the Monkey Mia dolphins.

In addition, it was recommended that as the wastewater treatment plant is currently located within a Parks and Recreation reserve, it should be appropriately identified and contained to a known boundary within the Reserve. This will ensure that the potential area of impact is clearly identified and the defined site can be managed for the purposes of a wastewater treatment plant.

### **Final Remediation Works for the Former Cresco Site, Bayswater**

CSBP Limited (CSBP) proposes to remediate contamination on the former Cresco site in Bayswater such that it is suitable for further commercial/industrial use.

Cresco, a South Australian fertiliser company, established the site in 1928 for the large scale manufacturer of fertiliser. From 1928 until 1970, Cresco

manufactured products such as superphosphate and sulphuric acid. CSBP purchased the site in 1970 and continued manufacturing chemicals until 1990. These historical activities, mainly the large scale on-site disposal of waste materials, have left the site with soil and groundwater contamination.

The proposed remediation includes:

- on-site treatment and reuse; and/or
- off-site disposal to landfill.

Based on the information provided, the EPA decided that the following environmental factors required detailed evaluation in the report:

- Soil contamination – removal of source contamination and prevention of groundwater contamination; and
- Water quality – groundwater flowing to the Swan River.

The EPA considered that post remediation site validation was essential and that management actions may be necessary based on the on-going groundwater monitoring results. As such, the EPA recommended appropriate Ministerial Conditions to address this.

The EPA considered that the proposal could be managed to meet the EPA's environmental objectives and the net result of the proposal would be an improved environment. The EPA concluded that it is unlikely that the EPA's objectives would be compromised provided there is satisfactory implementation by the proponent of their commitments and the EPA's recommended conditions.

## **BGC Voyager Quarry Expansion**

On 26 April 2005 the EPA released its report (Bulletin 1169) on the proposal by BGC (Australia) Pty Ltd to expand its existing hard rock quarry at The Lakes.

The proposal, which was assessed through a Public Environmental Review, includes clearing of 85 ha of native vegetation, the excavation of up to 2 million tonnes of gravel, about 12 million tonnes of clay and approximately 60 million tonnes of granite using conventional blasting and drilling, loading and hauling, crushing and screening methods. The proposal would have a life of approximately 50 years.

Key issues associated with the proposal include noise and dust, impacts on groundwater and impacts on native vegetation and fauna.

The proponent proposed a package of offsets including a conservation covenant over 120 ha of native vegetation, rehabilitation of an area of vegetation previously cleared by the proponent, the provision of 15 km of fencing material to the Ministry of Justice to protect remnant native vegetation and Woorooloo Brook and the rehabilitation of approximately 60 ha of gravel pits and other degraded lands managed by local and State Government agencies.

The EPA recommended specific conditions requiring:

- The relocation of native fauna species to another suitable habitat before commencement of land clearing;



- A dust monitoring program and remedial action if excess levels of dust are recorded;
- Detailed noise management requirements; and
- A ground and surface water monitoring program.

In addition, fauna surveys carried out for the proponent indicated that a local trapdoor spider may be a new species which may be threatened by the construction of the quarry. As a result the EPA recommended a condition requiring further research and investigation on the trapdoor spider and the preparation and implementation of a trapdoor spider translocation program.

A number of appeals were received on the EPA's report and recommendation and these were still being determined at the time of writing.

### **Ellendale 4 Diamond Project West Kimberley**



*Ellendale 4 mining lease December 2004. Rim of the volcanic pipe.*

The EPA assessed at the level of Environmental Protection Statement (reported in Bulletin 1181) a proposal by Kimberley Diamond Company NL to

develop a deep open cut mine and construct a processing plant at the Ellendale 4 site for the production of diamonds.

The mine development included waste dumps and a tailings facility, water ponds, a power station and borefield. It is planned that mining will take place below the groundwater table and dewatering of the pit will be required. The proposal area is adjacent to, but does not extend into, the Devonian Reef (Oscar Range) Conservation Park.

The environmental factors considered by the EPA were Groundwater and Stygofauna, Surface Water, Terrestrial Fauna and Rehabilitation and Closure. The EPA concluded that it was unlikely that implementation of this proposal would compromise the EPA's objectives, provided there was satisfactory implementation by the proponent of the recommended conditions and proponent commitments.

However, the EPA also drew attention to the fact that the lamproite pipes, in which the diamond resource occurs, represent an unusual geological feature in the area. Soils above the pipes do not fit the description of the profiles of the land systems within which they fall and the pipes may contain a superficial aquifer distinct from the deeper regional aquifer. Regional mapping of land-systems and vegetation highlights the strong links between the underlying landforms, soils and vegetation.

Detailed plant community mapping in the region is very limited and places some uncertainty on the ability to define the regional significance of plant communities, especially on surfaces with restricted distribution such as those

associated with diamond pipes. The EPA recommended additional surveys targeted to determine the regional significance of these plant communities prior to any proposal for an expansion to mining.

Any future proposals to mine the lamproite pipes in this area must also include consideration of the number of remaining pipes and the number that will be preserved as representative of a unique landform.

At the time of writing the level of assessment for the proposal and the EPA's report were under appeal.

## **ENVIRONMENTAL ASSESSMENT OF PLANNING SCHEMES**

A key issue for the EPA in assessing planning schemes under s48A of the EP Act is to ensure a rational linkage between the level and detail of environmental assessment and the relevant 'stage' of planning approval being considered. The planning approval process is a hierarchical one, normally involving a series of stages through regional scheme, town planning scheme, structure plan, subdivision and to development approval. When assessing a scheme or amendment at the regional scheme stage, the EPA would normally focus on 'higher level' environmental issues such as protection of regionally significant environmental features.

The level of detail required for environmental assessment normally increases as the planning detail increases in town planning scheme and structure planning. At this stage, more detailed

environmental information is required, for example, in terms of boundaries for protection of wetlands and other significant environmental features, cumulative impacts and drainage management.

The EPA is keen to ensure that this hierarchy of planning and environmental assessment is rational and that a consistent approach is adopted. Close collaboration with planning agencies is an essential element so as to ensure an efficient and effective process.

### **Shire of Harvey District Planning Scheme No. 1 Amendment No. 13 - Point Douro**

The EPA's assessment of the Shire of Harvey's District Planning Scheme No 1 Amendment No. 13 for the area known as Point Douro is complete. The report and recommendations, EPA Bulletin 1158, were transmitted to the Minister for the Environment; Science in January 2005.

A previous proposal for the development of the site for a Bunbury Holiday Resort did not proceed. Consequently, to enable planning and environmental consideration of the current proposal, the Shire of Harvey initiated Amendment No. 13 in August 1997. The Amendment is to rezone Lot 5 Old Coast Road, Leschenault (Pt Loc 23, Plan 7938) from "Tourist" zone and "Recreation" reserve to "Residential Development" zone, "Tourist" zone, "Recreation and Conservation" reserve and "Modified Water Body". The Concept Development Plan accompanying the Amendment comprised residential development, a

modified water body, tourist related uses and recreational use in part of the foreshore area, including a boat launching facility.

The EPA determined to formally assess the Amendment pursuant to “Division 3 – Assessment of Schemes” under Part IV of the *Environmental Protection Act 1986*. The EPA identified the following key environmental factors as requiring consideration:

- flora and fauna, including waterbirds;
- foreshores and floodplain;
- surface and estuarine water quality; and
- mosquitoes.

The public submission period, which closed 31 December 2001, raised two new environmental factors which were also addressed by the EPA:

- geoheritage; and
- acid sulfate soils.

