

Department of Environment

Public Drinking Water Resource Policy

*Protecting Public Drinking Water Source Areas
in Western Australia , September 2005*

Objective:

To coordinate and support Government policy for the protection Public Drinking Water Source Areas (PDWSA) in Western Australia.

This objective will help deliver a 'safe, good quality drinking water' to consumers, now and in the future, by:

- protecting and sustaining water quality in public drinking water source areas;
- implementing Government's plan for securing our water future; and
- supporting Government agency initiatives for the protection of drinking water sources.

Policy statements:

1. This policy applies to all PDWSA in Western Australia (PDWSA include Water Reserves, Catchment Areas and Underground Water Pollution Control Areas proclaimed under the *Metropolitan Water Supply, Sewerage and Drainage Act 1909* or the *Country Areas Water Supply Act 1947*).
2. The Department will develop 'Drinking Water Source Protection Assessments' and/or publicly consulted 'Drinking Water Source Protection Plans' for PDWSA. The identification of priority classification areas (i.e.. Priority 1, 2 and 3) and special protection zones (i.e. wellhead protection zones or reservoir protection zones) will occur at this time. See Attachment 1.
3. The Department will work to implement Government's "Recognition of the primacy of water quality in the management of drinking water catchments, to protect the long term sustainability of the resource, will be used to guide catchment management decisions."
4. The Department will work cooperatively with the *Advisory Committee for the Purity of Water* (chaired by the Department of Health) on 'catchment to consumer' drinking water quality protection issues to support implementation of the Australian Drinking Water Guidelines 2004.
5. The Department will seek advice from the Executive Director, Public Health for public health issues in PDWSA.
6. The Department will periodically update its 'Land use compatibility' policy document and associated Water Quality Protection Note to assist State and Local Government land use planning decision makers in protecting the value of PDWSA.
7. The Department will periodically review and update its 'Land acquisition' policy document to protect drinking water quality.
8. The Department will review, establish and implement legislation for the protection of PDWSA.

Supporting information for this policy, and the protection of drinking water sources, is available at <http://drinkingwater.environment.wa.gov.au>

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Public Drinking Water Source Areas, September 2005

Background:

The Department of Environment is the State Government agency responsible for the management, protection and enhancement of Western Australia's natural water resources.

This policy is for Departmental use and stakeholder advice within Public Drinking Water Source Area (PDWSA). It has been prepared to explain and support established programs for protection of the State's current and future drinking water supplies. It implements Government's ongoing support for the Australian Drinking Water Guidelines, 2004¹ and its 2005 "...plan to secure our water future" (*including completion of another 24 Drinking Water Source Protection Plans by 2008*)². It reflects the findings of the 2003, *State Water Strategy*³; *2003 State Sustainability Strategy*⁴; and key findings of two Parliamentary Committee reports undertaken in 1994⁵ and 2000⁶ on Perth's water supplies. The policy identifies existing policies, plans and processes established for the protection of drinking water sources by the Department of Environment and other government agencies.

It should be noted that a new focus on the protection of drinking water is currently being promoted by the *Advisory Committee for the Purity of Water* to ensure Government's drinking water protection policy initiatives are achieved. The Advisory Committee is chaired by the Department of Health and is comprised of key agencies across Government with a role or responsibility in drinking water protection issues. This Committee reports to the Minister for Water Resources and the Minister for Health. A recent decision of the Advisory Committee to establish a Drinking Water Source Protection Sub-Committee (Chaired by the Department of Environment) recognises this Department's key role in the protection of our State's limited PDWSA.

Supporting rationale:

This policy:

- does not introduce new requirements but aims to consolidate existing policy, plans and processes developed by the Department and already reflected in advice to Government, other State Agencies, Local Government, industry, agriculture and the community;
- is intended to provide authority, clarity and consistency for decision-making related to PDWSA protection. It is compatible with the 'catchment to consumer – multiple barrier' framework described in the "*Australian Drinking Water Guidelines, 2004*";
- will provide for continued implementation of the Department's drinking water source protection program which is modelled from two Parliamentary review reports completed in 1994 and 2000; and Government's water policy;
- does not establish the Department of Environment as a decision maker in land use development and planning but its purpose is to provide 'best practice' advice to State and Local Government planners for consideration in their decision making role; and
- has been developed to protect the '*drinking water*' environmental value of water resources within existing or proposed future PDWSA. This environmental value is consistent with the value identified through implementation of the *National Water Quality Management Strategy* Guideline 4⁷ as outlined in the *State Water Quality Management Strategy (SWQ1)* of 2001⁸.

