

Protecting Water Quality in Western Australia



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Water sustains life. Maintaining water quality at a level capable of sustaining present and future life is not an optional exercise, but an ecological imperative. Pollution with the potential to adversely affect water quality can be divided into two categories. Point source pollution comes from specific sources which can be identified, measured and monitored. Non-point source pollution, on the other hand, comes from a wide variety of sources and diffuse land use activities, not from a single discharge pipe or chimney. Water quality depends on effective protection from both types of pollution. This article examines how well equipped Western Australia is to provide protection for its water supplies.

THE importance of water to Western Australia, the second driest State in the driest inhabited continent in the world,¹ is self-evident. Not surprisingly, one of the primary objectives of Western Australia's water managers is to protect water quality.² While in most instances the State enjoys good water quality for consumptive purposes, in situ and divertible water resources have been extensively degraded and competing land uses are intensifying the pressure on both groundwater and surface water.³

Western Australia is not alone in the challenges it faces to maintain water quality. The Commonwealth, State and Territory governments have worked together to establish a National Water Quality Management Strategy ('NWQMS') directed at developing a consistent national approach to water

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1. WA Planning Commission *State Planning Strategy: Environment and Natural Resources Discussion Paper* (Perth, 1995) 32.
2. R Banyard 'Current Objectives in Administration of Water Resources' in R Bartlett, A Gardner & B Humphries (eds) *Water Resources Law and Management in WA* (Perth: Centre for Commercial and Resources Law, 1996) 77, 79.
3. R Humphries & P Williams 'The Current State of WA's Water Resources' in Bartlett et al *ibid*, 17, 19-21.

quality management.⁴ The objective of this Strategy is 'to achieve sustainable use of the nation's water resources by protecting and enhancing their quality while maintaining economic and social development'.⁵ Underlying this objective is the 'comprehensive philosophical umbrella'⁶ of ecologically sustainable development ('ESD'), indicating 'a clear predisposition to protect and enhance the quality of the nation's resource'.⁷

While there is no single expression of ESD, as it applies to water quality or otherwise, the Strategy draws on the National Strategy for Ecologically Sustainable Development to identify the core objectives and guiding principles essential to policies based on the concept of ESD and to 'throw extra light' onto the direction which water quality management must take.⁸ The core objectives are:

- to enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations;
- to provide for equity within and between generations; and
- to protect biological diversity and maintain the essential ecological processes of life-supporting systems.

Guiding these objectives are several principles which include:⁹

- integrating short and long term economic, environmental, social and equity considerations into the decision making process;
- where there is a threat of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;¹⁰
- adopting cost-effective and flexible policy instruments; and
- providing for broad community involvement.

The Council of Australian Governments has agreed to support the NWQMS¹¹ and the task now is to incorporate it into the legal and

4. ARMCANZ and ANZECC *National Water Quality Management Strategy: Water Quality Management — Policies and Principles* (Canberra, 1994) iii.

5. *Ibid.*, 6.

6. *Ibid.*, 4.

7. *Ibid.*, 6.

8. *Ibid.*, 4.

9. *Ibid.*, 5.

10. This is the most common expression of the precautionary principle. There are differing opinions on the effect of applying this principle. See *Bridgetown/Greenbushes Friends of the Forest v Dept of Conservation and Land Management* (unreported) Sup Ct 14 Feb 1997 File No CIV 2152 of 1996, 33 where Wheeler J found that '[t]he precautionary approach does not require that wherever there is any risk, however small, and however tenuous the scientific foundation for it, then decision makers may not act. The approach inevitably requires an assessment of the nature and degree of the risk, in the context of the other options available.'

11. COAG *Report on Water Resources Policy* 8(b).

administrative framework. Protecting and enhancing water quality while maintaining economic and social development is a formidable challenge. This article seeks to assess the current provision for water quality protection from diffuse and point source pollution in Western Australia in light of the objectives of ESD and the NWQMS. To do this, the statutory bodies with responsibilities relating to water quality will be discussed briefly. Next, the legislative framework for controlling point source discharges to water will be considered. Finally, the existing mechanisms to manage non-industrial and diffuse point source pollution which impact on water quality will be examined.

STATUTORY BODIES RESPONSIBLE FOR WATER QUALITY IN WESTERN AUSTRALIA

The primary responsibility for water quality management rests with the State. Within Western Australia the responsibility is shared by several statutory bodies that administer legislative and non-legislative regimes. This reflects both the complexity of water quality management and the diverse range of activities with the potential to impact upon it. While empowered by different statutory regimes, achieving ESD in relation to water quality requires that the decision making processes of these bodies occur within a comprehensive, integrated framework. While integration does not necessarily mean 'bureaucratic amalgamation',¹² a 'whole of government' approach to land and water management is needed throughout the State. This requires formalised inter-governmental coordination. This paper focuses on the major roles played by the Water and Rivers Commission ('WRC'), the Department of Environmental Protection, the Environmental Protection Authority ('EPA') and the Western Australian Planning Commission.¹³

12. CH Welker 'Pollution Control and Water Quality Management in WA' in Bartlett et al supra n 2, 247, 256.

13. Several other bodies exercise functions of importance to maintaining water quality. Local government, empowered by the Local Government Act 1995, creates town planning schemes. The Rivers and Estuaries Council advises the WRC under the Waterways Conservation Act 1976. The Swan Rivers Trust, created by the Swan River Trust Act 1988, is assigned the functions of managing and protecting the management area of the Swan and lower Canning River systems by coordinating other bodies whose functions relate to this management area and advising the Minister on the management program and development applications within the management area. The Office of the Soil and Land Conservation Commissioner is assigned functions relating to conservation lands being privately held and managed and also coordinates policies and activities of government departments and authorities in relation to the conservation of land. Under the Conservation and Land Management Act 1984 (WA), the Department of Conservation and Land Management manages Nature Reserves and National Parks and the waters associated with these areas and coordinates wetland policy within the State. In addition,

The WRC is an important guardian of water quality. In addition to assessing water resources and planning for the use of the State's water resources, this agency has water resource conservation, protection and management functions.¹⁴ It fulfils these roles through the powers vested in it under the Country Areas Water Supply Act 1947 (WA), the Water Boards Act 1904 (WA) and the Metropolitan Water Supply, Sewerage and Drainage Act 1909 (WA), which are focused on protecting drinking water quality; the Metropolitan Water Authority Act 1982 (WA), which provides for the administration of arterial drainage; the Rights in Water and Irrigation Act 1914 (WA), which provides for water allocation; and the Waterways Conservation Act 1976 (WA), which provides pollution control mechanisms within proclaimed Management Areas.

Part V of the Environmental Protection Act 1986 (WA) confers upon the Department of Environmental Protection pollution control powers for land, air and water. These powers include the issuing of licences and works approvals to regulate point source discharges from prescribed premises as well as monitoring and enforcement. Parts III and IV of the same Act empower the EPA to prepare Environmental Protection Policies and to carry out environmental impact assessments. All of these functions are of significance for maintaining water quality.

