

A guide to managing and restoring wetlands in Western Australia

Roles and responsibilities

In Chapter 5: **Protecting wetlands**


Version 1



Australian Government



Department of
Environment and Conservation

Our environment, our future 

Introduction to the guide

Western Australia's unique and diverse wetlands are rich in ecological and cultural values and form an integral part of the natural environment of the state. *A guide to managing and restoring wetlands in Western Australia* (the guide) provides information about the nature of WA's wetlands, and practical guidance on how to manage and restore them for nature conservation.

The focus of the guide is natural 'standing' wetlands that retain conservation value. Wetlands not addressed in this guide include waterways, estuaries, tidal and artificial wetlands.

The guide consists of multiple topics within five chapters. These topics are available in PDF format free of charge from the Western Australian Department of Environment and Conservation (DEC) website at www.dec.wa.gov.au/wetlandsguide.

The guide is a DEC initiative. Topics of the guide have predominantly been prepared by the department's Wetlands Section with input from reviewers and contributors from a wide range of fields and sectors. Through the guide and other initiatives, DEC seeks to assist individuals, groups and organisations to manage the state's wetlands for nature conservation.

The development of the guide has received funding from the Australian Government, the Government of Western Australia, DEC and the Department of Planning. It has received the support of the Western Australian Wetlands Coordinating Committee, the state's peak wetland conservation policy coordinating body.

For more information about the guide, including scope, purpose and target audience, please refer to the topic 'Introduction to the guide'.

DEC welcomes your feedback and suggestions on the guide. A publication feedback form is available from the DEC website at www.dec.wa.gov.au/wetlandsguide.

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'Roles and responsibilities' topic

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Disclaimer

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INTRODUCTION

Wetland conservation and management is the collective responsibility of individuals, education and research institutions, businesses, non-government organisations and local, state, and national government. The roles of these stakeholders can be complex and often overlapping. This topic provides an overview of the roles of these stakeholders in wetland conservation and management, with the aim of unravelling the confusion surrounding 'who is responsible for what?'

Table 1 broadly summarises the roles and responsibilities of stakeholders in wetland management and conservation. Much more detailed information is provided in subsequent sections, grouped into three parts: community stakeholders, organisations, and government.

THE ROLE OF COMMUNITY

Both as individuals and a collective, the community has an important role in, and contributes significantly to, wetland conservation in Western Australia. The community can take on-ground action to manage privately owned wetlands, assist in the management of wetlands on public land, and significantly influence the policy and decision-making of organisations and government.

Community values and expectations influence both the private and the non-government conservation sector. In the private sector, the influence of community and increasing requirement for corporations to be accountable has led to corporations integrating the principles of corporate social responsibility into business models and day-to-day operations.

Non-government conservation groups are also influenced by the community, as community concern for particular environmental issues can draw attention to them and place them on an organisation's agenda. Many conservation programs are driven and reliant upon community involvement and those which have greater community support are deemed more likely to succeed.

Community wetland conservation efforts can be greatly assisted by understanding the role of other stakeholders and the processes within which they operate. This enables the community to direct efforts to the most appropriate agency or organisation, through the best process and at a stage in the process that will have the greatest possible influence on wetland conservation outcomes.

Table 1. A summary of stakeholder roles and responsibilities in wetland management and conservation

Key

Level of responsibility			
No role	Low	Moderate	Significant
N/A	✓	✓	✓

	Conservation on private land	Conservation on public lands	Conservation estate/Bush Forever/Riverpark	Planning and policy development	Development assessment	Research	Formal advice	Water allocation licensing	Licensing of industry
Community	✓	✓	✓	✓	✓	✓	N/A	✓	N/A
Regional NRM organisations	✓	✓	N/A	✓	N/A	✓	N/A	✓	N/A
Local governments	✓	✓	✓	✓	✓	✓	✓	✓	N/A
Department of Environment and Conservation (DEC)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Office of the Environmental Protection Authority (OEPA)	✓	✓	✓	✓	✓	N/A	✓	N/A	N/A
Department of Water (DoW)	✓	✓	✓	✓	✓	✓	✓	✓	N/A
Department of Planning (DoP)	✓	✓	✓	✓	✓	N/A	✓	N/A	N/A
Department of Agriculture and Food (DAFWA)	✓	✓	N/A	✓	✓	✓	✓	N/A	N/A
Swan River Trust (SRT)	N/A	✓	✓	✓	✓	✓	✓	✓	N/A
Wetlands Coordinating Committee (WCC)	N/A	N/A	N/A	✓	N/A	N/A	✓	N/A	N/A
Environmental Protection Authority (EPA)	✓	✓	✓	✓	✓	N/A	✓	N/A	N/A
Western Australian Planning Commission (WAPC)	✓	✓	✓	✓	✓	N/A	✓	N/A	N/A
Conservation Commission of WA (CCWA)	N/A	✓	✓	✓	N/A	N/A	✓	N/A	N/A
Department of Sustainability, Environment, Water, Population and Communities (DSEWCaP) (Aust. Govt)	✓	N/A	N/A	✓	✓	✓	✓	N/A	N/A
Aquatic Ecosystems Task Group (AETG) (national)	N/A	N/A	N/A	✓	N/A	N/A	✓	N/A	N/A
Wetlands and Waterbirds Taskforce (WWTF) (national)	N/A	N/A	N/A	✓	N/A	N/A	✓	N/A	N/A

Individual or group action?

Members of the community, whether as individuals or a group member, can take action to benefit wetlands.

Landowners can take direct action to manage wetlands on their property. Assistance is available to individuals wishing to manage wetlands on their property for conservation purposes. This includes funding, training and access to other resources. For example, Doug and Eva Russell, cattle farmers in Manypeaks on the South Coast, have fenced off a wetland and remnant vegetation on their farm from cattle (Figure 1). They have created ecological corridors to connect their wetland with dryland remnant vegetation by fencing, direct seeding and planting. They have received funding and technical assistance from the National Trust and DEC's Land for Wildlife program.

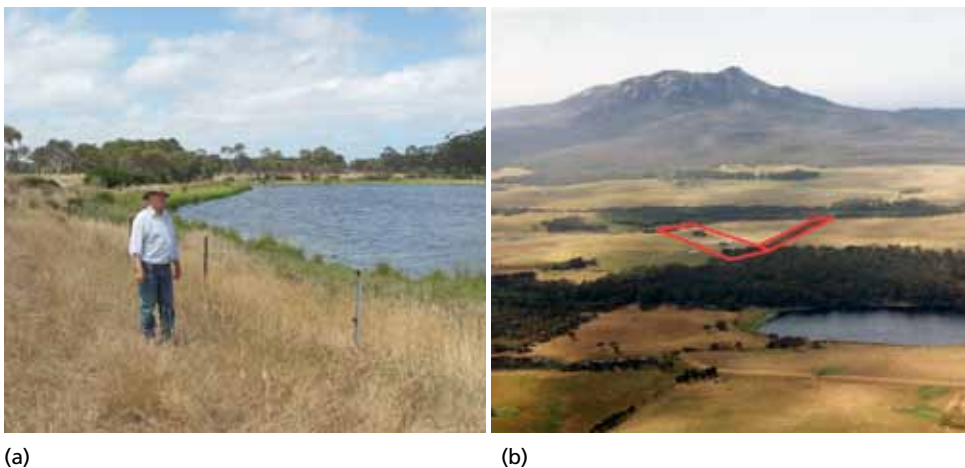


Figure 1. Landowners are in a unique position of being able to manage wetlands on their property. (a) The Russells have fenced off their wetland in Manypeaks, South Coast. Photo – B Schur/Green Skills Inc. (b) They have also revegetated ecological corridors (shown in red), connecting the wetland with nearby bush. Photo – K Hopkinson/ Green Skills Inc.

- For listings of various programs that provide assistance to individuals to manage wetlands, see the topic 'Funding, training and resources' in Chapter 1.

Individuals can also help protect and manage WA's wetlands by participating in citizen science. This is the name given to research or monitoring conducted by individuals or communities in the public interest. Citizen science is how ordinary citizens help scientific research and in doing so help society. The contribution of individuals with an interest in a particular species, site or type of ecosystem can be invaluable. Many organisations have citizen science programs that individuals can participate in.

For example, the ClimateWatch program encourages citizens to record sightings of wetland species including a number of WA frogs: www.climatewatch.org.au/species/frogs and the oblong turtle: www.climatewatch.org.au/species/reptiles/oblong-turtle.

- There are many ways to get involved in protecting and managing wetlands using citizen science, the following are just examples:

www.ala.org.au/get-involved/citizen-science/

www.climatewatch.org.au/

www.citizensciencealliance.org

For complex issues or large wetlands, taking action as an individual can sometimes be a daunting task and so it may be preferable to join or form a community group, or to seek the assistance of a regional or sub-regional natural resource management organisation (outlined in the section 'Regional natural resource management organisations'). Local community groups have demonstrated excellence in protecting and conserving the WA environment, being heavily represented at the annual Western Australian Environment Awards. Local community groups are often integral to the conservation of a site, as shown in the case study in this topic entitled 'Working collaboratively to manage and restore Lake Mealup'.

- ▶ There are many local community groups interested in wetlands in specific areas of WA. Some groups are listed in the 'Environment conservation and heritage' directory on Our Community Pty Ltd: www.ourcommunity.com.au. Other sources of information on local community groups include local governments, regional and sub-regional NRM organisations and local DEC offices.
- ▶ Information on forming a community group can be accessed from various sources, including:
 - Urban Bushland Council's notes: www.bushlandperth.org.au/images/stories/PDF/Resources/forming_a_friends_group_resource_notes.pdf
 - the Shire of Kalamunda's hints: <http://nrpg.org.au/page/Intro-to-Friends-Groups.aspx>
 - the Shire of Mundaring's notes: www.bushlandperth.org.au/images/stories/PDF/Resources/shire_of_mundaring_friends_group_manual.pdf

Visual surveillance of reserves is another important community function. Reporting activities that impact on a wetland, such as dumping of waste, damaging vegetation or lighting fires, can assist responsible authorities to avert environmental harm.

- ▶ Report illegal dumping to the illegal dumping hotline: 1300 766 541 or phone your local council. For more information see www.kabc.wa.gov.au/illegal-dumping.html
- ▶ Report pollution on the pollution hotline: 1300 784 782 (24 hours) or email pollutionwatch@dec.wa.gov.au; in the event of a hazardous materials release or life-threatening incident, call 000 and ask for Fire and Rescue.
- ▶ Report known or suspected arson (including suspicious behaviour) to Crimestoppers: 1800 333 000, or if it is an emergency, dial 000. See www.bushfirearson.gov.au/Pages/default.aspx for more information.

Community – helping to get things done at wetlands

The community can have a significant influence on wetland protection and management outcomes through participation in on-ground and wetland management planning activities.

Community assistance and guidance is often necessary for government to achieve successful, long-term implementation of programs. Public agencies responsible for management of public lands have recognised this and in particular the importance of community involvement in planning and undertaking wetland management.

In recognising that genuine engagement with the community is critical for environmental protection and natural resource management in Western Australia, DEC has embedded

this ethos in its mission statement. It has developed a number of formal policies to encourage, support and guide volunteer involvement in management activities and to ensure that volunteers are covered by insurance when participating in these activities.¹

Individuals can participate in working bees organised by land managers or community groups working in association with land managers. There are often a variety of on-ground management actions people can become involved in, including activities such as planting seedlings, weeding, fencing, conducting plant and animal surveys, water quality monitoring, and numerous other activities. Most restoration and management activities are restricted by the number of people available to assist and so every pair of hands helps. As the number of volunteer hours recorded for specific projects are a reflection of community engagement and concern for an area, this information is often used by government agencies to determine future allocation of funding and future projects to be implemented. Organised events will often be advertised in the local paper and local government websites.

There are a number of organisations that have valuable volunteer programs to help manage wetlands and other natural areas. DEC has a number of short-term and ongoing projects involving volunteers.

A program that provides help and assistance to community groups managing urban natural areas is DEC's Urban Nature program. Urban Nature provides technical advice and on-ground support for land managers and supporting groups working to protect, manage and restore bushlands and wetlands in the Perth metropolitan area and beyond, with a primary focus on regionally significant areas. For more information, see the Urban Nature webpage on the DEC website: www.dec.wa.gov.au/content/category/45/879/2024/.

Many community groups are eligible to apply for funding to do on-ground works at wetlands. Community groups often actively facilitate and broker relationships with community members, agencies and research organisations to improve wetland management (see the case study 'Working collaboratively to manage Lake Mealup' at the end of this topic for a great example of this).

- For listings of various programs that provide assistance to community groups to manage wetlands, see the topic 'Funding, training and resources' in Chapter 1.
- Details of DEC projects involving volunteers are provided on the volunteer webpage on the DEC website: www.dec.wa.gov.au/content/view/196/534/
- Local governments can also be contacted for information about upcoming events at wetlands managed by the local government.
- Information on volunteering is available from Volunteering WA: www.volunteeringwa.org.au.

A community voice in government policy development

The community has an important role in setting political agendas and raising government awareness of wetland conservation issues. While specific government agencies are assigned responsibilities for wetland conservation by the state government, government agendas and programs are frequently influenced by community concerns and opinions (Figure 2).

For example, the community was vocal in seeking the banning of recreational duck shooting in WA wetlands. Many groups and individuals formed the Coalition Against Duck Shooting. As a result of community opposition, recreational duck shooting was

banned in 1992 in WA (the first state or territory to do so) by changes to legislation. Recreational shooting is still allowed in some other Australian states and territories.

Government agencies and committees prepare broad policy statements, strategies and/or position statements in regard to environmental issues. These policies provide the community and the private sector with a greater understanding of the government's likely position on any proposal or plan that affects that issue.

Some government committees include community representatives to facilitate greater consideration of community opinions when developing policy and making decisions. For example, the Wetlands Coordinating Committee (described later) and a number of its sub-committees include representatives of the voluntary conservation movement and wetland scientists from universities and the private sector.

Most policies, strategies, and position statements developed by government agencies or committees are released in draft form for public comment. Submissions made during this time are usually considered through a formal process and a response is made to each substantive point raised. Submissions with well defined and explained points make it easier for the agency or committee to respond. Most agencies publish guidelines for preparing submissions. The response to submissions is sometimes published.

Some agencies or committees will invite community input before a draft is prepared, in the form of a workshop or survey. Invitations may be extended on a random basis or to known representative community members. For example, in development of Network City, the strategic framework used to create sustainable development of the Perth and Peel areas, the (then) Minister for Planning and Infrastructure ensured the process provided for extensive community involvement from the very beginning of the framework's development. The consultation process included a resident survey, publication of issues papers, a television program, interactive website, school competition, radio coverage, a large interactive forum and publication of a draft for public comment.²

Broad policy development can also be initiated by government in response to an issue raised by the community through individual or group lobbying to the responsible Cabinet Minister. The community response to a specific plan or proposal can also contribute to broader policy development on an issue. For example, the development of the *State Planning Policy 2.6 (State Coastal Planning)* formalised planning requirements for coastal setbacks in new developments, following community reaction to the initial proposal for redevelopment of Leighton Beach in Perth.³

- A list of policies that influence wetland management and protection, and descriptions of these policies, is available in the topic 'Legislation and policy' in Chapter 5.
- DEC recognises the right of members of the public to have a meaningful role in protecting and conserving Western Australia's natural environment and advertises documents for comment online at www.dec.wa.gov.au/community-and-education/have-your-say.html

A community voice in government decision-making

Decision-making processes often have a public consultation phase built-in. Community input during these phases can be a very effective way to influence a decision-making authority's determination of a proposal (a decision-making authority, or DMA, is a public authority empowered by legislation to make a decision in respect of a proposal). Raising issues early in the planning process is most effective, as it provides the proponent with more opportunity to address an issue or modify a proposal during the earlier stages of

planning.

Planning development and new infrastructure can require considerable investment and the later in the process an issue is raised, the less likely it will be that the proponent will



Figure 2. A community group speaking with media in the Kimberley region, WA. Photo – M Coote/DEC.

want to, or be able to afford to change the proposal.

More formally, the environmental impact assessment (EIA) process grants members of the community specific rights to have concerns and views regarding proposals taken into consideration.

These rights are generally applicable where a proposal is formally assessed, however, the EPA may request targeted public input into proposals that are assessed informally and that do not have to undergo a full EIA assessment.

The types of submissions and appeals an individual may make include:

- (i) a submission to the EPA during the public submission period of a project proposal undergoing environmental impact assessment
- (ii) an appeal against decisions, recommendations and orders issued in respect to the EIA process and applications to clear native vegetation to the Minister for Environment.

Appeal rights include the right to appeal:

- the decision of the EPA not to assess a proposal
- the content or recommendations of an EPA report.

The following appeals are only available to the proponent of the proposal:

- conditions imposed on a proposal by the Minister

- an order imposed on a proponent by the Minister following a breach of conditions.

Applications to clear native vegetation in WA are regulated through Part V of the *Environmental Protection Act 1986*. The process grants members of the community specific rights to have comments regarding proposals taken into consideration.

Table 2 provides some examples of statutory decision-making processes relevant to wetland conservation that involve an advertised public comment or appeal period.

Table 2. Examples of statutory decision-making processes in WA with public comment or appeal periods.

