

WESTERN AUSTRALIAN PLANNING COMMISSION  
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## STATE PLANNING POLICY 2.9

# WATER RESOURCES

PREPARED UNDER SECTION 26 OF THE  
PLANNING AND DEVELOPMENT ACT 2005  
BY THE WESTERN AUSTRALIAN PLANNING COMMISSION



This is a state planning policy made under section 26 of the Planning and Development Act 2005. This policy may be cited as State Planning Policy 2.9 Water Resources.

Water, and more particularly, the water cycle, is the means by which all life is sustained (Commonwealth of Australia, 2002). Water is a fundamental component in sustaining the wellbeing of the community, the environment, and existing and future development.

Western Australia's water resources are among its most valuable, yet diverse assets. 'Water resources' include natural or modified features such as wetlands, waterways (rivers, streams and creeks), floodplains, foreshores, estuaries, groundwater aquifers and the wider marine environment. In addition, 'water resources' refers to water for consumptive, recreational, industrial and commercial purposes, includ-6(r29( p)t)6(e)09ndvs 2Wum.5(o)-114r modified feat mod6Rpamelit

environmentally responsible way by providing a whole government framework for setting strategies and plans for water resources.

A number of national and state policies provide guidance on specific aspects of water quality protection and management such as the National Water Quality Management Strategy (1994 to 2001), the State Water Quality Management Strategy for Western Australia (WRC, 2001) reflecting Western Australia's timeframe and commitment to implement the National Guidelines and the Wetlands Conservation Policy for Western Australia (1997). State Planning Policy 2.9 Water Resources is consistent with the guiding principles of the above policies in a land-use planning context.

The Western Australian Planning Commission (WAPC) prepared the State Planning Strategy (WAPC, 1997), to provide the overall vision and framework in which land use planning operates, including dealing sustainably with the natural environment. One of its key strategic statements is to 'ensure that water resources are conserved and their quality protected'.

This theme is expanded in State Planning Policy 2: Environment and Natural Resources Policy (WAPC, 2003a), which sets out the broad environment and resource management policies for sustainable development, including measures for the protection and use of water resources. It recognises that effective water quality and quantity management is essential as we work towards sustainability. Under the policy, it is expected that planning strategies, schemes and decision making will identify and, where appropriate, include provisions to protect water resources.

The water resources policy is a 'second-tier' state planning policy providing additional guidance for the consideration of water resources in land use planning processes and is directly related to the overarching sector State planning policy: State Planning Policy 2 Environment and Natural Resources Policy. Therefore, it should be read and implemented in conjunction with this sector SPP. As the water resources policy does not address coastal areas or public drinking water source areas, the following second-tier SPPs should also be referred to in relation to these areas: State Planning Policy 2.6 State Coastal Policy (WAPC, 2003b) and State Planning Policy 2.7 Public Drinking Water Source Policy (WAPC, 2003c). Site-specific second-tier SPPs which may have direct relevance to specific water resources matters are: State Planning Policy 2.1 Peel-Harvey Catchment, State Planning Policy 2.2 Gnangara Mound Crown Land, State Planning Policy 2.3 Jandakot Groundwater Protection and draft State Planning Policy Swan-Canning River System (WAPC, 2003d). As outlined in State Planning Policy 1 State Planning Framework Policy, SPPs form part of the State planning framework, which provides a hierarchy for the planning policies, strategies and guidelines and, importantly, a context for decision making on land use and development in Western Australia.

The policy provides guidance in the planning, protection and management of surface and groundwater catchments, including consideration of availability of water and waterways management, wetlands, waterways, and estuaries and their buffers, and implementation of total water cycle management principles in the land use planning system. As this policy is a second-tier SPP, under State Planning Policy 2 Environment and Natural Resources Policy, it is intended to expand the broad water resources guidance provided in that SPP. It is important to note that this policy is not ret2(v8-nd eaic)9(y)912e plasat02(nd)6(e)2(is p)iv(e)-2(rlel)13es.vr b(y)9, i( )

there is demonstrable adverse and unacceptable impact on the quality and quantity of significant water resources, planning decision-makers should ensure that planning proposals and applications either do not proceed or are modified so that significant water resources are protected, conserved and enhanced.

This policy applies throughout Western Australia.

The objectives of this policy are to:

- (i) Recognise the hydrological importance of groundwater and surface catchments with regards to water management and the associated value of catchment planning on a regional, district and local scale.
- (ii) Protect, manage, conserve and enhance surface and groundwater catchments and recharge areas supporting significant ecological features or having identified environmental values, by ensuring, where possible, appropriate management or limiting inappropriate land use/s to

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The WAPC may prepare more detailed guidelines on the implementation of this policy, in consultation with local government, relevant agencies, organisations and groups to meet policy objectives. If prepared, these should be taken into account in the preparation of planning schemes, strategies and plans and in the determination of planning proposals and





5. The groundwater and surface water catchments and sub-catchments in the area should be identified mapped where known. Where the information is available, any relevant environmental data that may influence water resources should be identified, such as existing nutrient export levels, contaminated sites, water dependent ecosystems or essential native vegetation, together with data on future public and private drinking water catchments or supply sources.