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The following table provides explanatory comment for each policy statement:

Policy statement	Comment
1. Applicable area	<p>This policy applies to all proclaimed drinking water areas in WA. A Water Quality Protection Note listing proclaimed areas is available on the DoE website at http://drinkingwater.environment.wa.gov.au. This policy provides the Department of Environment's 'best practice' advice to State and Local Government decision makers.</p>
2. Prepare Assessments and Plans; and Identify priority areas and protection zones	<p>There are presently 139 PDWSA servicing the water needs of consumers in WA. As at June 2005, 29 Assessments and 54 Plans have been completed and these can be found on the Department's website. The completion of outstanding Plans is a priority to Government.</p> <p>These Assessments and Plans implement Government's initiative to protect our limited water supplies following the <i>Australian Drinking Water Guidelines 2004</i>. The Assessments include a risk assessment of hazards in the catchment. The publicly consulted Plans determine priority classification areas and protection zones to help control the identified risks and to guide decisions made by State and Local Government agencies in PDWSA.</p> <p>Recommendation 2 of the 2000 Parliamentary review was "That water source protection plans for the Perth metropolitan water supply be completed as a matter of urgency.". Government's 2005 <i>plan for securing our water future</i> identifies 24 Plans to be completed by 2008.</p> <p>The identification of priority areas and protection zones is reflected in existing by laws administered by the Department and in the policy and practice of other Government agencies. Examples include adoption of priority areas and protection zones within the Gngangara and Jandakot Land Use and Water Management Strategies.</p>
3. Primacy of water quality issues	<p>This policy statement is copied from Government's 2003 State Water Strategy response to resource protection and management issues (Section 8 page 56). It will be applied for both existing and proposed future Public Drinking Water Source Areas. Important considerations will include the availability of alternative sources, including the costs to investigate and establish them, and implementation of the <i>Australian Drinking Water Guidelines 2004</i> 'multiple barrier, risk management based approach' for drinking water quality and safety.</p> <p>It is also noted that Recommendation 3 of the 2000 Parliamentary review was "That the protection of water quality to meet public health objectives have primacy in the planning of integrated catchment management.".</p>
4. Advisory Committee	<p>The 'Advisory Committee for the Purity of Water' was established in 1925 and has continued to provide advice to Government on safe drinking water issues. This Committee supports application of the <i>Australian Drinking Water Guidelines</i> in WA.</p> <p>The Committee includes a broad range of Government agency</p>

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	<p>stakeholders.</p> <p>The terms of reference of the Committee requires it to report to both the Minister for Health and Minister for Water Resources, and to deal with all aspects of a water supply from catchment protection, storage, treatment and distribution to consumers.</p>
5. Public Health	<p>The Department of Health's advice will be sought for public health issues in public drinking water source areas.</p> <p>Generally, the Department of Environment is responsible to protect the raw water quality in catchments and Health is responsible for the treatment and distribution of safe water to consumers.</p> <p>Water service providers are responsible to both of these agencies and the public to ensure the availability of safe, good quality drinking water.</p>
6. Update Land Use Compatibility table	<p>This land use advice document is required to implement the Western Australian Planning Commission's June 2003, Statement of Planning Policy 2.7 "<i>Public Drinking Water Source Policy</i>"⁹. The table is not a decision making tool, its purpose is to provide best practice advice into the planning process.</p> <p>Policy 2.7 deals with existing PDWA, a new Draft Statement of Planning Policy (Number 2.9) is currently being developed to deal with proposed future PDWSA.</p> <p>The application of land use and development planning processes for the protection of drinking water catchments was a key recommendation in both Parliamentary Committee reports completed in 1994 and 2000.</p>
7. Land acquisition	<p>A Departmental '<i>land acquisition policy</i>'¹⁰ for PDWSA was approved in June 2004, to help achieve the drinking water quality objective described in this policy. The policy provides an opportunity for land owners to sell their property at appraised market values. A 'willing seller, willing buyer' philosophy prevails with no requirement on either party to sell or buy.</p>
8 Update legislation	<p>By-laws supporting water catchment protection will be periodically reviewed and enhanced. A review of by-laws has occurred in consultation with the community and other stakeholders with the aim of creating equivalent by-laws across Western Australia for Metropolitan and Country sources.</p> <p>Recommendation 1 of the 2000 Parliamentary review was that updated by-laws for public drinking water sources "...be progressed as a matter of urgency."</p>

References:

1. *Australian Drinking Water Guidelines 2004* - National Water Quality Management Strategy;
2. *State Government-Labor's plan to secure our water future* - Executive Summary, 2005;