Decision	Decision-making authority	Public consultation process	Appeals process	Legislation
Local planning scheme amendment	Department of Planning	Submission	State Administrative Tribunal	<i>Planning and Development Act 2005</i>
Local planning scheme amendment (assessed)	Environmental Protection Authority	Submission	Appeals Convenor	<i>Environment Protection Act 1986</i>
Development or subdivision proposal (assessed)	Environmental Protection Authority	Submission	Appeals Convenor	<i>Environment Protection Act 1986</i>
Clearing application	Department of Environment and Conservation	Public comment	Appeals Convenor	<i>Environment Protection Act 1986</i>
Groundwater allocation (regional/area) plans	Department of Water	Submission	State Administrative Tribunal	<i>Rights in Water and Irrigation Act 1914</i>

Community can also raise concerns or highlight opportunities for wetland conservation outcomes through a general enquiry to the relevant government agency or committee or local member of Parliament.

- For additional details on relevant legislation that provides for public consultation during decision-making processes, see the topic ‘Legislation and policy’ in Chapter 5.
- The Environmental Defender’s Office of WA also provides a range of useful fact sheets on this matter: www.edowa.org.au
- For further information on current EIA proposals open for public submissions or to make a submission, see the EPA website at www.epa.wa.gov.au/public-comment
- DEC publishes applications received for Part V licences, works approvals and clearing permits online at www.dec.wa.gov.au/news/advertisements.html and in the Public Notices section of *The West Australian* newspaper each Monday.
- For further information on the appeals process or to make an appeal, see the Appeals Convenor website at www.appealsconvenor.wa.gov.au and the State Administrative Tribunal website at www.sat.justice.wa.gov.au.

THE ROLE OF ORGANISATIONS

For the purposes of this guide, the term 'organisation' is used to collectively refer to businesses, not-for-profit organisations such as environment groups and public institutions such as universities, education centres and schools.

Organisations have varying roles in wetland conservation, depending on their structure and purpose. In particular, whether it operates for profit, is a not-for-profit organisation or a research institution.

For-profit organisations

Corporate social responsibility (or corporate citizenship) enables companies to embrace responsibility for the social and environmental impact of their business over and above what is legally required, and promote the public interest by encouraging community development and sustainability and voluntarily eliminating practices that harm the public realm.

For example, corporations can demonstrate corporate social responsibility by voluntarily lowering environmental emissions and waste, consulting with local communities prior to planning of projects, contributing funding and facilities to the community and enabling employees to participate in local environmental projects and events, such as planting days.

Corporations and environmental or community groups can form partnerships to facilitate positive environmental or social outcomes. The Coles Group Ltd (formerly Coles Myer) began a partnership with Landcare Australia in 2001 and has achieved a number of positive outcomes for the environment. These include reducing plastic bag usage by 45 per cent between 2004–2005, raising funds for Coastcare through a reusable bag initiative and contributing funds to the Junior Landcare Program aimed at reducing the impact of salinity and other environmental issues on communities.⁴

The growing number of businesses now competing in the annual Western Australian Environment Awards is an indication that the private sector is becoming increasingly aware of the value that corporate environmental responsibility can provide to their business.

- ▶ The Western Australian Environment Awards' *Winners* book, available at www.dec.wa.gov.au, provides inspiring examples of corporate participation and innovation in conservation and sustainability.
- ▶ *Working together: involving community and stakeholders in decision-making*⁵ is a guide by the Government of WA.

Land developers have a specific role in wetland management during the course of, and in the years following, the subdivision and development of an area of land. If a wetland is located within the parcel of land, it may be required to be ceded to the Crown free of cost as 'public open space' (often abbreviated to POS). For wetlands retained in areas of public open space within a residential development, it is common for developers to be assigned responsibility for the management of the wetland for a period of up to three years following the completion of a development. They are generally required to manage the wetland and associated wetland buffer in accordance with a wetland management plan that has been prepared in liaison with and approved by relevant authorities (for example, DEC and/or the local government). After this period, if the developer has satisfied the requirements and implemented all management actions outlined in the approved wetland management plan, transfer of the open space and therefore responsibility for the management of the wetland passes to the nominated vesting body,

typically the local government. Community can have an important role in the scoping of the wetland's management, and should be consulted by the land developer as a matter of course during the development of the plan. For more information on public open space in residential areas, see *Liveable Neighbourhoods*⁶ (Element 4, R11, page 7).

Corporatised and privatised service providers

Corporatised and privatised service providers of water, gas, electricity, and communication services are now largely commercial organisations which operate for profit or under strict regulatory control. These include Water Corporation, Western Power and Alinta Gas. Their association with state government varies between organisations, however, they are all regulated under legislation and policy and are required to meet government objectives.

While they do not have a lead role in wetland conservation, service providers have the potential to impact wetlands through infrastructure development and maintenance. As such, providers are required to conduct their business within the constraints of legislation and policies. This may include planning of infrastructure corridors to avoid impact on intact natural areas including wetlands, obtaining clearing permits prior to vegetation clearing for infrastructure corridors and conducting threatened flora and fauna surveys in environmentally sensitive areas prior to maintenance of infrastructure corridors.

Some service providers have developed internal policies to ensure business activities adhere to legislation and policy, ultimately reducing impacts on wetlands and other natural areas.

For example, Western Power has standards and instructions in place to restrict the movement of soil and plant life during construction and maintenance activities, which minimises the risk of spreading the pathogen *Phytophthora cinnamomi*, which causes Phytophthora dieback. Western Power has also supported the research efforts of the Centre for Phytophthora Science and Management with funding over four years.

extra information

Working with utility providers in and near wetlands

Utility providers may often need to access infrastructure in or near a wetland. Overhead or underground services may be located within a wetland area, often in formal drainage reserves or easements.

An easement is a right held by one person to make specific, limited use of land owned by another person. An easement is granted by the owner of the property for the convenience, or ease, of the person using the property. Common easements include the right to pass across the property, the right to construct and maintain a roadway across the property, the right to construct a pipeline under the land, or a power line over the land. Care should be taken to identify the location of these easements and ensure that the organisations that have access rights to the reserve are aware of the wetland management requirements. It is important to understand how their works and maintenance requirements may be made compatible with the values of the reserve.

For example, where an overhead power line enters a natural area, care should be taken by any vehicle that is entering the site in order to undertake pruning or other line maintenance work. Western Power now places signage on each power pole within conservation reserves that advise workers of the site's environmental sensitivity, and the need to take appropriate care. In addition

to these signs, sites are registered in databases and geographic information systems. Prior to undertaking any work near these areas, appropriate procedures are determined and field personnel are issued with work instructions that must be adhered to.

Whilst the *Utility Providers Code of Practice for Western Australia*⁷ has been designed for works in road reserves, it provides a starting point when consulting with any of these organisations (for example, Alinta Gas, Western Power, Horizon Power, or any one of the number of telecommunications carriers). It is available from the Main Roads WA website: www.mainroads.wa.gov.au.

Key principles when encouraging responsible action by utility providers include:

- ensure that the utility is advised of environmental values and sensitivities of the wetland and surrounding natural area, preferably both in writing and in liaison for on-site staff
- both parties should establish an agreement in writing, making clear the responsibilities of the utility provider, its contractors, the local government and/or community groups
- utilities should avoid locating new services in natural areas
- utilities and their contractors should adopt a 'do not disturb' approach to native vegetation when working in the natural area
- utilities and their contractors should follow *Phytophthora* dieback hygiene protocols when working in the natural area
- utilities and their contractors should follow weed and pest hygiene protocols when working in the natural area.

Privatised water service providers

Water Corporation

The main role of the privatised water suppliers such as Water Corporation is to supply water of a high quality to residential and commercial properties throughout the state. The Water Corporation is also responsible for the main drain network and the conveyance, treatment and disposal of wastewater via its reticulated wastewater system. The Water Corporation is a corporatised organisation with a business agenda, owned solely by a single shareholder, the state government. Any profits from the Water Corporation business are returned to the state as a dividend to contribute to future development of water supply. It has a board of directors who report to the Minister for Water.

- For more information, see the Water Corporation website: www.watercorporation.com.au

The enactment of the *Water Services Act 2012* and the *Water Services Legislation Amendment and Repeal Act 2012* will facilitate, amongst other matters, easier entry of new water service providers to the market. For the first time, all water service providers will operate under the same set of powers and obligations. The changes will also allow some of the state's water service providers to offer new services such as bulk water supplies, drainage, recycled water and sewerage services. It allows for the development of codes of practice for water service providers.⁸

Working with drainage service providers at individual wetlands

Relationships between local community groups and service providers can sometimes make or break wetland management efforts. In the case of Lightning Swamp located in Noranda, metropolitan Perth, a healthy working relationship has formed between the Friends of Lightning Swamp Bushland, City of Bayswater and the Water Corporation.

Management of the main drain that lead into, through and out of the wetlands in the reserve was a key issue identified through a management planning process. Routine mechanical removal of the introduced bulrush, *Typha orientalis*, from the drain by Water Corporation contractors was causing the loss of mature paperbarks and other native vegetation fringing the drain. The local community was understandably concerned.



Figure 3. The infestation of *Typha orientalis* that was present in the Water Corporation drain at Lightning Swamp. Photo – Friends of Lightning Swamp Bushland.

Representatives of the group met with Water Corporation staff responsible for the planning of drainage management. Through a process of negotiation, the Water Corporation agreed to keep all machinery out of the reserve on the basis that the group would take responsibility for the management of weeds in the drains. The group has successfully controlled the introduced bulrush and there has been no need to use heavy machinery to clear the drains.

Lightning Swamp case study acknowledgements: prepared by A. Del Marco, Ironbark Environmental with input from John Williams, Chairperson, Friends of Lightning Swamp Bushland and Jeremy Maher, Environmental Officer, City of Bayswater.

Harvey Water and Ord Irrigation Co-operative

Privatised water organisations such as Harvey Water and the Ord Irrigation Co-operative also have a role in water management in the state. These organisations are licensed by the Department of Water to deliver water sourced from catchment dams to regional irrigators through piping and channels for use in agriculture. Membership of these agencies is by means of shares that entitle irrigators (shareholders) to a relative allocation of water based on the amount of shares they own. The redistribution of water across the landscape by these organisations has the potential to impact wetland condition through altering wetland water regimes.

Public institutions

Public institutions are those organisations established for the public good and to undertake research, facilitate and deliver training and education to the public. They include institutions such as universities, schools, technical and educational centres. These organisations are often partially funded by government and partially funded privately through grants and partnerships with government, industry and other private sources.

Public institutions play a pivotal role in wetland conservation by conducting research and delivering education and training that enhances knowledge of wetland ecology and associated fields and develops the skills and knowledge necessary for management and conservation of wetlands. Wetland research conducted by university academics and research fellows facilitates development of innovative and more effective wetland management and conservation methods. Academics also play a valuable advisory role on many committees and collaborative projects. Education in primary and high schools is important to foster appreciation, understanding and respect in children for wetlands.

Not-for-profit organisations

Not-for-profit organisations (NPOs) are non-government organisations that are comprised of people with a common interest in addressing specific issues in support of the public good, through delivery of programs and services on a local, national or international level. These organisations do not exist to earn surplus funds (profits) to distribute to owners or shareholders, but instead use profits to help the organisation pursue its goals.⁹

As non-government organisations, NPOs are entities which remain independent of government, regardless of whether they receive complete or partial funding from government.

The goals and programs of NPOs, their membership base and available funding determine the role each NPO has on wetland conservation and protection. The role of some organisations may change over time, with some organisations only operating for a limited period while a cause is urgent.

Environment centres

WA's environmental education centres are very important and greatly increase community awareness and the capacity of individuals to make decisions and implement positive management actions for wetlands on their property, or the public properties they are involved in managing through Friends of groups or other associations.

Cockburn Wetlands Education Centre holds an annual conference on World Wetlands Day, 2 February. This highly successful conference, which has been held annually since 2005, brings together people involved in protecting and managing wetlands from across WA. For more information, see: www.cockburnwetlandscentre.wordpress.com

- Education centres that incorporate nearby wetlands into their activities include:
- Canning River Eco Education Centre: www.canning.wa.gov.au
 - Cockburn Wetlands Education Centre: www.cockburnwetlandscentre.wordpress.com
 - Henderson Environment Centre: www.stirling.wa.gov.au
 - Herdsman Lake Wildlife Centre (WA Gould League Inc): www.wagouldleague.com.au
 - Kings Park Education Centre and Rio Tinto Naturescape: www.bgpa.wa.gov.au/education
 - Naragebup Rockingham Environment Centre: www.naragebup.org.au
 - Piney Lakes Environmental Education Centre: www.melvillecity.com.au
 - South West Environment Centre: www.swecwa.org

Non-government conservation organisations

Non-government, voluntary conservation organisations may be organised on a local, regional, national or international level to address issues which may impact on environmental values or promote conservation.

Non-government organisations (NGOs) can play a pivotal role in delivering on-ground management advice, funding, and assistance to private landowners who have high conservation value wetlands on their property. WWF Australia is one such conservation NGO operating within WA that has provided such a service, through its 'Wetland Watch' program (not currently running).

Conservation NGOs are very important in bringing community concerns regarding the implementation of policy and programs to the attention of government and the wider community. These NGOs serve as environmental watchdogs, by reviewing proposals and draft policies and helping to identify where environmental values are at risk and not being managed appropriately. For example, the Wetlands Conservation Society (<http://cockburncommunity.asn.au/WetlandsConservationSociety>) formed in 1985 to campaign for the protection of wetlands throughout the state. It has been based at the Cockburn Wetlands Education Centre since 1993. The Wetlands Conservation Society is involved in a wide range of activities aimed at conserving WA wetlands including submissions, education, wetland revegetation and excursions to wetlands. The Wildflower Society (<http://members.ozemail.com.au/~wildflowers/conservation.html>) has also been active for many years in considering conservation issues as they pertain to WA's native flora. It makes submissions and meets with government as well as interested parties as and when it can.

Some of WA's conservation NGOs exist as 'umbrella' community groups that represent the views of many affiliated groups and individuals and advocate upon their behalf. Examples include the Urban Bushland Council, the Conservation Council of WA and the Environmental Defenders Office.

Other organisations such as Green Skills Inc. deliver sustainability programs on-ground and deliver training and employment opportunities across a wide range of industries. Green Skills Inc. has worked with landholders on the South Coast to deliver wetland management plans.

The following is a brief overview of each organisation:

- Conservation Council of WA: the main objective of the Council is to promote conservation of the natural environment and environmental protection in WA. It is an umbrella group for approximately one hundred affiliated groups. CCWA seeks to facilitate advocacy and action through policy development and legislative change, consultation, campaigning, submission writing, and environmental education. Website: www.ccwa.org.au
- Environmental Defenders Office (EDO): endeavours to provide protection of WA's environment by providing community groups and individuals with environmental legal services including advice, education, representation, and opportunity to participate in reform of laws affecting the environment. The EDO provides free legal advice over the phone to members of the community in public interest environmental law matters. It also provides fact sheets on a wide range of matters, including wetlands. Call on (08) 9221 3030 or Freecall 1800 175 542 (for WA callers outside the Perth Metropolitan Region). Website: www.edowa.org.au
- Urban Bushland Council (UBC): the peak community organisation for the recognition and protection of urban bushland in Western Australia. It comprises approximately sixty community conservation groups concerned about urban bushland (including wetland). The UBC is involved in local action and networking, policy development, lobbying and raising public awareness of issues regarding urban bushland. Website: www.bushlandperth.org.au
- Green Skills Inc.: operates a diverse range of environmental sustainability programs in metropolitan and regional areas to address local, regional and national priorities. In addition to wetland conservation activities, such as planning and implementing wetland restoration on private land, Green Skills' work integrates project management, training and employment programs across a wide range of industries, including sustainable living, energy and water efficiency, waste management, landcare and farm forestry. Website: www.greenskills.org.au

A number of NGOs work nationally to implement programs on an Australia-wide scale to effectively address national environmental issues such as water management and climate change. Some of the national NGOs involved in wetland conservation and protection in Western Australia include WWF Australia, Greening Australia, The Wilderness Society, and the Australian Conservation Foundation. One of the national programs which demonstrates the benefits of a national approach to conservation planning is The Wilderness Society's 'WildCountry' program which involves protection of high value remnants of Australia's natural environment, and restoration of important areas to maintain and/or restore ecological connections across the continent.

Many national and international organisations work in partnership with other NGOs, industry, scientific experts, government and the community to develop both scientific and rational economic solutions which help to influence governmental policy and practice and generally allow for better management of Australia's environmental values.

Regional natural resource management organisations

There are six community-based regional natural resource management (NRM) organisations in WA, which are a part of a national network of fifty-six regions. Working in partnership with stakeholders, the regional and sub-regional NRM organisations play a key role in the regional delivery of natural resource management programs in their regions: Northern Agricultural, Perth, Rangelands, South Coast, South West, and Wheatbelt as detailed in Table 3.