6. The availability of water resources for consumptive purposes is a primary requirement for a range of land use activities. Its availability may determine the type and intensity of land uses permissible. Drinking water source protection plans should be taken into account. In areas where water source areas for private and public use are yet to be gazetted, advice regarding the location of future water areas should be obtained from the Department of Water and strategies identified to ensure sources are protected in the future.

Proclaimed and confirmed ('in use' or 'future') public drinking water source areas should be identified using information available from the relevant water management agency. Local planning strategies (described in the Model Scheme Text) together with land use and water management strategies, should address how such areas are to be protected and managed, and guide appropriate zonings and restrictions on the types of development and minimum requirements for subdivision or special control areas. (Also, refer State Planning Policy 2.7 Public Drinking Water Source Policy, WAPC 2003)

7. Identify all floodplains and areas that are prone to surface flooding or groundwater inundation. Ensure that no development is in a flood path that could carry an increased risk to public safety or property.

8. Identify developable and non-developable areas based on environmental constraints identified in points 1 to 7 above.

9. Identify and protect a public open-space network including remnant vegetation, natural drainage lines, recreational, cultural and environmental features. Use of a multiple-use corridor approach should be considered and the design of the system should be responsive to local conditions.

10. Locate land uses that are incompatible with objectives for water resource protection an appropriate distance from the water resource. Consideration of potentially inappropriate land use practices such as clearing, stocking, fertilisation and effluent disposal is also required.

When developing planning strategies or plans, consideration should be given to incorporating relevant goals and outcomes for water quality, natural water balance, water efficiency, vegetation conservation, flood risk management, stormwater management and erosion and sediment control. These goals should be identified from existing state or local government policy and should be consistent with those contained in water management plans, wider catchment investigations, stormwater management plans, or other adopted plans or policies.

Water quality should be enhanced as a result of development through the use of water quality targets where appropriate. Derivation of water quality targets is key to the achievement of many aspects of this policy and should be accomplished in consultation with the Department for Planning and Infrastructure, the Department of Environment and Conservation, the Department of Water and other relevant stakeholders<sup>1</sup>.

The strategy/plan should address the influences the area will have on the surrounding catchment(s) together with the influences the catchment(s) will have on the dynamics of the area. This will enable relevant land and water management issues in relation to water supply, wastewater, groundwater and surface water to be considered collectively rather than in isolation, as well as ensuring acknowledgement of their relationship to other issues such as biodiversity, urban structure and sustainability.

Planning strategies and plans should also include design principles and management measures that are to be applied to meet relevant goals where appropriate, including:

- proposed measures to manage vegetation cover and dependent ecosystems such as wetlands and riparian corridors;
- proposed measures to manage site constraints and hazards such as flooding, slope stability, reactive soils, coastal hazards, erosion hazard, salinity, acid sulfate soils and land contamination; and
- proposed measures to ensure implementation of best planning practice and best management practice to achieve effective total water cycle management and integrated urban water management (see schedule 4 for principles). The strategy should also identify opportunities for best-practice water sensitive urban design.

The strategy/plan should be guided by information from the Department of Environment and Conservation, the Department of Water (Water Resource Manager) and the Water Corporation or other relevant responsible service provider. The strategy should also identify where further work is required to support future development such as proposed residential, industrial and commercial areas. This may take the form of urban water management strategies or the like, and should address wider catchment issues and implementation of best practice water management techniques.

New planning schemes and scheme amendments must demonstrate that any proposed changes in land use will not have a significant impact on the environment. In order to ensure the protection of water resources and progression of development in a sustainable manner, it may be appropriate to prepare an environmental management plan to address the requirements of this policy. Where a strategic water resource strategy has been prepared, this should provide the foundation for the environmental management plan, which should



It is recommended that the following approach is used to aid the determination of appropriate buffering for waterways and estuaries.

- Develop an understanding of the waterway, the issues and its significance.
  - Obtain aerial photos to assess vegetation complexes, waterway form, function and adjacent land uses.
  - Obtain maps showing the extent of floodway and floodplains, topography, cadastral information, soils, geology and vegetation complexes.
  - Obtain any relevant reports on the waterway and the region. This may include floodplain mapping, development proposals and/or flora and fauna survey reports.
  - Plan an on-the-ground site visit (if required) once you are confident you have the necessary information.
  - Negotiate and communicate with relevant stakeholders as required.
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- Identify the extent of the riparian vegetation.
  - Identify the soils that support the vegetation.
  - Locate the floodway and floodplain (1 in 100 year flood level, peak flow and river hydrology).

Water resource management plans prepared by the State Government provide useful information, particularly with regard to:

- environmental water provisions,
- the quantity of water resources available for consumption,
- water allocation limits, and
- licensing policy and principles.