The Western Australian Planning Commission is responsible for urban, rural and regional land use planning and development in Western Australia and has a 'major coordinating role across government'.¹⁵ Its mission is 'to formulate and coordinate land use strategies for Western Australia and to facilitate its growth while continuously enhancing its unique quality of life and environment'.¹⁶ This Commission advises the Minister for Planning on regional and local planning schemes and also prepares regional schemes which have statutory force; and accordingly local town planning schemes must follow its dictates.¹⁷ In addition, the Western Australian Planning Commission is authorised to make Statements of Planning Policy¹⁸ to which local government must give due regard when preparing or amending a town planning scheme.¹⁹ In so doing, it has made provision for the protection of

under the Wildlife Conservation Act 1950. CALM is also responsible for wildlife values in all lands and waters in the State. The Coordinator of Water Services assists the Minister with planning and coordination of water services, advises on policy and administers the licensing of the services of water supply, sewage, irrigation and drainage.

14. Water and Rivers Commission Act 1995 s 10(1).
15. S Holthouse & J Dixon 'Groundwater as a Component of the State Planning Strategy' *Groundwater and Land-Use Planning Conference* (Perth: Centre for Groundwater Studies, 1996) 228, 229.
16. *Ibid.*, 230.
17. WA Planning Commission Act 1985 s 18.
18. Town Planning Development Act 1928 s 5AA.
19. Town Planning Development Act 1928 s 7(5)(a).

water quality in several policy documents, schemes and plans, particularly in water catchments of importance for water supply.

CONTROL OF POINT SOURCE POLLUTION

Point source and diffuse source pollution both pose significant threats to water quality. Traditionally, Western Australia has focused on the control of point source pollution, in particular point source pollution as it occurs in relation to industrial premises.²⁰ Nevertheless, over 1 000 contaminated sites have been identified on the Swan coastal plain, with the highest risk sites focused around areas zoned industrial and associated with industrial and chemical point sources.²¹ At present some levels of point source discharge may be an unavoidable by-product of economic development. However, the effective regulation of this type of pollution is crucial to protect water quality and to meet the ESD objectives of safeguarding the welfare of future generations and maintaining the essential ecological processes of life-supporting systems.

While controls for point source discharges into water are available in several pieces of legislation, the most important provision is made in Part V of the Environmental Protection Act. Part V establishes a general pollution control system which requires works approvals and licences for the discharge of waste from 'prescribed premises' into the environment; provides powers to issue administrative orders and directives; creates general prohibitions in the form of offence provisions; and provides a system of enforcement with powers of inspection and prosecution.

1. Works approvals and licences

Two forms of statutory controls regulate discharges from prescribed premises. Works approvals provide some control over the planning and design of industrial operations. Any work carried out on prescribed premises which will cause or increase the discharge of waste or alter the nature of waste discharged must be done in accordance with a works approval or other authorisation.²² Actual discharges are regulated by licences. The occupier of prescribed premises can only cause or increase the discharge of waste or alter the nature of waste discharged in accordance with a licence.²³

20. Welker *supra* n 12, 256.

21. B Jenkins *Linking Environmental Protection and Groundwater Protection* (unpublished, 1996) 2.

22. Environmental Protection Act s 53. Works approvals are also required where work turns non-prescribed premises into prescribed premises: s 52.

23. Environmental Protection Act s 56.

The Chief Executive Officer of the Department of Environmental Protection may grant a works approval or licence, subject to conditions, after consulting with any person or public authority who has a direct interest in the subject matter and having regard to any relevant Environmental Protection Policy. The Environmental Protection Policies directed to the protection of water quality are particularly important to the grant of such authorisations as they prescribe beneficial uses and quality objectives within their policy areas. In the case of a licence application to discharge waste into proclaimed areas over which the WRC has control, it must always be consulted.²⁴ In fact, the WRC has been delegated the power and duty to grant licences where waste could reasonably be expected to gain access to any waters in the State.²⁵

(i) Best practice environmental management

The Environmental Protection Act licensing system, which has been in place since 1987, has very recently undergone a process of change. The original framework made use of licences which defined pollution control requirements according to maximum production throughput. Licence conditions and per annum fees for commercial activities which caused or contributed to the pollution of water were established according to maximum quantities of waste permitted to be discharged on any given day. The focus was on the end-of-pipe discharge rather than looking ‘back up the pipe’²⁶ to the source of the pollution. While allowing for certainty of result (assuming compliance) the system lacked incentive for licensees to improve their environmental performance or to take environmental responsibility.²⁷

To redress this deficiency, the licensing system is moving to one which encourages ‘voluntary proactive improvement of environmental performance’,²⁸ consistent with the concept of best practice environmental management (‘BPEM’). To do this, the system will provide for best practice and monitored licences, in addition to normal regulatory licences. Best practice licences will allow licensees to take responsibility for determining the best approach to meeting environmental performance requirements. To obtain such a licence, the applicant will be required to do a number of things, including setting environmental policies and performance objectives and putting in place environmental audit plans, environmental improvement

24. Environmental Protection Act s 57(2)(b)(ii).

25. Environmental Protection Act, Delegation No 22 *WA Government Gazette* 28 Oct 1994, 5467.

26. GM Bates *Environmental Law in Australia* 4th edn (Sydney: Butterworths, 1995) 395.

27. Dept of Environmental Protection *Achieving Best Practice Environmental Management* (Perth: unpublished, 1996) 2.

28. *Ibid.*

plans and systems of control and verification of environmental actions.²⁹ Such licences will continue to operate within defined perimeters, as they will always contain a discharge limit which cannot be exceeded;³⁰ but these regulatory controls will be accompanied by an ongoing commitment to reduce discharges.³¹ Monitored licences will monitor the main waste streams from industry, with maximum acceptable waste values prescribed in the licence.³² The necessary incentive to improve environmental performance will be supplied by load-based licence fees rather than maximum industry throughput, adjusted to recover the cost of administration.³³ The conditions proposed for obtaining a best practice licence will parallel, in many respects, the new ISO 14001 Environmental Management Systems developed by the International Organisation for Standardisation. In fact, as Gunningham has said, 'what is most striking about [Western Australia's proposed approach] is its potential to be used as a component to ISO 14001' while including some requirements currently lacking in the ISO 14001 framework.³⁴

Implementing BPEM requires legislative and policy change. The first steps towards implementing the BPEM system were taken through recent amendments to the Environmental Protection Regulations 1987. Notably, a new regulation is in place to define 'prescribed premises'. As of 1 October 1996, only those premises specified in Schedule 1 of the Regulations are prescribed premises. Previously, prescribed premises were those where 'there is carried out any activity for commercial purposes that causes or is likely to cause, or contribute to, pollution of any waters, air or land' in addition to those listed in the Schedule.³⁵ Additionally, several types of premises which were previously required to hold licences but which have 'low levels of pollution' are now subject only to a registration system.³⁶ It is anticipated that the registration system could ultimately apply to approximately 600 of the 1200 premises currently holding licences.³⁷ For those premises which

29. Ibid.

30. The NWQMS effluent quality guidelines for major industry could be used to define minimum standards.

31. Dept of Environmental Protection *supra* n 27, 7.

32. Ibid.

33. Ibid, 3.

34. N Gunningham 'From Adversarialism to Partnership? ISO 14000 and Regulation' in Int'l Standards Organisation *ISO 14000: Regulation, Trade and Environment* (Canberra: ACEL, 1996) 25. The ISO is a non-governmental organisation made up of national standards bodies from over 100 countries.

