Revised Draft Environmental Protection (Gnangara Mound Crown Land) Policy 1999

Report to the Minister for the Environment as required under Section 28 of the Environmental Protection Act, 1986

Foreword

The Environmental Protection Authority (EPA) is an independent statutory authority and is the key provider of independent environmental advice to Government. The EPA's objectives are to protect the environment and to prevent, control and abate pollution.

An Environmental Protection Policy (EPP) is prepared under Part III of the Environmental Protection Act 1986 and has "the force of law as though it had been enacted as part of this Act", on and from the day on which the policy is published in the Western Australian Government Gazette.

The Environmental Protection (Gnangara Mound Crown Land) Policy 1992, referred to in this document as the 1992 Gnangara Mound Crown Land EPP, was gazetted on 24 December 1992 and has had the force of law since that date. Under section 36(1)(b) of the Environmental Protection Act 1986, the Environmental Protection Authority (EPA) is required to review the Gnangara Mound Crown Land EPP and prepare a revised draft EPP for transmittal to the Minister for the Environment within 7 years from the date on which the policy was published in the Western Australian Government Gazette.

The EPA has now reviewed the 1992 Gnangara Mound Crown Land EPP. The review has been complicated because the EPA is currently awaiting finalisation of a number of significant proposals by Government Agencies which directly affects the 1992 Gnangara Mound Crown Land EPP. The EPA is also awaiting amendments to the *Environmental Protection Act 1986* which will allow the progression of the draft *Environmental Protection (State Groundwater) Policy* which was released for public comment by the EPA in 1998. The EPA expects that the legislative amendments should be finalised by late 2000. Subsequently the Gnangara Mound Crown Land EPP current at the time may ultimately become incorporated as a Schedule in the State Groundwater EPP.

In view of the above and the issues raised during public submissions, the EPA will shortly be convening a technical reference group to provide advice to the EPA on the following:

- the Environmental Quality Objectives and environmental criteria for the protection of environmental values of groundwater associated with the Gnangara groundwater system;
- the State Groundwater Environmental Protection Policy process and its relationship with the Gnangara Mound Crown Land EPP;
- the relationship of nationally agreed water quality criterion to the State Groundwater EPP; and
- the implications for the Gnangara Mound Crown Land EPP relating to the final outcome of discussions regarding the Gnangara Land Use and Water Management Strategy (WAPC, 1999).

To meet its requirements under section 28(c)(ii) of the Environmental Protection Act 1986, the EPA has prepared:

- a revised draft Environmental Protection (Gnangara Mound Crown Land) Policy 1999 (which is the 1992 Policy unchanged) as set out in Appendix 1; and
- a summary of submissions and EPA responses to the draft EPP as set out in Appendix 2.

I release and transmit this revised draft Environmental Protection (Gnangara Mound Crown Land) Policy 1999 to the Minister for the Environment in accordance with section 28(c)(ii) of the Environmental Protection Act 1986.