With respect to the flora and fauna, the EPA recognised the System 6 status of the area. However, it also understood that lack of funding has been a barrier to purchase of the land for Regional Park, particularly given that it was already zoned “Tourist” in the Shire of Harvey’s scheme. The proposed amendment allows development on the more degraded land, but at the same time ensures that over half of the site - that which is fully vegetated and of highest value – will now be retained within the conservation area for “Recreation and Conservation”. It is intended that the conservation area be separated from the developed area by a combination of the “Modified Water Body” and vermin proof fencing.

The EPA visited the site during the assessment period. One matter under discussion was the proposed channel which flows eastwards into Samphire Bay, and which had the potential to cause loss of integrity of important wader bird habitat. Many of the wader birds are the subject of international treaties (Japan Australia Migratory Bird Agreement, JAMBA and the China Australia Migratory Bird Agreement, CAMBA).. The proponent subsequently resolved to remove that portion of the channel. The EPA also required adequate modelling of the hydrological regime, and other technical information, to ensure that the proposed amendment will not permit changes to the sedimentation and nutrient regimes of the avifauna habitat, or have consequential impacts on the rich biomass of aquatic fauna in Samphire Bay. The modelling also indicated that the hydrological regime can be managed in such a way that the proposed conservation area, which also contains pre-existing runnelling for mosquito control, will not be scoured or adversely impacted.

Point Douro is not geoheritage listed at either the State or Commonwealth level. Nevertheless the EPA acknowledged that the Collie River Delta is of importance to geologists. Consequently, it sought independent technical advice and was assured that the level of development which will be possible under Amendment No. 13 should not severely damage the delta: the most important portions of the delta will be conserved.

Preliminary tests indicate that there is a significant acid sulfate soil issue at the site. The EPA recommended a further detailed assessment and dewatering

management plan, and advised that any works will need to be undertaken with a high degree of management. The Shire of Harvey was urged to seek some form of financial assurance to ensure adequate completion of acid sulfate soil works.

The EPA has recommended preparation of plans for Environmental Management, Water Management and Construction Management. The plans will address detailed measures to ensure the best environmental outcome, and will be released for public comment at the same time as the proposed Outline Development Plan.

At the close of the 2004/05 financial year, appeals to the Minister for the Environment; Science; Science, against the EPA's report and recommendations, were still to be determined.

## **SECTION 45C APPROVALS**

The section 45C amendment to the *Environmental Protection Act, 1986*, was enacted in 2003. The amendment enables the Minister for the Environment; Science, or her delegate, the Chairman of the EPA, to approve a change to a proposal which has already received environmental approval.

A change to a minor component of a proposal that clearly has insignificant environmental effects can be implemented without a submission to the EPA. Draft Guidelines for a proponent considering making a submission for a change are on the EPA website ([www.epa.wa.gov.au](http://www.epa.wa.gov.au) under *Policies/Other Documents*).

Prior to the delegation to the EPA Chairman, gazetted on January 14<sup>th</sup> 2005, the Minister approved 30 changes, on advice of the EPA. Since the delegation, the EPA Chairman has approved 17 changes (appendix 10). The list of changes approved under s45C are publicly available either from the Office of the Appeals Convenor or the DoE library.

If the change is to the legal description of the proposal, or only to a minor component of the proposal, but the environmental effects are potentially significant, the change requires assessment by the EPA under section 45C. If the effects are judged to be not significant, the change is approved by the EPA Chairman.

## **POLICY DEVELOPMENT**

This year the EPA, in consultation with and with the support of the Minister for the Environment; Science; Science, introduced a new policy instrument: State Environmental Policies (SEPs).

A SEP is initiated by the EPA under the broad head of power in s.17(3)(d) of the *Environmental Protection Act 1986*.

“s.7(3) . . . the Authority, if it considers it appropriate or is requested to do so by the Minister, may –

(d) consider and make proposals as to the policy to be followed in the State with regard to environmental matters;”

A draft Policy is then transmitted to the Minister for Cabinet's consideration and

if approved, a SEP becomes a whole-of-government position.

The EPA published an Explanatory Document for SEPs in November 2004 and the Government approved the first policy in January 2005: the State Environmental (Cockburn Sound) Policy.

The relationship between SEPs and EPPs is of special interest in terms of government environmental policy instruments.

Environmental Protection Policies (EPPs) are developed under Part III of *the Environmental Protection Act 1986* (the Act). They are whole-of-Government policies which are ratified by Parliament and have the force of law as if part of the Act.

Due to their legal standing, EPPs have been used by Government to address environmental issues that could not otherwise be adequately addressed via other provisions of the Act. EPPs have been used to provide strong, legally supported environmental policy positions.

However, in the past EPPs have not always been constructed as an instrument of coercive law. Instead, EPPs have been applied to a wide variety of environmental issues across various geographical scales and their provisions have varied in their degree of coerciveness and success. For example, EPPs such as the Swan and Canning Rivers EPP 1998 provided broad scale guidance statements with little or no enforcement provisions. In contrast, the most legally enforceable EPPs to date have been those which focus on a

localised area with locally specific enforcement provisions (e.g. the Kwinana and goldfields Sulphur Dioxide EPPs).

Following the promulgation of Environmental Protection Act amendments (October 2003), the Act now has clearer and wider reaching powers of protection, such as Environmental Harm provisions. Accordingly, there is likely to be much less need to use EPPs as an instrument for establishing a strong basis for non-coercive policy statements.

The development of an EPP under Part III of the Act will now be reserved for establishing more detailed law (i.e. analogous to writing clauses in the Act or Regulations under it). The development and use of EPPs is likely to be used in two main circumstances:

- to provide a clear statement of intent to use the enforcement powers of the Act, when required, in order to adequately address environmental issues;
- to provide the ability in certain areas under controlled conditions to permit activities that would otherwise be unclear under the Act.

## **Environmental Protection Policies**

Progress on Environmental Protection Policies (EPPs) is summarised in Tables below.

**Table 4: Environmental Protection Policies in force and their status as at June 2005.**

<b>Name</b>	<b>Approval date</b>	<b>Review date</b>	<b>Comment</b>
Environmental Protection (Peel Inlet-Harvey Estuary) Policy 1992	11.12.92	11.12.99	EPA is awaiting the finalisation of the Water Quality Improvement Plan before recommencing the review.
Environmental Protection (Swan Coastal Plain Lakes) Policy 1992	18.12.92	18.12.99	The EPA developed a new draft wetlands EPP. Released for public comment. Transmitted a revised draft EPP to the Minister. The Minister called for comment on the revised draft. The Minister then set up a Regulatory Impact Assessment Panel to review issues relating to the Swan Coastal Plain Wetlands policy.
Environmental Protection (Gnangara Mound Crown Land) Policy 1992	24.12.92	24.12.99	Review suspended awaiting section 46 assessment.
Environmental Protection (Swan and Canning Rivers) Policy 1998	10.07.98	10.07.05	Riverplan (Comprehensive Management Plan and Implementation Strategy) was released August 2004. The EPA deferred commencement of the review of the <i>Environmental Protection (Swan and Canning Rivers) Policy 1998</i> until proclamation of the Swan and Canning Rivers Management Bill 2005
Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998	28.10.98	28.10.05	The EPA deferred commencement of the review of the <i>Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998</i> awaiting finalisation of the Revised Draft <i>Environmental Protection (Swan Coastal Plain Wetlands) Policy 2004</i>
Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999	21.12.99	21.12.06	Policy being implemented
Environmental Protection (Ozone Protection) Policy 2000	17.10.00	17.10.07	Policy being implemented
Environmental Protection (Western Swamp Tortoise Habitat) Policy 2002	18.02.03	18.02.10	Policy being implemented
Environmental Protection (Goldfields Residential Areas) (Sulfur Dioxide) Policy 2003	18.03.03	18.03.10	Policy being implemented

**Table 5: State Environmental Policies in force and their status as at June 2005**

State (Cockburn Sound) Environmental Policy 2005	20.01.05	Policy being implemented
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**Table 6: Environmental Protection Policies in development**

Name	Status
Draft Environmental Protection (State Groundwater) Policy	On hold
Draft Environmental Protection (State Marine Waters) Policy	On hold.
Draft Environmental Protection (Ambient Air Quality NEPM Implementation) Policy	In development

**Table 7: State Environmental Policies in development**

Name	Status
Draft State (Coastal Zone) Environmental Policy	In development

**Table 8: Environmental issues being considered as SEPs/EPPs**

Name	Status
Odour Buffers for Waste Water Treatment Plants	The EPA has agreed to scope the possibility of an Odour Buffer EPP.
Dieback	The EPA has agreed to scope the possibility of a Dieback EPP/SEP.