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3. *Securing our water future* – A State Water Strategy for Western Australia, April 2003
4. *The Western Australian State Sustainability Strategy*, September 2003
5. The Select Committee on Metropolitan Development and Groundwater Supplies Report, Legislative Assembly Western Australia, 1994;
6. Report of the Standing Committee on Ecologically Sustainable Development in relation to the Quality of Perth's Water Supply, Western Australian Legislative Council, 2000;
7. Australian and New Zealand guidelines for fresh and marine water quality, Guideline Number 4, National Water Quality Management Strategy, 2000;
8. *State Water Quality Management Strategy* (SWQ1, Framework May 2001, implementing the National Water Quality Management Strategy in Western Australia);
9. *Public Drinking Water Source Policy*, Statement of Planning Policy No 2.7, June 2003, Western Australian Planning Commission; and
10. Land Acquisition Policy to Achieve Drinking Water Quality Protection Objectives in Public Drinking Water Source Areas, Water and Rivers Commission Board, June 2004

Other useful references:

- Public Drinking Water Resource Policy – Land Use Compatibility in Public Drinking Water Source Areas, Department of Environment, July 2004; and
- Water Quality Protection Note- Protecting Public Drinking Water Source Areas, Department of Environment, 2004;
- Water Resources, Draft Statement of Planning Policy No 2.9, September 2004, Western Australian Planning Commission (considering future PDWSA issues).

Policy Custodian:

In the event of any dispute arising in relation to the application of this policy, the issue shall be referred to the policy custodian (Manager, Water Source Protection) for resolution. The Executive of the Department, at its discretion may vary this policy.

Policy Recommended

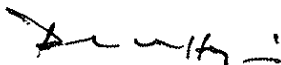


Tony Laws
Manager, Water Source Protection



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Policy Approved



Derek Carew Hopkins
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Date: 3/10/05

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Protecting the catchments of 'Public Drinking Water Source Areas'

	Protection Zone		Priority Classification Area		
	Reservoir Protection Zone (RPZ)	Wellhead Protection Zone (WHPZ)	Priority 1	Priority 2	Priority 3
<u>Aim</u> Protect water quality in drinking water catchments	No degradation of an existing high quality drinking water resource.	Same as Priority classification area the WHPZ is located within.	No degradation of an existing high quality drinking water source.	Maintain or improve the quality of an existing drinking water source.	Maintain drinking water quality for as long as possible before other land uses potentially render the source unsuitable.
<u>Objective</u> Control risks in drinking water catchment	Risk avoidance	Same as Priority classification area the WHPZ is located within	Risk avoidance.	Risk minimisation.	Risk management.
<u>Characteristic</u> Land use type normally included	Land generally in State ownership/reserves. Special purchase options exist for RPZ in Priority 1 areas if private land holdings are important to protect a drinking water source.	Special purchase options exist in Priority 1 areas if private land holdings are important to protect a drinking water source.	Land generally in State ownership/reserves. Special purchase options exist if private land holdings are important to protect a drinking water source. Land owners are not under any obligation to sell their land.	Low intensity land use with land generally in private ownership such as rural zoned land (eg. pastoral and dry land farming). Special purchase options exist if private land holdings are important to protect a drinking water source. Land owners are not under any obligation to sell their land.	Medium to high intensity land use with land generally in private ownership (eg Urban or Urban deferred zoned land or intensive agriculture). Special purchase options exist if private land holdings are important to protect a drinking water source. Land owners are not under any obligation to sell their land.

