ENVIRONMENTAL PROTECTION AUTHORITY

ANNUAL REPORT

2000 • 2001

Contents

Transmittal to the Minister

Hon Dr Judy Edwards MLA

MINISTER FOR THE ENVIRONMENT AND HERITAGE

In accordance with s21 of the *Environmental Protection Act 1986*, I submit the EPA's annual report for the year ended 30 June 2001.

It is with pleasure that, on behalf of the EPA, I advise that for the reporting period to 30 June 2001, 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 Environmental Protection.

Bernard Bowen

CHAIRMAN

31 October 2001

Environmental Protection Authority

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Chairman's Overview

This report covers my third year as Chairman of the Environmental Protection Authority (EPA). It has been a challenging and rewarding time.

The EPA was established by Parliament as an independent Authority with the broad objective of protecting the State's environment. This is undertaken through the process of providing overarching environmental advice to the Minister for the Environment and Heritage 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 to the Minister.

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 assessment and policy development. Towards the end of the report there are details of the EPA's role in the operation of the Waste Management (WA) facilities together with information on legislation issues, site visits undertaken by the EPA and the work of the Advisory Council to the EPA.

The array of matters coming before the EPA for examination during the year was diverse and challenging and included finalisation of its report on the proposal to extend the Ord irrigation scheme for agriculture. The proposal included the clearing of a considerable area of land which required the EPA to give detailed attention to the matter of the protection of the State's biodiversity in the East Kimberley region. Clearing has been a particularly sensitive matter for the EPA during the year, and the EPA finalised its Position Paper on clearing with special emphasis on the agricultural zone. The EPA is committed to providing advice that protects the State's

biological diversity. This is one of the unique aspects of Western Australia and is most widely recognised through the magnificent display of wildflowers that attracts people from around the world.

A major part of the work of the EPA is the provision of advice to the Minister on the assessment of development proposals. These proposals may be from either the private or public sectors, including government departments. The EPA values very highly its discussions with proponents in relation to their proposals, the preparation of the environmental review documents and the establishment of environmental commitments. In addition, the EPA encourages proponents to actively pursue a strategy of effective public consultation.

A pleasing aspect of the assessments during the year has been the number of reports prepared by the EPA as Environmental Protection Statements. This level of assessment is not appropriate for all assessments. However, for those circumstances where it can be used, the process ensures that the proponent will engage the public early in the preparation of a proposal and can respond to any environmental matters raised in the public discussion. During the year, the EPA assessed eight proposals through the Environmental Protection Statement process. There was only one appeal on this level of assessment, indicating a good level of public acceptance.

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 Chief Executive Officer of the Department of Environmental Protection and his staff for the part each has played in assisting the EPA in doing its work of protecting the environment. It is very important that all those involved have confidence that the process will deliver outcomes that give full attention to environmental protection.

I also want to record my appreciation to the members of the EPA for their assistance so readily given to the work of the EPA. Finally, although it is an independent Authority, the work of the EPA is enhanced by the Chairman having an opportunity to inform the Minister about matters of importance being considered by the EPA. I thank the Minister for the Environment of the day, the Hon Cheryl Edwardes, for her courtesy and friendly advice in relation to the work of the EPA. I also welcome the new Minister, the Hon Dr Judy Edwards, who has already made clear that she regards the work of the EPA to be of high importance.

Bernard Bowen
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.

Mr Bernard Bowen, Chairman

Member and Deputy Chairman from 14 January 1994
Chairman from 12 August 1997 until 1 January 2003

Bernard Bowen was Director of the Department of Fisheries and Wildlife between 1968 and 1985, and Director of the Fisheries Department between 1985 and 1991. He was Chairman of the Western Australian Wildlife Authority between 1968 and 1985, member of the Perth Zoological Gardens Board between 1972 and 1987 and member of the National Parks Authority between 1975 and 1985.

Mr Bowen has extensive experience in marine research and management at the national and international levels. Between 1994 and 1996, Mr Bowen participated in the preparation of the National State of the Environment Report as Chairman of the Estuaries and the Sea Reference Group.

Mr Bowen has been appointed to the National CSIRO Marine Sector Advisory Committee for a period of three years, and also to the Life Sciences Panel of the Cooperative Research Centres program.

Dr Elizabeth Mattiske, Deputy Chairman

Member from 6 May 1998 until 5 May 2000, Deputy Chairman from 6 May 2000 until 6 May 2003

Libby Mattiske is a plant ecologist with a Bachelor of Science with Honours and a PhD from Adelaide University.

Dr Mattiske has consulted privately in this field for many years, and is currently Managing Director of Mattiske Consulting Pty Ltd. The company conducts botanical and ecological studies and advises government agencies and mining companies on how to minimise the environmental impact of proposed developments.

Dr Mattiske's involvement, both past and present, with many environmental committees includes the System 6 Committee, the CSIRO Regional Research Committee (Wildlife and Ecology), the EPA Advisory Committee on Forest Management Plans, the National Parks and Nature Conservation Authority (WA), CALM Ranking Panel for the Conservation of Western Australia's Threatened Flora and Fauna, Australian Heritage Commission, Forest and Research Committee Working Group of Scientists to Review Forest Monitoring and Research Programmes, Council for Sustainable Vegetation Management and the Australian State of the Environment Committee.

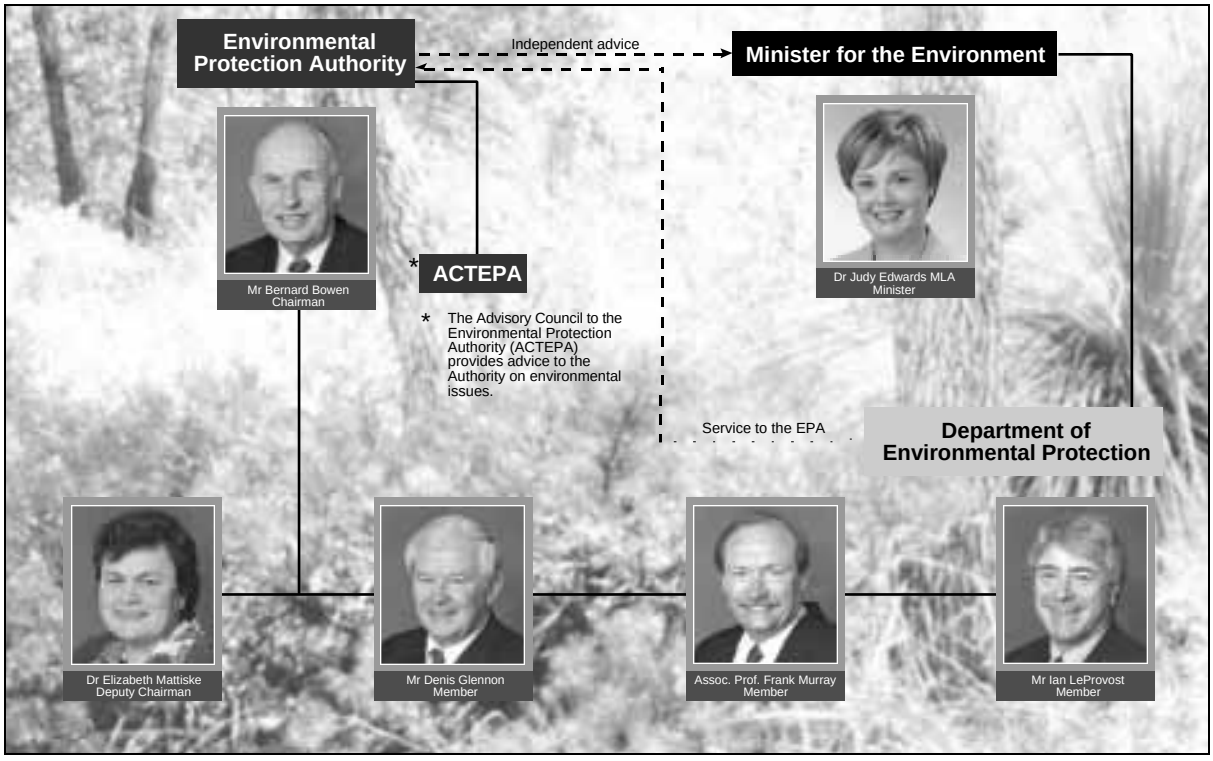

Figure 1: Operational structure of the EPA.

Mr Denis Glennon

Member from 1 January 1998 until 1 January 2003

Denis Glennon is Managing Director and board member of Environmental Solutions International Ltd, a company specialising in environmental management, contaminated site assessment and remediation, and hazardous waste, sludge and wastewater treatment.

Mr Glennon has a wide knowledge of environmental and pollution management systems and engineering, ecologically sustainable development and environmental management policy formulation, especially in regard to industrial waste disposal.

Mr Glennon is a Director and immediate past chairman of the Environment Management Industry Association of Australia (EMIAA), which comprises more than 200 private sector companies, research centres, tertiary institutions and Federal and State government departments.

Mr Ian Le Provost

Member from 1 January 2000 until 1 January 2003

Ian Le Provost is principal of Le Provost Dames and Moore, a specialist marine and coastal environmental consultancy within the multinational URS Corporation. He has some 30 years consulting experience in environmental assessment, monitoring and management in WA and more recently in northern Australia and SE Asia. He has been involved with most of the major marina, canal and harbour developments and offshore petroleum developments in WA since the early 1970s.

Mr Le Provost has a graduate degree in environmental science and post graduate qualifications in business management and ecologically sustainable development. He is also an accredited commercial diver.

Mr Le Provost is a board member of the WA Estuarine Research Foundation, Chairman of the Employer's Advisory Council for the School of Environmental Science at Murdoch University, and a past member and chairman of the Advisory Council to the EPA.

Associate Professor Frank Murray

Member from 6 May 2000 until 6 May 2003

Frank Murray is an environmental scientist with a Bachelor of Science with Honours from London University and a PhD from the University of Newcastle (NSW).

Associate Professor Murray has conducted research on pollution and environmental management for over 25 years, and has published widely is these fields. He is an Associate Professor in the School of Environmental Science at Murdoch University, where he teaches and conducts research. He is also the Director of Postgraduate Studies at Murdoch University. He regularly acts as a consultant to the World Health Organisation, United Nations Environment Programme and the Stockholm Environment Institute on issues related to air pollution and environmental management in various parts of the world.

MAJOR ENVIRONMENTAL ISSUES

Current members of the Environmental Protection Authority (from front left) Mr Bernard Bowen (Chairman), Dr Elizabeth Mattiske, (from back left) Professor Frank Murray, Mr Ian Le Provost and Mr Denis Glennon.

The Environmental Protection Authority (EPA) has overarching responsibility for the provision of advice to Government on environmental matters, and the public expectation of the EPA 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), 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.

Ecological Sustainability of Natural Resource Management

All agencies responsible for the management of natural resources – air, land and water, and the products nurtured in these environments – have an increasing responsibility to demonstrate to the community that attention is being given, in a transparent manner, to ecologically sustainable management of those resources.

The EPA has an important role to play in consultation with the agencies in setting over-arching environmental values, objectives and targets which agencies should take into account in giving attention to their environmental responsibilities.

The EPA also has a role at the evaluation level in reviewing environmental performance against objectives and targets so as to evaluate the performance of natural resource management.

The EPA has been working closely with natural resource management agencies on the subject of environmental performance, and to this end a workshop, attended by all of the Chief Executive Officers of the natural resource agencies and EPA members, was held on 19 March 2001.

At that workshop the EPA was encouraged to pursue the setting of overarching environmental values, objectives and targets. In undertaking its role of evaluating environmental performance, the EPA will work closely with the agencies and take into account the arrangements already in place.