Bernard Bowen CHAIRMAN

ENVIRONMENTAL PROTECTION AUTHORITY

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17 December 1999

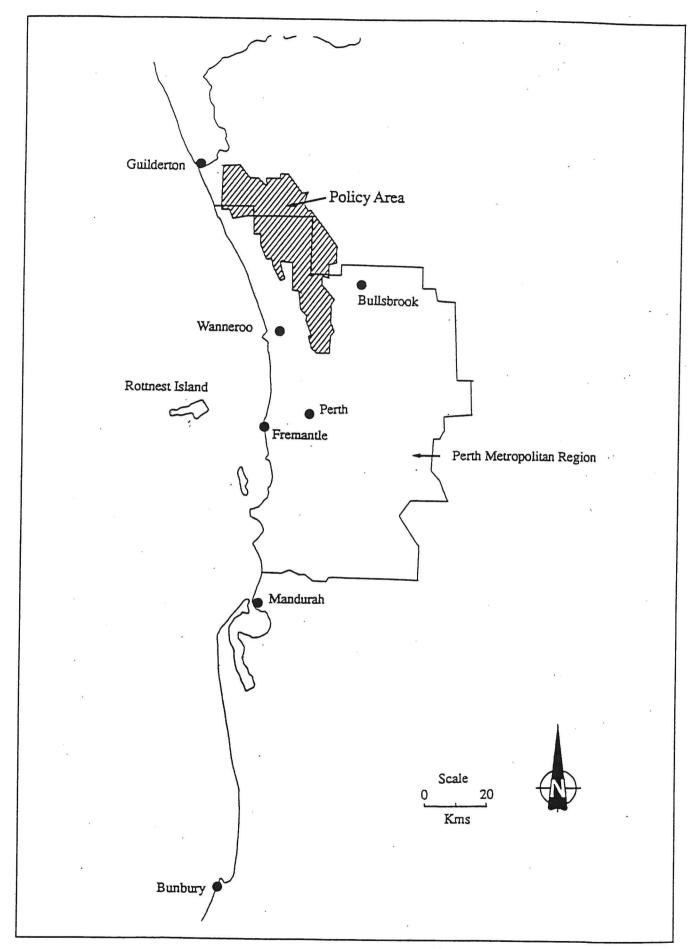


Figure 1. Draft 1999 Environmental Protection (Gnangara Mound Crown land groundwater) Policy Area.

1. Background

The Government of Western Australia published the *Environmental Protection (Gnangara Mound Crown Land) Policy 1992*, hereafter referred to as the Gnangara Mound Crown Land EPP, in the *Western Australian Government Gazette* on 24 December 1992. The policy has the force of law and is effective on and from this date.

The purpose of the policy was to protect:

- (a) the level of quality of groundwater on or under the policy area (an area consisting the Crown land and covering a large portion of the Gnangara mound); and
- (b) native vegetation in the policy area (Figure 1).

Under section 36(1)(b) of the *Environmental Protection Act 1986*, the Environmental Protection Authority (EPA) is required to review the Gnangara Mound Crown Land EPP and prepare a revised draft EPP for transmittal to the Minister for the Environment within 7 years from the date on which the policy was approved (that is, the date it was published in the *Gazette*).

The EPA is therefore required under law to conduct its review and transmit a revised draft EPP to the Minister by 24 December 1999. This document has been prepared so that the EPA may meet this requirement.

2. Context of the 1999 Environmental Review

The EPA is currently awaiting finalisation of amendments to the Environmental Protection Act 1986 which will allow the progression of the draft State Groundwater EPP which was released for public comment by the EPA in 1998. The EPA expects that these legislative amendments should be finalised by late 2000. Subsequently the Gnangara Mound Crown Land EPP current at the time may ultimately become incorporated as a Schedule in the Statewide EPP.

3. What is an Environmental Protection Policy (EPP)?

An Environmental Protection Policy (EPP) is prepared under Part III of the *Environmental Protection Act 1986* and has "the force of law as though it had been enacted as part of this Act", on and from the day on which the policy is published in the *Western Australian Government Gazette*.

An EPP establishes:

- the boundaries of the area and the portion of the environment to which the policy applies; and
- the basis on which the environment in this area is to be protected, or pollution is to be prevented, controlled or abated.

In addition, an EPP may also:

- identify and declare the beneficial uses of the environment to be protected under the policy;
- specify the environmental quality objectives to be achieved and maintained under the policy;
- set out the indicators, parameters or criteria to be used for measuring environmental quality in the policy area;
- make statements relating to any activity directed towards the protection of the environment, including the discharge of waste;
- create offences and penalty provisions; and
- establish a program for the achievement and maintenance of the environment quality objectives within the policy area and may specify, among other things, measures designed to:
 - (i) minimise the possibility of pollution;

Since this time, the recommendations of the Select Committee are progressively being implemented. The draft *Gnangara Land Use and Water Management Strategy* (WAPC, 1999) was released for public comment in May 1999. The EPA has released its advice on this document under Section 16 (j) of the Environmental Protection Act 1986 (EPA, 1999b).

In September 1996 the Minister for Environment acknowledged the need to protect groundwater for human use and ecosystem maintenance and the need to protect both groundwater quality and quantity by announcing the Government's commitment to establish a Statewide Environmental Protection Policy for the State's groundwater resources.