### **Policies Being Implemented**

All EPP's and associated maps may be viewed on the EPA website at [www.epa.wa.gov.au](http://www.epa.wa.gov.au) or at the DoE's Library Resource Centre, 141 St Georges Terrace, Perth.

#### ***Environmental Protection (Swan Coastal Plain Lakes) Policy***

The Swan Coastal Plain Wetlands Environmental Protection Policy seeks to provide statutory protection to wetlands with high ecological values.

The draft Swan Coastal Plain Wetlands Environmental Protection Policy and

Regulations 2004, together with an explanatory document and draft Wetlands Register, were released by the EPA for a 13 week public consultation period on 19 July 2004.

A large number of submissions were received and in response to these submissions changes were made to the draft Policy, Regulations and Wetlands Register.

The EPA released and transmitted its report including a summary of submissions and Revised Draft Policy, Regulations and Register to the Minister for the Environment; Science on 8 November 2004.

On receiving the EPA's report, the Minister consulted for a further 2 weeks to ensure the community had opportunity to provide comment on the revised Policy. On 12 January 2005 the Minister announced the Government would undertake an independent Regulatory Impact Assessment of the revised draft Policy.

A three-member Panel with expertise in wetlands, planning and real estate property values was established to determine the social, economic and environmental implications of the Policy. After the Panel's report has been received the Minister will determine the future direction of the Policy.

#### ***State Environmental (Cockburn Sound) Policy 2005***

Western Australia's first State Environmental Policy for the protection of the environmental quality of Cockburn Sound was released in January 2005, after extensive scientific and public consultation.

The new Policy takes a precautionary approach to environmental management. It sets early warning levels to trigger preventative action and prevent environmental impacts that might threaten the long-term ecological sustainability of the Sound and its social values. It is backed by the recently expanded powers under the *Environmental Protection Act 1986*, including environmental harm, clearing controls and unauthorised discharge regulations.

For example, for premises licensed under the *Environmental Protection Act 1986*, licence conditions will ensure that

the environmental values are protected and environmental quality objectives are being met.

For diffuse sources of emissions which find their way to the waters of Cockburn Sound, the Cockburn Sound Management Council plays a role in ensuring that land use practices within the catchment of Cockburn Sound are addressed.

As well, this Policy empowers the Cockburn Sound Management Council to report annually to the Minister for the Environment; Science on the 'State of the Sound' and for the Minister to table that report in Parliament.

Three key implementation documents have been developed in consultation with key stakeholders to support the Policy, saying what has to be achieved and who has responsibility for its implementation and enforcement:

- An Environmental Management Plan for Cockburn Sound and its Catchment, prepared by the Cockburn Sound Management Council, outlines on-ground actions for implementing the Policy, and establishes the particular roles and responsibilities of managers and user groups. The Council will coordinate implementation of the Plan to protect the environmental values of Cockburn Sound. In particular it will facilitate multiple use of Cockburn Sound and its foreshore, integrate management of the land and marine environments, coordinate research and investigations and monitor and report on performance.



- The Environmental Quality Criteria Reference Document for Cockburn Sound (2003-2004) outlines the environmental quality management framework for the Sound and provides the Environmental Quality Criteria (EQC), or benchmarks, to enable the State Environmental Policy to be implemented. There are EQC set for each environmental quality objective to ensure that water quality in the Sound is adequate for seagrass health and re-colonisation and for a generally healthy and resilient ecosystem which allows ongoing multiple social uses within the Sound. Development of the criteria has mainly been based on the guidelines and approaches recommended in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ 2000).
- The Manual of Standard Operating Procedures for Environmental Monitoring against the Cockburn Sound Environmental Quality Criteria (2003-2004) sets out the standard procedures for environmental monitoring in Cockburn Sound including information on monitoring design, preparation, data management and data analysis for interpretation against the EQC. The Manual ensures a consistent approach is taken in assessing environmental quality in Cockburn Sound and ensures data from different sources can be temporally and spatially integrated.

All four documents are available on the EPA's web site at

<http://www.epa.wa.gov.au> or on the Council's web site at <http://csmc.environment.wa.gov.au>

## Position Statements

Position Statements continue to be the EPA's vehicle to publish its high level policy positions.

A number of Position Statements were finalised during the year in a concerted effort to bring closure to some outstanding matters. These were No. 4 Wetlands, No. 5 Rangelands, No. 6 Towards Sustainability and No. 7 Principles of Environmental Protection (see Appendix 6 for a complete list of Position Statements and their status).

No. 8 Natural Resource Management is scheduled to be finalised by the end of 2005.

The Position Statement that has aroused considerable interest, including from overseas, is No. 9 Environmental Offsets. A preliminary Position Statement was released for wide consultation in July 2004 with resulted in some detailed, insightful and challenging comments.

The EPA decided on a number of changes and as a consequence decided to release a second version of the Preliminary Position Statement for a second, shorter round of consultations in June 2005. It is anticipated that the final document will be published in late 2005. The EPA is also drafting a companion Guidance Statement on Environmental Offsets for the environmental impact assessment process. This should also be released for public comment in late 2005.

## Guidance Statements

Guidance Statements distil in a concise way the experience contained in EPA assessments over the years. Each Guidance Statement is designed to help proponents and the public to understand how the EPA expects issues to be dealt with during the assessment process. They aim to provide a level of certainty for proponents, increase transparency for the public and provide high quality advice to the EPA.

Whilst the requirements set out in Guidance Statements are not mandatory, proponents are likely to find that the assessment of their proposals will be simpler and faster if they demonstrate that the proposal will meet or better those requirements. If proponents wish to take a different but acceptable approach to that set out in the Guidance Statement, they can put a technically well supported justification to the EPA on a case by case basis.

Guidance Statements are developed in two steps. Issues for inclusion in a new Statement are usually discussed with key stakeholders in a workshop or similar forum prior to the issue of a Draft Guidance Statement by the EPA. Once the Draft is agreed by the EPA, it is released for public comment, usually for 12 weeks. All comments are taken into account by the EPA as input to the final version of the Guidance Statement. Once published, a final Guidance Statement is subject to review after five years or when significant new information becomes available.

Twenty-three Guidance Statements are now available in either draft or final form. During this year a major revision

of Guidance No. 33 on Guidelines for Environment and Planning was completed.

The main purpose of this EPA Guidance Statement are:

- To provide information and advice to assist participants in land use planning and development processes to protect, conserve and enhance the environment.
- To describe the processes the EPA may apply under the EP Act to land use planning and development in Western Australia, and in particular to describe the environmental impact assessment (EIA) process applied by the EPA to schemes.

The Guidance Statement is intended as a resource document for local government, State Government agencies, consultants, proponents and the public.

A full list of Guidance Statements and their stage of development is included at Appendix 7.

## **MONITORING LIQUID WASTE TREATMENT FACILITY, BROOKDALE**

Waste Management (WA) (WMWA), a corporate entity within the Department of Environment is responsible for the operations of the Liquid Waste Treatment Facility at Brookdale.

The EPA has responsibility for monitoring compliance with the Ministerial Conditions contained in Ministerial Statement 588 issued as a

Ministerial Direction under s110 of the *Environmental Protection Act*.