As examples, the evaluation of ecologically sustainable forest management will be undertaken through the EPA's consideration of the next Forest Management Plan (2004-2013), and the evaluation of aspects of surface water and groundwater are undertaken through the assessment of environmental river flows and the management of sources of groundwater.

The EPA will be working with the natural resource management agencies to agree upon the most appropriate method for the EPA to undertake the task of evaluating environmental performance in an independent and transparent manner.

Cockburn Sound Environmental Protection Policy and its Relationship to the Cockburn Sound Management Council

Cockburn Sound, situated within Perth's coastal waters, is a well sheltered and accessible marine embayment highly valued by the community for its ecological, economic and recreational attributes.

The EPA is conscious of the need to protect the intrinsic values of biological diversity and the ecological, social, economic, scientific, educational, cultural, recreational and aesthetic values of these waters. It recognises the importance of Cockburn Sound for commercial purposes, including activities such as fisheries, aquaculture and tourism, which

EPA site visit to Port Catherine development.
From left: David Rowe (proponent), Mick Rogers (consultant), Richard Gorham (consultant), Stephen Watson (DEP regional officer), Frank Murray (EPA), Ian Le Provost (EPA), Des Lord (consultant), Nick Perrignon (proponent), Bernard Bowen (EPA), Darren Walsh (DEP) and Bryan Curtis (Ministry for Planning).

require a high level of marine water quality. The EPA also recognises other uses of the Sound such as industrial water supply, shipping, harbours and marinas, and as the receiving body for waste inputs from point and diffuse sources from foreshore industry and catchment land uses.

The *Southern Metropolitan Coastal Waters Study* published in 1996 highlighted the important linkages between a wide range of land-based human activities, occurring in urban, industrial and rural catchments, and the environmental quality of the coastal waters.

The EPA's objective is to establish an environmental management framework to maintain the established values of the marine environment in Cockburn Sound. This is consistent with the National Water Quality Management Strategy, and with the National Strategy for Ecologically Sustainable Development.

In November 2000 the EPA released a public explanatory document titled *"Managing Perth's Coastal Waters: Towards An Environmental Protection Policy (EPP) for Cockburn Sound"*. The document informed the community about measures being developed to protect the environment of Cockburn Sound, namely:

- development by the EPA of an Environmental Protection Policy (EPP) for Cockburn Sound, to establish a management framework to declare and protect the environmental values of Cockburn Sound. These values and objectives were derived from extensive community consultation. The environmental values and objectives that apply to the waters of Cockburn Sound were identified in the EPA document entitled *"Perth's Coastal Waters: Environmental Values and Objectives"*; and
- the formation of the Cockburn Sound Management Council to facilitate and coordinate on-going environmental management of Cockburn Sound and its catchment, and to prepare and implement an Environmental Management Plan (EMP). The EPP would provide the authority for the development and implementation of the EMP.

The environmental values to be protected are ecosystem health (an ecological value), and the social values of fishing, aquaculture, recreation, aesthetics and industrial water supply.

Measurable environmental benchmarks (environmental quality criteria) are being developed by scientists to indicate whether or not the environmental quality objectives are being met, and where management action will be required. The criteria development process is well advanced, and the draft environmental values, objectives, criteria and boundaries will be released by the EPA for public comment as part of the Draft EPP.

This is part of a broader consultative process that has included four technical workshops and five catchment uses workshops, involving the scientific community, policy makers and community representatives. The working draft EPP and EMP have been reviewed by the wide membership of the Cockburn Sound Management Council at its monthly meetings. Two well-attended community forums were conducted by the Cockburn Sound Management Council.

The EPP provides a management framework for environmental protection and the legal basis for the Cockburn Sound Management Council to develop and implement the EMP. Importantly, the Cockburn Sound Management Council will coordinate actions by responsible authorities in the management of multiple uses within the land and marine environment of Cockburn Sound. It will also report regularly on progress against the objectives of the EPP and EMP.

In June 2001 the EPA reported on progress in developing the EPP for Cockburn Sound in a document entitled *"Progress Report: Cockburn Sound Environmental Protection Policy"*. A Progress Report on the EMP was released at the same time by the Cockburn Sound Management Council. While preparation of the EPP is progressing well, the EPA reported that it is still in the process of obtaining advice on the environmental quality criteria, boundaries, and on the management of cumulative impacts, terrestrial groundwater and surface water. The EPA anticipates that the Draft EPP and Regulations containing the environmental values, environmental quality objectives, environmental

quality criteria and boundaries will be released for public consultation in the last quarter of 2001.

Following analysis and revision of the EPP in response to submissions, a revised draft will be transmitted to the Minister for the Environment and Heritage for consideration. The Minister will consult with others to determine whether further changes are needed. The final Cockburn Sound EPP will then be gazetted.

The Cockburn Sound Management Council expects to release the Draft EMP at the same time as the draft EPP is released by the EPA.

As part of the EMP, a program of implementation, monitoring and reporting procedures will be finalised. These procedures will develop from inter-agency consultation about best management and reporting practice.

Protection of Native Vegetation

The protection of Western Australia's native vegetation is important, not only because of its biological diversity and uniqueness, but also because of the part it plays in ecosystem processes. The importance of native vegetation has been brought into sharp focus in recent times through the issue of salinity in the agricultural areas.

Clearing and consequential salinity are having a devastating effect on biodiversity through the direct loss of plant species, and the associated loss of mammals, birds and other animals which depend upon sufficiently large areas of healthy bush for food and shelter. Many of the remaining areas of native vegetation in the wheatbelt are small islands surrounded by farmlands, and the fauna are unable to move to other areas of native vegetation when they are too far apart and not linked by "stepping stones" or corridors.

The EPA has long been concerned about the environmental consequences of clearing in the agricultural area and, whilst it appreciates that there are matters of equity to be considered, it holds strongly to the view that from an environmental perspective it is unreasonable to allow further clearing to be undertaken in the agricultural area for agricultural purposes.

The matter of land clearing is also important in other areas of the State. Western Australia is a signatory to the National Strategy for the Conservation of Australia's Biological Diversity and the principles embodied in that strategy have to be followed whenever clearing of native vegetation is being considered.

The EPA has endeavoured to provide a guide to the operational interpretation of the National Strategy on land clearing. This has been undertaken through a preliminary Position Statement, released for public comment, and then the EPA Position Statement on Environmental Protection of Native Vegetation in Western Australia released in December 2000. In finalising its Position Statement, the EPA considered an array of inputs from conservation groups, government agencies and individual members of the public.

EPA site visit to Tiwest Cooljarloo Mineral Sands Mining Operations. Photograph: South Mine Concentrator

In relation to the Position Paper on Native Vegetation, the EPA records its appreciation of the work undertaken by the former Deputy Chairman, Ms Sally Robinson. Ms Robinson was instrumental in the development of Position Statements, and wrote the original text of the Position Statement on Native Vegetation for EPA consideration.

Dryland Salinity

The salinity strategy released by the Government of the day and the State Salinity Council in March 2000 clearly outlined the dimensions of the salinisation problem in Western Australia.

The area affected by salinity will continue to rise from the current level of about 2 million hectares to the order of 4.5 to 6.0 million hectares over the next 50 to 100 years. The environmental impact of salinisation is significant, and places under threat a large number of the State's nature reserves as well as important fauna and flora of the area. Additionally, salinisation has an increasing impact on the amount of agricultural land available and on the infrastructure of rural commuities.

While salinisation may initially impact upon the rural environment and its communities, it is a wider community problem which requires understanding by the community and Government at all levels. The State Salinity Council (SSC) set out a Salinity Strategy to reduce the impact of salinity in the southwest agricultural region and has moved to have community ownership of that Strategy. The EPA has welcomed the progress being made by the

State Salinity Council in empowering the community through increased representation on the Council.

The EPA was pleased to learn that the Commonwealth Government had provided funds for a Co-operative Research Centre (CRC) which has been established to give attention to plant-based management of dryland salinity. The documentation leading to the establishment of the CRC set out, quite correctly, that there was a need for a revolution in agriculture, and quickly. The farming community needs advice at both the scientific and practical levels to make the transition to a more sustainable production system.

The establishment of the CRC, the appointment of a Salinity Task Force of Review by the State Government, and the increased involvement of the community through the SSC and workshops, have highlighted the need for a sharper focus on the vision of what can be achieved in agriculture, in nature reserve maintenance and in the protection of the most important of the rural infrastructures.

The EPA has an important role to play in assisting the SSC by setting out the overarching goals and targets which give operational interpretation to the vision for the rural areas impacted by salinisation and the strategies being implemented to reduce that impact.

During the year there has been considerable progress in understanding the magnitude of the salinity threat, and this has led to a recognition that up to 50% of some catchments are likely to become saline within 40 years or so. The environmental, social and economic impacts of such a change in the landscape are of national significance. This represents a challenge well beyond the capacity of any of the agricultural systems. The State Government and the SSC are encouraged to identify one or two catchments and to use these to demonstrate the successful integration of "an appropriate mix of the tools available to manage salinity" (Salinity Strategy). There is an urgent need to utilise the full array of initiatives and actions available and to give attention to the implementation of demonstration catchments.

EPA's Role in Perth's Bush Forever (formerly Perth's Bushplan)

The Government of the day endorsed and released Bush Forever in December 2000, following consideration of advice from a number of authorities and agencies, including the EPA. Following the publication of Bush Forever, the Authority moved quickly to clarify its role in the implementation of individual Bush Forever sites.

To this end, in January 2001 the EPA released policy advice on aspects of Bush Forever under s16(e) of the EP Act 1986 and also a draft Guidance Statement on levels of assessment for proposals impacting upon bushland areas within System 6 and the Southern Swan Coastal Plain Region.

The EPA endorsed Bush Forever as a sound approach for providing formal recognition of the value of Perth's biodiversity and a commitment to a comprehensive plan for its conservation. It provides an opportunity for Perth, unlike many other capital cities in the world, to conserve and maintain examples of much of the city's rich natural biological heritage. Bush Forever represents a key government initiative of long-term significance in achieving this objective.

Bush Forever provides a framework for the conservation of regionally significant vegetation within the context of environmental planning for Perth that incorporates biodiversity conservation and the linking of the landscape, cultural, community and educational values that help define the character and identity of this city.

The EPA recognised that negotiated solutions would be required in relation to some of the Bush Forever sites identified in the draft Perth's Bushplan, particularly areas that were generally recognised in the draft report as constrained sites to be protected through Negotiated Planning Solutions involving land zoned urban, urban deferred or industrial and that involves a compromise between conservation and development. While these generally included the most contentious of Bush Forever sites, they represented only a very small portion of the overall area identified for conservation in the draft Perth's Bushplan. In Bush Forever there are 17 sites in this category.

In the negotiation of solutions for such sites, the EPA advised that it expects a reasonable outcome through the negotiated planning solution process administered by the Ministry for Planning. The EPA considers that a "reasonable outcome" is where the core (highest conservation value) area/s and threatened ecological communities are protected. Recognising the constraints applying to these sites, the objective should be to protect as much bushland as possible. However, Negotiated Planning Solutions agreed at the government agency level do not preclude the possibility of referrals to the Authority pursuant to the EP Act.

The EPA, in discharging its responsibilities under the Act with respect to referrals, is required to consider proposals on their merits. The EPA would, however, expect that the officers would have made sound judgements and this would be an important factor in the EPA's consideration of a referral. The EPA would also take into account the regional context for individual sites in arriving at its decision on a referral. It is also possible that there may be other environmental issues unrelated to Bush

Forever that warrant referral and consideration by the EPA.