Table 3. Regional NRM organisation and sub-regions¹²

NRM regional organisation	NRM sub-regions
Northern Agricultural Catchments Council www.nacc.com.au	Greenough Moore River West Midlands Yarra Yarra
Perth Region NRM www.perthregionnrm.com	North North-East East South Coastal
Rangelands NRM WA www.rangelandswa.com.au	Kimberley Pilbara Gascoyne Murchison Goldfields Nullarbor Desert Rangelands
South Coast Natural Resource Management Inc. www.southcoastnrm.com.au	Albany Hinterland Esperance Mallee Esperance Sandplain Fitzgerald Biosphere Kent Frankland North Stirlings Pallinup
South West Catchments Council www.swccnrm.org.au	Blackwood Cape to Cape Geographe Leschenault Peel-Harvey Warren
Wheatbelt NRM www.wheatbeltnrm.org.au	Avon Lockhart Yilgarn

In addition to the regional NRM organisations, many organisations are active in sub-regions. They include catchment groups, landcare groups and regional councils. For example, in the Perth Region NRM area, the Ellen Brockman Integrated Catchment Group, the Eastern Metropolitan Regional Council and the South East Regional Catchment Urban Landcare WA carry out NRM functions.

NRM regional organisations are eligible for funding via the Australian Government's Caring for our Country funding program and the Government of Western Australia's State NRM program (in previous years initiatives such as the National Action Plan for Salinity and Water Quality (NAP) and the Natural Heritage Trust (NHT) were the primary funding programs).

With community input, each regional NRM organisation and many sub-regional NRM organisations have prepared a regional strategy outlining their evaluation of the natural assets (including wetlands) in their region and their condition; threats to those assets; goals and targets to improve their condition; actions to achieve those goals; and targets and a framework for implementing those actions. Investment plans have also been prepared to allocate funding to projects towards achieving the goals and targets outlined in the regional strategies.

Through the regional strategies, a number of the regional NRM organisations identified that their region's wetlands were poorly documented, and they applied for funding to carry out wetland mapping, monitoring and research programs to improve knowledge of the wetlands and their values. This process has resulted in much better knowledge of wetlands in the Rangelands, Northern Agricultural, South West and Wheatbelt regions. For example, in the Wheatbelt catchment, wetland mapping was carried out to identify the location of wetlands and characterise them into wetland types. Methodologies for evaluating their values at a broad scale (1:100,000) and a much finer scale (1:25,000) were also developed, and the broad scale methodology was applied to a range of wetlands across the area. As a result of this identification and evaluation of wetlands across the Wheatbelt, there is now a much better understanding of where wetlands are and their values, providing individuals, organisations and government with a better understanding of wetland protection and management priorities in the region. Rangelands NRM WA established a project that brought together a wide range of stakeholders to discuss Kimberley region wetlands, culminating in the report, *Establishing priorities for wetland conservation and management in the Kimberley Region*.¹⁰

- ▶ DEC undertakes wetland mapping projects as funding permits and is the lead agency for wetland inventory standards and endorsement of wetland mapping across the state.

NRM regional organisations often significantly contribute to a range of on-ground activities at wetlands and in their catchments. Planting, weeding, fencing and control of feral animals and cattle are just a few of the wide range of on-ground activities that NRM regional organisations participate in.

NRM regional organisations can also play a leading role in water management. For example, the Peel-Harvey Catchment Council, within the South West Catchments Council region, has partnered in an agreement with the City of Mandurah and the Shire of Murray to implement seven new stormwater retrofit projects by 2013 in the Peel-Harvey.¹¹ Activities of this nature can have significant water quantity and water quality benefits in wetlands.

- ▶ For more information on the role of regional NRM organisations in wetland conservation, see the State NRM Office website: www.nrm.wa.gov.au.
- ▶ For more information on the Wheatbelt and other wetland mapping around the state, see the DEC wetlands webpage: www.dec.wa.gov.au/wetlands then selecting the 'Wetland mapping' tab.

Western Australian Local Government Association

The Western Australian Local Government Association (WALGA) is a non-government organisation that lobbies and negotiates on behalf of the 142 local governments of WA.¹² As such, it is referred to as 'the voice of local government'. WALGA aims to enhance the capacity of local governments by negotiating service agreements and providing other economic, social, and environmentally sustainable services and infrastructure to meet the needs of the community.

The operations of WALGA are funded by membership subscriptions, businesses and grants.¹³

WALGA has undertaken or facilitated a number of projects that contribute significantly to wetland conservation outcomes including programs such as:

- Perth Biodiversity Project: supports local governments to use their functions and powers effectively to protect and manage local natural areas; see <http://pbp.walga.asn.au>

- South West Biodiversity Project: (now ceased but still provides resources) supports local governments to use their functions and powers effectively to protect and manage local natural areas; see www.walga.asn.au/AboutWALGA/Policy/SouthWestBiodiversityProject.aspx
- ▶ More information on these programs is available from the WALGA website: www.walga.asn.au.

COLLABORATIONS: NON-GOVERNMENT AND GOVERNMENT WORKING TOGETHER

An emerging trend in conservation is consortiums who collaborate to achieve conservation outcomes. Two examples of consortiums whose work affects WA wetlands are:

- The New WAtEr Ways aim is to build the water sensitive urban design capacity of Government and industry to improve the delivery of urban water management and water sensitive cities through partnerships, collaboration and consultation. It is a partnership of the Department of Water, Department of Planning, Western Australian Local Government Association, Water Corporation, Urban Development Institute of Australia (WA) and Swan River Trust. Website: www.newwaterways.org.au
- The Southwest Australia Ecoregion Initiative (SWAEI), a consortium of partner organisations and government agencies. It is a multi-stakeholder, non-sectoral group and authority is not vested in any one government agency or non-government organisation. It is jointly co-chaired by WWF-Australia and the Department of Environment and Conservation. Website: <http://swaecoregion.org/>

THE ROLE OF GOVERNMENT

The role of government is discussed below under the three tiers: local, state and national. The role of each tier of government is defined by legislation.

Government agencies have the ability to influence policy and actions of other government agencies in wetland conservation in a similar manner to community members or groups, as described above. For example, a state government agency may provide a response to a local government on an advertised policy or proposal.

The profile of each agency or committee has been provided in the tables below to allow quick identification of information of interest.



When seeking government action on a matter, it is important to understand who has lead responsibility for that matter within government. It is also important to understand which agencies or individuals are *advice giving* agencies on any particular matter, and which are a *decision-making authority* for a matter. A decision-making authority, or DMA, is a public authority empowered to make a decision in respect of a proposal. It is important to note that the legislative authority for many decisions is a Minister of government, not a government agency.

Local government

Local government is the tier of government responsible for managing the development and operation of individual local government areas, development and maintenance of assets, and provision of local services.

There are 142 local governments (also called shires or councils) in the state. These are each responsible for a specific geographic area varying in size from 1.5 square kilometres (Shire of Peppermint Grove) to 379,000 square kilometres (Shire of East Pilbara).¹³

Each local government has the power to make local policies under the *Local Government Act 1995* on a range of matters including wetland protection, subdivision and development, lot sizes, stormwater management and housing densities. Local governments are responsible for the detailed planning of the use of land via the development of 'local planning schemes' which set out rules for subdivision and development of land. As such, local governments have significant potential to positively influence wetland protection and conservation by:

- ensuring local planning schemes, subdivisions and developments protect wetlands, buffers and ecological corridors, wetland water regimes and water quality, and ensure their long-term management;
- managing stormwater via local drainage networks to reduce environmental impacts; and
- ensuring land use activities within the area are in accordance with the approved land use plans.

Local governments have the power to reserve land through their local planning schemes to protect places of special heritage significance or of significance to the community. They may also include other land into a 'scheme' reserve such as local parks and primary school sites.¹⁴

Through the planning process, local governments may also have wetlands vested with them. As a result, they are often managers of wetlands and therefore play an important ongoing management role. If a wetland is located within the parcel of land proposed for development, it may be required to be ceded by the land owner to the Crown free of cost as 'public open space' (POS). For wetlands retained in areas of open space within a residential or industrial development, it is common for developers to be assigned responsibility for the management of the wetland for a period of up to three years following the completion of a development. They are generally required to manage the wetland and associated wetland buffer in accordance with a wetland management plan that has been prepared in liaison with and approved by relevant authorities (for example, DEC and/or the local government). After this period, if the developer has satisfied the requirements and implemented all management actions outlined in the approved wetland management plan, transfer of the open space and therefore responsibility for the management of the wetland passes to the nominated vesting body, typically the local government. For more information on public open space in residential areas, see *Liveable Neighbourhoods*⁶ (Element 4, R11, page 7).

Local governments also have significant networks of local drains. The management of existing drains and the creation of new drains can both have significant impacts on wetlands. A number of local governments are now taking the proactive step of retrofitting existing stormwater drains to reduce their impacts on wetlands and other ecosystems via initiatives and resources such as the *Stormwater management manual for Western Australia*¹⁵, the International Council for Local Environmental Initiatives' Water Campaign™ and the New WAter Ways program.

- ▶ WALGA has produced an excellent series of fact sheets about local government and natural resource management, available from the WALGA website at www.walga.asn.au.¹² These include 'Factsheet 2: Understanding Local Government roles and responsibilities' and 'Factsheet 3: Local Government processes and engagement tips'.
- ▶ WALGA has developed a range of tools that local governments can use to identify and prioritise their environmental assets, and plan for their management, such as local biodiversity strategies. See the Perth Biodiversity Project for more information: <http://pbp.walga.asn.au>

Case study

The City of Cockburn was awarded the 'Government leading by example' award at the 2011 WA Environment Awards. The city has undertaken a number of initiatives that will have a positive effect on wetlands in their area. These include:

- a published wetland conservation policy (policy SPD5)
- provisions within the City of Cockburn Town Planning Scheme No. 3 supporting the protection and management of wetlands and wetland buffers from development and adjacent land uses
- a new Conservation Zone in its Town Planning Scheme that ensures landowners who opt to retain areas of conservation value within a development protect, manage, preserve and enhance these areas
- publication of wetland management plans on its website
- a Landowner Biodiversity Conservation Grant Program that gives financial support of up to \$3,000 to landowners to carry out on-ground works that directly relate to the conservation and improvement of privately-owned natural bushland and wetland areas on their property. Some examples of works include: fencing to exclude livestock, weed control, revegetation, erosion control, habitat creation, water quality enhancement and dieback treatment.
- support for WWF's now-finished Wetlands Watch program, which provided technical and financial assistance for private landowners to manage and rehabilitate high conservation value wetlands in Cockburn and surrounding LGAs.¹⁶
- advocating measures to minimise the need for spraying of wetlands, including encouraging residents to minimise midge and mosquito breeding conditions on their property and take steps to protect themselves from mosquitoes when outdoors
- converting drains to living streams
- participating since 2007 in the Water Campaign™ run by the International Council for Local Environmental Initiatives, and publishing a local water action plan committing to actions to improve its water management
- publishing a 'Parks, wetland and beach guide' online
- running the 'Better Tomorrow Sustainability Grants' to encourage and reward community participation in sustainability initiatives; and the 'Native plant subsidy scheme' to encourage the use of native plants in the city.

Local governments	Role Responsible for planning and management of the local area by administration of local planning schemes, policies, strategies in accordance with the local planning strategy ¹⁴ ; reserve management and delivery of local amenities and services ¹²
Website www.<LGName>.wa.gov.au	
Processes or programs that contribute to wetland conservation	
<ul style="list-style-type: none"> • Management of local government reserves • Preparation and implementation of local planning schemes • Preparation and implementation of local planning strategies • Planning and development approvals • Development and implementation of planning policies 	
Legislation relevant to wetland conservation	
<i>Local Government Act 1995</i>	
Relevant committees assisted Refer to each local government	Minister Minister for Local Government

extra information

Key considerations when working with local governments

- A. Del Marco, *Ironbark Environmental*

The management of wetlands vested with a local government largely depends on the resources and priorities of the individual local government and the interests of the local community. Many local governments are taking up the challenge of actively managing wetlands in their reserves and preparing management plans. However, because their roles are broad, the capacity of each local government to manage wetlands under their care is variable. Key points to consider when working with your local government are outlined below.

Capacity: gauge the local government’s capacity to prepare a wetland management plan or undertake management of the wetland. This may involve speaking with relevant senior staff, and then following this up with a letter to the Chief Executive to build a more formal relationship. Where their capacity or willingness is low, initially consider simple joint activities that could be undertaken that raise Councillor and community awareness of the wetland. These include nature walks, rubbish pick-ups, or erection of a sign or fence. It may take one or two years before a small local government agrees to prepare a management plan or invest significant resources in a reserve.

Big picture approach: for local governments that manage numerous wetlands, or have numerous wetlands on local government and private lands, encourage them to undertake a broad-scale assessment of the municipality’s wetlands. Better still, they could do this as part of a local biodiversity strategy.

Budget lead times: local governments have a long lead time between proposing and finalising an annual budget. The annual budget preparations for the following financial year generally commence by November of the previous financial year. Therefore it is necessary to submit proposals as early as possible in the preceding financial year. Better still, make comment on their forward five-year financial plan. These are called principal activity plans or future plans. This is where substantial projects and investments are planned by Council.

Legal responsibilities: remember that local governments have legal responsibility for lands vested in the Council, and will need to give approval for all works carried out in the reserve. This is best achieved through a management planning process, or where required, approval of a one or two year works program that is signed off by the Council.

extra information

Foster partnerships: help your local government work with another organisation to plan or undertake wetland management. There are many opportunities to develop co-operative projects and receive funding with regional Natural Resource Management organisations and local governments.

Develop partnerships: appreciate the skills and resources you and your group have to offer your local government. You may be able to provide expertise on an aspect of wetland management, or help the local government prepare a funding submission. You may be eligible for many grants that the local government is not eligible for.

Co-operate: keeping an eye on a reserve to ensure it is not being impacted by illegal activity (such as trail bike riding, dumping of garden refuse, and so on) is challenging for even the most well-resourced local governments. Local people enjoying and taking care of an area make for highly visible management and maximise passive surveillance to discourage illegal use of an area.

State government

Several state government authorities play very important roles in the protection and management of wetlands within Western Australia. The primary decision-making authorities are the Minister for Environment, the Minister for Water and the Minister for Planning.

<p>Minister for Environment</p>	<p>Role Decision-making authority under environment legislation</p>
<p>Website www.premier.wa.gov.au</p>	
<p>Power <i>Environmental Protection Act 1986</i> <i>Conservation and Land Management Act 1984</i> <i>Wildlife Conservation Act 1950</i> <i>Swan and Canning Rivers Management Act 2006</i></p>	<p>Processes or programs relevant to wetland conservation</p> <ul style="list-style-type: none"> • Decision-making authority under EP Act <ul style="list-style-type: none"> - determines appeals lodged under the Act - sets environmental conditions on proposals after consultation with other relevant decision-making authorities • Reports to Parliament • Ensures EPA has resources and facilities to function • Issue requests to EPA for advice and policy development on environmental matters and special reporting and auditing requirements
<p>Agency</p> <ul style="list-style-type: none"> • Appeals Convenor • Department of Environment and Conservation • Environmental Protection Authority • Swan River Trust 	

Minister for Water	Role Decision-making authority under water resources management legislation
Website www.premier.wa.gov.au	
Power <i>Water Agencies (Powers) Act 1984</i> <i>Rights in Water and Irrigation Act 1914</i> <i>Waterways Conservation Act 1976</i> <i>Water Services Act 2012</i> <i>Water Services Legislation Amendment and Repeal Act 2012</i>	Processes or programs relevant to wetland conservation <ul style="list-style-type: none"> • Decision-making authority under relevant acts <ul style="list-style-type: none"> - general function of conserving, protecting and managing water resources, assessing water resources and planning for the use of water resources under Section 9 of the <i>Water Agencies (Powers) Act 1984</i> - determines outcome of appeals regarding applications to take water - determines outcome of proposals in respect of bed and bank disturbance in consultation with relevant ministers • Reports to Parliament
Agency <ul style="list-style-type: none"> • Department of Water • Water Corporation 	
Minister for Planning	Role Decision-making authority under planning legislation
Website www.premier.wa.gov.au	
Power <i>Planning and Development Act 2005</i> <i>Town Planning Regulations 1967</i> <i>Town Planning and Development (Subdivision) Regulations 2000</i> <i>Metropolitan Redevelopment Authority Act 2011</i>	Processes or programs relevant to wetland conservation <ul style="list-style-type: none"> • Decision-making authority under relevant acts <ul style="list-style-type: none"> - overseeing the administration of planning agencies - maintaining and reviewing planning legislation - directing statutory and strategic planning matters - approving regional planning schemes and local planning schemes - approving some planning policies. • Reports to Parliament
Agency <ul style="list-style-type: none"> • Department of Planning • Metropolitan Redevelopment Authority • LandCorp • Development assessment panels 	

State government statutory offices, boards, tribunals, and committees

The following statutory offices, boards, tribunals and committees have been established under state government legislation and processes, and have significant roles and responsibilities in wetland protection and management:

- Environmental Protection Authority
- Appeals Convenor
- Western Australian Planning Commission
- Conservation Commission
- State Administrative Tribunal
- Wetlands Coordinating Committee

Environmental Protection Authority (EPA)	Role Board that provides independent advice to the state government on environmental matters ¹⁷
Website www.epa.wa.gov.au	
Objective To protect the environment and to prevent, control and abate pollution and environmental harm ¹⁷	
Power Statutory authority but not regulatory, provides advice to government via the Minister to assist decision making	Processes or programs that contribute to wetland conservation <ul style="list-style-type: none"> • Environmental impact assessment (EIA) resulting in recommendations on the environmental acceptability of proposals, schemes and their amendments • Publication of environmental protection bulletins (formerly position statements) and environmental assessment guidelines (formerly guidance statements) as indicators of the EPA's expectations in regards to specific issues • Formulation of environmental protection policies (EPPs) gazetted to protect specific parts of the environment • State of the Environment reporting indicating the status of major environmental issues in WA • Provision of strategic advice and on the formulation of regulations
Legislation relevant to wetland conservation <i>Environmental Protection Act 1986</i>	
Agency Office of the Environmental Protection Authority	Minister Minister for Environment
Membership Five members who are not public servants A full-time chairman, a part-time Deputy Chairman and three part-time members Appointed by the Governor of Western Australia on the recommendation of the Minister for Environment ¹⁷	Meeting frequency Fortnightly
	Sub-committees None
Publications specific to wetlands Chapter B4 ('Wetlands') of <i>Guidance Statement 33: Environmental guidance for planning and development</i> <i>Position Statement 4: Environmental protection of wetlands</i> A number of other EPA policies are relevant to wetlands. See the 'Legislation and policy' topic for a full list.	