35. Environmental Protection Regs, reg 4(a) (pre-1996 amendment).

36. Environmental Protection Regs, reg 5B and Sch 2. Prescribed premises in Sch 1, Part 2 may apply for registration rather than licensing.

37. A Baker 'Proposed Changes to the Environmental Protection Act Licensing System and Fee Structure' (Perth: unpublished, 1996) 3.

continue to require a licence, the result is significant. Licence fees are now based on actual gram per minute discharge of specified kinds of waste. The maximum fee, where the discharge component is predominantly, or at least equally, attributable to the discharge of waste into water is now \$200 000.³⁸ The previous licence fees pale in comparison.

(ii) Effect of market-based measures

The injection of market-based measures into the regulatory processes is in keeping with the ESD principle of adopting cost-effective policy instruments. Such measures, complimented by discharge limits appropriate for the receiving waters, should improve water quality outcomes by imposing the cost of polluting on the generator of the waste, thereby encouraging waste minimisation. The significant increase in licence fees should provide the requisite motivation, provided that paying the maximum licence fee to discharge waste is not more cost-effective than installing appropriate technologies to reduce discharges. What is more difficult to predict is whether the licensing costs associated with polluting water translate to the real costs associated with the consequent damage to the environment. The costing of this damage is recognised in the NWQMS as the primary difficulty in implementing a market-based approach to waste management.³⁹ An approach the Strategy suggests is to treat the receiving water as a capital asset, which is depreciated when used for waste disposal. If this was done, higher licensing fees would be associated with discharges into water resources of significance.

The global trend towards BP EM is perhaps inevitable. In fact, some have queried why it has taken so long to arrive.⁴⁰ Optimally, the result will meet the NWQMS objectives of enhancing water quality, while maintaining economic development. While these types of system appeal to environmentally conscientious industries, they are designed to motivate all industry by affecting the bottom line. It is important to ensure, however, that the motivation is towards better environmental management. Now that the maximum cost of discharge licences has been substantially increased, there may also be an incentive to move to non-compliance practices. For this reason, it is very important that the system is reinforced with effective monitoring and offence provisions. As the NWQMS states, it is important that 'mechanisms are in place to ensure the "rules are kept" and all players participate fairly'.⁴¹ This requires an effective enforcement against 'wilful polluters' combined with significant penalties to deter non-

38. Environmental Protection Regs, regs 5G(b) and (c).

39. ARMCANZ and ANZECC supra n 4, 13-14.

40. M Robinson 'ISO 14000: Eagle or Albatross?' in Gunningham supra n 34, 3.

41. ARMCANZ and ANZECC supra n 4, 24.

compliance.⁴² In the absence of credible deterrence, there is insufficient incentive for all except the very best companies to seek to go 'beyond compliance'.⁴³

2. Offence provisions

Enforcement comes in the form of administrative orders, directives and offence provisions. The Environmental Protection Act contains several specific offence provisions including those which relate to discharging of waste from prescribed premises without authorisation; contravening conditions of works approvals or licences; and disregarding pollution abatement notices, stop orders and directions.⁴⁴ In addition, general offence provisions in the Environmental Protection Act provide that '[a] person who causes or allows to be caused pollution commits an offence'⁴⁵ and that '[a] person who causes or allows waste to be placed in any position from which the waste could reasonably be expected to gain access to any portion of the environment and would in so gaining access be likely to result in pollution commits an offence'.⁴⁶ These general offence provisions must, however, be read in light of the definition of 'pollution'.

(i) Definition of pollution

Pollution is defined to mean: 'direct or indirect alteration of the environment — (a) to its detriment or degradation; (b) to the detriment of any beneficial use; or (c) of a prescribed kind'.⁴⁷

Taken literally, this definition, and particularly paragraph (a), makes causing pollution a very broad concept. Any action which has a detrimental or degrading effect on an individual plant or animal amounts to pollution. The application of this definition was narrowed in *Palos Verdes Estate Pty Ltd v Carbon*.⁴⁸ Reflecting upon the myriad of daily activities to which this definition could apply, Malcolm CJ restricted its application to the traditional or 'ordinary' meaning, 'namely, that the environment is altered to its detriment because the condition of the water, atmosphere, land or other aspect of the environment is altered so as to make it harmful or potentially harmful to the health, welfare, safety or property of human beings or harmful or potentially harmful to animals, birds, fish, other aquatic

42. Gunningham *supra* 34, 28.

43. *Ibid.*

44. Environmental Protection Act ss 53, 55, 58, 65(5), 69(1) and 71(5). S 118 makes provision for director and officer liability when a body corporate has committed an offence.

45. Environmental Protection Act s 49(1).

46. Environmental Protection Act s 50.

47. Environmental Protection Act s 3(1).

48. (1991) 72 LGRA 414.

life, plants or vegetation'.⁴⁹

Although the effect of the *Palos Verdes* decision is to confine an otherwise broad term, point source discharges of waste⁵⁰ which alter the condition of water so as to make it harmful or potentially harmful, thereby affecting water quality, continue to fit within its narrowed scope. However, activities such as the 'physical destruction of the environment by way of clearing land'⁵¹ and the destroying of wetlands, seagrass or other vegetation, which may also affect water quality, fall outside it. Although these activities cannot be characterised as point source discharges and are not licensed under the Environmental Protection Act, their exclusion means that the general offence provision cannot be used to protect water quality from these types of harmful activities.

Despite the narrow interpretation of paragraph (a), the direct or indirect alteration of the environment to the detriment of any beneficial use or of a prescribed kind can operate to expand the definition of pollution. 'Beneficial use' is expansively defined to include (i) use of the environment which is conducive to public health or (ii) aesthetic enjoyment which requires protection from the effects of discharges or is identified in an environmental protection policy. Environmental Protection Policies focused on important water resources prescribe the beneficial uses which they seek to protect. For example, the beneficial uses which the Environmental Protection (Peel Inlet-Harvey Estuary) Policy 1992 protects include the Estuary's use as a resource for studying the natural environment; as a habitat for diverse and abundant native flora and fauna communities; and for recreation, tourism and landscape amenity.⁵² As a result, the alteration of such a beneficial use to its detriment fits within the definition of pollution. However, determining whether alteration to the detriment of certain of these beneficial uses has occurred may pose its own difficulties. Unlike determining whether the Estuary's use as a habitat for flora and fauna has been altered, which presumably relies on scientific evidence, the determination of whether the Estuary's landscape amenity has been altered to its detriment may require a subjective assessment. In addition, there is no temporal limitation, with the result that any such alteration, for even a very short period of time, is pollution. It would not be surprising to see judicial interpretation also limit the scope of this provision, at least to the extent of importing the mythical reasonable person standard to determine

49. *Ibid.*, 429.

50. 'Waste' is defined to include 'matter — (a) whether liquid, solid, gaseous or radioactive and whether useful or useless, which is discharged into the environment; or (b) prescribed to be waste': Environmental Protection Act s 3(1).

51. *Palos Verdes* supra n 48, 431.