The EPA has indicated that it would be unlikely to assess either a proposal or a scheme amendment referred to it if the Negotiated Planning Solution achieves a reasonable conservation outcome expected through Bush Forever implementation.

Dieback Disease

Many native flora and fauna species are under constant threat from a range of diseases and pests. *Phytophthora cinnamomi* is recognised nationally and internationally as one of the key threats to biodiversity (at ecosystem, species and genetic levels) and the ecological functioning processes of many ecosystems.

In 2000, the EPA provided advice on the pathogen-*Phytophthora cinnamomi*. This advice was prepared in response to the Ministerial request "that the EPA review the report and protocol prepared by the Dieback Consultative Council and provide advice in the context of the environmental significance of *Phytophthora cinnamomi* (dieback) and implications of the protocol for its management in Western Australia".

The primary purpose of the EPA report was to provide advice to the Minister for the Environment under s16(e) of the EPA Act on the report entitled "*Phytophthora cinnamomi* and disease caused by it – a protocol for identifying 'protectable areas' and their priority for management".

The review included consultation with a range of community groups, specialists involved with different aspects of the pathogen's biology, and the Department of Conservation and Land Management, which has the responsibility for managing the disease in the conservation and forestry estates vested in the Conservation Commission of Western Australia. In providing its advice, the EPA was mindful that the Parliament had established a Conservation Commission whose functions include advising the Minister for the Environment on the development of policies for the conservation and management of biodiversity and biodiversity components throughout the State.

The significance of this disease was also recognised by local governments through the publication of their guide for managing dieback in local government jurisdictions.

The EPA recognised that, in view of the complexity of ecosystems and temporal changes in site conditions, the management of this key threatening process is a very difficult task. The protocol focussed on managing human behaviour to minimise the role of people in spreading the pathogen. The spread of the pathogen is a significant threat to aspects of the State's biodiversity, and thus the approach to threat abatement must always be one of continuous improvement in research, policy, strategic planning and management. It is in this context that the EPA provided its advice, not only on the protocol, but also on some wider issues.

The EPA advised the Minister that the protocol prepared by the Dieback Consultative Council should be endorsed, but on a trial basis with rigorous documentation of the trial and an independent review of the outcomes of the trial. The EPA considered that the long-term implementation of the protocol should only be agreed to if it could be demonstrated that there was an improvement in the management of *Phytophthora cinnamomi* in State Forest areas.

The EPA also provided advice associated with the pathogen, including the application of the precautionary principle in operational procedures, funding for management and research programs, the clarification of the roles and responsibilities of the Dieback Consultative Council and the Conservation Commission, and the need for a public awareness program.

Forest Management

The EPA has traditionally been involved in forest management through the assessment of Forest Management Plans (FMP). The current FMP is for the term 1994 to 2003. For 2004 and beyond, a process has been established by the Conservation Commission of Western Australia (CCWA) and the Department of Conservation and Land Management (CALM) to prepare a FMP.

The FMP for 2004 and beyond will be referred to the EPA for environmental impact assessment. The EPA has been working with the CCWA and CALM so as to coordinate the review process under the Department of Conservation and Land Management Act 1984 and the EP Act.

The EPA will be undertaking an assessment of the FMP, and this will include a period of public examination and submissions. The EPA will provide its assessment report to the Minister during 2002. It is important that there be sufficient time available for the final Government decisions to be made on the FMP, well before the conclusion of the current FMP which expires on 31 December 2003.

Special Areas

The State has a system of natural parks, nature reserves and marine reserves which provide a degree of biodiversity protection. However, outside the reserve system there are many areas which have "special" environmental values which need to be considered when environmental assessment is being undertaken.

Mr Bernard Bowen, chairman, EPA, presenting the EPA prize for Conservation Biology at Murdoch University to Ms Rebecca Austin.

Examples of "special areas" are rainforests of the Kimberley, coastal mangroves, research sites used for long term monitoring, and sites of special geological significance.

At the initiation of the then Deputy Chairman of the EPA, Miss Sally Robinson, a series of workshops was held in 1999 to brainstorm the matter of "special areas" throughout the State. Later in 2001 a Position Statement will be produced as a result of the workshops to assist proponents and the community generally to understand the diversity of "special" environmental areas in Western Australia.

Subterranean Fauna

One of the environmental factors considered by the EPA during the year has been the impact of proposals on subterranean fauna, mostly invertebrates. The proposals range from the Orebody 23 iron ore project near Newman to the Mt Margaret nickel cobalt project north of Leonora.

The subterranean fauna, called stygofauna (which live in groundwater) and troglofauna (which live in air spaces of caves), are very small, rarely being more than 5mm long. The most abundant and diverse stygofaunas generally occur in calcrete reservoirs along extensive networks of palaeorivers extending over much of Western Australia. Work undertaken by the Western Australian Museum suggests that each discrete calcrete aquifer studied to date in Western Australia may contain an endemic stygofauna, with taxa that are known solely from that aquifer.

This degree of endemism presents a problem for the EPA in providing advice to the Minister and for the mining industry in planning its resource development. If individual calcrete reservoirs commonly contain unique stygofaunas, it appears likely that mining requiring dewatering of calcrete aquifers could endanger individual stygobite species. This is not insignificant as many mining operations in Western Australia are localised near palaeorivers having these calcrete reservoirs.

The EPA has engaged Dr Philip Playford to examine the issue and provide a report under the following terms of reference :-

- Outline present knowledge of subterranean biotas in Western Australia and the potential impacts on them from resource development.
- Advise on the appropriateness of the most recent Environmental Conditions required of development proponents in relation to the protection of subterranean biotas.
- Advise on the procedural and/or legislative amendments, if considered necessary, which could be considered by Government.
- Advise on practical actions that should be considered at a whole of government level in relation to the impacts on subterranean biotas from development projects.
- Advise on educational processes which should be put in place to inform interested parties.

The report is expected to be provided to the EPA before the end of 2001.

Shark Bay World Heritage Property

Petroleum

A joint Federal-State government study is being undertaken into the potential impacts of petroleum industry activities in the Shark Bay World Heritage Area. The study is coordinated by the Department of Environmental Protection on behalf of the EPA, in close liaison with State and Federal government agencies and other stakeholders.

The technical report entitled *"Draft Working Paper on Environmental Values, Cultural Uses and Petroleum Industry Impacts"* was released by the DEP for public comment for a three month period closing at the end of January 2001. Information Days were held coincident with the release at Denham and Perth. The report generated 19 submissions covering a wide range of views. New information from these responses is being incorporated into the final Working Paper, which is close to completion. Following finalisation of the technical Working Paper, the EPA will prepare advice to the Minister for the Environment and Heritage under s16(e) of the EPA Act.

Guidance Statement on the Assessment of Development Proposals in Shark Bay World Heritage Property

Public comment on the 'Draft' Guidance Statement on the Assessment of Development Proposals in the

Shark Bay World Heritage Property was received during the year. The EPA considered the issues arising out of the public comment period and released the 'final' Guidance Statement on the Assessment of Development Proposals in Shark Bay World Heritage Property. The purpose of this Guidance Statement is to assist proponents understand the special importance of the World Heritage Area and the consultation process the EPA expects proponents to undertake in giving full attention to the Area's environmental values. Shark Bay is the only World Heritage Area in Western Australia.

University Linkage Projects

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

The programme commenced in October 2000. There have been six grants to 30 June 2001 totalling $9,490. Three grants were to honours students, one to a PhD student and two grants were for prizes in environmental science and conservation biology. The areas of work sponsored by the EPA include a review of terrestrial fauna survey data including advice on the level of detailed information required to assist the EPA in its environmental assessment of projects, reviewing the effectiveness of Ministerial Conditions in improving environmental practices in Western Australia and consideration of biological diversity in EPA decision making.

The students will be making presentations to the EPA on the results of their research work, with special emphasis on the aspects which they believe are of most importance to the EPA decision-making process.

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 555 development proposals and planning schemes were referred to the EPA for consideration. Of these, the EPA determined that 35 proposals required formal assessment, reporting and recommendations to the Minister for the Environment and Heritage. A further 266 required informal review with specific advice to the proponents.

During the year, 35 formal assessments were completed, including 6 which provided strategic advice under s16(e) of the EP Act. A list of these is set out in Appendices 2,3,4 and 5. Some of the more important assessments are discussed below. This is preceded by a brief discussion of some overarching issues in relation to the environmental assessment process.

Judging Environmental Acceptability

Proponents of development proposals have a responsibility in their environmental review documents to:

- describe the impacts of their proposal on the environment;
- show that all reasonable and practicable steps have been taken to minimise those impacts;
- commit to appropriate actions and measures to manage the impacts; and
- justify the proposition that the impacts of their proposal, both individually and in total, should be judged by the EPA to be environmentally acceptable.

The majority of proponents clearly recognise their obligations in respect of the first three requirements. Many proponents, however, fail to recognise and understand their responsibility in regard to the last requirement. This often leads to difficulties and prolongs the time taken for assessment.

Defining the acceptability criteria for impact upon some elements of the environment is relatively straight forward. For example, in relation to gaseous emissions, there are often nationally accepted standards for ambient levels which must be met.

On the other hand, for many environmental factors, particularly those related to the biological and physical environment, defining 'acceptability criteria' is not straightforward. This difficulty is sometimes further compounded by limitations in our ability to define with confidence the ecological response or consequences associated with a particular impact, or combination of impacts, of a proposal in both a local and regional context.

To assist proponents and the public generally in this regard, the EPA has been preparing 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.

In parallel with this, where proposals involve major environmental issues and acceptability criteria are uncertain, and where there is a need to have the highest degree of confidence in the prediction of impacts and their consequences, the EPA is increasingly encouraging proponents to establish peer review panels of specialists to guide them in their environmental studies and review their environmental documents before being submitted to the EPA and released for public comment. Often, in addition to being experts in a particular environmental field, peer review panel members have specific knowledge related to the geographic region where the proposal is to be located, such that the regional cumulative impacts can be considered more thoroughly.

The EPA also encourages meaningful consultation by proponents with relevant public and government agency stakeholders during preparation of their environmental review reports, as part of best practice environmental impact assessment.

It is the EPA's experience that where proponents clearly embrace the environmental impact assessment process and accept that it is not only their responsibility to define the impacts of their proposal and how they intend to manage these, but also to consider their proposal in a broader bioregional, ecosystem, and social surroundings context, and to justify the acceptability of the proposal, they have less difficulty with the environmental impact assessment process and produce a higher quality project in terms of environmental outcomes.

The Importance of Context

An important starting point for the EPA in carrying out environmental impact assessment is the consideration of the type of proposal and the environmental context of the proposed location. These considerations are being increasingly included in the Guidelines issued for the formal assessment of projects.

Context may include aspects such as:

- current land uses on the site and in the general region;
- land tenure;
- the environmental values of the site and nearby areas;
- community expectations about the appropriate use of special areas, including national parks and nature reserves, and how these expectations may impact upon other proposed activities;
- biodiversity on-site and in a regional context;
- the environmental "balance sheet" in regard to potential environmental gains and environmental losses from the proposal, on both local and State scales; and
- the balance between an individual's perception of their right to develop and the collective interests of the community in relation to wise use of environmental resources and intergenerational equity.

There are many aspects taken into account by the EPA in forming its overall judgement of environmental acceptability, including consideration of the overall environmental costs and benefits, and who bears those costs (community, proponent or a reasonable balance). An ideal development could be regarded as one which demonstrates good environmental outcomes and can be regarded by the community as a socially justifiable development, in terms of overall environmental costs and benefits. Such a project would achieve a sensible balance between environmental costs and benefits and would not put an unreasonable burden on the community to bear the environmental costs, either in this generation or in subsequent ones.