The EPA contracts an independent auditor to assist the EPA monitor compliance with the Ministerial Conditions.

The EPA reviewed the Brookdale Liquid Waste treatment Facility Progress and Compliance Report for the period 1 August 2003 to 31 December 2003 and concluded the facility was substantially in compliance of Ministerial and licence conditions (within the Ministerial Direction).

At the direction of the Minister for the Environment; Science the facility ceased operations on 31 December 2003.

The EPA reviewed the Detailed Site Investigation Plan (DSI) as Phase 1 of the decommissioning and rehabilitation of the Brookdale Liquid Waste Treatment Facility.

The Decommissioning and Rehabilitation Plan is being prepared by Waste Management (WA) in three phases:

- A DSI which provides for sampling of soil and groundwater to determine the extent, if any, of contamination of the site;
- A site Management Plan is then required to undertake any rehabilitation of contaminated areas that may result from the outcomes of the sampling undertaken through the implementation of the Detailed Site Investigation Plan; and
- If required, an ongoing Water Monitoring Plan may be required

depending on the outcomes of the first two plans.

The Minister for the Environment; Science; Science approved the DSI as the first phase towards decommissioning and rehabilitation of the Brookdale Liquid Waste Treatment Facility site and cancellation of the facility's operating licence under Part V of the *Environmental Protection Act 1986* on 14 March 2005.

Within the DSI was the requirement for Waste Management (WA) to undertake asbestos sampling and analysis of the site owing to asbestos being encountered during the partial demolition of some buildings. This work was required to be completed prior to personnel being on site to undertake sampling and analysis of soil and groundwater to ensure protection of their occupational health and safety.

The results of the asbestos sampling and analysis revealed significant occurrence of asbestos fragments in the assessed areas of the site. These fragments were identified in the partially demolished buildings, in building rubble, and on sealed and unsealed areas of the site. No asbestos fibres were identified in soil samples collected in the investigation.

On the advice of the EPA, the Minister for the Environment; Science; Science has approved an amendment to the DSI to remove the asbestos contamination to ensure the occupational health and safety of workers during the decommissioning and rehabilitation of the site.

A representative of the EPA attends meetings of the Brookdale Community Reference Group to keep them informed of progress and to receive feedback.

## LEGISLATIVE ISSUES

### Court Decisions

#### *BGC (Australia Pty Ltd) and Environmental Protection Authority*

The proponent for a quarry project at The Lakes east of Perth applied for special leave to appeal a decision of the Supreme Court of Western Australia to the High Court.

In that decision the Supreme Court upheld the EPA appeal that the Town Planning Appeals Tribunal was a decision making authority, constrained under section 41(2), from making a decision that could have the effect of causing or allowing the proposal to be implemented before the environmental impact assessment process had been completed.

The High Court refused to grant special leave on the 27 October 2004 with an order that the applicant pay the Respondent's cost of the application.

### Regulation 17 Applications

Noise Regulation 17 applications for approval to vary from the assigned noise levels were progressed for the following applicants:

#### *Western Power Corporation, Pinjar power station*

Following release of the EPA Bulletin, a noise regulation 17 approval was granted by the Minister to recognise a small noise exceedance over an area of bushland adjacent to the plant boundary. The approval was *Gazetted* on 24 September 2004.

#### *Sons of Gwalia Ltd, Greenbushes tantalum mine*

After an extended consultation and investigation period, the EPA endorsed a strategy recommending that a regulation 17 approval be granted, and the Bulletin was released in September 2004 (Bulletin 1148). An approval notice is currently under preparation by Parliamentary Counsels Office.

#### *Western Power Corporation, transmission substations*

The EPA endorsed a strategy involving a significant noise mitigation program, through which Western Power would reduce noise emissions from its 34 non-compliant transmission substations to compliance or within 5dB of compliance over five years. The EPA Bulletin recommending a noise regulation 17 approval was released in October 2004 (Bulletin 1149) and a draft approval notice has been prepared by Parliamentary Counsels Office.

#### *Alcoa Wagerup refinery*

Following an independent review of noise emissions from the Wagerup Refinery, and a thorough public consultation process, an EPA strategy briefing was held in October 2004. Because of the impending Part IV assessment of the Wagerup 3 expansion proposal, however, the EPA elected to defer assessment of the noise regulation 17 application in order to conduct these assessments together.

#### *CBH Esperance*

Work on this assessment was re-activated with an independent technical

review of noise emissions. The review report is awaiting finalisation.

### ***Esperance Port Authority***

The Esperance Port Authority exercised its option to apply for extension of its noise regulation 17 approval, originally granted in 2001. The assessment commenced with an independent technical review of noise emissions from the Port, and the review report is awaiting finalisation.

### ***Wesfi Manufacturing at Dardanup and Tiwest Chandala***

These two applicants carried out technical reviews of their noise emissions with a view to determining whether they may now be in compliance with the prescribed standards for noise emissions.

Other noise regulation 17 applications that did not substantially progress during the year: Albany Port (truck transport); Simsmetal (scrap metal recycling operations at its Spearwood plant); and Hope Downs (proposed iron ore operations at Port Hedland). Millenium Inorganic Chemicals at Australind is expected to submit an updated technical review in the near future.

## **CONSULTATION**

The EPA undertakes an array of consultative processes relating to proposals being assessed. These include:

- public review of proponent documentation for proposals either being formally assessed or for which a Strategic Environmental Review is being undertaken;

- participation at public meetings held by proponents to give advice on the EIA process and to respond to questions;
- conduct EPA-initiated public meetings where there is a degree of public sensitivity, usually after the close of the formal public review period, to provide feedback on the key environmental issues raised and to receive any other environmental issues the community requests the EPA to consider in its assessment of the proposal. These meetings also provide an opportunity for the EPA to inform the community of the likely timing of the EPA's advice to the Minister for the Environment; Science on a proposal and appeal rights available;
- participation at stakeholder meetings; and
- receiving briefings from stakeholder groups at meetings of the EPA Board on issues of importance.

## **SITE VISITS CARRIED OUT BY THE EPA**

During the year, various EPA members (subject to availability) travelled within the State to examine proposals in the field and to meet with proponents on-site.

Proponents have welcomed the opportunity to meet with the EPA to discuss issues in the less formal setting of the project. Relevant staff from the EPA Service Unit accompanied the EPA. Whenever possible, EPA members took the opportunity to meet with key

local stakeholders, including local government, interest and conservation groups.



*EPA site visit: BHP-Billiton ship loader. Port Hedland, November 2004*

Site visits have proved very valuable in a number of ways, including:

- giving EPA members a clearer understanding of the environmental setting of a proposal;
- providing an opportunity to meet proponents, exchange views, address environmental issues associated with their proposal, and network in an informal atmosphere;
- providing an opportunity for the mutual exchange of views and making it easier to communicate with proponents and others through subsequent telephone interaction and formal EPA board meetings;
- leading to better environmental advice being provided to the Minister; and
- enhancing the identity of the EPA as an Authority that provides independent advice.

A list of the EPA and other site visits is provided in Appendix 8.

## **ADVISORY COUNCIL TO THE EPA**

The Advisory Council to the Environmental Protection Authority (ACTEPA) was established to provide advice to the EPA on a range of environmental issues.

ACTEPA meets bi-monthly and consists of a cross-section of members of the community. Appointees are individuals who can bring to the table a range of perspectives and expertise from industry, conservation and technical fields, rather than representing particular groups.

### **Current members:**

Dr John Yeates (Chairman)

Mr Norm Halse (Deputy Chairman)

Dr Sue Graham-Taylor

Mr Frank Batini

Mrs Marion Blackwell

Mrs Dot Hesse

Dr Rod Lukatelich

Mr Tony van Merwyk

Mr Graham Slessar

Mr Richard Gorham

ACTEPA's role is to provide comment and advice to the EPA on any matters referred to it by the EPA. ACTEPA may also initiate discussion on environmental matters and provide advice to the EPA.