Appeals Convenor	Role Statutory office that investigates and provides advice to the Minister for Environment regarding appeals made under the <i>Environmental Protection Act 1986</i>	
Website www.appealsconvenor.wa.gov.au		
Power <i>Environmental Protection Act 1986</i> (section 107A)	Processes or programs relevant to wetland conservation <ul style="list-style-type: none"> • Advice to the Minister for Environment on appeals made under the EP Act, in regard to environmental impact assessment, permits for clearing native vegetation and conditions applying to certain industrial and commercial premises. • Consult with DEC, EPA, appellant and others as required in consideration of appeals • Provide fair hearings • Resolve disagreements between parties • Provide reports to the Minister on conclusion of appeal investigations 	
Agency Office of Appeals Convenor (inclusive of a Deputy Appeals Convenor, a Registrar and four appeals assessors who are employed under the <i>Public Sector Management Act 1994</i>)	Minister Minister for Environment	

Western Australian Planning Commission (WAPC)	Role Statutory authority responsible for urban, rural and regional land use planning and land development matters Responsible for the strategic planning of the state in response to the strategic direction of government	
Website www.wapc.wa.gov.au		
Objective To formulate and coordinate land use strategies for Western Australia to facilitate its growth while continuously enhancing its unique quality of life and environment ¹⁸		
Power Statutory decision-making authority	Processes or programs relevant to wetland conservation <ul style="list-style-type: none"> • Strategic planning of land use, including regional parks, other parks and recreation reservation • Decisions on planning proposals, including all subdivision proposals • Administration of regional planning schemes • Recommendations to the Minister on local planning schemes¹⁴ • Management of reserves e.g. Whiteman Park • Preparation and review of planning strategies, policies, standards and guidelines • Land acquisition • Implementation of Bush Forever¹⁹ 	
Legislation relevant to wetland conservation <i>Planning and Development Act 2005</i>		
Subsidiary legislation Metropolitan Region Scheme Peel Region Scheme Greater Bunbury Region Scheme		
Agency Department of Planning	Minister Minister for Planning	

<p>Membership Up to 15 members, appointed by the Governor</p> <p>An independent chairman, individual Director Generals from the Department of Housing, Department of Planning, Department of Transport, Department of State Development, Department Environment and Conservation and Department of Water and representatives from economic, social and environmental areas and Local Government.¹⁸</p>	<p>Meeting frequency Monthly</p>
	<p>Sub-committees 23 committees with a range of expertise and local community knowledge. For example, Environment and Natural Resources Management Committee¹⁸</p>

<p>Publications relevant to wetlands</p> <ul style="list-style-type: none"> • <i>Better urban water management (2008)</i> • <i>Liveable neighbourhoods: a Western Australian Government sustainable cities initiative (2009)</i> • <i>Statement of Planning Policy 2.2 Gnangara groundwater protection (2005)</i> • <i>Statement of Planning Policy 2.3 Jandakot groundwater protection (2003)</i> • <i>State Planning Policy 2.8 Bushland policy for the Perth Metropolitan Region (2004)</i> • <i>State Planning Policy 2.9 Water resources (2006)</i>

<p>Conservation Commission of Western Australia</p>	<p>Role Statutory authority that is the vesting body for all terrestrial lands under the <i>Conservation and Land Management Act 1984</i>, including national parks, conservation parks, nature reserves, state forests and timber reserves</p> <p>Advisory body to the Minister for Environment on management of native flora and fauna and ecologically sustainable forest management</p>
<p>Website www.wapc.wa.gov.au</p>	

<p>Objective To conserve the State’s biological diversity and to ensure the land estate, for which it has responsibility, is managed in an ecologically sustainable manner</p>

<p>Power Statutory authority but not regulatory, provides advice to assist government decision making via the Minister.</p>	<p>Processes or programs relevant to wetland conservation</p> <ul style="list-style-type: none"> • Vesting of terrestrial lands and their management, for conservation, including national parks, conservation parks, nature reserves, State forests and timber reserves (DEC manages land on the Commission’s behalf). • Development of policies to protect the state’s natural environment and for the appreciation and enjoyment of that environment by the community • Promotion and facilitation of community involvement • Guidelines for ecotourism
<p>Legislation relevant to wetland conservation <i>Conservation and Land Management Act 1984</i> <i>Conservation and Land Management Amendment Act 2000</i></p>	

<p>Agency Department of Environment and Conservation</p>	<p>Minister Minister for Environment</p>
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<p>Membership Nine Commissioners Appointed by the Governor of Western Australia on the nomination of the Minister for Environment</p>	<p>Meeting frequency Monthly</p>
	<p>Sub-committees None</p>

State Administrative Tribunal	Role Independent body that makes and reviews a range of administration decisions related to civil, commercial, and personal matters, made by government agencies, public officials and local governments
Website www.sat.justice.wa.gov.au	
Power <i>State Administrative Tribunal Act 2004</i> <i>State Administrative Tribunal (Conferral of Jurisdiction) Amendment and Repeal Act 2004</i> (Conferral Act)	Processes or programs relevant to wetland conservation <ul style="list-style-type: none"> • Efficient, effective resolution of questions, complaints or disputes • Responds to appeals made under water legislation and planning legislation (not the <i>Environmental Protection Act 1986</i> – this is the responsibility of the Appeals Convenor) • Encourages resolution of disputes through mediation • Reviews and/or make decisions regarding individual cases • Publishes and provides in writing to all parties all final decisions within ninety days
Agency No associated agency	Minister State Attorney General

Wetlands Coordinating Committee	Role Committee established by the Minister for the Environment to coordinate the implementation of the <i>Wetlands Conservation Policy for Western Australia</i> ²⁰
Website www.dec.wa.gov.au/wetlands/wetlands_coordinating_committee	
Objective Encourage the conservation and proper management of wetlands and to encourage development to be consistent with objectives of the <i>Wetlands Conservation Policy for Western Australia</i> ²¹	
Power Non-statutory, that is not legally bound or prescribed by policy and or legislation	Processes or programs relevant to wetland conservation <ul style="list-style-type: none"> • Review of and report to the Minister on implementation of actions listed in the <i>Wetlands Conservation Policy for Western Australia</i> (1997) • Endorsement of wetland mapping, classification and evaluation methodologies and data • Review and endorsement of member policy documents affecting wetland conservation
Legislation relevant to wetland conservation Refer to member agencies	
Agency Department of Environment and Conservation	Minister Minister for Environment
Membership Positions appointed by Minister for Environment Chaired by DEC and includes representatives of DEC, Department of Planning, Department of Agriculture and Food, Department of Water, the West Australian Local Government Association, the voluntary conservation movement and non-government wetland scientists	Meeting frequency Annually
	Sub-committees Active working groups: Wetland Status Working Group (wetland inventory including mapping and loss), Wetland Buffer Guideline Working Group Others: Wetland Conservation Incentives Working Group, Drainage Evaluation Working Group.

State government agencies

State government agencies with responsibilities for aspects of wetland conservation and management in WA are:

- Office of Environmental Protection Authority
- Department of Environment and Conservation
- Department of Water
- Department of Planning
- Department of Agriculture and Food
- State Natural Resource Management Office
- Department of Fisheries

The Office of the Environmental Protection Authority

The Office of the Environmental Protection Authority (OEPA) is the state agency that supports the EPA in conducting environmental impact assessments and developing policies to protect the environment. The OEPA also monitors compliance with Ministerial conditions related to approvals. The OEPA is accountable to the Minister for Environment, as well as to the EPA.

<p>Office of the Environmental Protection Authority (OEPA)</p>	<p>Role Supports the EPA in conducting environmental impact assessments and developing policies to protect the environment.</p>
<p>Website www.epa.wa.gov.au</p>	
<p>Objective To support the EPA to meet its stated objective to use its best endeavours – a) to protect the environment; and b) to prevent, control and abate pollution and environmental harm.</p>	
<p>Processes or programs relevant to wetland conservation</p> <ul style="list-style-type: none"> • Management of the environmental impact assessment process for the Environmental Protection Authority • Implementation of Environmental Protection Authority policy 	
<p>Legislation relevant to wetland conservation</p> <ul style="list-style-type: none"> • <i>Environmental Protection Act 1986</i> 	
<p>Relevant committees assisted/ supported Environmental Protection Authority</p>	<p>Minister Minister for Environment</p>

The Department of Environment and Conservation

The state government agency with a lead role in the protection and management of wetlands is the Department of Environment and Conservation.²² Specifically, it has responsibility for certain activities relating to wetlands except for waterways, their floodplains, estuaries and peripheral estuarine wetlands. These wetland types are the responsibility of the Department of Water unless these areas are, or are proposed to be, DEC managed estate.

Department of Environment and Conservation (DEC)	Role Lead responsibility for protecting and conserving the State's environment and for aspects of natural resource management in Western Australia
Website www.dec.wa.gov.au	
Objective Working with the community, we will ensure that Western Australia's environment is valued, protected and conserved, for its intrinsic value, and for the appreciation and benefit of present and future generations ¹	
Processes or programs relevant to wetland conservation <ul style="list-style-type: none"> • Development and advocacy of wetland protection and management through DEC guidelines, standards, procedures and education initiatives; input into broader policies and initiatives e.g. national wetland policies • Lead role in wetland mapping; coordination of wetland mapping, survey and monitoring programs and standards, custodian of various wetland datasets • Advice on the conservation significance of wetlands • Lead role in implementing and achieving the objectives of the <i>Wetlands Conservation Policy for Western Australia</i> (Govt of WA 1997) • Provision of technical wetland advice to the Environmental Protection Authority in environmental impact assessment and broader policy development processes • Provision of expertise and advice to planning authorities to ensure that the appropriate level of protection is given to wetlands in the land planning process • Advocacy for wetland protection via land use planning processes • Advocacy for wetland protection via water planning processes • Management of national parks, conservation parks, state forests, and timber reserves and nature reserves, which include many of WA's nationally and internationally significant wetlands • Support for conservation activities at privately owned wetlands through community engagement and capacity building programs through programs such as Healthy Wetland Habitats and Land for Wildlife • Research into wetland species and processes • Research into climate change and biodiversity • Regulation of clearing of native vegetation • Implementation of international migratory bird treaties • Identification, protection, monitoring and recovery of rare and threatened species and communities • Regulation of industry, contaminated sites and development and draining of acid sulfate soils • Identification of internationally and nationally significant wetlands and proposal for inclusion under the Ramsar Convention and <i>Directory of Important Wetlands of Australia</i> 	
Legislation relevant to wetland conservation <ul style="list-style-type: none"> • <i>Environmental Protection Act 1986</i> • <i>Conservation and Land Management Act 1984</i> • <i>Wildlife Conservation Act 1950</i> • Environmental Protection (Clearing of Native Vegetation) Regulations 2004 • Environmental Protection Regulations 1987 	

<p>Publications relevant to wetlands</p> <ul style="list-style-type: none"> • <i>A guide to managing and restoring wetlands in Western Australia</i> (2012) • <i>A guide to the assessment of applications to clear native vegetation under Part V of the Environmental Protection Act 1986</i> (2009) • <i>Guidelines checklist for preparing a wetland management plan</i> (2008) • <i>Draft framework for mapping, classification and evaluation of wetlands in Western Australia</i> (2007) • <i>Protecting our wetlands in Western Australia</i> (2006) • Wetland inventory series – wetland mapping and evaluation reports for areas of WA • <i>Guideline for the determination of wetland buffer requirements</i> (DoP and DEC in preparation) 	
<p>Relevant committees assisted/ supported</p> <p>Environmental Protection Authority Conservation Commission of WA Wetlands Coordinating Committee</p>	<p>Minister</p> <p>Minister for Environment</p>

The Department of Water

The Department of Water (DoW) is the state agency whose core business is to manage the state’s ground and surface water resources to support sustainable use and development to meet the needs of current and future users, while protecting water dependent ecosystems and environments.

It does this by measuring and allocating the state’s water resources, licensing and setting rules for the abstraction of water, integrating land and water planning and protecting the state’s waterways and catchments.²³ The Department is the lead agency for the management of waterways (such as rivers, creeks, streams and brooks) including their floodplains, estuaries, inlets and reservoirs unless these are in DEC estate. Where a waterway or floodplain is listed under the Ramsar Convention but is not within DEC managed estate, DoW works in consultation with DEC.

<p>Department of Water (DoW)</p>	<p>Role</p> <p>Leads the management and protection of the state’s water resources including waterways and groundwater by informing the government and the community on the quantity, quality, use and availability of the state’s water resources and encouraging water conservation and alternative water sources²⁴</p>
<p>Website</p> <p>www.water.wa.gov.au</p>	
<p>Objective</p> <p>Support WA’s growth and development by managing the availability and quality of water sustainably – now and for the future²⁴</p>	
<p>Processes or programs relevant to wetland conservation</p> <ul style="list-style-type: none"> • Provision of expertise and advice to planning authorities to ensure that the appropriate level of protection is given to water resources in the land planning process • Water resource management legislation and reform • Water allocation, including the establishment of environmental water provisions for wetlands • Water management plans • Water licensing and regulation, giving consideration to water requirements of high value ecosystems • Water re-use, recycling and conservation programs • Stormwater/drainage plans, programs and policies • Waterway management plans • Water quality improvement plans • Authorising bed and bank disturbance • Environmental water planning including ecological water requirements and ecological water provisions for wetlands • Algal bloom management techniques • Catchment monitoring programs • Salinity management • River restoration action plans, training and activities 	

<p>Legislation relevant to wetland conservation</p> <ul style="list-style-type: none"> • <i>Water Agencies (Powers) Act 1984</i> • <i>Rights in Water and Irrigation Act 1914</i> • Rights in Water and Irrigation Regulations 2000 • <i>Waterways Conservation Act 1976</i> • <i>Water Services Act 2012</i> • <i>Water Services Legislation Amendment and Repeal Act 2012</i> 	
<p>Publications relevant to wetlands</p> <ul style="list-style-type: none"> • <i>Better urban water management</i> (2008) • <i>Stormwater management manual for Western Australia</i> (2004–2007) • <i>Decision Process for Stormwater Management in WA</i> (2009) • <i>State Water Plan</i> (Government of Western Australia 2007) • <i>Environmental Water Provisions Policy for WA</i> (2000) • <i>Operational policy: identifying and establishing waterways foreshore areas</i> (2012) • <i>The State Waterways Initiative</i> (2008) 	
<p>Relevant committees assisted/ supported</p> <p>Rural Water Advisory Committee</p>	<p>Minister</p> <p>Minister for Water</p>

The Department of Planning

The Department of Planning (DoP) has the potential to influence wetland protection and management in WA, through provision of planning and policy advice to the Western Australian Planning Commission (WAPC).

<p>Department of Planning (DoP)</p>	<p>Role</p> <p>Statewide responsibility for planning for future communities. Plan cities, towns and connecting transport routes.²⁵</p>
<p>Website</p> <p>www.planning.wa.gov.au</p>	
<p>Objective</p> <p>The department plays a vital role in improving the quality of life of all Western Australians. We plan the cities and towns in which we live and the transport routes that connect us to our jobs, friends and places of recreation. We generate thousands of direct and indirect jobs through the planning approval process.²⁵</p>	
<p>Processes or programs relevant to wetland conservation</p> <ul style="list-style-type: none"> • Advice to Western Australian Planning Commission on planning proposals and policies and implementation of the WAPC's decisions • Delegated authority for decisions on subdivision and development applications, when they comply with WAPC policies and practices • Bush Forever • EnviroPlanning (in partnership with WALGA) 	
<p>Legislation relevant to wetland conservation</p> <ul style="list-style-type: none"> • <i>Planning and Development Act 2005</i> • <i>Town Planning Regulations 1967</i> • Region schemes: Metropolitan Region Scheme; Peel Region Scheme¹⁴; Greater Bunbury Regional Scheme 	
<p>Relevant committees assisted/ supported</p> <p>Western Australian Planning Commission</p>	<p>Minister</p> <p>Minister of Planning</p>

The Department of Agriculture and Food

The Department of Agriculture and Food (DAFWA) assists WA's agriculture, food and fibre sectors to be sustainable and profitable. DAFWA has a number of investment priorities which support wetlands management. These include developing long-term management solutions to salinity, soil degradation and water quality to ensure sustainable management of land and water resources in a changing climate. DAFWA is the lead agency for managing biosecurity risks and invasive plants, animals and diseases in WA. It also has a significant role in the state's land and water resources condition assessment and planning. DAFWA supports the State NRM Office which facilitates funding and governance of coordinated community delivery of natural resource management in Western Australia (see State NRM Office, below, for more information).