The Importance of Standards

The EPA is developing a series of documents to provide clarification and guidance on minimum standards in biological data collection for the EPA process.

This work has been undertaken through meetings with proponents, representatives of CALM and other government agencies, as well as with academics involved in defining biological values in the environment.

A preliminary Position Statement was released in May 2000, and a number of Guidance Statements are currently being prepared under the general heading of Terrestrial Biological Survey Standards, including statements on flora, vegetation and vertebrate fauna.

Review of Environmental Impact Assessment (EIA) Process

During the year, the EPA continued to seek ways to improve the timeliness and effectiveness of the EIA process.

As part of this review the EPA engaged Emeritus Professor David Lindsay to carry out a short study to canvass ways in which the process may be streamlined and made easier for all parties without compromising the rigour of the process itself.

The method of the review was to discuss the process of developing a successful environmental impact

assessment from original scoping to Ministerial approval, with a number of proponents who have had major development proposals assessed by the EPA in recent years. In addition, other agencies who provide advice to the EPA in the assessment process, including Department of Conservation and Land Management, Water and Rivers Commission, and Health Department of Western Australia, were consulted to broaden the scope of the review and information on which it was based.

The general approach was to break down the EIA process into phases from conception to approval, and then to ask the participants to provide their own views on the way in which each phase was handled and the efficiency with which it achieved its target outcome.

The review highlighted nine areas where the EPA might consider refinements, or provide greater clarity regarding the process and its requirements, to improve the overall process.

In parallel with this study, the EPA also held a Workshop with senior DEP staff to identify ways to improve the process, from the point of view of the EPA/DEP experience. The Workshop looked at problems which were identified, or perceived to exist with:

- EIA documents;
- the process itself
- the EPA's own input; and
- proponent's performance.

The Workshop then identified a number of potential solutions covering:

- better management of the work load;
- better advice to proponents on the requirements of EIA and their obligations; and
- better ways for the EPA to be involved during the assessment.

Based on Professor Lindsay's study and the findings of the Workshop, the EPA now intends to consult with industry groups representing proponents, conservation groups, the Environmental Consultants Association, and relevant government agencies on proposed changes to the process to be implemented during 2001/02. These will generally cover:

- introduction of a "referral form" setting out the information required to be included with referrals from proponents and decision making authorities;
- where a proposal is subject to formal assessment, the proponent will be required to prepare an Environmental Scoping document setting out, amongst other things, the key environmental issues arising from the proposal and the surveys and investigations the proponent intends to undertake as part of the EIA;
- a requirement for proponent environmental review documents to describe key ecosystem processes and provide a regional setting, and to consider existing cumulative impacts, particularly with regard to impacts on biodiversity;
- a requirement for proponent environmental review documents to identify environmental benefits which would be included in, or provided by, the proposal, and including justification as to why the proposal should be found to be environmentally acceptable;
- increased requirement for peer review of proponent environmental review documentation and its contents;
- early involvement of the EPA in reviewing and agreeing to the Environmental Scoping document, and regular involvement of the EPA during the assessment, to address critical matters at the earliest stage possible; and
- improved documentation setting out the EPA's requirements for EIA, and providing clearer advice on EPA environmental objectives.

Additional Levels of Environmental Assessment

Following changes implemented in 1999/2000 to provide additional levels of assessment to streamline the way it deals with some proposals, the EPA assessed seven proposals through the 'Environmental Protection Statement' process. Of these, only one had appeals on the EPS level of assessment, indicating a good level of acceptance of this process in its first full year. A list of these is presented in Appendix 3.

The EPA also assessed one land clearing proposal through the 'Proposal Unlikely to be Environmentally Acceptable' process (Appendix 4).

Major Projects

Of the proposals assessed during 2000/2001, the EPA was particularly pleased with the quality of environmental assessment, the consideration of ways to mitigate or off-set environmental impacts, and the extent of stakeholder consultation associated with the following proposals:

- Waste to Energy and Water Plant, Mason Road, Kwinana;
- Esperance Port – Upgrade of Marine Facilities; and
- Geraldton Southern Transport Corridor.

These and some of the other more important assessments completed during the year are discussed below.

Ord River Irrigation Area Stage 2, Kunnunurra

During the year the EPA completed its assessment of the proposal by Wesfarmers Sugar Company Pty Ltd, Marubeni Corporation and the Water Corporation of Western Australia to develop the Ord River Irrigation Area Stage 2, for an export-based raw sugar industry.

The project area extends over 76,000 hectares of land covering the Weaber, Keep River and Knox Creek Plains, with approximately equal areas being in Western Australia and the Northern Territory.

The proposal was assessed jointly by the EPA and the Northern Territory Department of Lands, Planning and Environment.

The EPA conducted its assessment in two parts: the first focussing on the biodiversity implications of the project, and the second on management requirements.

Biodiversity was a major issue as the project requires extensive clearing of native vegetation. The EPA considered the proposal against the National Strategy for Conservation of Australia's Biological Diversity, which was adopted by all States, Territories and the Commonwealth in 1996.

The EPA based its biodiversity assessment on the following criteria:

- no extinction of known species of plant or animal;
- adequate level of survey to identify possible risks of extinction and threats to viability of populations;
- maintaining and protecting riverine systems and riparian vegetation;
- retention of a target of 30% of mapped vegetation associations/communities within the project area; and
- adequate representation of significant environmental values within protected areas.

As part of the assessment the proponents were required to carry out extensive vegetation surveys. Through the assessment process, critical areas for vegetation protection were identified and excluded from the development area.

The EPA concluded that while the project would lead to the loss of approximately 33,500 hectares of grassland vegetation and modify the natural hydrological regime, it was unlikely that any species of flora or fauna would become extinct, though some fauna would be affected by the loss of a large area of habitat.

A buffer zone is to be established to protect all vegetation associations/communities and this has contributed to the EPA target of 30% retention of vegetation associations/communities being achieved. Riparian zones around water courses and wetlands have been excluded from the development.

In addition, the EPA recommended that proposals by the Western Australian and Northern Territory Governments to establish conservation reserves covering 421,600 hectares in the region should be implemented within two years of any decision to proceed with the project.

The second part of the EPA's assessment, focussing on management requirements, considered a wide range of matters including groundwater and surface water management, mosquitoes and diseases vectors, chemical use, recreation, and the overall management structure to be put in place to ensure environmental obligations were met.

The assessment also considered the factor of Aboriginal heritage and culture. The EPA met several times during the assessment with representatives of the Kimberly and Northern Land Councils and the Miriuwung and Gajerrong people, and endeavoured to gather together reasonably available material to enable it to understand and identify the extent to which the aesthetic, cultural, economic and social surroundings of the Aboriginal people would be affected by the proposal.

These meetings were very valuable, but the EPA found that the available information was quite limited when considering the implications of the proposal on Aboriginal values. However, given the commitments made by the proponents to undertake further archaeological and ethnographic surveys of the project area, to develop and implement a Cultural Heritage Management Plan and complete an Aboriginal Socio and Economic Impact Assessment, the EPA was satisfied that the project could be managed to give proper attention to protection of Aboriginal cultural and heritage values.

In parallel with its assessment of the irrigation scheme itself, the EPA also undertook a strategic assessment of the Water and Rivers Commission's Interim Water Allocation Plan for the Ord River, which would give effect to allocation of a large quantity of water to the scheme.

The EPA focussed its review on two key aspects of the plan:

- the proposed research to identify Ecological Water Requirements (EWRs); and

- the methodology used to identify Environmental Water Provisions (EWPs).

The EPA recommended that a review be undertaken of current best practice in defining EWPs for wet-dry tropic rivers, and that the review process seek advice from experts with knowledge of tropical river ecosystems.

As a result of the EPA's assessment, the Water Allocation Plan was substantially revised to give greater recognition to environmental values of the lower Ord River, and further public consultation has been undertaken on the plan. The EPA expects to provide further strategic advice on the Interim Water Allocation Plan, along with advice on the water licence for Ord Stage 2, during 2001/02.

Overall, the EPA concluded that the proposed Ord River Irrigation Scheme Stage 2 could be developed and managed in an environmentally acceptable manner, subject to recommended conditions and satisfactory implementation by the proponents of the management commitments. While there would be environmental costs, the project provided opportunity for considerable environmental benefits including:

- substantially expanded conservation reserves in the region;
- management of the project buffer primarily to protect its conservation values; and
- the opportunity for an Indigenous Land Use Agreement with the indigenous peoples.

Esperance Port – Upgrade of Marine Facilities

The Esperance Port Authority's proposal to upgrade marine facilities at the Esperance Port was to enable an increase in iron–ore handling from two million tonnes per annum to four million tonnes per annum. The upgrade included the deepening of existing berths, dredging of the harbour basin and shipping channel, and installation of associated shiploading infrastructure as well as a new storage shed.

One of the impacts of the proposal is further impairment of visual amenity across Esperance Bay. However, given the Port Authority's commitment to construct shiploaders that are lower and less visually intrusive than those historically constructed, and its decision to locate the new shed behind existing infrastructure, the EPA concluded the visual impacts of the proposal are acceptable.

The EPA also examined the impact on coastal processes of the proposed widening of the breakwater and extension of a finger groyne. The existing breakwater groyne, constructed in 1988-1989 to reduce siltation of the harbour entrance, had effectively interrupted the longshore sediment transport from west of Dempster Head into Esperance Bay. The upgrade is unlikely to further impact upon these processes.

Control of iron-ore dust was a significant issue in the EPA's 1993 assessment. As a result, the Esperance Port Authority installed dust control measures that have been shown through monitoring to be effective. The EPA was satisfied that dust could be managed through the proponent's commitment to install similar dust control measures.

The EPA's technical assessment of a Regulation 17 request to allow a higher noise level than that set down in the Environmental Protection (Noise) Regulations 1997 was a significant aspect of the EPA's assessment.

Although the Esperance Port Authority has undertaken a range of measures in the past to reduce its operational noise emissions, the existing port operations exceed noise levels stipulated under both existing environmental approvals for iron-ore operations and those provided in the Environmental Protection (Noise) Regulations 1997. The upgrade will also exceed these assigned levels under certain conditions.

The EPA considered that it was not practical for the existing operations to comply with the Environmental Protection (Noise) Regulations in the immediate future and concluded a Regulation 17 approval could be granted for a period of three years.

The Esperance Port Authority is required, as part of its approval, to prepare comprehensive noise control programmes for its existing plant. It has been given one year to implement its noise control programme and achieve a further reduction in plant noise. The approval was also structured to ensure that the new shiploader and conveyors are designed and constructed using the quietest reasonably available equipment. At the end of the first year, the noise levels for the existing plant will be reduced to the level set for the upgraded equipment.

The EPA also provided some additional recommendations to the rail manager to ensure that impacts associated with increased train movements outside the Esperance Port boundary, through the town, are identified and managed appropriately. The rail manager conducts rail operations under an existing Environmental Management Programme (EMP). The EPA recommended that the current rail management practices should be reviewed and the EMP revised to ensure that increased movements do not cause undue detrimental impacts. The revised EMP is to be submitted to the EPA.

Cockburn Cement Shellsand Dredge operating in Owen Anchorage.

Waste to Energy and Water Plant, Mason Road, Kwinana

Global Olivine Western Australia (GOWA) proposed to build and operate a Waste to Energy and Water Plant at Lot 15 Mason Road, Kwinana.