A draft State Groundwater EPP was released by the EPA for public comment in 1998. This establishes a consistent regulatory framework for the protection of the State's Groundwater according to the principles of ecologically sustainable development. In doing so the policy recognises existing groundwater EPPs such as the Gnangara Mound Crown Land EPP as well as the National Water Reform Framework (to which the Western Australian Government is cosignatory). The EPA is currently awaiting finalisation of amendments to the Environmental Protection Act 1986 before it can allow this policy to progress further. It expects, however, that these legislative amendments should be finalised next year. Subsequently, the Gnangara Mound Crown Land EPP which is current at the time may ultimately become incorporated as a schedule in the State Groundwater EPP.

4.2. Objectives of the revised draft 1999 (previously 1992) Gnangara Mound Crown Land EPP

The principal objectives of the Gnangara Mound Crown Land EPP are:

• to declare under the Environmental Protection Act, certain uses of groundwater, vegetation and wetlands on or under the policy area, to be beneficial uses of the Gnangara Mound Crown Land EPP and to establish a consistent regulatory framework for the protection of these uses.

In order to achieve this objective, the revised draft 1999 (previously 1992) Gnangara Mound Crown Land EPP:

- defines the policy area;
- identifies the beneficial use of groundwater to be protected within the policy area;
- endeavours to establish a consistent framework for decision-making that is effective, flexible and equitable and yet which protects the beneficial use of wetlands; and
- establishes a program for the protection of the beneficial use of wetlands.

4.3. Area to which the revised draft 1999 (previously 1992) Gnangara Mound Crown Land EPP applies

The policy area is identified in Figure 1. It is the Gnangara Mound Crown Land which is a large mound of groundwater beneath the deep sandy soil north of Perth, between the coast and the Darling Scarp.

4.4 The beneficial uses of groundwater, native vegetation and wetlands protected under the revised draft 1999 (previously 1992) Gnangara Mound Crown Land EPP

The beneficial use of groundwater declared to be protected under clause 6 of the Gnangara Mound Crown Land EPP are as follows:

"(a) use of the groundwater to support native vegetation and wetlands in the policy area;

In practice, authorisation of an activity (otherwise prohibited under the policy) is obtained by way of a statutory approval under the Environmental Protection Act by a works approval, licence, a requirement contained in a pollution abatement notice, 'not assessed' level of assessment (section 40 of the Act), a Ministerial Condition (section 45 of the Act), a direction (section 73 of the Act) or an exemption for the discharge of waste in emergencies (section 75 of the Act).

4.5 Scope of the revised draft 1999 (previously 1992) Gnangara Mound Crown Land EPP

The policy allows for some activities already occurring in the policy area to continue even though they may not be entirely compatible with groundwater protection.

This includes activities such as mining, roads and road transport, horse riding in the pine plantation, rifle range and pistol shooting, pine production, power generation and transmission.

However, any existing activity in the policy area may be reviewed if it is polluting the groundwater or likely to do so.

4.7 Environmental performance of the 1992 Gnangara Mound Crown Land EPP

The 1999 review has been based on the effectiveness of the EPP in influencing other regulatory mechanisms and decision makers and achieving environmental protection as various land uses are established, including the following:

- water resource development;
- wetlands and upland vegetation;
- pine plantations;
- extractive industries;
- Whiteman Park; and
- Yanchep National Park.

Such regulatory mechanisms include licensing, environmental impact assessment and development control under the town planning process.

5. Issues considered by the EPA in reviewing the 1992 Gnangara Mound Crown Land EPP

There are a number of inter-related issues which the EPA has taken into consideration in its review of the 1992 Gnangara Mound Crown Land EPP as follows;

5.1 Government commitment to a State Groundwater EPP

In September 1996 the Minister for the Environment announced the Government's commitment to establish an Environmental Protection Policy for the State's groundwater resources. This announcement acknowledged the need to protect groundwater for human use and ecosystem maintenance and the need to protect both groundwater quality and quantity, and called for the policy to "form a cornerstone for groundwater protection" in the State.