Department of Agriculture and Food (DAFWA)	Role To work with our partners to develop the agriculture and food sector; and to effectively manage the risks to the natural and biological resources on which the sector relies.
Website www.agric.wa.gov.au	
Objective/mission To foster a progressive, innovative and profitable agriculture and food sector that benefits Western Australia now and in the future.	
Processes or programs relevant to wetland conservation <ul style="list-style-type: none"> • Support the agricultural sector to minimise impacts by ensuring sustainable management of land and water resources in a changing climate • Minimise the introduction of invasive plants, animals and diseases and management of them to exclude, eradicate, control or minimise their impact to agriculture and related natural resources • Administers the <i>Soil and Land Conservation Act 1945</i> to regulate land degradation and proposals to drain sub-surface water to control salinity • Coordination of state NRM policy and funding programs (see below) • Contributes to state government policies including land and water resource allocations, biosecurity and climate change to support sustainable natural resource use for agriculture 	
Legislation relevant to wetland conservation <i>Biosecurity and Agricultural Management Act 2007</i> and regulations <i>Soil and Land Conservation Act 1945</i> Soil and Land Conservation Regulations 1992	
Publications relevant to wetlands Relevant publication topics include biosecurity, invasive species and climate.	
Minister Minister for Agriculture and Food	

The State Natural Resource Management Office

The State Natural Resource Management Office (SNRMO) was formed by the state government in 2003 to facilitate improved coordination of NRM delivery in WA and to advocate NRM activity and engage resource managers on key NRM issues.

State Natural Resource Management Office (SNRMO)	Role Coordinate natural resource management (NRM) across state government.
Website www.nrm.wa.gov.au	
Processes or programs relevant to wetland conservation	
<ul style="list-style-type: none"> • Develop and coordinate 'whole-of-government' state NRM policy • Negotiate and interact with the Commonwealth on matters related to the Caring for Our Country program • Provide strategic advice for regional project and investment plan development • Administer Commonwealth and State NRM funding • Communicate with stakeholders and the broader community on NRM matters • Support NRM councils and committees 	
Relevant committees assisted/ supported WA NRM Ministerial Committee Council for Natural Resource Agency Chief Executives (CONRACE) NRM Senior Officers Group	Minister Minister for Agriculture and Food

The Department of Fisheries

The Department of Fisheries' primary responsibility is to conserve, develop and manage the fish and aquatic resources of Western Australia to ensure there are 'fish for the future'.

Department of Fisheries (DoF)	Role Conserve, develop and manage the fish and aquatic resources of WA to ensure there are fish for the future.
Website www.fisheries.wa.gov.au	
Processes or programs relevant to wetland conservation	
<ul style="list-style-type: none"> • Maintain expert knowledge of WA's freshwater fish • Control of the introduction and spread of introduced fish and crayfish, maintenance of the noxious fish list and operation of the FISHWATCH service • Regulation of relocations, introductions and reintroductions of freshwater species of fish and crayfish 	
Legislation relevant to wetland conservation <i>Fish Resources Management Act 1994</i> Fish Resources Management Regulations 1995	
Publications relevant to wetlands <i>Freshwater fish distribution in Western Australia database</i> http://freshwater.fish.wa.gov.au	Minister Minister for Fisheries

case study

Case study: organisations involved in urban water supply and stormwater management

There are a number of organisations involved in urban water services and management in WA, including the Water Corporation, Department of Water, local governments and Swan River Trust. Their roles can be complex and overlapping. Similarly, the legislation governing water management is spread across a large number of Acts, some of which are very old. The *Water Services Legislation Amendment and Repeal Act 2012* and the *Water Services Act 2012* will replace and streamline a number of these Acts.

Table 3 outlines the roles of key water management organisations.

Water supply and demand management

Organisations such as Water Corporation, Busselton Water Board and Aqwest (Bunbury Water Board) are authorised to supply water to households and businesses in the state. The Department of Water is responsible for development of the overarching policy and management of water resources (and use) in the state. It is the Department of Water that allocates and licences the amount of water an organisation such as the Water Corporation can use or extract. This is important way of stimulating better water demand management responses by water supply organisations, diversification of water supply sources (e.g. desalination of water) and water disposal options that make use of this precious resource.

The Department of Water is also responsible for licensing water extraction by smaller organisations, such as market gardens, and for developing and implementing policies in this regard. The Department uses allocation limits, licensing, efficiency programs and the recouping of unused entitlements to distribute abstraction to limit impacts on the environment and to reduce abstraction in areas where the reductions will benefit the conservation of wetlands. On the Gngangara Mound, where many wetlands are drying due to the drier climate and water and land uses, the Department of Water has stated that 'no long term licences for accessing the fresh groundwater resources of the Leederville or Yarragadee aquifers are to be granted for additional groundwater entitlements, other than for extenuating circumstances'.²⁶

A proposal to use water that is likely to have a significant impact on the environment may be referred to the Environmental Protection Authority (EPA) for assessment under Part IV of the *Environmental Protection Act 1986*. The supply of groundwater from the Gngangara Mound for public water supply and private licensed use in Perth is one such case. As a result of the referral of a proposal to abstract groundwater from the Gngangara Mound in the 1990s, the EPA determined that the proposal should be assessed, and made recommendations to the Minister for Environment regarding appropriate conditions and commitments should the Minister approve the proposal. As a result, the Department of Water is required to undertake a range of actions to protect wetlands on the Gngangara Mound in accordance with Ministerial conditions of approval and commitments. For more information, see the report, *Review of Ministerial conditions on the groundwater resources of the Gngangara Mound*.²⁷

Table 3. The role of organisations in water management in Western Australia

Responsibility		Water Corporation	Department of Water	Swan River Trust	Department of Environment & Conservation	Local Government	Harvey Water	Ord Irrigation	Department of Planning
POLICY	Develops policy for wetland management in WA				✓				✓
	Develops policy for water resource management in WA		✓						✓
	Provides input into policy and regulation that affects wetlands		✓		✓	✓			✓

		Responsibility							
		Water Corporation	Department of Water	Swan River Trust	Department of Environment & Conservation	Local Government	Harvey Water	Ord Irrigation	Department of Planning
LICENCES	Licences groundwater and surface water abstraction		✓						
SERVICE DELIVERY	Delivers clean drinking water	✓							
	Removes wastewater	✓							
	Maintains drinking water, drainage network and sewage pipelines from residential and commercial properties to main network	✓							
	Maintains local government drains					✓			
	Pipes irrigation water from local dams to shareholders in Collie, Harvey and Waroona for agricultural use						✓		
	Pipes irrigation water to shareholders from Lake Argyle to the Ord irrigation area in Kununurra for agricultural use							✓	
DEVELOPMENT / LAND USE PLANNING	Ensures future development and land use planning enhances ecological health and amenity of the Swan-Canning Rivers			✓					
	Provides advice on development and land use planning that has the potential to affect waterways, groundwater and catchments		✓		✓	✓			✓
	Provides advice on land use planning (structure plans, subdivisions, development etc) that has the potential to affect wetlands		✓		✓	✓			✓
	Decision-making authority for most development applications					✓			
PROTECTION/ RESTORATION	Protects waterways and catchments in WA		✓			✓			
	Protects wetlands in WA		✓		✓	✓			
	Manages wetlands within reserves				✓	✓			
	Protects and enhances the ecological health and community benefit of the Swan-Canning rivers			✓					
	Catchment management programs and activities e.g. conversion of stormwater drains to 'living streams'		✓	✓	✓	✓			
MONITORING	Monitors surface and groundwater (quality and water levels)		✓				✓	✓	
	Monitors drinking water quality	✓							
	Monitors water quality and water level of Swan-Canning rivers			✓					
	Monitors water quality, quantity and treatment in dams, storage facilities and Perth desalination plant	✓							

Surface and groundwater (drainage) management

The Department of Water is responsible for overseeing surface and ground water management policy and planning in WA.

The urban drainage network is made up of drains that principally flow to wetlands, waterways or the ocean. Most urban drains are managed by local governments. In some parts of the Perth metropolitan area the Water Corporation manages 'main drains' that receive drainage water from the local government drainage network. Main Roads and the Public Transport Authority also manage drainage associated with their infrastructure.

The Water Corporation is required to manage stormwater in the landscape within declared drainage districts, under licence from the Economic Regulatory Authority. Properties within these districts pay an annual drainage service charge for this service. The pipes, roadside channels and open drains known as 'main drains' are all part of the Water Corporation's network. In metropolitan Perth, this is made up of 828 kilometres of drains, diverting water from more than 400,000 hectares of land and preventing the flooding and waterlogging of approximately 260,000 properties.²⁸

Outside of the Perth metropolitan area the Water Corporation is responsible for maintaining rural drainage in defined rural drainage districts. Properties within rural drainage districts do not pay annual service charges. The rural drainage service was initially provided only to make land viable for agricultural. It provides a limited flood protection service, allowing adjacent land to be inundated following major storms.

Unlike the urban drainage of other Australian cities, Perth's main drains are designed to intercept and convey shallow groundwater in addition to surface overland flow.²⁹ Many main drains have been constructed to make land that was naturally waterlogged or inundated, that is, wetland areas, viable for agricultural or urban development. The draining of Perth's wetlands has affected all wetland types but in terms of area, it is particularly the extensive waterlogged wetlands that have been affected over decades, as historically they were not typically considered environmentally valuable.

Many main drains flow through significant wetlands in the Perth and Peel Regions. In fact whole chains of wetlands are influenced by the main drains. These drains, and their impacts on wetlands, are a legacy of historical urban and rural development.

Water regime and drainage

Wetland water regime is the specific pattern of when, where and to what extent water is present in a wetland.³⁰ Its components are the timing, frequency, duration, extent, depth and variability of water presence.³¹ The protection of wetland water regime is fundamental to protecting a wetland's values. Inherent in drainage planning is the concept that water needs to be removed from the landscape, beyond its natural flows, to enable people to inhabit the land. There is a strong potential for drainage to significantly alter wetland water regime, and consequently, wetlands and their natural values. However, there has been significant reform of the urban water planning process over the last decade, resulting in a much more transparent, accountable and environmentally-based planning framework for drainage planning in urban areas (Figure 4). As a result, greater opportunity exists for individuals and groups to be involved to ensure that valuable wetlands are considered appropriately in the planning process. Although the issues involved may be complex, stakeholders can influence the process by supporting this principle and advocating for the protection of wetlands in the planning area. Development proponents are required to address arterial drainage planning issues when proposing land use changes. However, in large and complex catchments, the Department of Water may take lead responsibility in the development of plans, in conjunction with the Department of Planning and local governments.

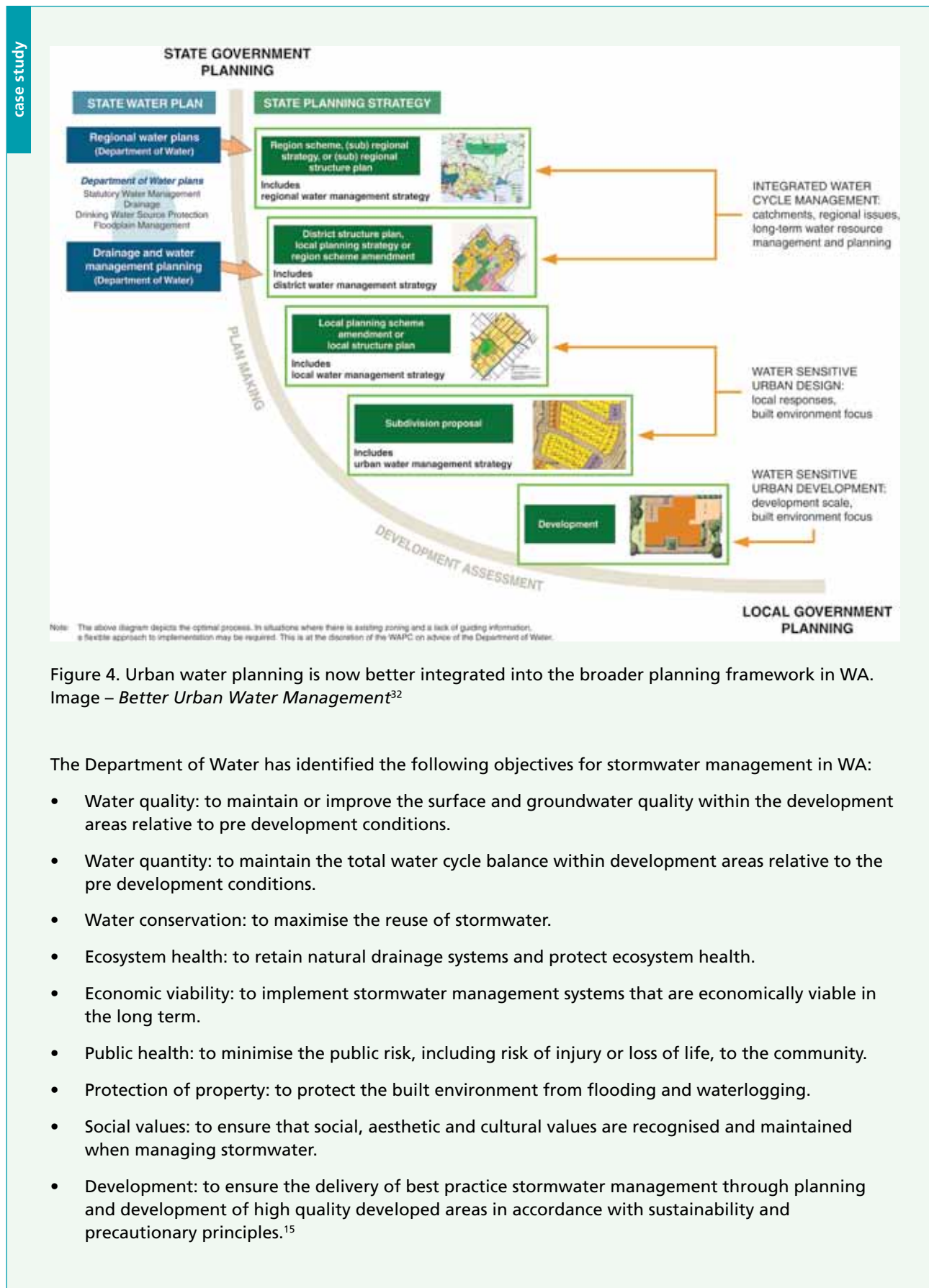


Figure 4. Urban water planning is now better integrated into the broader planning framework in WA. Image – *Better Urban Water Management*³²

The Department of Water has identified the following objectives for stormwater management in WA:

- Water quality: to maintain or improve the surface and groundwater quality within the development areas relative to pre development conditions.
- Water quantity: to maintain the total water cycle balance within development areas relative to the pre development conditions.
- Water conservation: to maximise the reuse of stormwater.
- Ecosystem health: to retain natural drainage systems and protect ecosystem health.
- Economic viability: to implement stormwater management systems that are economically viable in the long term.
- Public health: to minimise the public risk, including risk of injury or loss of life, to the community.
- Protection of property: to protect the built environment from flooding and waterlogging.
- Social values: to ensure that social, aesthetic and cultural values are recognised and maintained when managing stormwater.
- Development: to ensure the delivery of best practice stormwater management through planning and development of high quality developed areas in accordance with sustainability and precautionary principles.¹⁵

- ▶ For additional detail on the water regime of WA wetlands, see the topic 'Wetland hydrology' in Chapter 2.
- ▶ The Department of Water invites comments on drainage plans on its website: www.water.wa.gov.au. There is often a link from the front page of the website to plans currently open for comment.
- ▶ The document outlining how wetland water regimes are protected through urban water planning processes is *Better Urban Water Management*.³² It describes how water resources, including wetlands, should be considered at each stage of the land planning process by identifying the various actions and investigations required to support the particular planning decision being made. It is available online at www.planning.wa.gov.au/dop_pub_pdf/Better_Urban_Water_Management.pdf.
- ▶ The *Stormwater management manual for Western Australia*¹⁵ and the *Decision process for stormwater management in WA*³³ provide stormwater planners and managers with guidance on how to manage stormwater to protect wetlands.

Wetland water quality and drainage

The Department of Water is responsible for overseeing surface water and groundwater management policy in WA. It has spearheaded significant reform in urban water management through a variety of initiatives over the past decade. However, managing the water cycle and its quality in the urban environment requires the participation and compliance of a number of stakeholders, from individuals in the community to local and state government authorities.

Local governments are well placed to make significant improvements to the water quality of the estimated 3,000 kilometres of drains within their networks. In WA, there has been a significant uptake of water quality management initiatives by local governments. For example, more than forty local governments are participants of the Water Campaign™ run by the International Council for Local Environmental Initiatives. As participants, these councils have identified the changes that they will make to the management of water within the local government area. Ratepayers can encourage better wetland outcomes by supporting their local government's uptake of water initiatives such as the Water Campaign™. Resourcing is a constraint facing local governments; ratepayers can help influence the resourcing of such activities by providing their support. A holistic cost-benefit analysis of these activities will often demonstrate that the cost of managing drainage water quality, for example, will be offset by the reduction in costs of managing poor water quality in receiving wetlands and other environments they are responsible for managing.