52. Environmental Protection (Peel Inlet-Harvey Estuary) Policy 1992 cl 5.

whether an alteration has occurred to the detriment of a beneficial use.⁵³

(ii) Standard of liability in Western Australia

In Western Australia, the intention to cause a particular result is not an element of the offence unless it is expressly declared to be so.⁵⁴ While it remains unclear whether the offences prescribed in the Environmental Protection Act are ones of strict or absolute liability,⁵⁵ it is clear that none are modified by words which indicate that intention to cause the result is an element of the offence. This type of an approach is not uncommon in regulatory offences, which aim to protect the common interests of society and promote the objects of the legislation, rather than to ensure that only those persons with guilty minds are punished. In this respect, regulatory offences may be distinguished from criminal offences. In keeping with this approach, and despite the availability of statutory defences to relieve liability,⁵⁶ the maximum penalties for commission of a Part V offence are relatively modest. Depending on the offence committed, the maximum penalties available for corporations range from \$20 000 to \$50 000 and those for individuals range from \$10 000 and/or six months' imprisonment to \$25 000.

There are situations where strict and absolute liability offences may be suitable, as the objective is to protect water from pollution regardless of the intentions of the actor. However, where a polluter has intentionally, wilfully or negligently caused serious environmental harm, the Environmental Protection Act offers no alternative to imposing harsher punishment. In this respect, the pollution offence provisions in Western Australia are out of step with those in other Australian jurisdictions which now contain a hierarchy of offence provisions, ranging from ones of absolute or strict liability to those requiring proof of intention or negligence. In the case of the latter, the burden on the prosecution is much higher but when

53. A similar suggestion is made in relation to s 39(1) of the Environmental Protection Act 1970 (Vic) in N Brunton 'Water Pollution Law in New South Wales and Victoria: Current Status and Future Trends' (1994) 11 EPLJ 39, 51.

54. Criminal Code s 23. Part V of the Criminal Code applies to all statutory offences: s 36.

55. In *Palos Verdes* supra n 48, Malcolm CJ stated that s 49(1) is an absolute liability offence. In *State Energy Commission of WA v Carbon* ((unreported) 11 Jan 1994 No 940001) Commissioner Ng, citing *Palos Verdes*, held that section 49(2) was an offence of strict liability. Similarly, the magistrate in *EPA v Kalgoorlie Consolidated* ((unreported) Ct of Petty Sessions 1991, noted in (1991) 10(2) AMPLA Bulletin) is reported to be of the opinion that ss 58 and 61 'are strict liability offences, except to the extent that specific defences apply.'

56. The Environmental Protection Act provides statutory defences related to emergency, accident and statutory authority. The Supreme Court has not yet been asked to determine whether the Criminal Code defences are also available or have been excluded by necessary implication.

satisfied the maximum penalties available are in the order of \$1 000 000 for corporations and \$250 000 and/or seven years' imprisonment for individuals.⁵⁷

A good example of a situation where the availability of an offence requiring proof of mens reas attracting higher penalties could have been utilised is the case of *Environmental Protection Authority v McMurtry*.⁵⁸ McMurtry was charged with consenting to the commission of a section 49(1) offence by Gilfillan Holdings Pty Ltd. McMurtry, as managing director of Gilfillan Holdings Pty Ltd, had directed his foreman to pump a contaminated tank and three underground wells down an open grate which led into a neighbouring creek. The foremen refused and suggested appropriate disposal but McMurtry did not want to pay to have this done and instructed the foreman to find someone else to do the job. While the employee was discharging approximately 22 000 litres of a solution containing toxic chemicals, the EPA was notified and an inspector arrived at the premises. Ultimately, the offence of causing pollution by directly altering a wetland to its detriment was made out.

For his part, McMurtry was sentenced to 12 weeks' imprisonment and became the first person in Australia to go to jail for committing an environmental offence. Despite this, one commentator suggested that this case served to highlight the deficiencies in the legislation and specifically that the lack of statutory provision for intentional, wilful or negligent crimes and the low range of penalties available meant that 'perhaps the only things Mr McMurtry can be thankful for is that he committed his crime in Western Australia'.⁵⁹ While this is probably the case, it is interesting to note that McMurtry's 12 weeks' imprisonment fell well short of the maximum six months and \$10 000 penalty available. Similarly, the \$15 000 fine given to Gilfillan Holdings Pty Ltd in earlier proceedings⁶⁰ was significantly lower than the maximum \$50 000 available.

The availability of larger penalties, especially in relation to intentional acts of pollution, is necessary to ensure that it is not more cost-effective for persons, whether occupying prescribed premises or not, to pollute water rather than deal with discharges appropriately. The present disparity between the maximum penalties and the new \$200 000 maximum licensing fee for discharges into water from prescribed premises is noteworthy. To redress this, the Environmental Protection Act should be amended to include offences for which mens rea is an element and to which more onerous penalties or sentences can attach. These amendments need to be

57. Eg Environmental Offences and Penalties Act 1989 (NSW) (Tier 1 and 2 offences).

58. (Unreported) Ct of Petty Sessions 9 Mar 1995 no 34314.

59. N Brunton 'Directors, Companies and Pollution in WA' (1995) 12(3) EPLJ 159, 160.

60. *Ibid*, 159.

complemented by sentencing options for situations where imposing a monetary penalty is not appropriate or effective. Options are particularly needed where defendants are impecunious or industries consider penalties a cost of doing business or a less expensive option to upgrading equipment.⁶¹ Outside the possibility of 6 months' imprisonment for an individual who breaches section 49(1), the Environmental Protection Act presently contains no such options.

(iii) General environmental duty

The Environmental Protection Act also lacks a general statutory duty requiring every person to do what is reasonable to avoid, remedy, or mitigate any adverse effect on the environment arising from an activity carried on by or on behalf of that person, whether or not the activity is being carried out in accordance with an authorisation. This type of general duty, which is imposed in other jurisdictions,⁶² is appropriate as it demands responsibility from all persons undertaking activities which may have an adverse effect on the environment and its constituent parts.

Such a duty complements the objectives of ESD as it demands that individuals integrate environmental considerations into their decision making. To ensure that such a provision is not too onerous, a limit of reasonableness must be maintained coupled with limitations on the remedies available in the face of a breach. Specifically, such a duty need not be directly enforceable against the person except to the extent that stop orders, directions or pollution abatement notices can issue to require the person to cease or not commence an activity or to take the steps necessary to avoid or remedy the harm.

(iv) Public participation

In keeping with the trend towards public participation,⁶³ the NWQMS reinforces the principle of ESD to fully involve the public in water quality management. At present there is little provision in the Environmental Protection Act for public involvement in the prosecution of Part V offences, which may only be instituted by either the Chief Executive Officer or an

61. Ibid. Eg Gilfillan Holdings went into liquidation and was unable to pay its fine and a clean up order was not sought. For a discussion of sentencing options: see Z Lipman & L Roots 'Protecting the Environment through Criminal Sanctions: The Environmental Offences and Penalties Act 1989 (NSW)' (1995) 12 EPLJ 16.

62. Eg Resource Management Act 1991 (NZ) s 17(1); Environmental Protection Act 1994 (Qld) s 36(1); Environmental Protection Act 1993 (SA) s 25.