The Draft State Groundwater EPP (EPA, 1998) will establish a consistent regulatory framework for the protection of the State's groundwater according to the principles of ecologically sustainable development. In doing so the policy recognises existing groundwater EPPs and the National Water Reform Framework (to which the Western Australian Government is co-signatory). Key Aspects of the draft EPP include:

• The recognition of the environmental values upon which human "beneficial" uses are based;

Gnangara Park Concept Plan - issued for public comment in May 1999: (Department of Conservation and Land Management, 1999);

Perth's Bushplan - for public comment: (Government of Western Australia, 1998); and

Draft Environmental Protection (Swan Coastal Plain Wetlands) Policy 1999 - Currently being developed by the EPA under s28 of the Act (EPA 1999a). The EPA has adopted a consistent approach regarding the implications and relativities of both the Wetlands EPP and the revised draft Gnangara Mound Crown Land EPP 1999; and

• the recommendations of the Parliamentary Select Committee on *Metropolitan Development* and *Groundwater* (1994) to adopt a "whole of government" approach to groundwater protection of the Gnangara Mound.

6. EPA observations and suggestions

The review of the 1992 Gnangara Mound Crown Land EPP has been complicated because the EPA is currently awaiting finalisation of a number of significant proposals (as mentioned above) by Government Agencies which directly affects the 1992 Gnangara Mound Crown Land EPP. The EPA is also awaiting the amendments to the *Environmental Protection Act 1986* which will allow the progression of the draft State Groundwater EPP which was released for public comment by the EPA in 1998. The EPA expects that the legislative amendments should be finalised by late 2000. Subsequently the Gnangara Mound Crown Land EPP current at the time may ultimately become incorporated as a schedule under the State Groundwater EPP.

In view of the above and the issues raised during public submissions, the EPA will shortly be convening a technical reference group to assist with the development of a schedule relating to the Gnangara Mound for inclusion in the proposed State Groundwater EPP. It should provide advice to the EPA on the following:

- the Environmental Quality Objectives and environmental criteria for the protection of environmental values of groundwater associated with the Gnangara groundwater system;
- the State Groundwater Environmental Protection Policy process and its relationship with the Gnangara Mound Crown Land EPP;
- the relationship of nationally agreed water quality criterion to the State Groundwater EPP; and
- the implications for the Gnangara Mound Crown Land EPP relating to the final outcome of discussions regarding the Gnangara Land Use and Water Management Strategy (WAPC, 1999).

It is proposed to incorporate the Environmental Quality Objectives and environmental criteria within a schedule under the State Groundwater EPP so that it can be more easily reviewed in the future. The technical reference group should include, but not necessarily be limited to, the key stakeholders as identified below:

- Department of Environmental Protection (DEP);
- Water and Rivers Commission (WRC);
- Western Australian Planning Commission (WAPC)/Ministry for Planning;
- Department of Conservation and Land Management;
- Water Corporation; and
- Health Department.

Appendix 1

Environmental Protection Act 1986

Revised Draft Environmental Protection (Gnangara Mound Crown Land) Policy 1999

ENVIRONMENTAL PROTECTION ACT 1986

ENVIRONMENTAL PROTECTION (GNANGARA MOUND CROWN LAND) POLICY 1999

Approved by the Minister under section 31 (d)

PART 1 — PRELIMINARY

Citation

- 1. This Policy may be cited as the Environmental Protection (Gnangara Mound Crown Land) Policy 1999.
- 2. The purpose of this policy is to protect
 - (a) the level and quality of groundwater on or under the policy area (an area consisting of Crown land and covering a large portion of Gnangara mound); and
 - (b) native vegetation and wetlands in the policy area

Interpretation

- 3. In this policy, unless the contrary intention appears
 - "basal area", in relation to the pine plantation, means the area of trunks of trees in the pine plantation when measure at 1.3 metres above ground level;
 - "contaminant" means any substance that is capable of causing a change in the physical chemical or biological characteristics of groundwater such that —
 - (a) the capacity of the groundwater to support flora or fauna is reduced; or
 - (b) the suitability of the groundwater for human consumption is reduced,

but does not include any substance that is applied to land for forestry purposes in accordance with good forestry practice;

"Gnangara mound" means the groundwater system which occurs in the superficial formations in the area bounded generally by the Indian ocean, Moore river, Gingin brook, Chandala brook, Ellen brook and the Swan River;