During the year ACTEPA was kept advised of a range of issues before the

EPA, and members' input was sought. Issues covered include:

- Process improvements of Environmental Impact Assessment;
- Position/Guidance Statements – advice sought with regard to review and proposed new Statements;
- Environmental Protection Policy – advice sought with regard to need for review, or definition; and
- State of the Environment – Working Groups.

The EPA records its appreciation for the time and effort taken by ACTEPA members during the year. The advice of

all members of ACTEPA is greatly appreciated by the EPA.

The EPA reviewed the role and structure of ACTEPA in May 2005 and agreed to restructure ACTEPA into a number of reference panels that would be called in to advise on specific issues relevant to the membership of the panel when needed. Three reference panels were established:

- Industry
- Mining; and
- Natural Resource Management.

The panels include expert and community representation.

# APPENDICES

## APPENDIX 1: The Role and Function of the Environmental Protection Authority

### What is the Environmental Protection Authority?

The Environmental Protection Authority (EPA) is a statutory authority and is the primary provider of independent environmental advice to Government. The EPA is not a regulatory body. The EPA consists of five members, including a full-time chairman.

### When was the EPA established?

The EPA came into existence on 1 January 1972 and operates under the *Environmental Protection Act (1986)* (the EP Act).

### What is the ‘environment’ to the EPA?

The EP Act defines environment to mean *living things, their physical, biological and social surroundings, and interactions between all of these. ... For the purposes of the definition of “environment” ...the social surroundings of man are his aesthetic, cultural, economic and social surroundings to the extent that those surroundings directly affect or are affected by his physical or biological surroundings.*

### What are the EPA’s objectives?

The EPA’s objectives are to protect the environment and to prevent, control and abate pollution.

### How does the EPA achieve its objectives?

The EPA achieves these objectives through:

- Providing advice to the community, stakeholders, developers, regulators and those within Government who formulate environmental policy;
- Preparing Environmental Protection Policies (EPPs) which have the force of law and State Environmental Policies (SEP), Position Statements and Guidance Statements which are non – statutory. Details of the Policy program are provided on the EPA website ([www.epa.wa.gov.au](http://www.epa.wa.gov.au));
- Assessing development proposals (including schemes and scheme amendments) and activities that have the potential to impact on the environment, and advising the Minister for the Environment; Science; Science regarding their environmental acceptability and conditions which should apply if they are approved to proceed. Details are on the EPA website; and
- Auditing compliance with Ministerial Conditions for proposals for which the Department of Environment is the proponent.



Who does the EPA involve when formulating advice to the Minister?

The EPA receives information from many sources, including the public, developers, peak bodies, interest groups and government departments, particularly the Department of Environment.

In addition, the EPA has established three Reference Panels for mining, industrial and natural resource management. Each reference panel has technical experts and community representation. The EPA may refer matters relevant to a particular Reference Panel for advice.

How does the EPA give advice to Government?

The EPA makes recommendations to the Minister for the Environment; Science; Science. The advice is public, and is generally through published Bulletins. The Government, through the Minister, makes the final decisions.

How can the EPA's advice be implemented?

The three main instruments for implementing the EPA's advice to Government are:

- Government endorsed statutory EPPs or non – statutory SEPs, which have been developed by the EPA in consultation with all interested parties;
- Ministerial Conditions set by the Minister for the Environment; Science; Science on development

proposals assessed by the EPA; and

- Bodies, including Government, government agencies, local government, stakeholders and the community, implementing the EPA's policies and advice, as provided or modified.

Public's Right to be involved

A basic tenet of the EP Act is the community's rights to know, to be informed, to be heard and to object to activities that have the potential to impact on the environment. Accordingly, the EPA provides opportunities for the public to be involved in the decision-making processes. Further information on how the public can become involved is available on the EPA website and in its advertisement in Public Notices section of the Monday edition of the *West Australian* newspaper.

Other functions of the EPA

The Minister can request the EPA to carry out other functions. For instance, the Minister has asked the EPA to carry out State of the Environment (SOE) reporting and Natural Resource Management (NRM) environmental performance auditing.

The EPA publishes Position Statements to provide the overarching principles and information which the EPA would use when giving advice to the Minister, the public, proponents, and decision-makers. The list of Position Statements is provided in Appendix 6.

In addition, the EPA publishes Guidance Statements that provide direction to

proponents in developing their proposals for environmental impact assessment. The list of Guidance Statements is Provided in Appendix 7.

All Position and Guidance Statements are available on the EPA's website.

#### Principles that the EPA considers when carrying out its duties

The EPA has regard for a number of principles when giving environmental advice, including:

1. *The precautionary principle;*
2. *The principle of intergenerational equity;*
3. *The principle of the conservation of biological diversity and ecological integrity;*
4. *Principles relating to improved valuation, pricing and incentive mechanisms; and*
5. *The principle of waste minimisation.*

#### What are the environmental aspects that the EPA can consider when giving advice?

Generally, when providing advice, the EPA considers the following broad environmental factors:

- i) Integration;
  - Biodiversity; and
  - Sustainability.
- ii) Biophysical:
  - Flora and vegetation;
  - Fauna;
  - Wetlands (wetlands, rivers);
  - Water (surface or ground);
  - Land form;
  - Marine habitats; and

- Conservation Areas.

#### iii) Pollution Management:

- Air Quality;
- Water Quality (surface, marine or ground);
- Soil Quality;
- Noise;
- Radiation;
- Light; and
- Greenhouse Gases.

#### iv) Social Surrounds:

- Heritage;
- Visual Amenity; and
- Recreation

#### v) Other:

- Decommissioning and rehabilitation.

#### Role of the proponent

A common concern raised with the EPA each year is that the Environmental Impact Assessment (EIA) process is biased because the proponent has the responsibility to prepare, or have prepared, the environmental review document. The basis of this concern is that the proponent, who has the greatest stake in having the project proceed, should not be given the opportunity to control the development of the major document on which the environmental impacts of the project are likely to be judged.

However, there are good reasons why the proponent should play a pivotal role in the preparation of the environmental review document, provided the appropriate checks and balances are in place. The preparation of this document is the prime way for proponents to ensure that environmental factors are given consideration in project decision-

making. It is only through this mechanism that the proponent will appreciate the environmental impacts of the proposed project, and thus the need for good project design and a management program to ameliorate those impacts.

The EPA encourages and expects the proponent to give a high priority to environmental responsibility, including the preparation of a list of environmental commitments as part of its management program. This can be achieved only if the proponent is fully involved in the consideration of the environmental impacts of the project through the preparation of the environmental review document which requires the proponent to consider environmental issues and factors in project formulation. It is also important for the proponent and their consultant to prepare the document as though looking at the project through the eyes of the EPA. It needs to be as accurate and as full as possible.

It should be remembered that the preparation of the environmental review document is only one element of the process of EIA. There are a number of steps in EIA in WA which are designed to ensure the objectivity and adequacy of the information which is available to the decision-making authority. These steps can be summarised as:

- the scoping document for the preparation of the environmental review document is approved by the EPA;
- the scoping document is publicly available and, at the ERMP level of assessment, the scoping document is available for public comment;
- the environmental review document can be released only

after the EPA is satisfied that the document is appropriate for release;

- the public has the opportunity to comment on the environmental review document after it has been approved for release;
- the proponent is required to respond to public comments on the environmental review document, the EPA checks the adequacy of the response which is also available to the public;
- the EPA provides the Minister for the Environment; Science; Science, who is the decision-making authority, with an assessment report on the project after receiving advice from technical experts within its Service Unit (see below), other agencies and institutions; and
- the public (and the proponent) have a further opportunity to provide advice or information to the Minister, in the form of an appeal, following the public release of the EPA report and recommendations.