- ▶ Individuals and community groups can find out if their local government is a participant, and what changes they have committed to, at the ICLEI website: <http://iclei.org/index.php?id=2389te>.

Any modifications to drains, or their management, require the approval of the managing authority. Key concerns of managing authorities will include whether changes to the capacity of the drain will increase the risk of flooding, or reduce the ease of management or public safety. Any proposed changes to the banks, cross-sectional area and levels of drains will require a professional hydrological assessment.

While the Water Corporation is responsible for providing and managing part of the urban and rural drainage networks, the Economic Regulatory Authority operating licence does not require the Water Corporation to control water quality within the main drains. The Water Corporation's stated responsibilities lie in design, construction, operation and maintenance of the drainage networks that convey drainage water to meet the flood protection requirements of the Economic Regulatory Authority operating licence.²⁹ However the Water Corporation has recently stated that it recognises a holistic and integrated catchment scale approach is required for the adequate management of water quality.²⁹ It has recently funded research into the water quality of its main drains²⁹ and undertaken a revegetation trial for a section of a branch drain with the objective of developing a more environmentally sustainable approach to urban drainage management and reducing maintenance by installing long term native vegetation that, once established, would significantly reduce maintenance cost.

- ▶ For more information on managing stormwater quality in WA, see the 'Stormwater' webpage of the Department of Water's website: www.water.wa.gov.au/Managing+water/Urban+water/Stormwater/default.aspx#

Wastewater service providers are responsible for conveying, treating and disposing of wastewater. The Water Corporation is the main provider in WA, however, some local governments, land developers, mining companies, and other organisations are also wastewater service providers. Wastewater service providers are responsible for minimising environmental impacts associated with overflows from their wastewater systems into sensitive receiving environments, including wetlands. The overflow points in



Figure 5. A pumping station. Photo – C Mykytiuk/DEC

wastewater systems are typically located at pumping stations (Figure 5). These stations are generally located at low points in the landscape, and consequently they are often near wetlands. The overflow of wastewater into wetlands has the potential to impact wetland water quality.³⁴ Service providers are required to carry out actions to assess, contain and recover wastewater at overflow sites in accordance with the *Wastewater overflow response procedures*.³⁵

Managing the catchment of the Swan and Canning Rivers

The Swan River Trust (SRT) is another state government agency involved with water management in Perth. Under the *Swan and Canning Rivers Management Act 2006* the SRT is responsible for protecting and enhancing the ecological health and long-term community benefit of the Swan-Canning River system. An important role undertaken by the SRT is to promote sound land use practices in the catchments of the Swan-Canning River system. The Swan-Canning river system includes the Ellen Brook, a westerly section of the Avon River, Helena River, Southern River and the Canning River. The SRT plays an important role in protecting wetlands by delivering a wide range of management programs and activities throughout the Swan Canning catchment to improve water quality in the Swan Canning Riverpark, which also improves water quality of wetlands in the catchment. These range from providing advice on development and land use changes to on-ground projects such as revegetation and fencing, re-engineering drains into living streams, restoring foreshores and improving the health of wetlands and floodplains along tributaries, and creating artificial wetlands in those drains that deliver large nutrient loads to the Swan and Canning Rivers.

- For additional detail on the Swan River Trust including current programs, see the website at www.swanrivertrust.wa.gov.au.

Case study: regulating industry and environmental harm

Pollution control

DEC is responsible for regulating the emissions or discharge of a range of industrial activities that would otherwise pose a significant environmental risk. It has powers to investigate, enforce and to order pollution to be abated and remediated. DEC carries out these responsibilities in accordance with Part V of the *Environmental Protection Act 1986* (EP Act). In particular, DEC manages potential polluting activities of 'prescribed premises' through works approvals and licences.

However, a range of activities do not fall within this regulatory mechanism. Local government approval is required for a range of activities through land use planning, extractive industry and offensive trades approvals and local government by-laws. Department of Mines and Petroleum approvals apply to mine sites, petroleum industries and dangerous goods storage facilities.

Individuals, organisations and community groups such as 'Friends of' groups can play an important role in surveillance and education regarding pollution, and in proactive activities to improve compliance of industry and best practice management by the community in general. For example, the Light Industry Audit Project was delivered by Perth Region NRM between 2007 and 2012. The project aimed to educate and influence managers in regard to the discharge of nutrients and contaminant sources from small and medium sized enterprises by auditing the use, storage and disposal of all types of solid and liquid materials. The subsequent report identified that the main areas where businesses failed to minimise the risk of pollution were:

- inappropriate liquid storage and spill management infrastructure
- inappropriate disposal of wastewater
- wastewater containing detergents, degreasers or sediments not properly treated and/or being discharged to open ground, septic tank system or stormwater drainage
- no emergency spill kit
- no emergency spill management plan and/or staff training for managing spills
- Material Safety Data Sheets not held on site for all chemicals used.

DEC is also responsible for investigating potential environmental harm caused by pollution. Under the EP Act it is an offence to cause environmental harm to the environment. Under the EP Act, an 'alteration of the environment to its detriment or degradation or potential detriment or degradation' or an 'alteration of the environment to the detriment or potential detriment of an environmental value' is considered environmental harm.

- To report pollution, call the Pollution Watch Hotline, 1300 784 782 (24 hours) or email pollutionwatch@dec.wa.gov.au. In the event of a hazardous materials release or life-threatening incident, call 000 and ask for Fire and Rescue).
- DEC publishes details of granted and refused licences. These are available to view at the 'Licensing and regulation' webpage of the DEC website www.dec.wa.gov.au/pollution-prevention/licensing-and-regulation.html.
- Information on the Light Industry Audit Project is available on the Swan River Trust website: www.swanrivertrust.wa.gov.au/the-river-system/tackling-the-issues/addressing-contaminants/light-industry-program

Australian government

National wetland protection and management is coordinated by the Australian government and through two committees. It plays a role in wetland policy and management, particularly with regard to nationally and internationally significant wetlands in WA.

Australian government agencies

The Australian government agency with primary responsibility for wetland protection and management issues of national interest is the Department of Sustainability, Environment, Water, Population and Communities.

Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC)	Role Develops and implements national policy, programs and legislation to protect and conserve Australia's environment
Website www.environment.gov.au www.nrm.gov.au	
Objective/mission Advancing a sustainable Australia: our environment, water, heritage and communities	
Processes or programs relevant to wetland conservation <ul style="list-style-type: none"> Administrative authority for the Ramsar Convention in Australia. Is the Australian representative; liaises with state and territory governments; designates sites for listing; provides guidance and advice; coordinates reporting on Ramsar sites. For more information see the 'Case study: roles and responsibilities for Ramsar wetlands' below. Participates in partnerships and implements agreements that seek to protect migratory species and their flyways as part of Australia's international commitments to the Convention on Migratory Species (Bonn Convention). Caring for Our Country investment program. Environmental biosecurity and invasive species policy. Implements the <i>Environment Protection and Biodiversity Conservation Act 1999</i> including regulating actions; maintaining the migratory species list; maintaining the list of threatened species, ecological communities and key threatening processes; development conservation advice and recovery plans for listed species and ecological communities; developing and implementing threat abatement plans. 	
Legislation relevant to wetland conservation <i>Environment Protection and Biodiversity Conservation Act 1999</i> <i>Natural Heritage Trust of Australia Act 1997</i> <i>Water Act 2007</i>	
Publications relevant to wetlands <ul style="list-style-type: none"> <i>The Wetlands Policy of the Commonwealth Government of Australia</i> (1997) EPBC Act Policy Statement 1.1: <i>Matters of national environmental significance</i> (2009) National guidelines for Ramsar Wetlands (publication series) Fact sheets (publication series) <i>Aquatic ecosystems toolkit</i> (2012) <i>Discovering Wetlands in Australia</i> (2011) – a primary classroom resource <i>Issues Paper: The role of wetlands in the carbon cycle</i> (2012) 	

<p>Relevant committees assisted/ supported</p> <p>Standing Council on Environment and Water (SCEW) www.environment.gov.au/about/councils/scew/index.html</p> <p>SCEW Senior Officials Committee</p> <p>National Water Reform Thematic Oversight Group (Water TOG)</p> <p>Landscape and Ecosystems Scale Biodiversity Thematic Oversight Group (Bio TOG)</p> <p>Aquatic Ecosystems Task Group</p> <p>Wetlands and Waterbirds Taskforce</p>	<p>Minister</p> <p>Minister for Sustainability, Environment, Water, Population and Communities</p> <p>Minister for Climate Change and Energy Efficiency</p> <p>Parliamentary Secretary for Sustainability and Urban Water</p>
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Australian government committees

<p>Aquatic Ecosystems Task Group (AETG)</p>	<p>Role</p> <p>Responsible for developing a national approach for the identification, classification and management of high ecological value aquatic ecosystems</p>
<p>Website</p> <p>Nil</p>	<p>Responsible for ensuring other high ecological value aquatic ecosystem work undertaken is coordinated and consistent with the AETG objectives³⁶</p>
<p>Objective</p> <p>Develop a national framework for the identification, classification and management of high ecological value aquatic ecosystems</p> <p>Provide a nationally coordinated approach to policy development for cross-jurisdictional issues within the aquatic ecosystems context</p>	
<p>Power</p> <p>Advice to National Water Reform Thematic Oversight Group (Water TOG) and Standing Council on Environment and Water (SCEW)</p>	<p>Processes or programs relevant to wetland conservation</p> <ul style="list-style-type: none"> • Development of a common definition of high ecological value aquatic ecosystems • Development of a national framework and or methodology for the identification, delineation, classification and description of Australia’s high ecological value aquatic ecosystems • Development of guiding principles for the management of high conservation value aquatic ecosystems³⁶
<p>Legislation relevant to wetland conservation</p> <p><i>Environment Protection and Biodiversity Conservation Act 1999</i></p> <p><i>Water Act 2007</i></p> <p>State and territory environmental legislation</p>	
<p>Agency</p> <p>A Council of Australian Governments (CoAG) committee chaired by the Department of Sustainability, Environment, Water, Population and Communities</p>	<p>Minister</p> <p>Minister for Minister for Sustainability, Environment, Water, Population and Communities</p>
<p>Membership</p> <p>Jurisdictional nominations from relevant agencies. In WA: Principal Coordinator, Wetlands Section, DEC.</p>	<p>Meeting frequency</p> <p>As required</p>

<p>Wetlands and Waterbirds Taskforce (WWTF)</p>	<p>Role Responsible for advising the Standing Council on Environment and Water (SCEW) on the implementation of the Ramsar Convention</p>
<p>Objective To promote a coordinated approach to the implementation of national obligations under the Ramsar Convention and international agreements on migratory waterbirds. To provide advice and undertake actions that facilitates such coordination³</p>	
<p>Power Advisory to the Landscape and Ecosystems Scale Biodiversity Thematic Oversight Group (Bio TOG) and Standing Council on Environment and Water (SCEW)</p>	<p>Processes or programs relevant to wetland conservation</p> <ul style="list-style-type: none"> • Australia’s National Ramsar Committee; National reporting for the Ramsar Convention Conference (of Contracting Parties) and biennial meetings of the bilateral migratory bird agreements between Australia and Japan, China and the Republic of Korea • Provide advice on Australian and New Zealand obligations under the above international agreements and the Bonn convention • Provide advice on Australian and New Zealand’s contribution to ensure long term conservation of migratory waterbirds in the East Asian Australasian Flyway • Provide advice on meeting the objectives for the conservation of wetland biodiversity as enunciated under the National Strategy for the Conservation of Australia’s Biological Diversity³ • Develop and implement a practical three-year rolling plan for coordinated implementation for Ramsar sites
<p>Legislation relevant to wetland conservation <i>Environment Protection and Biodiversity Conservation Act 1999</i> <i>Water Act 2007</i> State and territory environmental legislation</p>	
<p>Sub-committees Wetlands and Waterbirds Advisory Group</p>	
<p>Agency A Council of Australian Governments (CoAG) committee chaired by Department of Sustainability, Environment, Water, Population and Communities</p>	<p>Minister Minister for Sustainability, Environment, Water, Population and Communities</p>
<p>Membership Jurisdictional nominations from Australian state, territory and NZ agencies. In WA: Principal Coordinator, Wetlands Section, DEC.</p>	<p>Meeting frequency Twice yearly</p>

Case study: roles and responsibilities for Ramsar wetlands

- M. Coote, DEC

Australia is one of 160 countries that are party to the Ramsar Convention on Wetlands, which was signed in Ramsar, Iran in 1971. This treaty, officially known as *The Convention on Wetlands of International Importance, especially as Waterfowl Habitat*, currently lists more than 1,906 wetlands worldwide covering some 186.5 million hectares. The Ramsar Convention is an international intergovernmental treaty, which aims to halt and, where possible, reverse, the worldwide loss of wetlands and to conserve those that remain through wise use and management.

Australia was the first to nominate a site—Cobourg Peninsula in the Northern Territory in 1974—and now has sixty-four wetlands listed under the Ramsar Convention. Twelve of these sites occur in Western Australia, covering a total area of 514,800 hectares.

Designation as a Ramsar site confers upon it the prestige of international recognition, it also raises the profile of the site; enhances opportunities for management assistance and improves long-term management of the wetland; and increases legislative protection through the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Nomination of a Ramsar site

Ramsar site nominations can be initiated by the Australian, state and territory governments, non-government organisations (NGOs), community entities, trusts, Traditional Owners, individuals, private landowners or a company. Proposed nominations on state or private land require support from the relevant state government. In practice, most Ramsar site nominations are proposed and developed by the state or territory governments, which have priorities for new Ramsar sites and processes for reviewing and supporting Ramsar nominations.

The development of a Ramsar site nomination should be the result of a collaborative process between site managers/landowners and the Australian and state or territory governments. Consultation with the landowner(s) and key stakeholders is an important consideration in both the preparation of a Ramsar nomination and the negotiation of ongoing management arrangements for the site.

Roles and responsibilities for Ramsar in Australia

Australian government (via the lead agency, the Australian Department of Sustainability, Environment, Water, Population and Communities):

- designating Ramsar sites on account of international significance in terms of ecology, biology, zoology, limnology or hydrology
- working with state and territory governments to promote the conservation of Ramsar sites and wise use of all wetlands, and review Ramsar site condition
- reporting any changes to the ecological character of Australia's listed wetlands and responding to the Ramsar Secretariat's inquiries about reports from third parties
- using its best endeavours to ensure there are management plans for wetlands listed under the Ramsar Convention
- regulating actions that will have, or are likely to have, a significant impact on the ecological character of a Ramsar wetland. This includes relevant actions that occur outside the boundaries of a Ramsar wetland.
- providing advice on the Ramsar Convention and any agreed assistance to wetland managers
- reporting to the regular Conference of the Contracting Parties.

State government (via the lead agency, DEC)

- leading the development of the nomination documentation for candidate nominations within the state including the consultation on these nominations
- liaising with the Australian Government about nominations within the jurisdiction
- coordinating and updating information on Ramsar sites within the state (for example, the Ramsar National Report).

Site managers/landowners:

- under the EPBC Act, seek approval prior to undertaking an action within or outside a declared Ramsar wetland if the action has, will have or is likely to have a significant impact on the ecological character of the Ramsar wetland. The action could be a project, a development, an undertaking, an activity or series of activities, or an alteration to any of these things.
- managing the Ramsar site(s) to maintain ecological character through applying the principles of wise use and sustainable resource management. This may be through the development and implementation of a management plan or system for the site.
- having procedures and monitoring in place to detect if any threatening processes are likely to, or have altered the site's ecological character. This will help to identify if there are any actual or likely changes to ecological character of the site.
- taking action to manage or remediate Ramsar sites that have undergone an actual or likely change in ecological character
- report any actual or likely changes in ecological character to the Australian Government
- undertake required site level updates and reporting as required (for example, Ramsar Information Sheet updates)
- seek guidance and assistance about managing and representing the needs of wetlands, if required
- inform the Australian and relevant state governments of any intention to transfer ownership or otherwise sell land on which the wetland is situated and
- notify future land managers of the property's Ramsar status, should the property be sold or otherwise change ownership.

For further information on the details of the roles and responsibilities for Ramsar Convention in Australia see the Australian Ramsar site nomination guidelines, *Module 4 of the National Guidelines for Ramsar Wetlands - Implementing the Ramsar Convention in Australia*.³⁷

Case study: working collaboratively to manage and restore Lake Mealup

Lake Mealup is a large freshwater wetland situated on coastal lowlands on Lake Mealup Rd, West Pinjarra, one kilometre east of the Peel-Harvey Estuary (Figure 6). It is located on the Pinjarra Plain, the most heavily cleared landform unit within the Swan Coastal Plain. Lake Mealup is an excellent representation of coastal lowland wetlands on the coastal plain and its vegetation, as well as surrounding dryland vegetation communities, is home to a number of threatened plant and animal species.