<p>Strategies Used to achieve above aim and objective</p>	<p>Drinking Water Source Protection Assessments and Drinking Water Source Protection Plans developed.</p> <p>Best practice Land use compatibility is recommended to decision makers in a DOE Water Quality Protection Note that is called up in the Western Australian Planning Commission's Statement of Planning Policy 2.7.</p> <p>Recreation opportunities are guided by DoE Recreation Policy 13, July 2003).</p> <p>Reservoir Protection Zone (already set at 2km from high water mark of reservoir in Metropolitan area catchments and updated by-laws are proposed for Country catchments with ability to set RPZ up to 2km distance). RPZ are established to prevent direct chemical or biological contamination of the reservoir.</p>	<p>Drinking Water Source Protection Assessments and Drinking Water Source Protection Plans developed.</p> <p>Best practice Land use compatibility is recommended to decision makers in a DOE Water Quality Protection Note that is called up in the Western Australian Planning Commission's Statement of Planning Policy 2.7.</p> <p>Wellhead Protection Zone 500 metres in P1 areas and 300 meters in P2 and P3 to prevent direct chemical or biological contamination of the groundwater abstraction area.</p> <p>Proclamation of public drinking water source areas allowing application of By-laws to protect drinking water. Development of policy, guidelines, protection notes and brochures to protect drinking water quality.</p>	<p>Drinking Water Source Protection Assessments and Drinking Water Source Protection Plans developed.</p> <p>Best practice Land use compatibility is recommended to decision makers in a DOE Water Quality Protection Note that is called up in the Western Australian Planning Commission's Statement of Planning Policy 2.7.</p> <p>Need to avoid contamination risks.</p> <p>Reservoir Protection Zone (already set at 2km from high water mark of reservoir in Metropolitan area catchments and updated by-laws are proposed for Country catchments with ability to set RPZ up to 2km distance). RPZ are established to prevent direct chemical or biological contamination of the reservoir.</p> <p>Wellhead Protection Zone 500 metres to</p>	<p>Drinking Water Source Protection Assessments and Drinking Water Source Protection Plans developed.</p> <p>Best practice Land use compatibility is recommended to decision makers in a DOE Water Quality Protection Note that is called up in the Western Australian Planning Commission's Statement of Planning Policy 2.7.</p> <p>Need to minimise contamination risks.</p> <p>DoE recommends low intensity rural and rural lifestyle uses are maintained.</p> <p>Reservoir Protection Zone (already set at 2km from high water mark of reservoir in Metropolitan area catchments and updated by-laws are proposed for Country catchments with ability to set RPZ up to 2km distance). RPZ are established to prevent direct chemical or</p>	<p>Drinking Water Source Protection Assessments and Drinking Water Source Protection Plans developed.</p> <p>Best practice Land use compatibility is recommended to decision makers in a DOE Water Quality Protection Note that is called up in the Western Australian Planning Commission's Statement of Planning Policy 2.7.</p> <p>Need to manage contamination risks.</p> <p>Development is acceptable subject to effective water resource protection.</p> <p>Reservoir Protection Zone (already set at 2km from high water mark of reservoir in Metropolitan area catchments and updated by-laws are proposed for Country catchments with ability to set RPZ up to 2km distance). RPZ are established to prevent direct chemical or</p>
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	<p>Proclamation of public drinking water source areas allowing application of By-laws to protect drinking water. Development of policy, guidelines, protection notes and brochures to protect drinking water quality</p>		<p>prevent direct chemical or biological contamination of the groundwater abstraction area. Proclamation of public drinking water source areas allowing application of By-laws to protect drinking water. Development of policy, guidelines, protection notes and brochures to protect drinking water quality</p>	<p>biological contamination of the reservoir. Wellhead Protection Zone 300 metres to prevent direct chemical or biological contamination of the groundwater abstraction area. Proclamation of public drinking water source areas allowing application of By-laws to protect drinking water. Development of policy, guidelines, protection notes and brochures to protect drinking water quality</p>	<p>biological contamination of the reservoir. Wellhead Protection Zone 300 metres to prevent direct chemical or biological contamination of the groundwater abstraction area. Proclamation of public drinking water source areas allowing application of By-laws to protect drinking water. Development of policy, guidelines, protection notes and brochures to protect drinking water quality</p>
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Description:

- **Priority 1 (P1)** source protection areas are defined to ensure that there is no degradation of the water source. P1 areas are declared over land where the provision of high quality public drinking water is the prime beneficial land use. P1 areas would typically include land under public ownership. P1 areas are managed in accordance with the principle of risk avoidance, and hence DoE recommends limited additional land uses and activities in these areas to avoid the risk of contamination.
- **Priority 2 (P2)** areas are defined to ensure that there is no increased risk of pollution to the water source. P2 areas are declared over land where low intensity development (such as rural) exists. Protection of public water supply sources is also a high priority relative to other land use values in these areas. P2 areas are managed in accordance with the principle of risk minimisation, and as such DoE recommends conditional development within these areas.
- **Priority 3 (P3)** areas are defined where it is necessary to manage the risk of pollution to the water source, and where water supply sources need to co-exist with other generally existing land uses such as residential, commercial and light industrial developments. Key elements in protection of P3 areas include the need for deep sewerage and land users using best environmental management practices.
- **Reservoir protection zones (RPZ)** are defined to protect the surface water source from contamination in the immediate vicinity of reservoirs. A RPZ consist of an area up to 2kilometres around the top water level of a reservoir and it includes the reservoir itself. These zones do not extend outside the catchment area (i.e. downstream from a dam wall). Generally conditions apply in these zones aimed at preventing people from entering the RPZ to avoid the risk of contamination.
- **Well-head protection zones (WHPZ)** are defined around groundwater abstraction bores. In the absence of modeled alternative zone shapes, WHPZ in P1 areas are set at a 500 metre radius around a bore, and in P2 or P3 areas they are set at a 300 metre radius around a bore.