#### EPA linkages with government agencies and authorities

The EPA seeks advice from agencies, including the Department of Environment, (DoE), Department for Planning and Infrastructure (DPI) and WA Planning Commission (WAPC), the Department of Conservation and Land Management (CALM), the Conservation Commission of Western Australia, the Marine Parks and Reserves Authority (MPRA), Department of Health, Department of Industry and Resources (DoIR), Department of Indigenous Affairs and Department of Fisheries.

### *Department of Environment*

As a result of the Machinery of Government Report review, the Department of Environmental Protection and the Water and Rivers Commission have been amalgamated to form the Department of Environment (DoE).

Administratively situated within the new Department is the EPA Service Unit, consisting of the Environmental Impact Assessment Division and the Policy and Coordination Division, under the direction of the EPA. A Service Agreement between the Authority, Department and the Minister has been established for the provision of departmental services to the EPA.

The EPA Service Unit carries out a variety of functions for the EPA, primarily EIA and preparation of draft EPA Bulletins, research and co-ordination functions in relation to the environment, and the preparation of draft EPPs.

The Department will continue to administer the regulation requirements of the EP Act (for example Licensing of Industry and undertaking pollution investigations) and act as a proponent (for example for water allocation plans) and as a provider of expert advice on matters pertaining to pollution control, management of contaminated land and water resource protection and management as inputs to the EIA process.

In relation to policies and requirements for best practice in control of pollution, the EPA will continue to have a key role where it subjects proposals to EIA and through relevant EPPs.

Where DoE is the proponent of proposals that are subject to Ministerial Conditions set by the Minister for the Environment; Science, the EPA undertakes the statutory compliance audit role.

### *Department for Planning and Infrastructure and WA Planning Commission*

All town planning schemes and amendments (both Local Authority and Region Schemes) are required to be referred to the EPA under Section 48A of EP Act. If the EPA formally assesses a scheme or amendment to a scheme, both the Planning and Infrastructure, and Environment Ministers have to agree on conditions before approval can be given.

DPI and WAPC also prepare strategic plans that the EPA can report on under Section 16(j) of the EP Act.

### *Department of Conservation and Land Management (CALM)*

In the case of CALM, the EPA has two different working relationships. CALM, as manager of forests and the conservation estate on behalf of the Conservation Commission of Western Australia, is required to implement Forest Management Plans which are assessed by the EPA. CALM is also a key provider of expert advice on conservation and biodiversity issues generally, and particularly during the EIA process.

### *Conservation Commission of Western Australia*

The Commission has responsibility for control and management planning of State Forest and the conservation estate. This includes adopting management

plans for the estate and then auditing CALM's implementation of the plans. Where the EPA assesses plans, such as the Forest Management Plans, the EPA may then audit the Commission's compliance with Ministerial Conditions set by the Minister for the Environment; Science.

#### *Marine Parks and Reserves Authority (MPRA)*

The MPRA has responsibility for control and management planning of marine parks and reserves. The MPRA provides advice on marine issues for development proposals under consideration by the EPA.

The MPRA is supported by a Scientific Advisory Committee which the EPA also calls upon from time to time for professional and technical input.

#### *Department of Health*

The Department of Health has a significant role in providing advice to the EPA on possible health impacts of proposals. Industrial and other activities can pose a risk to human health if not managed in an environmentally acceptable manner.

When the EPA requests a Health Risk Assessment to identify cumulative effects of an activity on human health, for example the impact of air emissions from several industries within a region, the EPA seeks advice from the Department of Health on the assessment particularly in relation to the validation of the modelling methods proposed.

The Department of Health also provides specialist advice in the remediation and management of asbestos in contaminated

sites and where on-site containment of contaminated material is proposed.

#### *Department of Industry and Resources (DOIR)*

Two new Memoranda of Understanding (MOUs) between the EPA and DOIR were signed on 17 December 2004. The MOUs deal with onshore mining and exploration proposals and with onshore petroleum proposals respectively. The MOUs, provide clear criteria for DOIR to refer proposals to the EPA under Part IV of the *Environmental Protection Act 1986*.

The MoUs are not a delegation of the EPA's powers but provide an agreed, efficient and transparent administrative framework for referral of proposals to the EPA. MoUs of this type are consistent with the recommendations of the Review of the Project Development Approvals System ("the Keating Review") and provide an effective means to ensure coordination between Government agencies and efficiency of the approvals process.

The MOUs were developed in consultation with industry and the conservation movement and have the support of both.

The new onshore petroleum MOU complements the MOU between the EPA and DOIR on referral of offshore petroleum proposals which was signed on 3 June 2004.

#### *Department of Indigenous Affairs*

When the EPA is undertaking an assessment of a proposal, Aboriginal heritage may be a relevant environmental factor. The EPA must consider the issue and must satisfy itself

that it can, and will, be addressed, consistent with the scope and requirements of the EP Act. One way to assist the EPA to be satisfied is for the EPA to be provided with confirmation that environmental aspects of the issue will be fully addressed through other processes, such as under the *Aboriginal Heritage Act*.

The EPA will give consideration to Aboriginal heritage matters to the extent that they may be affected by the impacts of the proposal on the physical or biological surroundings. The EPA will need to determine if changes to the physical or biological environment will result in there being an impact on matters of heritage significance to Aboriginal people.

Under both of these circumstances, the EPA will consult with and seek specialist advice from the Department of Indigenous Affairs to avoid or reduce duplication.

#### *Department of Fisheries*

Department of Fisheries provides key advice on significant proposals that may have an impact on the marine environment.

The Department of Fisheries is responsible for the management of the State's fish resources, commercial, pearling and aquaculture industries, recreational fishers and the waters and habitats that surround the State's coastline.

The Department of Fisheries develops and implements appropriate and sustainable resource management strategies for the State's fisheries and

fish habitats, including collaborative arrangements with the EPA in terms of aspects of natural resource management.

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**APPENDIX 2: Formal Assessments (including Regulation 17 variations. Excluding Environmental Protection Statements, Assessment on Referral Information and Proposal Unlikely to be Environmentally Acceptable which are listed in Appendix 3 and 4.)**

<b>Bulletin No.</b>	<b>Title</b>	<b>Release date</b>
1142	Resource Recovery Facility, Lot 505, Neerabup Industrial Area	July 2004
1147	Denison 3D seismic survey, Shire of Irwin	September 2004
1148	Sons of Gwalia Ltd, Greenbushes Operations, Noise Regulation 17 Variation	September 2004
1149	Power Transmission Substations Noise Regulation 17 Variation	October 2004
1150	Cliff Head oil field development, 20 km south of Dongara, Shire of Irwin	October 2004
1152	Relocation of Herne Hill Quarry Operation, Amendment of Implementation Conditions	November 2004
1154	Cockburn 2 Combined Cycle Gas Turbine - Change to environmental conditions	November 2004
1155	Review of Environmental Conditions on the Gnangara and Jandakot Mounds	November 2004
1156	East Clontarf Residential Development	December 2004
1157	Clay Excavation lots 7, 20, 60, 63 & 64 (previously part lot 1 & lots 222, 27, 26, 25, 28 & 7), Hallett Rds, Upper Swan	December 2004
1158	Shire of Harvey District Planning Scheme No 1, Amendment No. 13 – Point Douro	January 2005
1159	New road from Tom Price to Karratha	January 2005
1160	Bluewaters Power Station	January 2005
1165	Expansion of Monkey Mia Dolphin Resort	February 2005
1169	Land clearing and quarry extension Avon Loc 1881 Lots 11 & 14 Horton Road, The Lakes	April 2005