The environmental review document for the proposal was available for public review in April 2000 and the EPA released its report and recommendations in December 2000.

The environmental factors assessed in the report were:

- air emissions;
- marine discharges; and
- wastes and by-products.

Of these three factors, air emissions are the main environmental issue associated with waste to energy plants and the EPA recognised that stringent emission limits are required to be met to ensure that air quality is not compromised. The EPA noted the incorporation of 'best practice' air pollution control equipment in the proposal to minimise emissions in accordance with the requirements of the EP Act.

As part of its consideration, the EPA looked at the more general issue of uncertainty associated with the introduction of new technology. The EPA encourages the use of new technology that can achieve better environmental outcomes. Safeguards are needed, however, in the event that the technology does not achieve its design predictions. A number of measures were incorporated into the assessment to address this issue, such as an independent design audit, staged commissioning with achievement of performance benchmarks before subsequent stages could proceed, specialised training requirements and contingency plans if design predictions were not met.

The EPA noted the potential benefits of the proposal in terms of producing substantial quantities of electricity, potable water and other useful materials from a waste stream that would otherwise be disposed of in a landfill.

The EPA further noted that the proposal is but one of the technologies that are being considered to help achieve the State Government's goal of "Towards zero waste by 2020" and that it achieves important reductions in greenhouse gas and reactive organic compound emissions.

Mt Margaret Nickel Colbalt Project

The EPA's joint assessment with the Commonwealth of the proposal by Anaconda Nickel Limited (ANL) continued throughout the year. This project, located between the towns of Leonora and Leinster, would be similar in type to the company's existing Murrin Murrin Nickel Cobalt Project.

The proposal includes mining areas, process water supply borefields, a processing plant, and a number of infrastructure corridors. It is a large project that would impact upon approximately 110 km2 of land spread over a distance of approximately 100 km. The proposal is being assessed by the EPA at the level of Public Environmental Review.

The key issues identified so far through the proposal itself and submissions on the proposal are:

- declared rare and priority flora, and flora of conservation significance;
- regional conservation;
- borefield operation;
- stygofauna; and
- Aboriginal heritage and culture.

During the 8-week public review period, the EPA visited the project site to discuss the proposal with representatives of the local Aboriginal communities and to hear their submissions. The EPA is pleased with the level of consultation that ANL has achieved with the local Aboriginal communities through the Murrin Murrin Aboriginal Environmental Liaison Committee, and notes that a similar Committee is being established for the Mt Margaret Nickel Cobalt Project.

The EPA intends to report on this assessment in July/August 2001.

Long Term Shell Sand Mining, Cockburn Sound

Cockburn Cement Ltd (Cockburn) has been dredging shellsand in the Owen Anchorage area since 1972 under the terms of the Cement Works

(Cockburn Cement Limited) Agreement Act 1971, as amended 1986. The Agreement Act entitles Cockburn to access shellsand sediment within a five mile (8km) radius of a point on Coogee Beach, north of Woodman Point.

Cockburn undertook dredging initially on Parmelia Bank between 1971-1981 and then moved to Success Bank in 1981. Since 1994, Cockburn has been dredging shellsand from an area on Success Bank, known as the short and medium-term dredging areas.

The EPA has undertaken assessments on Cockburn's short-term and medium-term dredging proposals (Bulletins 739, 833 and 901). As part of the short and medium-term dredging proposals, an Environmental Management Plan was formulated to incorporate detailed research aimed at providing information necessary to assist the proponent to minimise the adverse impacts of Cockburn's continuing dredging operations on Success Bank in Owen Anchorage and to resolve the issue of long-term access to shellsand.

The EPA is currently assessing a proposal by Cockburn Cement for the long term (2002 – 2034) dredging of shellsand in the Owen Anchorage/ Cockburn Sound area at the level of Environmental Review and Management Program.

The proposal involves the recovery of 90 million tonnes of limesand in two stages. Stage 1 would result in the removal of 168 ha of seagrass from Success and Parmelia Banks and the dredging of a further 264 ha of unvegetated seafloor for the recovery of 30 million tonnes of limesand. Stage 2 proposes the dredging of 350 ha east of the Mewstone, with little or no seagrass disturbance, for the recovery of 60 million tonnes of limesand.

The proponent's environmental review document was released on 27 November 2000 for 12 weeks public review.

The proponent is currently responding to issues raised by the public review process.

Coral Coast Marina Development, Maud's Landing
Coral Coast Resort

In 1995, the EPA assessed a proposal by Coral Coast Marina Development Pty Ltd (CCMD) to develop a marina-style tourism resort and residential subdivision at Mauds Landing, 3km north of Coral Bay. The EPA found that this proposal was environmentally acceptable subject to nine recommendations. In determining appeals received on the EPA's report, the Minister for the Environment determined that the proposal should not proceed.

EPA site visit to boat launching facility options and Mauds Landing, Coral Bay. From left to right: Kim Taylor (DEP), Associate Professor Frank Murray (EPA), Andrew Kingham (WA Tourism Commission), Doug Bathgate (Gascoyne Development Commission), Darren Walsh (DEP), Bernard Bowen (EPA), Doug Meyers (CALM) and Renee Hodges (DEP).

In 1999, State Cabinet invited CCMD to submit a revised scaled-down proposal for a development at Mauds Landing and endorsed a set of planning and environmental guidelines for the proposal. In May 2000, CCMD referred its proposal to the EPA. The level of assessment was set at PER with a public comment period of eight weeks.

CCMD's revised proposal consists of land development for tourism and residential accommodation based around a 46 hectare inland waterway adjacent to Bateman Bay adjoining the Ningaloo Marine Park. The proposal also includes a site for the development of wastewater, power and landfill services.

CCMD have also proposed a draft Natural Resources Management Agreement with CALM and Fisheries WA which outlines a framework to manage visitation pressures on the Ningaloo Marine Park.

During the public comment period, the PER drew wide public interest and scrutiny resulting in a large number of submissions to the EPA. The issues raised represented a broad range of views on the proposal and were related to factors including:

- regional and Marine Park planning;
- impacts of the proposal 'foot print' and visitation on values of the Ningaloo Marine Park and surrounding areas; and
- the proponent's proposed management and management models.

CCMD is currently addressing issues raised in submissions, prior to the EPA's consideration of the proponent's response and then progressing its assessment of the proposal.

The Commonwealth environment protection agency, Environment Australia, is also undertaking a formal assessment of the proposal under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*. Pursuant to this Act, the Federal Minister for the Environment must also make a decision as to whether the proposal should be allowed to proceed.

Geraldton Southern Transport Corridor

In May 2001, the EPA reported on the Geraldton Southern Transport Corridor project which proposes to construct and operate a road/rail corridor to provide direct access to the Port of Geraldton from the Geraldton-Mt Magnet Road, Walkaway Road and North West Coastal Highway. Based on the information provided in the proponent's "Geraldton Southern Transport Corridor Environmental Protection Statement" document, associated appendices, and the community and stakeholder consultation undertaken by the proponent, the EPA determined that the proposal was capable of being implemented in an environmentally acceptable manner. Consequently, the EPA set the level of assessment at EPA-Initiated Environmental Protection Statement (EPS).

The key components of the proposal were:

- a new single rail alignment from the Narngulu Industrial Area to the Geraldton Port;
- a new east-west link road from the Geraldton Airport to the Geraldton Port; and
- associated interchanges and connections to the local road system.

The major environmental factors given attention in the assessment of this proposal and evaluated in the EPA's report were:

- noise - effects on adjacent residents and community facilities;
- vegetation - clearing of remnant vegetation;
- public health and safety - demonstration that the risk to public health and safety from the transport of dangerous goods is as low as reasonably practicable; and
- foreshore (beach) - stability of the foredunes.

Desalination and Seawater Supplies Project, Burrup Peninsula

In November 2000, the Water Corporation referred a proposal to construct and operate a seawater supply and thermal desalination system on the Burrup Peninsula. The desalination plant will provide an alternative source of high quality process water to the Peninsula. This is particularly important because the capacity of the existing potable water supply is insufficient to meet the requirements of new industries. The desalination plant will utilise waste heat from the Syntroleum Gas to Synthetic Hydrocarbons Plant to provide sufficient process water to meet Syntroleum's requirements, thereby achieving greenhouse gas savings. The project will also provide approximately 60 ML/day of seawater for other new industrial developments.

In view of the limited number of environmental factors and the public consultation undertaken by Water Corporation, the EPA assessed the proposal as Proponent-Initiated Environmental Protection Statement, and completed the assessment within 6 months.

The main environmental factor of greatest concern to the EPA was the potential impact on the marine environment from the brine discharge into King Bay. A benthic habitat survey was conducted to document the marine habitats and biological communities in the vicinity of the proposed site for the outfall. Since that area of the bay was found to be mainly sand, mud and coarse shell and the marine habitats and biota in the area were sparse and typical of habitats widely distributed in the Dampier region, the EPA did not consider that environmental impacts due to construction would be significant.

The EPA was particularly concerned that the brine discharge did not impact on the corals within the region, which are near the threshold of their thermal tolerance during summer. The proponent committed to installing a cooling tower that would enable the discharge to be cooled to near ambient seawater temperatures. The EPA was satisfied that the coral reefs would be protected and that the potential environmental impacts on other marine flora and fauna could be managed, based on the results of near and far field modelling and commitments made by the proponent.

The EPA was also satisfied that the impacts on the terrestrial flora along the pipeline route (4.2 km) would be acceptable and that commitments made by the proponent would protect priority flora and minimise the spread of weeds within the region. No rare plants were identified within the corridor.

The EPA is aware that the outstanding scenic values of the Burrup Peninsula will be reduced as a result of industrial development and it sought commitments from the proponent to implement measures that would minimise the visual impact of the large diameter pipelines from Burrup Road.

Relocation of Broome International Airport

In June 2001 the EPA finalised the environmental impact assessment and released its report and recommendations on the proposal by Broome

International Airport Holdings to relocate the Broome International Airport. The airport, which is currently within the Broome townsite, will be relocated to a site approximately 12 km north-east of Broome.

The proposed site was selected by the Broome Airport Relocation Taskforce which included representation from the Shire of Broome, WA Tourism Commission, Ministry for Planning, Kimberley Development Commission, Department of Environmental Protection, Department of Land Administration, Airport Engineering Services, Broome Aviation and the Department of Transport.

Ten potential sites were evaluated according to a number of criteria and were narrowed down to two options, and then to the preferred site taking into account an array of factors, including indigenous culture.

The key environmental factors for the assessment of the project were:

- biodiversity, being the potential impacts of clearing 200 hectares on the Pindan vegetation and terrestrial fauna such as the Greater Bilby;
- migratory birds, including the Roebuck Bay Ramsar site;
- water quality; and
- potential impacts on noise sensitive premises.

The EPA concluded that the proposal could be managed to meet the EPA objectives provided the proponent satisfactorily implemented its commitments and the recommended environmental conditions.

These conditions require the preparation of a Flora and Fauna Management Plan, including further surveys of the proposed site, and a Noise Management Plan to the requirements of the EPA.

The proponent's commitments include the preparation of an Environmental Management Plan to address management issues at the pre-construction, construction and operation stages to the requirements of the EPA.

ENVIRONMENTAL ASSESSMENT OF PLANNING SCHEMES

The EPA has now been assessing statutory regional and town planning schemes, and amendments, under s48A of the EP Act for five years, following changes introduced to planning legislation in 1996.

A key issue for the EPA in assessments under s48A is to ensure a rational linkage of the level and detail of environmental assessment to the relevant 'stage' of planning approval being considered. The planning approval process is a hierarchical one normally involving a series of stages from regional scheme to town planning scheme to structure plan, to 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 of 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.