This information, including management plans for water protection areas, water allocation plans and water provisions for environmental flow requirements and riparian management, are also found on the DoW website.

The Environmental Protection Authority (EPA) prepares environmental protection policies (EPP) that relate to water resources. They can be found at: <http://www.epa.wa.gov.au/policies.asp>.

In particular, the EPA website details the following:

- Swan Coastal Plain Lakes policy,
- Gnangara Mound Crown Land policy,
- Peel Inlet—Harvey Estuary policy,
- Swan and Canning rivers policy,
- South West agricultural zone wetlands policy and

The EPA also releases guidance statements regarding specific environmental factors.

<http://www.epa.wa.gov.au/template.asp?ID=14&area=EIA&Cat=Guidance+Statements>

Relevant statements are:

- Draft EPA Guidance 33 Policies, Guidelines and Criteria for Assessing Planning Schemes
- Draft EPA Guidance 48 Groundwater Environmental Management Areas
- Final EPA Guidance 28 Protection of the Lake Clifton Catchment

The Perth Groundwater Atlas is a valuable tool to determine the depth to the water table and aquifer thickness in the Perth metropolitan area, the DoW website home page <http://www.water.wa.gov.au>.

Outside this area, refer to the Western Australia Atlas on the WALIS website.

Other relevant documents include: Gnangara Land Use and Water Management Strategy, see WAPC website under 'publications': <http://www.wapc.wa.gov.au> and the Jandakot land use and water management strategy (WAPC, March 1995).

DoW web page under 'Drinking Water'. <http://drinkingwater.environment.wa.gov.au>.

State Water Quality series documents 1, 2 and 6 (published) SWQ3 is in preparation and will deal with drinking water protection specifically. WQPN LUCT WQPN Overview (background and history) WQPN private supplies Department of Environment and Conservation Policy for PDWSA (in preparation) Western Australia State Sustainability Strategy, 2003 (Section 3—

Other wetlands of importance are EPP Wetlands—wetlands included in the following EPA environmental protection policies:

Environmental Protection (South West Agriculture Zone Wetlands) Policy 1998

Environmental Protection (Swan Coastal Plain Lakes) Policy 1992

These policies are found on the EPA's website at: <http://www.epa.wa.gov.au>

For information regarding wetlands outside the Swan Coastal Plain, contact the relevant regional office of the Department of Environment and Conservation.

Consideration of the environmental component of wetland buffers and/or setbacks should take into account and be guided by relevant policies of the Wetlands Co-ordinating Committee, the EPA, the Department of Environment and Conservation and the WAPC.

The Department of Environment and Conservation provides general information regarding waterways on their website at: <http://waterways.environment.wa.gov.au>

Mapping of waterways can also be accessed via the Western Australia Atlas on the WALIS website: [http://www.walis.wa.gov.au/walis/content/wa\\_atlas\\_popup2.html](http://www.walis.wa.gov.au/walis/content/wa_atlas_popup2.html) The DoW is the primary agency responsible for the identification of areas of flood risk through their program of floodplain mapping. The Department of Agriculture also has mapping available in relation to local and seasonal inundation and flooding.

Total water cycle management encompasses all aspects of water sensitive urban design including water supply, sewerage, stormwater management and water recycling and reuse. It addresses water quality, water quantity and water conservation, together with other social and environmental objectives.

Most information regarding total water management focuses on stormwater; however, water conservation and water recycling and re-use are gradually increasing in prominence.

Information on water conservation and recycling can be obtained from the Water Corporation at:

[http://www.watercorporation.com.au/W/waterwise\\_index.cfm](http://www.watercorporation.com.au/W/waterwise_index.cfm)

The Department of Environment and Conservation provides general information regarding stormwater on their website at: <http://stormwater.environment.wa.gov.au>

The Department of Environment and Conservation's Sustainable Stormwater Management Manual for Western Australia (2004) can be accessed from the Guidelines page of <http://stormwater.environment.wa.gov.au>

WAPC's Draft Operational Policy Liveable Neighbourhoods (2004) contains information regarding stormwater management and its implementation through planning and can be accessed at the WAPC website, under publications: <http://www.wapc.wa.gov.au>

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sustainability. Water efficiency, re-use and recycling are integral components of total water cycle management and should be practised when any water is extracted from river and groundwater systems (Stormwater Management Manual for Western Australia, Department of Environment, April 2004).

Integrated urban water management, similarly to total water cycle management, recognises

- protection of water-related environmental, recreational and cultural values;
- localised water harvesting for various uses; and
- localised wastewater treatment systems.

The priorities established for the achievement of total water cycle management should be weighed in the context of overall urban design parameters such as residential densities, landscape amenity, commercial, education and retail facility location. The management of urban water resources can be costly in terms of both land and infrastructure requirements. It is therefore necessary to consider the most cost-effective solutions, which have maximum social, economic and environmental benefits.

By command of the Governor,

M. C. WAUCHOPE, Clerk of the Executive Council.