<b>Bulletin No.</b>	<b>Title</b>	<b>Release date</b>
1170	Western Extension of Nickol Bay Quarry	May 2005
1172	Barge site, laydown area and access road, North Kimberley	May 2005
1173	Pilbara Iron Ore and Infrastructure Project: Port and North-South Railway (Stage A)	May 2005
1175	Final remediation works for the former Cresco site, Bayswater	June 2005
1176	Collie B Power Station	June 2005
1177	Bluewaters Power Station Phase II	June 2005
1178	Collie power station expansion	June 2005
1182	Ammonium Nitrate Production Facility Expansion, Kwinana	June 2005



**APPENDIX 3: Environmental Protection Statements and Assessment  
on Referral Information**

<b>Bulletin No.</b>	<b>Title</b>	<b>Level</b>	<b>Release date</b>
1143	Taking of seven plants of caladenia huegelii & clearing of approximately 3.3 hectares of potential habitats, Lot 1580 Warton Road, Southern River	ARI	July 2004
1144	Hepburn Avenue extension between Mirrabooka Avenue and The Avenue, Landsdale	ARI	August 2004
1146	Mineral Sands Mine Gingin	EPS	September 2004
1162	Campbell Road Estate, super-lot subdivision	ARI	January 2005
1163	Kwinana Liquor Burner Emissions Reduction Project	ARI	March 2005
1164	Gas pipeline to Nifty Copper Operations	ARI	February 2005
1166	Marillana Creek (Yandi) Life of Mine proposal, Mining Leases 270SA & 47/292, 90km north-west of Newman	EPS	April 2005
1167	Temporary relocation of total waste management's evaporation ponds to the Mungari Industrial Estate	ARI	April 2005
1168	Wheellarra Hill iron ore mine extension	EPS	April 2005
1171	Goldworthy Iron Ore Mines extension project	EPS	May 2005
1174	Kwinana gas-fired power station	ARI	May 2005
1181	Ellendale 4 Diamond Project, West Kimberley	EPS	June 2005
1183	Kemerton silica sand mining revised proposal – additional mining area and transfer of land for conservation Kemerton	ARI	June 2005

#### APPENDIX 4: Proposal Unlikely to be Environmentally Acceptable

Bulletin No.	Title	Release date
1179	Building licence for single residence, Lot 1613 Barrett Street, Southern River	June 2005
1180	Residential subdivision Lot 1613 Barrett Street, Southern River	June 2005

#### APPENDIX 5: s16 Strategic Advice

Bulletin No	Project Title	Release date
1145	Plans for bauxite mining and haul road stream crossing in some CAR informal reserves/ ML ISA	August 2004
1151	Review of the Fire Policies and Management Practices of the Department of Conservation and Land Management	November 2004
1153	Dampier to Bunbury natural gas pipeline corridor widening - Kwinana to Bunbury project	November 2004
<b>Discussion Paper</b>	Managed Aquifer Recharge using Treated Wastewater on the Swan Coastal Plain	April 2005

#### APPENDIX 6: Position Statements

No.	Position Statement	Current Status
1.	Environmental Protection of Cape Range Province	Published December 1999
2.	Environmental Protection of Native Vegetation in Western Australia	Published December 2000
3.	Terrestrial Biological Surveys as an element of Biodiversity Protection	Published March 2000
4.	Environmental Protection of Wetlands	Published November 2004
5.	Environmental Protection and Sustainability of the Rangelands in Western Australia	Published November 2004
6.	Towards Sustainability	Published August 2004
7.	Principles of Environmental Protection	Published August 2004
8.	Environmental Protection in Natural Resource Management	Preliminary published June 2004
9.	Environmental Offsets	Preliminary published July 2004. Version 2 published June 2005.

## **APPENDIX 7: Guidance Statements for the Assessment of Environmental Factors**

### *Final Guidance*

<b>No</b>	<b>Title</b>	<b>Release date</b>
1	Protection of Tropical Arid Zone Mangroves along the Pilbara Coastline	April 2001
2	Risk Assessment and Management: Offsite Individual Risk from Hazardous Industrial Plant	July 2000
3	Separation Distances between Industrial and Sensitive Land Uses	June 2005
4	Deep and Shallow Well Injection for Disposal of Industrial Waste	September 1998
10	Level of Assessment for proposals affecting natural areas within the System 6 Region and Swan Coastal Plain portion of the System 1 Region	January 2003
12	Minimising Greenhouse Gases	October 2002
13	Management of Air Emissions from Biomedical Waste Incinerators	March 2000
15	Emissions of Oxides of Nitrogen from Gas Turbines	May 2000
17	A Site Remediation Hierarchy for Contaminated Soil	July 2000
18	Prevention of Air Quality Impacts from Land Development Sites	March 2000
28	Protection of the Lake Clifton Catchment	May 1998
29	Benthic Primary Producer Habitat Protection for Western Australia's Marine Environment	June 2004
33	Guidelines for Environment and Planning	June 2005
34	Linkage between EPA Assessment and Management Strategies, Policies, Scientific Criteria, Guidelines, Standards and Measures Adopted by National Councils	April 1998
40	Management of Mosquitoes by Land Developers	June 2000
41	Assessment of Aboriginal Heritage	April 2004
47	Assessment of Odour Impacts	March 2002
49	Assessment of Development Proposals in Shark Bay World Heritage Property	November 2002
51	Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia	June 2004
54	Consideration of Subterranean Fauna in Groundwater and Caves during Environmental Impact Assessment in Western Australia	December 2003
55	Implementing Best Practice in Proposals Submitted to the Environmental Impact Assessment Process	December 2003
56	Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia	June 2004

*Draft Guidance*

No	Title	Release date
48	Groundwater Environmental Management Areas	February 1998

**APPENDIX 8: EPA site visits**

Date	Site
2 July 2004	Extension of Hepburn Avenue (Stage 2) from Marshall Road to Reid Highway, Ballajura.
12 August 2004	East Clontarf Residential Development, Manning.
30 August 2004	Fremantle Outer Harbour Project.
5 – 6 September 2004	Expansion to Monkey Mia Dolphin Resort, Location 80, Reserve 1686, Shark Bay.
8 –9 November 2004	FMG Pilbara Iron Ore and Infrastructure Project - Stages A and B.
3 December 2004	Gwindinup Mineral Sands Project, Bunbury.
9 – 10 May 2005	Expansion of Export Facilities from 95mtpa to 120mtpa by Pilbara Iron, Dampier. Dampier Port Authority – Management Plan.
9 –9 June 2005	Beagle Bay Tree Plantation proposal.

## APPENDIX 9: Attendance at EPA Meetings

<b>Attendance EPA Meetings – 1 July 2004 to 30 June 2005</b>		
<b>Name</b>	<b>No of Meetings Held</b>	<b>No of Meetings Attended</b>
Dr W Cox	25	25
Dr R Green <sup>1</sup>	25	20
Mr D Glennon <sup>2</sup>	25	14
Ms J Payne	25	25
Dr A Hinwood <sup>3</sup>	25	23
Prof S Halls <sup>4</sup>	25	5

### Foot Notes:

1. Dr R Green's term of appointment as Deputy Chairman expired on 6 May 2005.
2. Mr D Glennon had leave of absence approved by the Minister from March 2005 to June 2005.
3. Dr A Hinwood was appointed Deputy Chairman from 11 May 2005.
4. Prof S Halls was appointed as Member from 11 May 2005.