STRATEGIC ASSESSMENTS

Strategic environmental assessment is an expanding area of the EPA's work. These assessments provide for key environmental issues to be considered at a strategic level and at an early stage in planning for development so that necessary environmental protection and management requirements can be built into detailed planning and design for subsequent developments. Importantly, strategic assessment allows cumulative impacts of planned development to be considered, rather than impacts from individual development being considered in isolation which is often the case with project by project assessment. Strategic assessment also facilitates better consideration of alternative locations for developments to avoid particularly sensitive environmental areas.

In 2000-2001 the EPA completed a range of strategic assessments covering:

- Regional planning strategies

This involved consideration of regional biodiversity and nature conservation issues as well as potential pollution issues, in key regions of the State including:

  - Southern River – Forrestdale Draft Structure Plan, Cities of Armadale and Gosnells; and
  - North–East Corridor Extension Strategy, City of Swan and Shire of Chittering.

- Natural resources management

A focus during the year was on water resources and sustainable land use including:

  - Bauxite Mining and Haul Road Stream

Crossing in CAR Informal Reserves Huntly Mine, Mining Lease 1SA near Dwellingup;

- Ord River Interim Water Allocation Plan; and
- Scott Coastal Plain – A Strategy for a Sustainable Future.

- Transport planning
  - Department of Transport Strategies – Perth Metropolitan and Country Areas; and
  - Air Quality Implications of the Metropolitan Transport Strategy.

POLICY DEVELOPMENT

The EPA has progressed its approach of giving greater emphasis to policy development, as set out in last year's Annual Report.

Environmental Protection Policies

Environmental Protection Policies (EPP) remain the highest order of policy instruments under the EPA Act, having the force of law following Parliamentary disallowance procedures. Progress on the EPPs are described below and summarised in Tables 1 and 2 (pages 21 and 22).

Environmental Protection (Swan Coastal Plain) Lakes Policy 1992

Considerable work and negotiations were involved with the statutory seven-year review of this EPP. The EPA reported to the Minister in late 1999 on the review, recommending a widening of the scope of the Policy, and the Ministerial consultation phase concluded in December 2000. During this time the EPA developed draft Administrative Procedures designed to complement the Policy and illustrate how it would be implemented. These went out for public comment during the latter stages of the Minister's consultation. The Policy has attracted considerable interest particularly from private property owners who lobbied Government over the issue of a right to veto any proposed listing of wetlands on private property on the Register to protect. On the other hand, conservationists have agreed that wetland losses on the Swan Coastal Plain have been very high since European settlement and that the community must ensure protection of the remaining high value wetlands. The revised EPP will be finalised shortly.

Environmental Protection (Western Swamp Tortoise) Policy

Despite the passage of time associated with the development of this EPP, considerable progress was made towards finalising it. The EPA expects to report to the Minister by the end of 2001. This EPP is about protection of the remaining known habitat of this very rare reptile which is faced with increasing pressures from intensified land uses around the two remaining reserves, Ellenbrook and Twin Swamps, which represent small island sanctuaries for the species.

The EPA has elected to recommend environmental values and environmental quality objectives for protection with the responsibility of achieving those objectives to rest with decision making and managing authorities.

Environmental Protection (Goldfields Residential Areas) (Sulphur Dioxide) Policy 1992

This EPP underwent its statutory seven-year review and the EPA reported to the Minister with recommended changes in late 1999. The Policy then underwent its Ministerial Consultation phase which specifically included reference to the commercial implications of changes to the Policy: the EPA having advised the Minister that this was the appropriate way of addressing such matters raised by the emitting industries. The revised Policy is yet to be finalised.

Environmental Protection (Ozone Protection) Policy 2000

During the 1992 Policy's statutory seven-year review, the EPA recommended small but significant amendments. These expanded the scope beyond managing ozone depleting substances to include alternative refrigerants which replace ozone-depleting substances. The purpose for this additional control is to ensure that the ozone-depleting substances are properly dealt with during replacement. The Government accepted the EPA's advice which had received broad industry support and the revised Policy came into operation in late 2000. The additional powers of the Policy should only be required for the seven-year period until its next statutory review.

Environmental Protection (State Air Quality) Policy

The EPA has initiated a State Air Quality Policy as the preferred mechanism to implement the National Environment Protection Measure (NEPM) on air quality. The EPA issued a scoping document for this Policy in March 2001 inviting public comment.

Environmental Protection (Peel Inlet – Harvey Estuary) Policy 1992

The EPA has reported to the Minister on this Policy following its statutory seven-year review in late 1999. The Authority recommended that the Minister suspend further action until the EPA had concluded its review of the environmental

conditions set by the Minister on the proposal to improve water quality in the estuarine system. This proposal was a combination of building the Dawesville channel to improve tidal exchange of water and catchment management measures to reduce the level of phosphorous from rivers, drains and groundwater. The EPA is yet to finalise its review of the environmental conditions and then to progress the EPP review.

Environmental Protection (Coastal Zone) Policy

The incoming Government came with a policy position of developing an EPP for the coastal zone in Western Australia. The EPA is yet to formally initiate this Policy, although preliminary discussions have commenced over its possible scope.

Position Statements

The EPA intends to continue its approach of providing environmental leadership through Position Statements.

Outcomes for 2000/2001 were publication of the final Statement on the "Environmental Protection of Native Vegetation in Western Australia" and preliminary Statements for "Environmental Protection of Wetlands" and "General requirements for Terrestrial Biological Surveys". The EPA also released a discussion paper "A Policy Framework for the Establishment of Wetland Banking Instruments in Western Australia" concurrently with the Wetlands Position Statement. Other initiatives include preliminary scoping for Statements on Biodiversity and Sustainability with considerable work done on Position Statements on Rangelands and Principles for Environmental Protection. A list of Position Statements and the levels to which they have progressed can be found at Appendix 6.

Guidance Statements

Guidance Statements are issued by the EPA to assist proponents and the public generally to understand the minimum requirements, for protection of elements of the environment that the EPA expects to be met during the assessment process. Proponents are of course encouraged to do better than the minimum.

Proponents who are able to demonstrate that they will meet or exceed the minimum requirements are likely to find that their assessment will be more straight-forward and take less time. A proponent who wishes to deviate from the minimum level of performance in a Guidance Statement would be expected to put a well-researched and clear justification to the EPA arguing the need for that deviation.

The improved process for developing Guidance Statements has been running successfully this year. The two-step approach has streamlined the process and facilitated energetic and helpful input from stakeholders and the public on the content of the Guidance Statements.

Table 1: Environmental Protection Policies and their current status

Name	Approval date	Review date	Comment
Environmental Protection (Gnangara Mound Crown Land) Policy 1992	24.12.92	24.12.99	EPA reported. Ministerial consultation concluded. Additional technical work required to finalise.
Environmental Protection (Goldfields Residential Areas) (Sulphur Dioxide) Policy 1992	29.01.93	29.01.00	EPA reported. Ministerial consultation.
Environmental Protection (Swan Coastal Plain Lakes) Policy 1992	18.12.92	18.12.99	EPA reported. Ministerial consultation.
Environmental Protection (Peel Inlet – Harvey Estuary) Policy 1992	11.12.92	11.12.99	Progress awaiting EPA review of Peel-Harvey Environmental Conditions.
Environmental Protection (South West Agricultural Zone Wetlands) Policy 1997	28.10.98	28.10.05	Gazetted.
Environmental Protection (Swan Canning Rivers) Policy 1998	10.07.98	10.07.05	Gazetted.
Environmental Protection (Kwinana) (Atmosphere) Policy 1999	21.12.99	21.12.06	Gazetted.
Environmental Protection (Ozone Protection) Policy 2000	17.10.00	17.10.07	Gazetted.

Table 2: Environmental Protection Policies in progress

Name	Status
Draft Environmental Protection (Western Swamp Tortoise) Policy	EPA's report to Minister being finalized.
Draft Environmental Protection (State Groundwater) Policy	Suspended pending legislative amendments.
Draft Environmental Protection (State Air Quality) Policy	Scoping paper released for public comment.
Draft Environmental Protection (State Marine Waters) Policy	Suspended pending legislative amendments.
Draft Environmental Protection (Cockburn Sound) Policy	In progress.

Twenty-three Guidance Statements are now available as either 'draft' or 'final'. Another six are at various stages of development. The following Guidance Statements were released in 2000/ 2001:

- System 6/Perth's Bushplan: Assessment of Proposals – draft
- Contaminated Soils Management Remediation Hierarchy – final
- Risk Assessment and Management: Offsite Individual Risk – final
- Shark Bay World Heritage Property: Assessment of Development Proposals – final
- Arid Zone (Pilbara) Mangroves – final

A list of Guidance Statements and the levels to which they have been progressed can be found at Appendix 7.

MONITORING OF WASTE MANAGEMENT (WA) FACILITIES

Waste Management (WA) currently operates the Intractable Waste Disposal Facility at Mt Walton East and the Liquid Waste Treatment Plant at Brookdale.

The EPA has responsibility for monitoring these facilities, with each facility operated under a Ministerial Direction issued under s110 of the EPA Act.

In May 1999, the EPA finalised by tender the appointment of an independent auditor to assist the EPA monitor the operations of Waste Management (WA).

Intractable Waste Disposal Facility, Mt Walton East

Under s46 of the EPA Act, the EPA undertook a review of the environmental conditions contained in a number of previous Ministerial Statements and previous licence conditions applying to the Intractable Waste Disposal Facility, Mt Walton East, with a view to consolidating the environmental conditions and commitments of those statements and licences.

The consolidation of conditions applying to this facility was undertaken to assist both Waste Management (WA) and the EPA in the environmental management of this facility.

The EPA provided its advice to the Minister in Bulletin 1005 dated December 2000.

The Minister for the Environmental issued a Statement that the proposal may be implemented subject to the consolidated environmental conditions and commitments on 1 February 2001.

No consignment of wastes to the Intractable Waste Disposal Facility, Mt Walton East occurred during the operational period for this facility in 2001.

Liquid Waste Treatment Plant, Brookdale

Waste Management (WA) has applied for a change to the status of the Liquid Waste Treatment Plant at Brookdale to enable it to accept hazardous waste for specialised treatment to render them suitable for landfill disposal or to render them non-hazardous for treatment within the liquid waste treatment plant, recycling or repackaging for transport to other appropriate facilities. This proposal is currently the subject of a formal assessment at Consultative Environmental Review (CER) level. The Brookdale facility has a Dangerous Goods Storage Licence issued by the Department of Minerals and Energy which allows the temporary storage of these materials.

In 1999 the then Minister for the Environment requested the EPA to inquire into and report on possible changes to the conditions and procedures relating to the acceptance and treatment of waste outside current specifications at this facility. This

action was taken pursuant to s48(4)(e) of the EP Act. The review of the possible changes to conditions and procedures, pursuant to s46 of the Act, will be undertaken as part of the broader assessment under the CER assessment process.

The Minister's request did not require the cessation of acceptance and treatment of waste outside current specifications recognising that these operations at the Brookdale facility provide a unique service to business in the wider Perth area and that this service had been ongoing for some years.

The Minister for Environment and Heritage has recently issued a Direction under s110N(1) of the EP Act that no waste is to be received at this facility outside current environmental approvals as from 28 February 2002. A timeline to complete the current environmental impact assessment within the deadline set by the Minister has been negotiated between Waste Management (WA) and the EPA, and this has been communicated to the Minister.