"groundwater" includes water in a wetland that is surface expression of groundwater;

"Wetlands policy" means the Environmental Protection (Swan Coastal Plain Wetlands) Policy 1999;

"mining operations" has the meaning given to that expression in section 8 (1) of the Mining Act 1978;

"native vegetation" means any plant species which is indigenous to the policy area;

"Planning Policy" means "Statement of Planning Policy No. 3: Gnangara Mound Crown Land" prepared by the State Planning Commission under the Town Planning and Development Act 19289 and published in the Gazette of 20 March 1992 at pp. 1309–1311 and includes any amendments made to that policy;

"policy area" means the portion of the environment to which this policy applies;

- (b) use of the native vegetation and wetlands as a refuge for many rare, endangered, and geographically restricted species for flora and fauna including many birds which migrate between Australasia and the northern hemisphere and which are protected under International Treaties;
- (c) use of the native vegetation and wetlands as a focus of cultural and heritage values for communities living in the area before European settlement, having provided the basis for food gathering and spiritual life in those communities;
- (d) use of the native vegetation and wetlands as an important aesthetic element of the natural landscape;
- (e) use of the native vegetation and wetlands as providing a biologically productive and genetically diverse natural environment.

Activities which can cause groundwater, native vegetation or wetlands to be degraded

- 7. The following activities, amongst others, can cause the levels and quality of groundwater on or under the policy area to be reduced or degraded or the destruction of native vegetation and wetlands in the policy area
 - (a) The discharge of contaminants in the policy area;
 - (b) the filling in of wetlands in the policy area;
 - (c) the carrying out of excavation or mining operations in the policy area;
 - (d) the clearing, destruction or removal of native vegetation on or from the policy area;
 - (e) the excessive abstraction of groundwater from the policy area.

Environmental quality objectives for groundwater

8. The environmental quality objectives to be achieved and maintained in respect of groundwater on or under the policy area are set out in Schedule 1.

Protection of groundwater, native vegetation and wetlands

- 9. The achievement and maintenance of the environmental quality objectives referred to in clause 8 and the protection generally of groundwater, native vegetation and wetlands in the policy area to be effected by
 - (a) local authorities and the State Planning Commission giving effect to the Planning Policy;
 - (b) management, development and use of Whiteman Park being carried out in accordance with the Whiteman Park Development Strategy;
 - (c) management, development and use of Yanchep National Park being carried out in accordance with the Yanchep National Park Management Plan;
 - (d) management of the pine plantation being carried out in such a manner as to ensure that use of groundwater by the pine plantation is no greater than the use of groundwater by native vegetation (this means that the basal area of the pine plantation should not exceed an average of 11 square metres per hectare);

Clearing, destruction or removal of native vegetation

- 15. A person shall not clear, destroy or remove any native vegetation on or from the policy area unless—
 - (a) the person is authorized under the Act to do so and is acting in accordance with that authorization;
 - (b) the person is authorized under any other written law to do so
 - (i) for the purpose of fighting a fire or preventing the outbreak of fire; or
 - (ii) as part of a controlled burning operation, and is acting in accordance with that authorization; or
 - (c) the clearing, destruction or removal of native vegetation occurs in the area of the pine plantation.

Penalties

- 16. A person who contravenes clause 11, 12, 13, 14, or 15 commits an offence and is liable
 - (a) in the case of an individual, to a penalty not exceeding \$5 000 and if the offence is a continuing offence to a daily penalty not exceeding \$ 1000; and
 - (b) in the case of a body corporate to a penalty not exceeding \$10 000 and if the offence is a continuing offence to a daily penalty not exceeding \$2 000.