63. For an example of the call to relax standing barriers: see ALRC *Who Can Sue? A Review of the Law of Standing* (Sydney: AGPS, Oct 1995).

appointee, acting with the consent of the Minister for the Environment.⁶⁴ The Achilles heel of pollution control is effective monitoring and enforcement. An efficient way to redress this is to provide a role for citizens in the enforcement of statutory environmental responsibilities. However, this type of provision is not consistent with existing Department of Environmental Protection prosecution policy. At present the Department's 'philosophy and policy advocates pursuing non-prosecution options to prevent or abate pollution or prevent a continuation or recurrence of an alleged offence'.⁶⁵ As such, enforcement measures are only used when non-coercive measures fail to resolve the problem in a satisfactory manner.⁶⁶ While the objective of pollution control is ultimately to solve the problem, the need to provide credible deterrence as an incentive to move beyond compliance may mean that it is time to reconsider this policy and whether it is now appropriate for the public to be given a role.

Despite the present provision in the Environmental Protection Act restricting persons able to institute prosecutions, the common law right of private citizens to seek injunctive relief to prevent a threatened breach of the Act may still be available. In *Bridgetown/Greenbushes Friends of the Forest Incorporated v Department of Conservation and Land Management*,⁶⁷ Parker J stated that while the jurisdiction of the courts to grant such an injunction was one of 'great delicacy' he was not prepared 'to hold, on a strike out application, that there is no possibility' that the general law right to seek injunctive relief could not be exercised.⁶⁸ This right should be complemented by amendments to the Environmental Protection Act allowing any person to initiate pollution control prosecutions and enforce a general environmental duty to provide for broad community involvement in the process.

DIFFUSE SOURCE POLLUTION MANAGEMENT

Controlling point source pollution is only part of the answer to protecting and enhancing water quality. The more difficult questions are posed by diffuse source pollution. While Part V of the Environmental Protection Act provides a mechanism for regulating point source discharges from prescribed premises, there is no single mechanism in place to manage diffuse source pollution. Diffuse source pollution results from widespread land practices, such as agricultural nutrient and pesticide use, or from a

64. Environmental Protection Act s 114(1).

65. Dept of Environmental Protection *Pollution Prevention Provision, Operational Policies — Part 5, Enforcement Policy* (Perth: unpublished, 1994).

66. *Ibid.*

67. (Unreported) Sup Ct 9 Aug 1995 no 950415.

68. *Ibid.*, 37. This decision is currently on appeal.

collection of sources, such as septic tanks. It is often the cumulative effect of these types of activities which makes them harmful to water quality, with the result that they are inherently more difficult to regulate. This fact, combined with the historical focus on point source pollution, means that while some mechanisms presently exist to regulate diffuse source pollution, further innovation in this area may be required. Ultimately, meeting the NWQMS and ESD objectives for water quality requires management solutions for diffuse source pollution.

1. Environmental Protection Policies

Environmental Protection Policies ('EPPs') are the most effective mechanism presently available to manage diffuse source pollution and the activities which cause it. Once approved, an EPP is stated to have the force of law and, with the exception of certain State Agreements and assessed schemes, prevails to the extent of inconsistency over any other written law.⁶⁹ EPPs are equipped to control diffuse source discharges by nominating beneficial uses for particular resources supported by control programs to regulate or prohibit activities which affect those uses within the policy area.⁷⁰ EPPs may also provide that their objectives are to be achieved by local authorities and the Western Australian Planning Commission through its planning instruments and decision making as well as by landholders and management authorities acting within the area at which the policy is directed.⁷¹ In a sense EPPs serve two very different purposes, providing at times a general administrative framework, while at others including legally binding provisions the contravention of which may be an offence.⁷²

EPPs have not been used to control diffuse source pollution affecting water quality in a comprehensive manner, dealing instead with a few specified policy areas within the State.⁷³ Responding to the Select Committee's call for government to 'move, without delay, to strengthen the legislative mechanisms which control the protection of groundwater

69. Environmental Protection Act s 5.

70. CH Welker *Administration and Policy Framework Paper for Water Quality Management in WA* (Perth: unpublished, 1994) 4.

71. It is interesting to note that complementary SPPs exist for the two EPPs relating to water quality which include such direction. These are Statement of Planning Policy No 2 'The Peel Harvey Coastal Plain Catchment' (Perth, 1992); Statement of Planning Policy No 3 'Gnangara Mound Crown Land' (Perth, 1992).

72. An offence under the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992 for filling in a protected lake has been successfully prosecuted: see Jenkins *supra* n 21, 7). For a discussion of the role of EPPs: see PW Johnston 'Environmental Advocacy: The Role of Lawyers in WA' (1992) 8 EPLJ 177.

73. EPPs in place to protect water quality are: Environmental Protection (Peel Inlet — Harvey Estuary) Policy 1992; Environmental Protection (Gnangara Mound Crown Land) Policy 1992; Environmental Protection (Swan Coastal Plain Lakes) Policy 1992.

resources',⁷⁴ the EPA is presently preparing a State-wide EPP to protect groundwater that will complement the regulatory instruments of other agencies such as the WRC and the Western Australian Planning Commission.⁷⁵ This EPP will propose broad objectives which will apply to all groundwater resources, with separate attachments designed to deal specifically with areas of importance.⁷⁶

The NWQMS anticipates that water management will be directed by attaching environmental values, more commonly referred to as beneficial uses, and accompanying criteria to specific water resources. Under the Strategy, Australian Water Quality Guidelines for Fresh and Marine Waters have been prepared, identifying five categories of environmental values: ecosystem protection, recreation and aesthetics, raw water for drinking water supply, agricultural water, and industrial water. Based on the Australian Guidelines, the EPA has adopted Western Australian Water Quality Guidelines for Fresh and Marine Waters⁷⁷ that are designed to be more consistent with the conditions in the State. At present these Guidelines are found in a non-statutory document prepared by the EPA to guide water quality management decisions. The preparation of the EPP to protect groundwater provides an opportunity to begin assigning these environmental values more comprehensively to groundwater resources. Similar provision is needed for all waters in the State.⁷⁸

The process prescribed to prepare an EPP is complex. It requires the preparation of drafts, provides for representations from the public, contemplates the appointment of committees of inquiry and mandates Ministerial consultation with public authorities and persons likely to be affected. The result is that EPPs are taking an average of five years to bring from inception to gazetting.⁷⁹ This means that the process of preparing an EPP for all waters in the State would be a lengthy and perhaps impossible task. In addition, these instruments have the shortcoming of being administered by the EPA, an agency which is not a manager and does not have the resources for monitoring.⁸⁰ EPPs which direct implementation by other agencies are also reliant on such agencies possessing effective

74. Select Committee on Metropolitan Development and Groundwater Supplies *Metropolitan Development and Groundwater Supplies Report* (Perth: Legislative Assembly, 1994) 94.

75. Jenkins *supra* n 21, 7.

76. *Ibid.*

77. EPA *Draft WA Water Quality Guidelines for Fresh and Marine Waters* (Bulletin 711, Oct 1993).

78. For a discussion of the State Environmental Protection Policy — Waters of Victoria: see Brunton, *supra* n 59, 50-51.