The EPA expects to complete its assessment of the proposed change of status relating to this facility early in 2002.

LEGISLATION ISSUES

The EPA has a significant role to play in environmental regulation. The EP Act sets out that the Governor may, on the recommendation of the EPA, make regulations required or permitted by the Act to be prescribed or in relation to implementing a National Environmental Protection Measure.

Review of the Noise Regulations

The "Noise Regulations Review – Outcomes of the Working Group Programme" report was prepared by the DEP in consultation with 14 Working Groups and a wider Reference Group, and endorsed by the EPA in June 2000. The report proposed;

- short term amendments to be developed by February 2001; and
- longer term amendments involving further consideration by the working groups, who were to report to EPA by 30 June 2001.

The EPA presented the report to the Minister in August 2000, with a request to approve commencement of drafting. The Minister gave approval for the drafting of four of the amendments, and these were progressed to gazettal in November 2000.

The report of the Working Groups was publicly released and circulated to all local governments and members of the working groups and the wider reference group in March 2001.

Licence Fee Increases

In August 2000 amendments were made to the *Environmental Protection Regulations 1987* to provide for progressive increases in licence, works approval and registration fees over the period 2000 to 2004. The aim of these increases was to achieve full cost recovery for the provision of regulatory services by the DEP.

Monitoring Regulations

In January 2001 amendments were made to the *Environmental Protection Regulations 1987* to provide for the application of quality assurance requirements to monitoring conducted by certain licensees. The regulations were developed by a Ministerial Working Group comprising members of the DEP, industry and the community.

The need for these regulations arose from legal uncertainties in the use of industry self-monitoring data in enforcement actions. The regulations provide for the issue of certificates of approval for monitoring equipment, the deeming of monitoring to be correct unless proven otherwise, and the requirement for licensees attesting to the accuracy of monitoring information provided to the Department.

Controlled Waste Regulations

In March 2001 the *Environmental Protection (Controlled Waste) Regulations 2001* were gazetted along with amendments to the *Environmental Protection (Liquid Waste) Regulations 1996*.

The new Controlled Waste Regulations and changes to the existing Liquid Waste Regulations are a key part of the Government's regulatory system for managing hazardous waste streams.

The Regulations classify certain wastes as controlled wastes and set up a tracking system to ensure the wastes reach approved disposal sites. The Regulations also provide a licensing system to improve standards in the transport of controlled wastes.

There are incentives for waste producers to use cleaner production in their industrial processes as the Regulations make the producers of controlled wastes responsible for the transport and disposal of their waste.

The Regulations expand the successful tracking and licensing system introduced by the DEP in 1996 for managing the transport and disposal of liquid wastes from septic tanks, grease traps and oil interceptors. This experience has shown that regulatory controls are required to ensure wastes are correctly handled and disposed, especially where financial incentives exist to encourage illegal dumping.

EPA site visit to Hope Downs Iron Ore mine proposal.
From left: Hugh Middlemis (consultant), Bryan Jenkins (DEP), Allen Wright (Water and Rivers Commission), Alex Thornton (Hope Downs), Frank Batini (CALM), Tim Gentle (DEP), Bernard Bowen (EPA), Ian LeProvost (EPA), Murray Hogarth (DEP), Mike Rosengen (DEP) and Frank Murray (EPA).

The waste tracking system will provide more secure conditions for approved disposal sites, and will also assist the Government in identifying priority waste management issues in Western Australia.

The Regulations also give effect to Western Australia's obligations under the National Environmental Protection Measure for the Movement of Controlled Waste Between States and Territories, including recognising permits and licences issued in other States and Territories.

Small Abattoir Regulations

As part of the DEP's licensing system, a number of industry groups are required to be registered. One such industry is small-scale abattoirs.

The *Environmental Protection (Abattoir) Regulations 2001* are specifically for the control of registered small-scale abattoirs, that is, those processing more than 100 and less than 1,000 tonnes (live weight of animals) per year.

The regulations will help improve the environmental performance of small-scale abattoirs and ensure that waste generated at these facilities is collected and managed in an acceptable manner. The regulations are also designed to control impacts associated with abattoir operations such as odour, dust and export of nutrients.

Burning on land development sites

An amendment to the *Environmental Protection Regulations 1987* was introduced in December 2000 which prohibits the practice of burning waste materials on land development sites within the Perth metropolitan area and the Bunbury and Mandurah areas. The prohibition was considered essential to reduce the incidence of regional and local pollution events relating to such burning. The regulations apply to lots greater than 2,000 square metres and infringement notice penalties of $250 and $500 apply.

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.

Although time consuming, these EPA site visits have been valuable and 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 DEP accompanied the EPA.

Whenever possible, EPA members use the opportunity of being in the field to meet with key local stakeholders, including local government CEOs and Shire Presidents, other interest and conservation groups, and Aboriginal communities.

Other site visits were also carried out by individual EPA members, mostly the Chairman and Deputy Chairman.

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, addressing issues, and networking in an informal atmosphere whilst on-site;
- 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;
- enhancing the identity of the EPA as an independent authority; and
- providing an identity to an otherwise "invisible" Board.

A list of the EPA and other site visits is given 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 is comprised 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:

Mr Andrew Baker (Chairman)
(the above appointment expires 30 June 2002)

Mr Norm Halse (Deputy Chairman)

Dr Sue Graham-Taylor
(the above appointments expire 1 September 2002)

Mrs Dot Hesse

Dr Rod Lukatelich

Mr Tony van Merwyk

Ms Verity Allan

Mr Graham Slessar

Mrs Marion Blackwell
(the above appointments expire 30 September 2001)

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

ACTEPA was kept advised of a range of issues before the EPA, and members' input was sought. Issues covered include:

- Cockburn Sound;
- James Point;
- Coastal Zone Management Policy for Western Australia;
- noise;
- odour;
- land clearing;
- air quality;
- Position Statements and Guidance Statements;
- Ord River Irrigation Area Stage 2, Kununurra;
- Discussion Paper on Clearing Native Vegetation;
- ACTEPA's views on EPA's role; and
- Future Perth project.

The EPA records its appreciation for the time and effort taken by Advisory Council members during the year. The advice of all members of ACTEPA is greatly appreciated by the EPA.

Appendices

APPENDIX 1

THE ROLE OF THE ENVIRONMENTAL PROTECTION AUTHORITY

The EPA is an independent advisory body and provides overarching policy advice to the Minister for the Environment. Its objectives, as stated in the EPA Act, are to protect the environment and to prevent, control and abate pollution.

The EPA carries out a number of functions in pursuing its objectives including:

- environmental impact assessment;
- formulating environmental policies;
- co-ordinating activities necessary to protect, restore and improve the environment of the State;
- seeking information and providing advice; and
- carrying out studies, investigations and research into problems of environmental protection.

A major role of the EPA is to ensure that the environment is protected when development decisions are made. It does this by providing high level independent environmental advice to the Minister for the Environment and others so that environmental considerations are taken into account in the decision-making process.

Approval of proposals and the environmental conditions to be imposed on developments are made by the Minister, who may take into account broader issues than those considered by the EPA.

Under the EP Act, environment is defined as "living things, their physical, biological and social surroundings and the interactions between all of these". The Act further explains that "the social surroundings of man are his aesthetic, cultural, economic and social surroundings to the extent that these surroundings directly affect or are affected by his physical or biological surroundings." The EPA interprets environment to include beneficial use and risk associated with the environment.

General approach taken by the EPA

The EPA is regarded by the community as an advocate for the environment and believes that transparency of process is fundamental to the effective development of environmental policy and to the implementation of environmental protection.

In evaluating issues, the EPA seeks input from stakeholders and the public through liaison, public meetings, submissions, as well as through site visits with proponents and members of the community.

The broad principles of ecologically sustainable development and biodiversity provide a valuable starting point for the EPA. However, recommendations are also made on the basis of protecting:

- ecological processes;
- biodiversity;
- declared rare flora and fauna;
- vegetation associations and habitat;
- water quality and quantity (marine, estuarine, fresh and brackish waters);
- air quality;
- soils and land;
- individuals and society from unacceptable risk; and
- beneficial uses of the environment.

These elements are considered during the assessment of each development proposal by the EPA. The EPA also considers the environmental management framework for each proposal to ensure that the whole

proposal and all of its environmental impacts are managed. This includes environmental management plans, objectives and performance indicators. Proponents are encouraged to conduct an annual audit and a periodic review of their operations in keeping with the broad philosophy of ensuring continuous improvement in environmental management.

A series of non-statutory statements has been developed to set out the EPA's view on specific environmental matters, giving proponents and the community an understanding of the EPA's views. They are designed to increase certainty for proponents and the public. If the EPA's views are incorporated early in project development by proponents, assessments can be carried out more rapidly.

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 have a pivotal role to play in the preparation of the environmental review document, provided the appropriate checks and balances are in place. The preparation of the document is the prime way for proponents to ensure that environmental factors are given consideration in project decision-making.

It should be remembered that the preparation of the 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 guidelines for the preparation of the environmental review document are set by an assessment division within the Department of Environmental Protection (DEP);
- the guidelines are public and at one level of assessment the guidelines are available for public comment;
- the document can be released only after the assessment division of the DEP is satisfied that the document is appropriate for release;
- the public has the opportunity to comment on the document after it has been approved for release;
- the proponent is required to respond to public comments on the document, and the response is also available to the public;
- the EPA provides the Minister for the Environment, who is the decision-making authority, with an assessment report on the project after receiving advice from the DEP assessment division and many others; 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.

An essential element in the EIA process is the involvement of the proponent in the preparation of the environmental impact statement (EIS). 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 the 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 a project through the preparation of the EIS. The EIS forces the proponent to consider environmental issues and factors in project formulation. It is also important for the proponent and their consultant to prepare the EIS as though looking at the project through the eyes of the EPA. It needs to be as truthful and as full as possible.

EPA linkage with government agencies

The EPA seeks advice from agencies, including the Department of Environmental Protection (DEP), the Ministry for Planning (MfP) and Western Australian Planning Commission (WAPC), the Water and Rivers Commission (WRC), the Department of Conservation and Land Management (CALM), the Conservation Commission of Western Australia (CCWA) and the Marine Parks and Reserves Authority (MPRA).

Department of Environmental Protection

The DEP is the main service department of the EPA, although the EPA uses staff and facilities of other departments by arrangement with the Minister concerned. The DEP carries out a variety of functions under the general guidance of the EPA, including environmental impact assessment and preparation of draft reports, research and co-ordination functions in relation to the environment, pollution prevention and management, and the preparation of draft policies.

To foster a better working relationship, the EPA and DEP hold a planning day each year at which issues and management approaches are scoped, and important understandings about resource sharing, independence of advice and other matters are reached. The planning days provide an opportunity for the EPA, the CEO and Directors of the DEP to understand the various complexities and constraints of EPA and DEP functions.

Ministry for Planning and WA Planning Commission

The EPA has two distinct relationships with the MfP and WAPC. The first is with the MfP and WAPC as proponents of planning schemes and amendments. The second is with those agencies as advisers on planning matters.

Regular meetings are held between the EPA Chairman and Chairman of the WAPC (approximately monthly). Meetings are also held with the CEOs of MfP and DEP to discuss matters impinging on planning and environment and the implementation of assessments through s48A of the EPA Act.

Water and Rivers Commission

The WRC also has two distinct relationships with the EPA: one as a proponent (eg for water allocation plans), and the other as a provider of expert advice on matters pertaining to water resource protection and management as inputs to the environmental assessment process.

The EPA receives briefings and advice from officers of the WRC on water resource management issues relating to proposals, and it assesses water allocation plans.