Maldison Methoxychlor	5 *
Parathion	1.5
2,4-Dichlorophenoxyacetic acid	5
Carbon tetrachloride	0.15
Tetrachloroethene	0.5
Trichloroethene	1.5
1,1-Dichloroethene	0.015
1,2-Dichloroethene	0.5
Benzo-a-pyrene	0.01
Pentachlorophenol	0.5
2,4,6-Trichlorophenol	0.5
Phenols	0.5
Benzene	0.5
Trihalomethanes	10
Hydrocarbons (total)	0.5
Aromatic Hydrocarbons	0.5
Polychlorinated Biphenyls	*
Surfactants	10

Microbiological quality

Micro-organisms	Limit
Faecal coliforms	not detectable
Coliforms	not detectable
Faecel Streptococci	not detectable
Salmonella	not detectable

Radiological characteristics (Becquerel/L)
Gross alpha activity
Gross beta activity excluding activity by 0.1
potassium-40

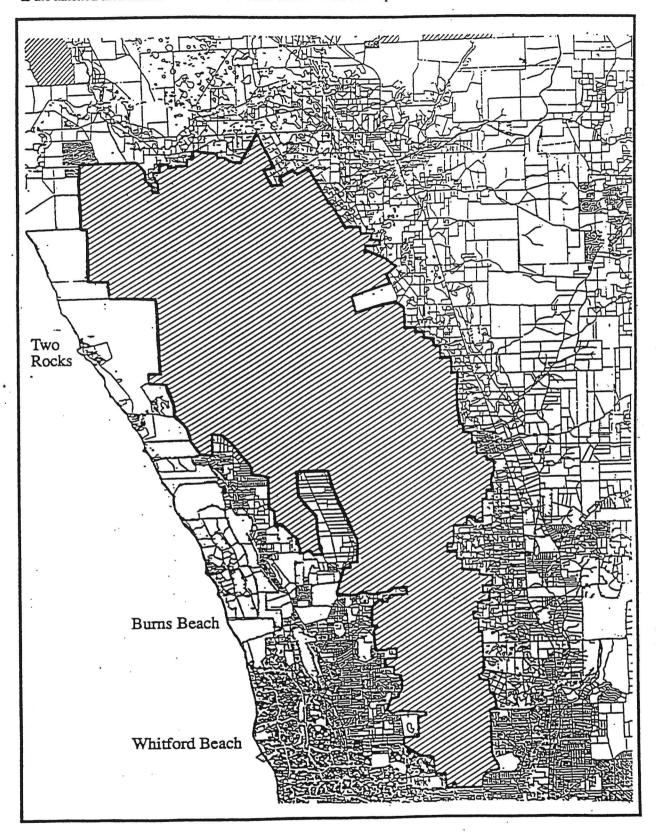
A reference in this Part to -

- (a) a limit, shall be construed as a reference to the maximum limit that is permitted in the groundwater;
- (b) a range, shall be construed as a reference to the range that the groundwater must fall within.

[Note: Where the permissible limit or range is shown as an *, the in situ level is considered to be the permissible limit or range.]

SCHEDULE 1

Environmental Protection (Gnangara Mound Crown land groundwater) policy. The area designated for protection is the hatched area contained within the thick black line on the map.



Appendix 2

Report on submissions for the

Review of the Environmental Protection (Gnangara Mound Crown Land) Policy 1992

and the

draft Environmental Protection (Gnangara Mound Crown Land) Policy 1999

The draft Environmental Protection (Gnangara Mound Crown Land) Policy 1999, was released on 12 November 1999 for a 3 week public comment period ending on 3 December 1999. Notice of the release was published in the Government Gazette on 12 February 1999 and advertisements were placed in the *West Australian* newspaper and the local newspapers inviting submissions.

The draft policy was distributed to State Government departments, Local Government departments in the region, local Members of the Legislative Assembly and Legislative Council, industries in the region, individuals who expressed interest, local groups and conservation groups. Copies of the draft policy were available at the head office of the Department of Environmental Protection and at its regional offices.

A total of 21 submissions were received, including some late submissions which were accepted. A summary of the nature of interest of submissions is as follows:

*	No. of Submissions
State Government	
(including vesting authorities)	8
Local Government	1
Conservation Groups	6
Aboriginal Groups	2
Individuals & other interested groups	4
Total	21

A full summary of public submissions and responses for the policy is provided in Table 1. A list of the submitters to the draft policy is given in Table 2.

Key to abbreviations (submission No.)