Figure 6. The location of Lake Mealup relative to Harvey Estuary and Peel Inlet, Mandurah. Image – L Duffy/DEC.

Lake Mealup is also one of a number of wetlands in the Peel-Yalgorup wetland system listed under the Convention on Wetlands of International Importance (Ramsar Convention). The Peel-Yalgorup system is known to be the most significant area in the south-west of Western Australia for waterbirds and waders.³⁸ Several migratory bird species such as the great egret (*Egretta alba*) and the sharp-tailed sandpiper (*Calidris acuminata*) have been known to visit the wetland³⁹ and are protected under the EPBC Act. The ecological character of the site is protected under the EPBC Act. Lake Mealup is also listed as a nationally important wetland in the *Directory of Important Wetlands* under the 'Lake McLarty System' listing; on the Register of the National Estate under the 'Peel-Harvey Estuarine System' listing; and identified under the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992*. The wetland is recognised as a Conservation management category wetland by DEC in the *Geomorphic Wetlands Swan Coastal Plain* dataset, a category assigned to wetlands of the highest conservation value.

► For additional detail regarding wetland policy, see the topic 'Legislation and policy' in Chapter 5.

In the 1990s, it became increasingly evident that declining water levels and drying of the lake beyond its natural variability was leading to increasingly acidic conditions, poor water quality, increasing weed coverage and declining waterbird habitat. The lower water levels have been attributed to a decline in rainfall, changes in drainage management in the catchment and groundwater abstraction.

Collaborative action, initiated by the community

Many individuals and groups have been involved in the restoration of Lake Mealup. Community groups, landholders, Aboriginal groups and representatives, state government agencies, consultants and university staff have all contributed. However, a community group – the Lake Mealup Preservation Society (LMPS) – has been a driving force over a number of decades.

The LMPS formed in 1986 and by 1989 it had purchased three properties adjoining the Lake Mealup Reserve managed by DEC, with the aim of preserving the natural values of the wetland and adjoining bushland. During this time, DEC also purchased an additional lot to expand its existing reserve. The purchase of three properties by the LMPS consolidated the area of land managed for conservation. Historically, ownership of the wetland spanned several properties including Lake Mealup Reserve managed by DEC, and a number of small-scale farming properties including a piggery. The properties purchased by LMPS included Little Lake Mealup, a 10 hectare wetland to the west of Lake Mealup (Figure 7).

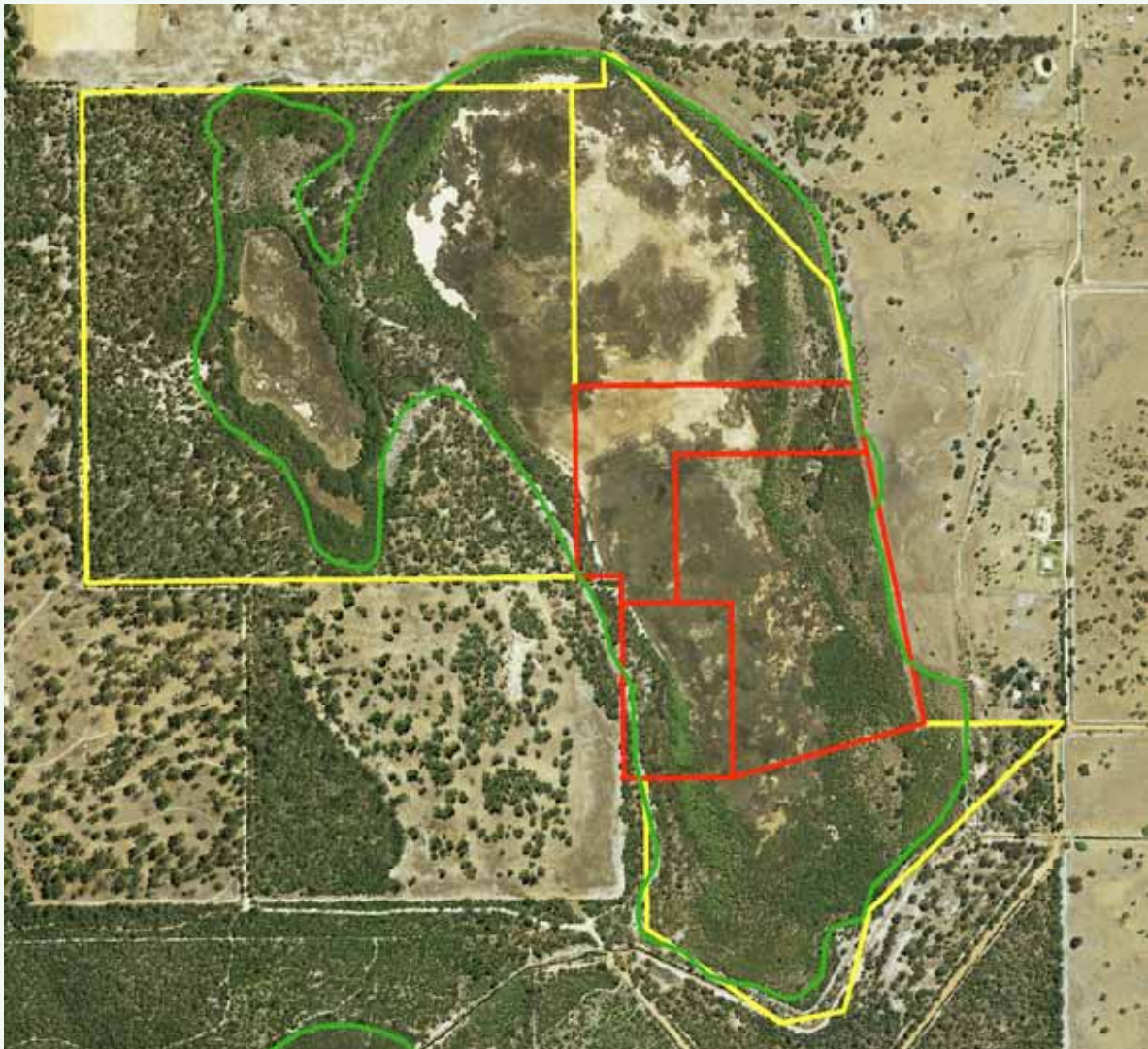


Figure 7. Lake Mealup, showing the wetland boundary (green), the Lake Mealup Preservation Society property boundaries (yellow) and DEC land (red). Image – A Fairs/DEC.

The LMPS has taken a very active role in maintaining and managing the properties and has completed a range of management activities, many on a monthly or annual basis with funding from membership fees and grants. Some activities have occurred in collaboration with the Peel-Harvey Catchment Council (PHCC), consultant wetland scientists V & C Semeniuk Research Group (VCSRG) and DEC. Activities have included:

- hand weeding of introduced bulrush (*Typha orientalis*), dock (*Rumex* sp.), lupin (*Lupinus cosentinii*) and arum lily (*Zantedeschia aethiopica*)
- fencing to exclude livestock
- 1080 fox baiting
- flora, waterbird, macroinvertebrate, mammal and reptile surveys
- ongoing monitoring of an extensive piezometer (groundwater monitoring) bore network since 1996
- monitoring of surface water levels and water quality in the lake since 1987
- revegetation
- community awareness activities
- local seed collection
- annual fire break maintenance
- construction of a birdwalk and bird hide.

LMPS – achieving restoration by engaging other stakeholders

Lake Mealup Preservation Society has taken a very active role engaging relevant NRM and government organisations in Lake Mealup's management over many years. This active engagement has resulted in the group receiving support in the form of specialist skills, funding, equipment and increased exposure through stakeholder communication and some media coverage.

LMPS has been actively collaborating with DEC, PHCC, DoW, Natural Trust of Australia (WA) (NTWA) and VCSRG to address these degrading processes and protect the ecological condition and amenity value of the wetland.

LMPS joined DEC's Land for Wildlife program in 2002. This voluntary program is designed to encourage and assist landholders to provide habitats for wildlife on their property. Through the program, DEC conducted a bushland condition assessment, established a weed prioritisation and management schedule, and provided LMPS with information and books on bushland management and conservation covenants.

In 2003, LMPS registered an agreement with NTWA, placing their properties under a voluntary conservation covenant as a means to legally protect the natural values of the property in perpetuity⁴⁰. Together, the NTWA and LMPS established a bushland management plan for the properties which established the management framework which is used to manage the lake.

In 2009, the LMPS entered a voluntary management agreement with DEC's Healthy Wetland Habitats program. This program provides funding and support to private landholders to manage high conservation value Swan Coastal Plain wetlands. The LMPS was provided \$10,000 to undertake agreed management actions including water quality and hydrology investigations, fencing and weed control over five years (Figure 8).

Typha control and revegetation funding has been provided through the Australian Government's Caring for Our Country funding, via Peel-Harvey Catchment Council and the South West Catchments Council.

Funding and technical support needed to improve water levels in the lake have been provided by the State NRM program via the DoW. In-kind support from stakeholders has also been invaluable.



Figure 8. Lake Mealup Preservation Society representative Peter Wilmot receiving a Healthy Wetland Habitats funding cheque from DEC's HWH Officer Amanda Fairs. DEC Lake Mealup Project Officer Heidi Bucktin, DoW officer Keiryn Kilminster and Peel-Harvey Catchment Council officer Amanda Willmott look on. Photo - L Duffy/DEC.

Progressing Lake Mealup's recovery

In 2007, LMPS compiled the document, *A proposal to improve the quality and quantity of water in Lake Mealup by changes in drainage management*.⁴¹ This was the catalyst for a recovery program implemented over the course of the following five years. In response, DEC developed the *Lake Mealup Nature Reserve Recovery Program 2009*. DEC's Nature Conservation Project Officer coordinates and implements this program with assistance and in collaboration with LMPS.

The first stage of the recovery program, from 2009 to 2010, involved the collection and analysis of hydrological data (surface and groundwater level and quality, rainfall) to investigate whether managing water levels was feasible. This data was collected by LMPS, DEC and PHCC, under advice and assistance from VCSRG (groundwater) and advice and equipment offered by DoW. Analysis was carried out on surface water data collected by LMPS between 1987 and 2008, and groundwater data collected by LMPS under the direction of VCSRG from 1996 to present. Water quality data for the main drain collected by the Department of Water (DoW) intermittently between 1991 and 2004 was analysed. DoW assisted with surface water quality monitoring, providing technical advice and lending monitoring equipment.

In 2010 the Lake Mealup Technical Advisory Group convened for the first time and agreed upon the second stage of the recovery program based on the data collected during the first stage. The focus of the second stage was to reconnect the lake to the catchment and increase its water levels using an adjustable height weir (Figure 9) and drainage modifications. Targets and triggers were developed as part of an adaptive management plan. As the lake is part of a Ramsar site, the adaptive management plan was referred to the Australian Government Department of Sustainability, Environment, Water, Population and Communities. The Conservation Commission's approval was also sought, due to changes on conservation estate land vested in it. The Water Corporation, the authority with whom the drain is vested, approved proposed modifications to the Mealup Main Drain, to divert drainage flows back into the wetland.



Figure 9. The adjustable height weir, receiving flows diverted from the Mealup Main Drain. Photo – H Bucktin/DEC.

Since the first drainage flows were diverted into the lake in May 2012, Lake Mealup is showing the first signs of recovery (Figure 10). Monitoring indicates that the pH of the lake is improving and animals once again inhabit the wetland. DEC and the LMPS will continue to monitor and manage the lake.



Figure 10. Lake Mealup, full in August 2012. Photo – R Rose.

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A guide to managing and restoring wetlands in Western Australia

Legislation and policy

In Chapter 5: **Protecting wetlands**


Version 1



Australian Government



Department of
Environment and Conservation

Our environment, our future 

Introduction to the guide

Western Australia's unique and diverse wetlands are rich in ecological and cultural values and form an integral part of the natural environment of the state. *A guide to managing and restoring wetlands in Western Australia* (the guide) provides information about the nature of WA's wetlands, and practical guidance on how to manage and restore them for nature conservation.

The focus of the guide is natural 'standing' wetlands that retain conservation value. Wetlands not addressed in this guide include waterways, estuaries, tidal and artificial wetlands.

The guide consists of multiple topics within five chapters. These topics are available in PDF format free of charge from the Western Australian Department of Environment and Conservation (DEC) website at www.dec.wa.gov.au/wetlandsguide.

The guide is a DEC initiative. Topics of the guide have predominantly been prepared by the department's Wetlands Section with input from reviewers and contributors from a wide range of fields and sectors. Through the guide and other initiatives, DEC seeks to assist individuals, groups and organisations to manage the state's wetlands for nature conservation.

The development of the guide has received funding from the Australian Government, the Government of Western Australia, DEC and the Department of Planning. It has received the support of the Western Australian Wetlands Coordinating Committee, the state's peak wetland conservation policy coordinating body.

For more information about the guide, including scope, purpose and target audience, please refer to the topic 'Introduction to the guide'.

DEC welcomes your feedback and suggestions on the guide. A publication feedback form is available from the DEC website at www.dec.wa.gov.au/wetlandsguide.

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These topics are available in PDF format free of charge from the DEC website at www.dec.wa.gov.au/wetlandsguide.

'Legislation and policy' topic

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Disclaimer

While every effort has been made to ensure that the information contained in this publication is correct, the information is only provided as a guide to management and restoration activities. DEC does not guarantee, and accepts no liability whatsoever arising from, or connected to, the accuracy, reliability, currency or completeness of any material contained in this guide.

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ACRONYMS

DEC	Department of Environment and Conservation
DIA	Department of Indigenous Affairs
DoF	Department of Fisheries
DoP	Department of Planning
DoW	Department of Water
EIA	Environmental impact assessment
EPA	Environmental Protection Authority
EPP	Environmental protection policy
SAT	State Administrative Tribunal
SPP	State Planning Policy
WAPC	Western Australian Planning Commission



Important note

This topic provides an overview of environmental legislation and policy that contributes to wetland conservation in Western Australia. It is for general information purposes only. Whilst all care has been taken to ensure the accuracy of the information presented in this guide, it is not intended to be comprehensive and should not be seen as a substitute for professional legal advice. Legal advice relating to specific circumstances can be sought from a solicitor or, where the matter is in the public interest, the Environmental Defender's Office WA (Inc.): www.edowa.org.au.

Enacted: to make into law

Statute: a law enacted by State or Australian Parliament

Regulation: a law made under the authority of an Act of Parliament

Introduction

Legislation and policy has an important role in protection and management of wetlands in Western Australia. A range of Acts and policies provide for specific aspects of wetland protection and management in Western Australia, the most important of which have been described in this topic.

A range of other Acts that have a bearing on specific aspects of wetland management are outlined in relevant topics of the guide (for example, use of pesticides is outlined in the topics 'Wetland weeds' and 'Introduced and nuisance animals').

'Legislation' refers to laws **enacted** by state or Australian Parliament. A law can also be called an Act of Parliament or **Statute**, and often referred to as a statutory mechanism.

Statute also refers to the schedules, policies, or **regulations** formed under an Act, such as local planning schemes, environmental regulations and environmental protection policies (EPPs). These contain details of how a statute applies and as they are also enacted they are legally binding. Specifically, regulations are more commonly referred to as subsidiary legislation, and should be read in the context of the over-riding Act under which they apply.

Subsidiary legislation is often required to provide greater detail for the implementation of an Act in relation to a particular matter, such as to address specific issues, different applications in geographic regions, or schedules (lists) to which the Act is to apply. Subsidiary legislation can be passed or enacted more quickly than Acts, and hence provide the ability to amend the manner in which an Act might be implemented in relation to changing knowledge and understanding of the matters to which the Act applies. The Acts discussed in this topic are shown in Table 1.

Administrative policies and guidelines are also used to protect wetlands and while these are not statutory instruments, they provide direction for how Statutes may be applied, such as whether future planning and development is likely to be environmentally acceptable. These include State Environmental Policies (SEPs), state planning policies (SPPs), and guidelines and position statements of the Environmental Protection Authority (EPA). The policies discussed in this topic are shown in Table 2. Note that only government policies are covered.

Some policies are statutory rather than administrative (that is, they have the power of law). For example, gazetted environmental protection policies prepared under the *Environmental Protection Act 1986* are statutory, not administrative. In this topic, statutory policies are discussed in both the 'legislation' and 'policy' sections.

Legislation and policies are a reflection of community expectations and aspirations. Legislation and policies can best achieve these expectations and aspirations when the community participates in their development and application. Community engagement in decision-making processes is built into much of the legislation and policies covered in this topic, giving all members of the community a say in how WA's wetlands are protected and conserved.



Roles of agencies and decision-making authorities

The topic 'Roles and responsibilities', in Chapter 5 describes the roles of individuals and a range of community and government organisations in relation to wetland conservation and management more broadly. It describes many of the government agencies and decision-making authorities listed in this topic.

Table 1. Key Acts for wetland management and protection.