Department of Conservation and Land Management

In the case of CALM, the EPA has three different working relationships. CALM assists the CCWA and implements management plans, including the Forest Management Plan which is assessed by the EPA. CALM is also a key provider of expert advice to the EPA on conservation and biodiversity issues during the environmental assessment process. The third area is that of the EPA auditing compliance by CALM with Environmental Conditions set by the Minister for the Environment in relation to the Forest Management Plan. The very different nature of these three working relationships can present management challenges.

It is essential for the EPA and CALM to work closely together to ensure that the different aspects of their working relationship are undertaken in an effective and efficient manner. This is being achieved through an ongoing consultation process between the Chairman of the EPA and the Chief Executive Officer of CALM.

APPENDIX 2

Formal Assessments (other than Environmental Protection Statements)

Bulletin No.	Title	Release date
984	Tidal Power Station, East and West Doctors Creek, and transmission lines to Derby and Broome	July 2000
985	Natural Gas Plant, Burrup Peninsula	August 2000
986	Kalbarri Airport, Kalbarri	August 2000
988	Ord River Irrigation Area Stage 2, Kununurra Part 1 (revised proposal)	August 2000
989	Upgrade of Facilities and Change to Environmental Conditions, Esperance Port	August 2000
990	Mineral Sands Mining to Orebody 27200, Cooljarloo Mine, Dandaragan	September 2000
992	MRS Amendment 1008/33, South Fremantle/Hamilton Hill	September 2000
994	Peel Region Scheme	September 2000
995	Perth to Bunbury Highway, Metropolitan Region to Bagieau Road, Lake Clifton	October 2000
996	Lead Oxide Mine and Concentrator, Wiluna and Geraldton	October 2000
997	Marra Mamba Iron Ore Mine Stage 2, Nammuldi/Silvergrass Project, 12km NNW of Brockman	October 2000
998	Clearing of approximately 600 hectares of land for crop growing, Swan Locations 5434 and 5433, Lot 2 Mogumber West Road, 35km north of Gingin	December 2000
1004	Waste Processing Plant, Lot 15 Mason Road, Kwinana Industrial Area	December 2000
1005	Change to Environmental Conditions – Mt Walton East Intractable Waste Disposal Facility (consolidation of Environmental Conditions and introduction of waste acceptance criteria)	December 2000
1006	Changes to Environmental Conditions and Procedures for Wagerup Alumina Refinery expansion, Wagerup	January 2001
1008	Change to Environmental Conditions – Wagoo Hills Windimurra Vanadium Project and Mingenew Coal Project	January 2001
1009	City of Armadale, TPS No 2, Amendment No.134, rezone from Rural X to Residential Development Area, Lot 1 Hilbert Road, Forrestdale	March 2001
1012	Change to Environmental Conditions – (Increase in phosphorous) Beenyup Wastewater ocean outlet duplication, Marmion Marine Park	May 2001
1016	Ord River Irrigation Area Stage 2, Kununurra Part 2 (revised proposal)	June 2001
1017	Relocation of Broome International Airport, Broome Road, Broome	June 2001
1018	City of Rockingham, TPS No 1, Amendment No. 300, rezone from Rural to Development zone, Pt Lot 306 &16 and Lots 774 & 313 Fifty Road, Baldivis	June 2001

APPENDIX 3

Environmental Protection Statements (EPS)

Bulletin No.	Title	Release date
993	Wesfarmers LPG upgrade, Kwinana Industrial Area	September 2000
999	Industrial subdivision Lot 502 North Lake, Sudlow and Phoenix Roads, Bibra Lake	November 2000
1002	Northern suburbs transit system extension, Currambine to Clarkson-Butler	December 2000
1003	Upgrade of Useless Loop Road between Shark Bay Road and False Entrance Road, Shark Bay	December 2000
1011	Kemerton Wastewater treatment plant and treated wastewater reuse to woodlot at Binningup, Kemerton	April 2001
1013	Geraldton Southern Transport Corridor, Geraldton	May 2001
1014	Desalination and seawater supplies project, Burrup Peninsula	May 2001

APPENDIX 4

Proposal Unlikely to be Environmentally Acceptable

Bulletin No.	Title	Release date
1000	Clearing of 184 hectares of land for agriculture, Kent Location 1766, cnr Needilup Road and Townsend Road, 25km east of Pingrup, Shire of Kent	December 2000

APPENDIX 5

s16 Strategic Advice

Bulletin No	Project Title	Release date
987	Southern River-Forrestdale Draft Structure Plan, Cities of Armadale and Gosnells	August 2000
991	Scott Coastal Plain – A Strategy for a Sustainable Future	September 2000
	Air Quality Implications of the Metropolitan Transport Strategy	October 2000
	Department of Transport Strategies – Metropolitan, Regional Land Transport Perth Metropolitan and Country Areas	October 2000
1001	North-East Corridor Extension Strategy, City of Swan and Shire of Chittering	December 2000
1015	Bauxite Mining (7.8ha) and Haul Road Stream Crossing (1.0ha) in CAR Informal Reserves Huntly Mine, Mining Lease 1SA near Dwellingup	May 2001

APPENDIX 6

Position Statements

Position Statement	Current Status
Environmental Protection of Cape Range Province	Final published.
Environmental Protection of Native Vegetation in Western Australia	Final published.
Wetlands	Preliminary published.
Standards for Biological Surveys	Preliminary published. Final in preparation.
Rangelands (State) Protection	Preliminary in preparation.
Principles of Environmental Protection for Western Australia	Preliminary in preparation.
Biodiversity	Scoping commenced.
Benthic Primary Producers Habitat Protection	Preliminary in preparation
Sustainability	Scoping commenced.
Special Areas	Preliminary in preparation.
Greenhouse	Initiated.

APPENDIX 7

Guidance Statements

Draft Guidance Statements in preparation

Aboriginal Culture and Heritage*

Noise, Transport – Road and Rail

Wetlands, Protection

Terrestrial Biological Survey Standards*

Coral Protection

Gypsum Mining

Draft Guidance Statements released

System 6/ Perth's Bushplan: Assessment of Proposals*

Gas Pipelines (High Pressure): Residential Development in Proximity*

Odour Impacts: Assessment

Environmental Management Systems

Groundwater Environmental Management Areas*

Noise: Environmental*

Petroleum (Offshore): Exploration and Production

Rangelands: Protection

Seagrass: Habitat Protection

Surface Runoff: Management of from Industrial and Commercial Sites

Planning Schemes: Guidance for Assessment*

Greenhouse Gas Emissions: Minimisation *

Waste – Liquid Hazardous Waste, Deep and Shallow Well Injection

Final Guidance Statements Released

Shark Bay World Heritage Property: Assessment of Development Proposals

Mangroves, Arid/ Pilbara

Contaminated Soils Management: A Remediation Hierarchy

Risk Assessment and Management: Offsite Individual Public Risk

Lake Clifton: Protection

Linkages between EPA Assessment and Guidelines, Standards and Measures Adopted by National Councils

Mosquitoes: Guidance for Developers

Biomedical Waste Incinerators: Management of Air Emissions

Gas Turbines: Emissions of Oxides of Nitrogen

Development Sites: Air Quality Impacts

*Progress of these Guidance Statements is EPA's priority for action.

APPENDIX 8

EPA site visits

Date	Site
12 September – 13 September 2000	Shire of Waroona TPS No7, Old Bunbury Road; Waste Water Treatment Plant, Bunbury; and sand extraction proposals, Kemerton.
9 October 2000 – 10 October 2000	Boat Launching Facility, Coral Bay; and Coral Coast Marina Development, Maud's Landing.
31 October 2000	Port Catherine Project, Coogee; Long Term Shell Sand Mining, Cockburn Sound; and Livestock holding facility and Port Developments, James Point.
28 November 2000 – 29 November 2000	Hope Downs Iron Ore Mine, near Newman.
14 December 2000 to 15 December 2000	Mt Margaret Nickel Cobalt Project.
29 January 2001	Alcoa's operations at Pinjarra and Kwinana.
23 April 2001 – 24 April 2001	Tiwest Mineral Sands Mining Operations at Muchea and Cooljarloo; and Iluka Resources Mineral Sands Mining Operations at Eneabba.

Other site visits by EPA members

Date	Site
25 July 2000 - 27 July 2000	Ord River Irrigation Area Stage 2 project, Kununurra.
26 February 2001 - 27 February 2001	Cable Sands - Newcastle, NSW.
2 March 2001	Cable Sands, Bunbury re proposed Mineral Sands mine, Jangardup.
6 March 2001 - 7 March 2001	Simcoa Quartz Mine, Moora.
26 March 2001 - 27 March 2001	Iron Ore Expansion Project, Koolganobbing.
4 April 2001 - 5 April 2001	Kemerton sand mining.

APPENDIX 9

Attendance at EPA Meetings

Attendance EPA Meetings – 6 July 2000 to 21 June 2001					
	EPA Member				
EPA Meeting Date	Bernard Bowen	Libby Mattiske	Ian Le Provost	Denis Glennon	Frank Murray
No. 742 – 6 July 2000	✓	✓	✓	_	✓
No. 743 – 20 July 2000	✓	✓	✓	✓	✓
No. 744 – 3 August 2000	✓	✓	✓	✓	_
No. 745 – 17 August 2000	✓	✓	✓	✓	✓
No. 746 – 31 August 2000	_	✓	_	✓	✓
No. 747 – 14 September 2000	✓	✓	✓	✓	✓
No. 748 – 28 September 2000	✓	✓	✓	✓	_
No.749 – 12 October 2000	✓	✓	_	✓	✓
No. 750 – 26 October 2000	✓	✓	✓	_	✓
No. 751 – 9 November 2000	✓	✓	✓	_	✓
No. 752 – 23 November 2000	✓	✓	✓	✓	✓
No. 753 – 8 December 2000	✓	✓	✓	✓	✓
No. 754 – 18 January 2001	✓	✓	✓	✓	✓
No. 755 – 2 February 2001	✓	✓	✓	_	✓
No. 756 – 15 February 2001	✓	✓	✓	_	✓
No. 757 – 1 March 2001	✓	✓	✓	✓	✓
No. 758 – 15 March 2001	✓	✓	✓	✓	✓
No. 759 - 29 March 2001	✓	✓	✓	_	✓
No. 760 – 12 April 2001	✓	✓	✓	_	✓
No. 761 - 26 April 2001	✓	✓	✓	✓	✓
No. 762 - 10 May 2001	_	✓	✓	✓	✓
No. 763 - 25 May 2001	✓	_	✓	✓	✓
No. 764 - 7 June 2001	✓	✓	✓	_	✓
No. 765 - 21 June 2001	✓	✓	✓	✓	✓

APPENDIX 10

Financial Report

The administration costs of the EPA are as follows:		
	2000-01 ($'000)	1999-00 ($'000)
Recurrent		
Salaries, wages and allowances	384	369
Other Expenses		
Staff related expenses	31	57
Communications	4	5
Services and contracts	153	196
Consumable supplies	3	8
Repairs, Maintenance and Depreciation	9	14
Total	**584**	**649**

Electoral Act 1907 (s175ZE 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:

1. Total expenditure for 2000/2001 was $1 695.37 .

2. Expenditure in the following areas:

Advertising Agencies	Nil
Market research organisations	Nil
Polling organisations	Nil
Direct mail organisations	Nil
Media advertising organisations	Intersector/Marketforce Productions ($1 695.37)

Note:
Section 175 ZE of the Electoral Act 1907 requires "specified amounts" of $1 500 or greater expended on advertising in the above categories to be notified in the annual report.