MfP	Ministry for Planning (26)
WRC	Waters and Rivers Commission (20)
WC	Water Corporation (17)
DME	Dept. Minerals and Energy (7)
MRWA	Main Roads Western Australia (21)
HD	Health Dept. (9)
CALM	Dept. Conservation and Land Management (25)
WR	Westrail (1)
C/W	City of Wanneroo (23)
WCG	Waterbird Conservation group (19)
WS	Wildflower Society (18)
CC	Conservation Council (24)
NCE	Nyungah Circle of Elders (2)
NTC	The Combined Swan River and Swan Coastal Plains Native
	Title Claims (3)

		Koara No.2 Decision (NNTT, June 98) - aboriginal culture considered as part of every assessment by DEP/EPA NPNCA Policy Statement 2A - aboriginal involvements in National Parks and Nature Conservation (NCE, NTC) Advice from Aboriginal communities should be given a priority (16)	aboriginal consultation as part of the technical reference group process.
5.	Environmental Quality Objectives (EQO's) - Schedule 1	 EQO's need substantial review as they are unrepresentative of uncontaminated groundwater /don't reflect National drinking water guidelines - NHMRC, ANZEC (WRC, HD,12) Questions of clarification relating to Schedule 1: "in-situ" definition, maximum levels and limits for herbicides and pesticides (HD) EQO required for no further loss to native vegetation (CC,WS, 6, 12, 15) EQO required for no further change to condition or composition of groundwater dependent vegetation (CC,WS, 6,12, 15) EQO's relating to impact on beneficial uses are required for proposed activities/developments (CC, 15) EQO's should be regularly reviewed in public arena (WS, 6) 	It is recognised that the EQO's and water level criteria require technical review. This will be undertaken via the EPA's technical reference group as part of a "whole of Government" approach to the State Groundwater EPP. The National drinking water guidelines are currently under revision and have recently undergone public review.
6.	Water level criteria - climatic variability	 Supports review of EPP criteria (WCG, 6) EPP does not adequately address long cycle/natural climate variability - more investigation required (WC, 6) No further urban development should be permitted on the Gnangara Mound as it causes water levels to drop below minimum levels (8) 	,
7.	Beneficial uses	 Native vegetation and wetlands as a habitat for flora and fauna which is not rare, endangered and geographically restricted should be included (CC, WS, 6, 12, 15) Requires greater protection for groundwater resources and native vegetation (CC, WS, 12, 16) Support Part 2 - beneficial uses (WCG) Environmental and social implications of conflicting beneficial uses should be publicly debated (WC) Beneficial uses of EPP (Groundwater, wetland and native vegetation) should take precedence over forestry activities (12) 	Beneficial uses and their conflicts will be reviewed via the EPA's technical reference group and recommendations regarding this issue made to the Minister for the Environment.
8.	Controlled activities	 "construction and alteration of drainage systems" should be added as a controlled activity (CC, 15) Review/performance criteria for controlled activities should be considered within the EPP-including third party requests for review (CC) Pesticide management required in Public Water Supply Area (WRC) Substances used for forestry (Sec3b) should require Health Dept. approval (12) the use of PSC88 and other pesticides either approved or under review and controlled by the Pesticide Advisory Committee should be exempt under cl.11 unless it is intended for future applications to require EPA approval (HD) Acknowledge that existing roads and road transport 	Controlled activities will be reviewed via the EPA's technical reference group as part of a "whole of Government" approach.

Table 2. List of submitters

1	Westrail
2 3	Nyungah Circle of Elders
	The Combined Swan River and Swan Coastal Plains Native Title Claim Applicants
4	Ellenbrook Joint Venture
5	Copy (No7)
6	Ellenbrook Conservation Group
7	Dept. Minerals and Energy
8	Wetlands Action Group for Stirling
9	Health Department of WA
10	Copy (No 19)
11	Australian Aluminium Council
12	Peter Wilmot and Jan Knight
13	Copy (No 24)
14	Copy (No 23)
15	Melville Conservation Group
16	Astrid Herlihy
17	Water Corporation
18	Wildflower Society
19	Waterbird Conservation Group Inc.
20	Water and Rivers Commission
21	Main Roads Department
22	Copy (No 20)
23	City of Wanneroo
24	Conservation Council of WA
25	Dept. Conservation and Land Management
26	Ministry for Planning