## APPENDIX 10: Section 45C List of approved changes to proposals

Proposal	Variation	Advice to Proponent
Southwest Metro Railway, Perth to Mandurah Statement 637 Public Transport Authority	Construction of Jandakot Substation; vegetation clearing of 0.34 ha	17/1/05
Southwest Metro Railway, Perth to Mandurah Statement 637 Public Transport Authority	Old Mandurah Road realignment near Stakehill Road, Baldivis, and deletion of the bridge across the Old Mandurah Road	22/1/05
Murrin Murrin Nickel Project Statement 506 Minara Resources	Use of Pit 2/3 as a Tailings Storage Facility	31/1/05
Marandoo Iron Ore Mine Statement 286 Hamersley Iron Pty Ltd	Extension to tailings pit, and additional topsoil stockpiles and roads.	31/1/05
Southwest Metro Railway, Perth to Mandurah Statement 637 Public Transport Authority	Repositioning rail track outside MRS railway reserve, near Stakehill Road, Baldivis	2/2/05
Koolyanobbing Iron Ore Expansion, Windarling Range & Mt Jackson Statement 627 Portman Iron Ore Limited	Request for increase in size of waste rock dump, vegetation clearing and enlarged mine pit	8/2/05
Mt Weld Rare Earths Project Statement 476 Lynas Corp Limited	Transport of ore rather than concentrate.	8/2/05
Fimiston Mine and Waste Dumps Stage II, Kalgoorlie Statement 188 Kalgoorlie Consolidated Gold Mines Pty Ltd	Southern Extension of Waste Rock Dump footprint	21/2/05
Yandicoogina Iron Ore Mine, 90km North West of Newman Statement: 523 Hamersley Iron Pty Ltd	Extension of existing waste rock dump, development of additional waste dump and product stockpiles	25/2/05
Yandicoogina Iron Ore Mine, 90km North West of Newman Statement 523 Hamersley Iron Pty Ltd	Expansion and upgrade of mining facilities and infrastructure	25/2/05

<b>Proposal</b>	<b>Variation</b>	<b>Advice to Proponent</b>
NW Shelf LNG Expansion Project Statement 536 Woodside Energy Limited	Deletion of additional power generation units	25/2/05
South West Metro Rail, Perth to Mandurah Statement 637 Public Transport Authority	Relocation of a proposed 132Kv/25kV substation from Karnup to a site at Parklands	4/3/05
Gold Mine Developments on Lake Lefroy, 7 km South-East of Kambalda Statement 548 Gold Fields Australia	Increase in mine dewatering and dewater discharge to Lake Lefroy, to 20 GL	9/3/05
Lancelin to Cervantes Coastal Road Statement 618 Main Roads WA	Additional road connection, to Ocean Farms Estate, near the Nilgen Nature Reserve	16/3/05
Koolyanobbing Iron Ore Expansion, Windarling Range & Mt Jackson Statement 627 Portman Iron Ore Limited	Increase from 6 to 8 Mtonnes per annum production.	5/5/05
Channar Mining Project, Hamersley Range Statement 16 Hamersley Iron Pty Ltd	Mining approximately 1 Mtonnes of ore below the water table at Channar East Pit 3.	31/5/05
Northwest Shelf Gas Project LNG Facilities Statement 536 Woodside Energy Ltd	Clarification of Schedule 1 error from 2.7 M cubic metres to 2.7 M m3 plus 1 M m3 at Star Rock, total 3.7 M m3.	7/6/05

## APPENDIX 11: Financial Report

The administration costs of the EPA are as follows:

	2004-05 (\$'000)	2003-04 (\$'000)	2002-03 (\$'000)	2001-02 (\$'000)	2000-01 (\$'000)
<b><i>Recurrent</i></b>					
Salaries and allowances	577	579	452	390	384
<b><i>Other Expenses</i></b>					
Advertising expenses	66	0	0	0	0
Staff related expenses	19	16	41	41	31
Communications	9	10	10	4	4
Services and contracts	17	24	254	179	154
Consumable supplies	6	14	13	9	3
Repairs, Maintenance and Depreciation	1	2	2	7	8
<b><i>Total</i></b>	<b>695</b>	<b>645</b>	<b>772</b>	<b>630</b>	<b>584</b>

### *Electoral Act 1907 (s175 ZE Disclosure)*

In accordance with Section 175 ZE of the *Electoral Act 1907*, the Environmental Protection Authority incurred the following expenditure in advertising, market research, polling, direct mail and media advertising:

- Total expenditure for 2004/2005 was \$66 250.00 (2003/04 – \$1 512.00).
- Expenditure of specified amounts of \$1 600 or greater in the following areas:

Advertising Agencies	Nil
Market research organisations	Nil
Polling organisations	Nil
Direct mail organisations	Nil
Media advertising organisations	\$ 25,977

#### ***Note:***

Section 175 ZE of the *Electoral Act 1907* requires “specified amounts” of \$1 600 or greater expended on advertising in the above categories to be notified in the annual report.



## APPENDIX 12: Abbreviations

<b>ACTEPA</b>	Advisory Council to the Environmental Protection Authority
<b>AHC</b>	Australian Heritage Council
<b>ARI</b>	Assessment on Referral Information
<b>CALM</b>	Department of Conservation and Land Management
<b>CAMBA</b>	China Australia Migratory Bird Agreement
<b>CCWA</b>	Conservation Commission of Western Australia
<b>CSIRO</b>	Commonwealth Scientific and Industrial Research Organisation
<b>DEP</b>	Department of Environmental Protection
<b>DoA</b>	Department of Agriculture
<b>DoE</b>	Department of Environment (amalgamation of WRC and DEP)
<b>DoF</b>	Department of Fisheries
<b>DoH</b>	Department of Health
<b>DIA</b>	Department of Indigenous Affairs
<b>DoIR</b>	Department of Industry and Resources
<b>DPI</b>	Department for Planning and Infrastructure
<b>CITES</b>	Convention on International Trade of Endangered Species
<b>EIA</b>	Environmental Impact Assessment
<b>EIS</b>	Environmental Impact Statement
<b>EMIAA</b>	Environmental Management Industry Association of Australia
<b>EMP</b>	Environmental Management Plan
<b>EPA</b>	Environmental Protection Authority
<b>EP Act</b>	<i>Environmental Protection Act (1986)</i>
<b>EPASU</b>	EPA Service Unit
<b>EPP</b>	Environmental Protection Policy
<b>EPS</b>	Environmental Protection Statement
<b>EQC</b>	Environmental Quality Criteria
<b>EQO</b>	Environmental Quality Objectives
<b>ERMP</b>	Environmental Review and Management Programme
<b>EV</b>	Environmental Values
<b>FMP</b>	Forest Management Plan
<b>GBRS</b>	Greater Bunbury Region Scheme
<b>HRA</b>	Health Risk Assessment
<b>JAMBA</b>	Japan Australia Migratory Bird Agreement
<b>LoA</b>	Level of Assessment
<b>MoU</b>	Memorandum of Understanding
<b>MPRA</b>	Marine Parks and Reserves Authority
<b>MRWA</b>	Main Roads Western Australia
<b>NAP</b>	National Action Plan
<b>NEPC</b>	National Environmental Protection Council
<b>NHT</b>	Natural Heritage Trust
<b>NWQMS</b>	National Water Quality Management Strategy
<b>NRM</b>	Natural Resource Management
<b>PER</b>	Public Environmental Review

<b>PUEA</b>	Proposal Unlikely to be Environmentally Acceptable
<b>RO</b>	Reverse Osmosis
<b>SCP</b>	Swan Coastal Plain
<b>SEP</b>	State Environmental Policy
<b>SoE</b>	State of the Environment
<b>SOER</b>	State of Environment Reporting
<b>SRG</b>	Stakeholder Reference Group
<b>SRT</b>	Swan River Trust
<b>UNEP</b>	United Nations Environment Program
<b>UNESCO</b>	United Nations Education Scientific and Cultural Organisation
<b>VOC</b>	Volatile Organic Compound
<b>WA</b>	Western Australia
<b>WALA</b>	Western Australian Land Authority
<b>WALGA</b>	Western Australian Local Government Association
<b>WAPC</b>	Western Australian Planning Commission
<b>WMWA</b>	Waste Management WA
<b>WRC</b>	Water and Rivers Commission