79. EPA *Annual Report 1994-1995* (Perth, 1995) 13.

80. WA Water Resources Council *River Management in WA: Ministerial Discussion Paper* (Perth, 1994) 22.

powers and procedures to do so. For these reasons, EPPs can only be a part of the solution for controlling diffuse source pollution. Optimally, they should provide a framework for water quality management which all regulatory authorities are required to incorporate into their legislative processes and decision making.⁸¹

2. Environmental impact assessments

Another part of the solution for controlling diffuse source pollution is the environmental impact assessment process. This process can be used on a case by case basis to assess the potential impacts of a proposal on water quality. The process is initiated when a proposal appears likely, if implemented, to have a 'significant' effect on the environment. In such a situation, the proposal must be referred to the EPA by the decision making authority and may be referred by the proponent, the Minister for the Environment or any other person.⁸² The EPA also has the power to call-in such a proposal. The EPA then determines whether assessment is required, either on a formal or informal basis. If an environmental impact assessment is carried out, the EPA reports to the Minister for the Environment on the environmental factors relevant to the proposal and any conditions or procedures to which implementation should be subject.⁸³ The Minister for the Environment, in consultation with the relevant decision maker, then determines whether the proposal should be implemented and on what conditions.⁸⁴

The recent passage of the Planning Legislation Amendment Act 1995 (WA) means that special provision is now made for the assessment of planning schemes⁸⁵ and proposals under assessed schemes. This new process requires all schemes to be referred to the EPA. If the EPA determines that an assessment of the scheme is required, it will issue instructions defining the scope and content of the environmental review, which the responsible authority must then undertake.⁸⁶ Based on this review, the EPA will report to the Minister for the Environment who must consult with the Minister for Planning to determine the conditions to which the scheme, if implemented, should be subject.⁸⁷ A scheme which has been through this process, or which the EPA has determined need not be formally assessed,

81. Bates notes the assertion that these types of policies are binding on regulatory authorities may be problematic: see Bates *supra* n 26, 398, n 18.

82. Environmental Protection Act s 38.

83. Environmental Protection Act s 40.

84. Environmental Protection Act s 45.

85. 'Scheme' is defined to include: amendments to the Metropolitan Region Scheme; regional planning schemes and amendments; town planning schemes and amendments; and SPPs.

86. Environmental Protection Act s 48C.

87. Environmental Protection Act s 48F. If the Ministers cannot agree, the Governor is the final decision maker: Environmental Protection Act s 48J.

becomes an 'assessed scheme'.⁸⁸

Unlike the general referral process for proposals which may have a significant effect on the environment, when such a proposal is made under an assessed scheme it is for the responsible authority to determine whether or not it needs to refer the proposal to the EPA. This determination is based on whether the environmental issues raised were addressed when the scheme was assessed and whether the proposal complies with the assessed scheme.⁸⁹ In respect of proposals under assessed schemes, section 38 has been amended to preclude 'any other person' from referring such a proposal to the EPA and to restrict the EPA's capacity to call-in such a proposal to situations where it lacked sufficient scientific or technical information to assess the environmental issues raised by the proposal when it first assessed the scheme, unless it is a proposal of a prescribed class.⁹⁰ Although the effects of these amendments are not yet fully known, it is clearly very important that water quality issues are considered when the EPA determines whether or not to assess a scheme as well as when it issues instructions for environmental review. The amendments to section 38 mean that this may be the only opportunity that the EPA has to require the assessment of such impacts, even if specific proposals with potentially significant impacts are later proposed. This result is less than satisfactory. At the very least, the restrictions on the ability of the EPA to call in proposals with potentially significant impacts should remain, whether or not the proposal arises under an assessed scheme. Similarly, any person should be able to refer such a proposal to the EPA for consideration. Absent such amendment, the EPA must take steps to ensure that water managers are formally consulted before a determination not to assess a scheme is made or any environmental instructions are issued.

Notwithstanding these amendments, the effects of diffuse source pollution, and indeed point source pollution, on water quality can be addressed at several stages of the environmental impact assessment process. A recent development is the preparation of policies for assessment in advance of proposals.⁹¹ This approach was used in the groundwater-fed catchment of Lake Clifton, where the EPA developed specific environmental protection criteria for the area to limit the effects on the quality and quantity of groundwater caused by changes in land uses from privately owned property.⁹²

88. Environmental Protection Act s 3(1). Amendments to town planning schemes, to the extent that they are necessary to amend such a scheme to comply with the provisions of an assessed Metropolitan Region Scheme or regional planning scheme, are also defined to be 'assessed schemes'.

89. Environmental Protection Act s 48I.

90. Environmental Protection Act s 38(3).

91. Jenkins *supra* n 21, 8.

92. *Ibid.*

The criteria were endorsed by the Western Australian Planning Commission which, in turn, included the criteria in a Coastal and Lakelands Planning Strategy directing development in the area.⁹³ Although the EPA's policies are non-binding, they may be translated into statutory planning schemes controlling development of the catchment in the future.⁹⁴

Water quality considerations can also be examined at the 'scoping stage' by requiring the proponent or responsible authority to provide information about the potential impacts of the proposal on water quality.⁹⁵ This is particularly useful in the assessment of schemes, as it is possible at this early planning stage to consider the cumulative impacts from diffuse sources. The Peel Region Scheme assessment offers an example of this with the environmental review instructions requiring consideration of water quality in the Peel Harvey Estuary and surrounding areas. Specifically, the review instructions require an estimate of possible changes to the water quality in the Estuary because of growth, including industrial expansion.⁹⁶ If conditions are placed in the assessed scheme to address these concerns, proposals carried out thereunder will be required to comply or again be subject to the environmental impact assessment process. Ultimately, the process offers a means by which conditions can be attached to proposals or through which recommendations to refuse proposals can be made if the resulting impact would be environmentally unacceptable.

Of course, it is not administratively or economically feasible for the five member EPA to conduct environmental impact assessments for every project, plan, program, policy operation, undertaking, development or change in land use proposed in the State. This was never the intention, as is made clear by the fact that the process is only triggered by proposals which may have a significant effect on the environment — and even then the EPA is required to determine whether assessment is necessary. In fact, the cost of bringing every proposal through formal assessment would be too great and the result would be both ineffective and unmanageable.⁹⁷ Thus it has always been expected that the other procedures in place to administer and approve proposals 'ensure that the proposal is environmentally acceptable'⁹⁸ — which necessarily includes ensuring that any impacts on water quality are acceptable. The lack of adequate provision to consider such impacts in the other decision making processes belies this assumption and poses a significant problem for controlling diffuse source pollution and managing environmental degradation.

93. Ibid.

94. Ibid.

95. Environmental Protection Act s 40.

96. Issued by the EPA on 25 Oct 1996.

97. DP Emond 'The Greening of Environmental Law' (1991) 36 McGill LJ 742, 757.

98. Environmental Impact Protection Administrative Procedures 1993 cl 5.1.

An example of this problem, as it relates to water quality, is found in the State's primary water legislation, the Rights in Water and Irrigation Act 1914 (WA). This legislation makes provision for the WRC to license the taking of water and gives it powers relating to improper water use. It does not, however, make direct provision for the WRC to consider the impact on water quality when making such an allocation.⁹⁹ Much of the harm caused to water quality by urbanisation and agriculture, which together are the biggest sources of diffuse source pollution,¹⁰⁰ arises perhaps ironically in tandem with the use of water. This is particularly the case for activities such as irrigation. Yet these considerations are not clearly within the scope of matters which the WRC can entertain in the allocation decisions.

Of course, it is possible for the EPA to carry out an environmental impact assessment on proposals to abstract water which require licensing. If this occurs, the effect on the environment, including water, can be considered and appropriate conditions imposed. This has occurred in the past in relation to applications by the then Water Authority to abstract water for public water supply purposes.¹⁰¹ The difficulty is that while the cumulative impacts may be significant, not every allocation by itself has a significant effect appropriately assessed by the EPA. Therefore, in order for water quality considerations to be included in every allocation decision and for ESD to be achieved, the WRC must be given the explicit legislative authority to do so together with the powers to impose conditions on licences in order to meet water quality objectives and targets.

Similar legislative direction is required to ensure that planning agencies consider water quality and place appropriate weight on providing for its protection in the exercise of their powers. At present, coordination is taking place between agencies¹⁰² and the Western Australian Planning Commission and local authorities have a duty to consult public authorities, such as the WRC, when they are likely to be affected by a proposed planning scheme or amendment¹⁰³ or a proposed subdivision.¹⁰⁴ In addition to any Statement of Planning Policy or EPP of relevance, WRC policies must be taken into account in the exercise of the planning agencies powers, although the weight to be accorded such consideration is for the decision maker to determine.¹⁰⁵ However, there is no statutory provision requiring planning agencies to take

99. Rights in Water and Irrigation Act 1914 ss 12, 13, 26D.

100. Jenkins *supra* n 21, 3.

101. *Ibid*, 8.

102. Welker *supra* n 70, 3.

103. Town Planning and Development Act 1928 s 7(2aa) and Metropolitan Region Town Planning Scheme Act 1959 s 33(2)(e).

104. Town Planning and Development Act 1928 s 24.

105. *Minister for Aboriginal Affairs v Peko Wallsend Ltd* (1985) 162 CLR 24, 41, 46.

responsibility for protecting water quality or prescribing the appropriate weight to be attached to the policies of agencies which do.

Given the role of the environmental impact assessment process and the underlying assumption that environmental issues other than those of particular significance are being provided for elsewhere in the process, all State legislation should do so. This is especially important in relation to planning instruments and proposals thereunder given the special provision made for them in the environmental impact assessment process by the Planning Legislation Amendment Act 1996 (WA). Such a requirement could help to ensure that water quality is not diminished by insignificant increments, as results from diffuse source pollution. It would also take a very important step towards fully integrating environmental considerations into the decision making processes in the manner required to meet ESD objectives.

3. Public drinking water supply protection

Because of the importance of maintaining the quality of our drinking water, significantly more attention has been paid to controlling activities and developments which cause pollution over catchment areas of importance for this purpose. The Metropolitan Water Supply, Sewerage and Drainage Act 1909 (WA), the Country Areas Water Supply Act 1947 (WA) and the Water Boards Act 1904 (WA) each allow the WRC to proclaim water reserves and catchment areas. Within these areas, the WRC has the powers of a local health board, including the power to make by-laws which control potentially polluting activities, regulate land use and allow for steps to be taken to prevent or clean-up pollution.¹⁰⁶ The Metropolitan Water Supply, Sewerage and Drainage Act 1909 (WA) also allows the WRC to proclaim an Underground Water Pollution Control Area within the metropolitan area.¹⁰⁷ This allows it to make by-laws to protect underground water purity and to control the placing or discharging of things which may have direct or indirect effects on groundwater purity.¹⁰⁸ Within country water reserves and catchment areas, where the removal of riverine vegetation impacts significantly on water quality, the Country Areas Water Supply Act 1947 (WA) provides for 'controlled lands' to be defined within which the clearing of land without a licence is an offence.¹⁰⁹

To maintain the quality of drinking water supplies in these areas, the WRC has developed a catchment policy.¹¹⁰ Recognising that it is not possible

106. Metropolitan Water Supply, Sewerage and Drainage Act 1909 s 17; Country Areas Water Supply Act 1947 s 12.

107. Metropolitan Water Supply, Sewerage and Drainage Act 1909 s 57A.

108. Metropolitan Water Supply, Sewerage and Drainage Act 1909 s 57B(1).

109. Country Areas Water Supply Act 1947 s 12B.

110. Water Authority of WA *Catchment Protection Policy to Maintain the Quality of Drinking Water Supplies* (Perth, June 1992).

to maintain all water supply catchment areas in pristine condition, the policy identifies three priority source protection classifications to which differential protection policies apply. Priority 1 areas are the most important for public water supply. Within these areas, most of which are in Crown ownership, the objective is to ensure no degradation of the water supply. To do this, the policy imposes strict limitations on land uses which might cause pollution and development is generally not permitted. Priority 2 areas are those from which water is taken but over which some development has already occurred. In these areas, the policy aims to ensure that pollution is not unduly increased by restricting further land development and activities to those which have a relatively low pollution risk. Priority 3 areas are those where substantial water resources exist but current or planned development may threaten the maintenance of the water quality. Here the policy seeks to minimise the risk of pollution through management guidelines but contemplates that some water will be contaminated and lost or that higher levels of treatment will be required before use.¹¹¹ While the appropriate priority protection level for each area is determined by the WRC and supported by Water Source Protection Plans, the policy recognises the need to work with other agencies, relying on their legislative capacity to protect these areas.¹¹²

The Western Australian Planning Commission has taken steps to integrate these policies into planning decisions in the metropolitan region through Policy DC 6.3. This policy, which applies to catchment areas, reserves, public water supply areas and Underground Water Pollution Control Areas, as well as areas with particular water management problems or large development proposals which may impact on significant surface or groundwater features, requires the Western Australian Planning Commission to seek advice from the WRC and to have regard to its policies.¹¹³ In addition, the Metropolitan Region Scheme assigns reserve status to many of the catchments used for public water supply,¹¹⁴ striving to ensure that land-uses within these areas are non-polluting and do not threaten water quality.¹¹⁵ The need to protect water supply catchments is also recognised in strategic plans for metropolitan areas, Corridor Structure Plans and the proposed Western Australian Planning Commission State Planning Strategy.

111. *Ibid.*, 4.

112. *Ibid.*, 5.

113. C O'Neill 'Land Use Planning and Water Resources — Prospects for Partnership' in Bartlett et al supra n 2, 166, 169. The policy states that the WAPC will not support zoning or subdivision applications if 'the proposal is inconsistent with land and water management plans and policies for the area.'

114. *Ibid.* Rivers, estuarine foreshores, lakes and wetlands may also be reserved.

115. K Cadee 'Managing Groundwater Impacts in an Expanding Urban Area' *Groundwater and Land-Use Planning Conference Proceedings* (Perth: Centre for Groundwater Studies, 1996) 77, 84.

4. Managing groundwater supply quality

Groundwater catchments are of particular importance as groundwater supplies 40 per cent of Perth's drinking water, an amount which is expected to increase to 46 per cent over the next 15 years.¹¹⁶ Since 1975 groundwater sources in urban or near urban areas have been developed to supplement the water supply and these sources are particularly vulnerable to diffuse source pollution from development and land use activities.¹¹⁷ As a result, several policies and instruments are in place to coordinate the development of land and the protection of significant groundwater mounds, particularly over the Gnangara and Jandakot water mounds.

The Gnangara Mound, a Priority 1 Source Protection Area, is the subject of the Environmental Protection (Gnangara Mound Crown Land) Policy 1992¹¹⁸ and a Statement of Planning Policy. Both of these policies are designed to ensure that activities and land uses around the Gnangara Mound are compatible with the sustainable use of groundwater and its associated environmental values. The Jandakot Mound, a Priority 2 Source Protection Area, is the subject of the Jandakot Land Use and Water Management Strategy 1995. This strategy is aimed at promoting a long-term framework for development which is compatible with the protection of water and environmentally sensitive land. In addition, a Metropolitan Regional Scheme Amendment has been proposed for the Jandakot Mound which introduces a new 'Rural Groundwater Catchment Protection' zone over capture zones.¹¹⁹ Together these policies place significant restrictions on the types of development and activities which can occur over important groundwater catchments.

Despite these initiatives, the policies in these areas do not yet make comprehensive provision for acceptable bottom lines for water quality protection. This was implicit in the recent Town Planning Appeal Tribunal decision, *Ironbridge Holdings Pty v WAPC*.¹²⁰ The appeal was against a decision of the Western Australian Planning Commission to deny a subdivision in the Jandakot Underground Water Protection Control Area of one hectare sewered lots. The Western Australian Planning Commission refused the application on a number of grounds, including the fact that it

116. L Moore 'Land Use Planning over the Gnangara Mound' *Groundwater and Land-Use Planning Conference* *ibid*, 169, 172.

117. Select Committee on Metropolitan Development and Groundwater Supplies *supra* n 74, 91.

118. A draft EPP to regulate private land in the area has been in preparation for several years.

119. Holthouse & Dixon *supra* n 15, 234.

120. (Unreported) WA Town Planning Appeal Tribunal 20 Dec 1996 no 4. An application for leave to extend time for filing an appeal against this decision was granted by the Supreme Court on 27 March 1997.

was not consistent with the recommendations and objectives of the Jandakot Land Use and Water Management Strategy 1995. In addition to the Strategy, the WRC's Catchment Protection Policy, the DC 6.3 Policy, and the proposed Amendment to the Metropolitan Regional Scheme were all relevant to the proposal and together supported the position that future subdivisions should be restricted to those with a minimum lot size of two hectares, to ensure that a measurable increase in groundwater contamination would not result. However, the evidence suggested that the two hectare minimum referred to unsewered lots. As a result, the Tribunal considered the different levels of contamination which could ensue from one hectare sewered lots, as opposed to two hectare unsewered lots, to determine whether the proposed subdivision fitted within the minimum risk provided for in the policies.

While the evidence suggested that the risk of contamination from the sewers was appropriately 10 per cent greater than the risk from the larger unsewered lots and there was no evidence to support or suspend fears that increased living density would not increase the risk of contamination, the Tribunal allowed the appeal. It did so after accepting that the precautionary approach, one of the guiding principles of ESD, applied as a matter of common sense and, without the State policies, would have acted to place a heavy burden on the developer to show that environmental harm would not occur.¹²¹ Yet, guided by the policies, the Tribunal held that the proposed subdivision could proceed because the risk associated with the one hectare sewered subdivision was comparable to the minimum policy of two hectare unsewered lots. As a result, the Tribunal found that the proposal fitted within the minimum environmental risk set by the various State policies in place for the area.¹²²

The Tribunal's conclusion that the proposed subdivision fitted within the minimum environmental risk accepted by the policies can be questioned in light of the lack of evidence to assess the potential risk of contamination resulting from the increased living density. However, the decision does suggest that not only is more scientific evidence needed but that a clear and comprehensive set of acceptable minimum risks within such policy areas could better control planning decisions. The historical focus of the policies on the effects of sewerage, or lack thereof, on groundwater quality needs to be expanded. Optimally, some form of statutory instrument needs to provide clear standards for acceptable and unacceptable land uses in important groundwater supply areas. The WRC could fulfil its water quality protection role in these areas through greater influence on the land planning

121. *Ibid.*, 29.

122. Cognisant of the importance of the water source, the Tribunal did provide for conditions to be imposed to restrict building area, lawn size and amount of chemical products stored on any one lot as well as making provision for buffer zones around production wells.

and development processes¹²³ or comprehensive water protection plans with statutory expression. In addition, when development takes place in these sensitive areas, stringent controls on land use need to be available with provision for monitoring and penalties. In this regard, there continues to be an immediate need for the WRC to be given stronger by-law making capacity.¹²⁴ Positive steps in this area could help to integrate water quality decisions into the decision making process.

5. Protecting other beneficial uses

The Waterways Conservation Act 1976 (WA) contains the only other general mechanism, outside of EPPs and Statements of Planning Policy, to control diffuse source pollution by protecting beneficial uses not associated with public drinking water supply. This Act allows for the proclamation of Management Areas over rivers, inlets, estuaries and associated lands. Within such areas the WRC has significant control over the use of land and water for the purpose of conserving and managing the waters therein.¹²⁵ It has the power to carry out policies or implement schemes to coordinate the actions of those who own or control land adjacent to or associated with the waters under its control in order to prevent or abate pollution, including the power to enter into agreements with land owners for the management of land and water within the area. General powers within Management Areas also include licensing activities which impact directly on the waterways, as prescribed in the regulations, which would otherwise constitute an offence against the Act.¹²⁶

This framework is limited in many respects. The powers of the WRC to license activities do not extend to include land use activities which have an indirect effect on water, focusing instead on activities which impact on the waterways themselves. To be effective, its powers need to be extended or a mechanism needs to be put in place to allow planning decisions relating to such activities to be guided by appropriate environmental values. Expanding powers under this Act, however, does not provide for a comprehensive management framework throughout the State, as it remains focused on proclaimed areas. In consequence, it does not provide a

123. This is one of the recommendations of the Select Committee on Metropolitan Development and Groundwater Supplies supra n 74, 95.

124. D Carew-Hopkins 'Findings of the WA Parliamentary Select Committee on Metropolitan Development and Groundwater Supplies' *Groundwater & Land-Use Planning Conference* supra n 115, 216, 226-227.

125. Waterways Conservation Act 1976 ss 4 and 25. Under the Swan River Trust Act 1988, the Swan River Trust manages and protects the management area of the Swan and Lower Canning River systems by coordinating other bodies and advising the Minister on management and development within the area.

126. Waterways Conservation Act 1976 s 46.

comprehensive mechanism to control diffuse source pollution and the activities which cause it.

CONCLUSION

Ultimately, all decisions, including those relating to activities which cause point source and diffuse source pollution should be made within a framework designed to achieve ESD. The NWQMS recognises the desirability of this type of management, which it describes as embracing the following characteristics:

A holistic approach to natural resource management within a catchment with water quality considered in relation to land use and other natural resources; coordination of all the agencies, levels of government and interest groups within the catchment; [and] extensive opportunity for consultation and participation.¹²⁷

To effect this, managers need to be guided by achievable water quality goals, prescribed environmental values and comprehensive water plans. While public consultation is a necessary component, at the end of the day the responsibility to do this should rest with a State agency.¹²⁸ At a minimum, responsibility needs to be clearly assigned to one agency with the legislative capacity to plan, coordinate and integrate water quality considerations into the broader planning and decision making framework. Optimally, all decision makers exercising powers and functions which bear on water quality within this framework should be constrained and guided by clearly expressed water quality objectives which give statutory expression to the core objectives of ESD.

127. ARMCANZ and ANZECC *supra* note 4, 21.

128. *Ibid.*, 22.