Acts and Statutes	Legislative mechanisms relevant to wetland management and protection	Administering agency/ agencies	Minister
<i>Environmental Protection Act 1986</i>	<ul style="list-style-type: none"> • Function of the Environmental Protection Authority (Part II) • Development of policies for environmental protection (Part III) • Environmental impact assessment (Part IV) • Regulation of pollution, environmental harm and clearing (Part V) 	Environmental Protection Authority (Parts I – IV) Department of Environment and Conservation (Part V)	Minister for Environment
<i>Wildlife Conservation Act 1950</i>	Protection of native flora and fauna	Department of Environment and Conservation	Minister for Environment
<i>Conservation and Land Management Act 1984</i>	Use, protection, and management of certain public land and waters	Department of Environment and Conservation Conservation Commission	Minister for Environment
<i>Planning and Development Act 2005</i>	<ul style="list-style-type: none"> • State planning policies • Region planning schemes • Local planning schemes • Subdivision and development control 	Western Australian Planning Commission Department of Planning Local government	Minister for Planning
<i>Aboriginal Heritage Act 1972</i>	Conservation of and protection for places and objects of importance to Aboriginal people	Department of Indigenous Affairs	Minister for Indigenous Affairs
<i>Fish Resources Management Act 1994</i>	Protection of aquatic species and habitats	Department of Fisheries	Minister for Fisheries
<i>Rights in Water and Irrigation Act 1914</i>	Some protection of water resources in proclaimed areas. Assigns rights to take water from the environment.	Department of Water	Minister for Water
<i>Soil and Land Conservation Act 1945</i>	Protection of land degradation (erosion, salinity and flooding) which may impact wetland condition	Soil and Land Conservation Commissioner	Department of Agriculture and Food Minister for Agriculture and Food
<i>Land Administration Act 1997</i>	Management of pastoral lands	Pastoral Lands Board (through the Department of Regional Development and Lands)	Minister for Lands
Commonwealth Acts			
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	<ul style="list-style-type: none"> • Protection and manage matters of national environmental significance • Regulations outlining the Australian Ramsar management principles 	Department of Sustainability, Environment, Water, Population and Communities	Minister for Environment (C/wealth)

Table 2. Key policies for wetland management and protection

Policy	Publisher	Year
<i>Wetlands Conservation Policy for Western Australia</i>	Govt. of WA	1997
<i>Draft Framework for mapping, classification and evaluation of wetlands in Western Australia</i>	DEC	In prep
<i>Draft Guideline for the Determination of Wetland Buffer Requirements</i>	DEC	In prep
<i>Guidelines checklist for preparing a wetland management plan</i>	DEC	2008
<i>WA Environmental Offsets Policy</i>	Govt. of WA	2011
<i>Environmental Protection (Swan Coastal Plain Lakes) Policy 1992</i>	Govt. of WA	1992
<i>Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998</i>	Govt. of WA	1998
<i>Environmental Protection (Western Swamp Tortoise Habitat) Policy 2011</i>	Govt. of WA	2011
EPA Position Statement No 4 <i>Environmental Protection of Wetlands</i>	EPA	2004
EPA Guidance Statement No 7 <i>Protection of the Western Swamp Tortoise Habitat, Upper Swan/Bullsbrook</i>	EPA	2006
EPA Position Statement No 9 <i>Environmental Offsets</i>	EPA	2006
EPA Guidance Statement No 10 <i>Levels of assessment for proposals</i>	EPA	2006
EPA Guidance Statement No 19 <i>Environmental offsets</i>	EPA	2008
EPA Guidance Statement No 28 <i>Protection of Lake Clifton catchment</i>	EPA	1998
EPA Guidance Statement No 33 <i>Environmental guidance for planning and development</i>	EPA	2008
EPA Guidance Statement No 40 <i>Management of mosquitoes by land developers</i>	EPA	2000
State Planning Policy 2 <i>Environment and natural resources policy</i>	WAPC	2003
State Planning Policy 2.1 <i>Peel-Harvey coastal plain catchment</i>	WAPC	1992
State Planning Policy 2.2 <i>Gnangara groundwater protection</i>	WAPC	2005
State Planning Policy 2.3 <i>Jandakot groundwater protection</i>	WAPC	1998
State Planning Policy 2.8 <i>Bushland Policy for the Perth Metropolitan Region</i>	WAPC	2005
State Planning Policy 2.9 <i>Water resources</i>	WAPC	2006
<i>Planning Bulletin 64/2009: Acid sulfate soils</i>	WAPC	2009
<i>Acid sulfate soils planning guidelines</i>	WAPC	2008
<i>Policy framework for inland drainage</i>	DoW	2012
<i>Better Urban Water Management Strategy</i>	WAPC	
<i>State Water Plan</i>	Govt. of WA	2007
<i>Water allocation planning in Western Australia: a guide to our process</i>	DoW	2011
<i>Stormwater management manual for Western Australia</i>	DoW	2004–2008
<i>Decision process for stormwater management in WA</i>	DoW	2009
<i>Wetland Policy of the Commonwealth Government of Australia</i>	Govt. of Australia	1997

LEGISLATION FOR WETLAND CONSERVATION

There is no single Act that provides for every aspect of wetland management and protection. This topic provides an overview of the main statutory mechanisms that can assist in the protection of wetlands in WA. Other Acts not covered in this topic will apply generally to wetland areas, as they do to any area in WA, and their exclusion does not suggest that they do not apply (for example, the *Land Administration Act 1997* and the *Mining Act 1978*).

- ▶ For copies of WA's individual legislative acts and regulations, see the State Law Publisher's website www.slp.wa.gov.au/legislation/statutes.nsf/default.html.
- ▶ For copies of the Government Gazette, see the State Law Publisher's website www.slp.wa.gov.au/gazette/gazette.nsf
- ▶ For copies of Australian government legislation, see ComLaw online www.comlaw.gov.au
- ▶ For a guide to legislation designed specifically for primary producers, see *Production and environmental legislation: a guide for primary producers*.¹

Other relevant legislation that applies to wetland conservation and management activities are outlined in Table 3.

Table 3. Legislation relevant to specific wetland management activities, covered in other topics of this guide

Activity	Key legislation	For more information
Managing sites with declared weeds	<i>Agriculture and Related Resources Protection Act 1976</i>	'Wetland weeds' topic
Controlled burns, including local government permits	<i>Bush Fires Act 1954</i>	'Wetland weeds' topic
Using herbicides	<i>Pesticides Act 1999</i> <i>Health Act 1911</i> <i>Agricultural and Veterinary Chemicals Code Act 1994</i>	'Wetland weeds' topic
Managing non-native animals	<i>Pesticides Act 1999</i> <i>Agriculture and Related Resources Protection Act 1976</i> <i>Fish Resources Management Act 1994</i> <i>Animal Welfare Act 2002</i>	'Introduced and nuisance animals' topic
Managing activities with the potential to affect acid sulfate soils	<i>Contaminated Sites Act 2003</i>	'Water quality' topic

STATE LEGISLATION

The *Environmental Protection Act 1986*

The *Environmental Protection Act 1986* (the EP Act) provides for an Environmental Protection Authority; for the prevention, control and abatement of pollution and environmental harm; and for the conservation, preservation, protection, enhancement and management of the environment. The Environmental Protection Authority (EPA) and the Department of Environment and Conservation (DEC) are responsible for administering specific aspects of this Act.

The EP Act consists of nine parts:

Part I – Preliminary

Part II – Environmental Protection Authority

Part III – Environmental protection policies

Part IV – Environmental impact assessment

Part V – Environmental regulation

Part VI – Enforcement

Part VII – Appeals

Part VIII – General

Part IX – Transitional

Aspects of these parts relevant to wetland protection are discussed below.

Part I – Preliminary

Part I provides an explanation of the terms used in the EP Act. It also states that the Act binds the Crown (that is, government agencies). It also provides the objective of the EP Act, to protect the environment of Western Australia, having regard for the following principles:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity
- principles relating to improved valuation, pricing and incentive mechanisms
- the principle of waste minimisation.

Part II – Environmental Protection Authority

Part II establishes the functions and powers of the Environmental Protection Authority (EPA). The EPA is the primary provider of independent environmental advice to government. It consists of five members, including a full-time chairman, each appointed by the Governor of Western Australia on the recommendation of the Minister for Environment. They meet fortnightly.

The objective of the EPA, as stated in Part II, is to protect the environment and to prevent, control and abate pollution and environmental harm. It assigns a range of functions and

powers to the EPA to achieve these objectives and furthermore states that the EPA is independent and cannot be directed by the Minister. The composition and appointment of the board of the EPA is prescribed. The operation of the meetings and staffing of the EPA is provided for, as well as the provision of services by staff of the Office of the EPA to assist the EPA to perform its functions. It allows for the establishment of advisory groups, committees, councils and panels.

Functions under Part II include the provision of strategic advice to the Minister for Environment under section 16(e). The EPA has provided strategic advice on a range of matters that have significant bearing on wetland conservation. For example, the use of managed aquifer recharge using treated wastewater; and the future of the Dawesville to Binningup area (inclusive of the internationally significant Peel Yalgorup wetlands).

Environmental protection policies: statutory policies developed under Part III of the *Environmental Protection Act 1986*. They are whole-of-government policies that are ratified by Parliament and have the force of law as if part of the Act from the day they are published in the *Western Australian Government Gazette*.²

Part III – Environmental protection policies

Part III covers the full process of development of **environmental protection policies** (herein 'EPPs'). It describes the preparation, consultation, and publication of draft environmental protection policies by the EPA for consideration of the Minister for Environment.

EPPs are used by the state government to address environmental issues that could not otherwise be adequately addressed via other provisions of the Act. EPPs have been used to provide strong (legal) environmental policy positions and have been applied to a wide variety of environmental issues across various geographical scales.

An EPP may include:

- identification of the area of the environment to which it relates
- identification of the environmental values to be protected
- environmental quality objectives to be achieved by the EPP, a programme to achieve and maintain them and how they will be measured
- how the environmental area is to be protected from pollution and environmental harm and how any activities which might cause environmental harm could be prevented, controlled or abated
- creation of offences and provide penalties for any activities which cause undue environmental harm.

An approved EPP prevails over a town planning or region scheme unless the scheme was assessed by the EPA under Division 3 of Part IV (Assessment of schemes) of the EP Act. Approved EPPs are required to be reviewed within seven years of gazettal.

The EPA develops EPPs, however, it is DEC that has responsibility for investigating potential breaches. Penalties for breaches apply.

► Three EPPs directly relate to wetland protection:

- the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992*
- the *Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998*
- the *Environmental Protection (Western Swamp Tortoise Habitat) Policy 2011*.

These policies are described in this topic in the section 'Policies for wetland conservation'.

Part IV – Environmental impact assessment

Part IV of the EP Act establishes the requirement for **environmental impact assessment** (EIA) of proposals that are likely to have a significant effect on the environment.

The EPA's objectives for environmental impact assessment include:

- (a) to ensure that proponents take primary responsibility for protection of the environment influenced by their proposals;
- (b) to ensure that best practicable measures are taken to minimise adverse impacts on the environment, and that proposals meet relevant environmental objectives and standards to protect the environment, and implement the principles of sustainability;
- (c) to provide opportunities for local community and public participation, as appropriate, during the assessment of proposals;
- (d) to encourage proponents to implement continuous improvement in environmental performance and the application of best practice environmental management in implementing their proposal; and
- (e) to ensure that independent, reliable advice is provided to the Government before decisions are made.³



The EPA provides advice, the Minister makes the decision

The EPA advises the Minister on the environmental acceptability of proposals and schemes. It is the government, through the Minister, who has responsibility for approving or refusing proposals and schemes under the EP Act. The EPA is not a regulatory agency and it does not issue approvals.

This part of the Act makes provisions for:

- the referral and assessment of proposals and schemes
- the preparation of a report by the EPA to the Minister on the outcome of its assessment
- conditions and procedures of implementation of proposals.

Section 122 of the Act also allows for the publication of specific administrative procedures to be followed during the environmental impact assessment process. These are the *Environmental Impact Assessment Administrative Procedures 2010*. These administrative procedures were published ('gazetted') in the **Government Gazette** No. 223.

Division 1 – Referral and assessment of proposals

Division 1 of Part IV of the EP Act outlines the process of referral and assessment of **significant** and **strategic proposals**.

The EP Act specifies who can refer significant and strategic proposals. In general, responsibility for referral of a proposal to the EPA rests with **decision-making authorities**.

Environmental impact assessment: an orderly and systematic process for evaluating a scheme or proposal, including its alternatives where relevant, and its effects on the environment, including the mitigation and management of those effects.³

Government Gazette: a government publication issued by the State Government which includes details of statutory matters, available from the State Law Publishers.

Significant proposal: a proposal likely, if implemented, to have a significant effect on the environment.

Strategic proposal: a future proposal that will be a significant proposal; or future proposals likely, if implemented in combination with each other, to have a significant effect on the environment.

Decision-making authority: a public authority empowered to make a decision in respect of a proposal. Often abbreviated to DMA.³

For example, subdivision and development applications are types of proposals that may require referral by planning agencies to the EPA. However, any person may refer a significant proposal, except if it comes under a scheme that has already been assessed. In this circumstance, only the **proponent** can refer the proposal. The EPA may also require a proponent or decision-making authority to refer a proposal if it considers it to be a significant proposal. If the referral is made by someone other than the proponent or the decision-making authority, it is known as a 'third party' referral.

Proponent: the person who is responsible for the proposal, or the public authority on which the responsibility for the proposal is imposed under another written law



Wetland triggers for referral to the EPA

The EPA has published an extensive list of wetlands that, for the purposes of environmental impact assessment, it considers to be of high conservation significance and to require a high level of protection. This list is available on page 4 of Chapter B4 of EPA Guidance Statement No. 33: *Environmental Guidance for Planning and Development*.³ A proposal that is likely, if implemented, to have a significant impact on any of these wetlands is likely to require referral to the EPA for environmental impact assessment. Examples of significant impacts include: clearing of native vegetation, mining, filling, excavating, draining or disposal of waste, allowing emissions into the wetland, and activities located near the wetland without the provision of an appropriate setback or buffer, such as clearing or groundwater abstraction.



Figure 1. Developments with the potential to impact upon wetlands of conservation significance are one kind of activity that may trigger referral of a proposal to the Environmental Protection Authority for environmental impact assessment under the *Environmental Protection Act 1986*. Photo – J Davis.

Determinations about the use and management of water

How water is used and managed is critical to protecting and managing WA's wetlands. Water management is regulated by a range of Acts, many of which are old and overlapping. Section 3 of the EP Act defines a 'proposal' as a project, plan, programme, policy, operation, undertaking or development or change in land use, or amendment of any of the foregoing, but does not include scheme. On this basis, proposals regarding water use and management can be subject to either section 38 (significant proposals) or section 40B (strategic proposals) of the EP Act; or the EPA may prepare strategic advice to the Minister for Environment under section 16(e).

When a proposal that has previously been assessed as a strategic proposal (under section 40B) and granted approval is referred to the EPA, the proponent has the right to request the EPA declare this a **derived proposal**. The EPA does not assess derived proposals. With changes introduced in 2010, there are no longer appeal rights on the EPA's decision to declare a referred proposal a derived proposal.

The EPA may request additional information on a referred proposal and once the information provided is sufficient, it will publish the referral information on the EPA website: www.epa.wa.gov.au/EIA/referralofProp-schemes/Pages/Publiccommentonreferrals.aspx. The EPA will provide a seven day public comment period on each referred proposal before it proceeds to make a decision on whether or not to assess the proposal, and if so the level of assessment. Comments on the referral information must be made using the Referral Comment Form available on the EPA website (on the webpage listed above).

The EPA is required to decide whether or not to assess the referred proposal within twenty-eight days of receipt of all required information. The EPA publishes this decision on its website and in the public notices in *The West Australian* newspaper on Mondays.

Anyone can appeal an EPA decision not to assess a proposal, with the exception of those circumstances where the EPA has recommended that the proposal be managed under the native vegetation clearing provisions of the EP Act (these provisions are described below, see 'Part V' information).

The assessment of a proposal is usually carried out using a standard set of procedures. The nature of the proposal determines which of the following two procedures, or 'levels of assessment' will be followed:

- assessment on proponent information (API), applied where the environmental acceptability or unacceptability of the proposal is apparent at the referral stage. A public review period is not considered necessary because either:
 - the proponent has appropriately and effectively consulted with the stakeholders during the preparation of the proposal, or
 - further consultation through a public review process is unlikely to identify additional stakeholders or raise additional significant environmental issues.
- public environmental review (PER), applied where:
 - the proposal is of regional and/or State-wide significance.
 - the proposal has several significant environmental issues or factors, some of which are considered to be complex or of a strategic nature.
 - substantial and detailed assessment of the proposal is required to determine whether, and if so how, the environmental issues could be managed.
 - the level of interest in the proposal warrants a public review period (generally 4–12 weeks).

The level of assessment determines what documentation and public review processes are required. With changes introduced in 2010, there are no longer appeal rights on the EPA's decision to assess a proposal or on the level of assessment.

- The procedures for each level of assessment, including public review processes, is shown in flow diagram format in Appendix 1 and 2.

Derived proposal: a proposal referred to the Environmental Protection Authority under section 38 of the *Environmental Protection Act 1986* that is declared by the EPA to have been identified in a strategic proposal that has been assessed and granted approval under Part IV of the Act⁴

Once the EPA has completed its assessment, it is required to prepare a report on the outcome of its assessment to the Minister which includes the key environmental factors identified and the EPA's recommendations as to whether or not the proposal may be implemented.

If it recommends that the proposal be allowed, any conditions and procedures that the proposal should be subject to will be detailed. An assessment is then required to be published and distributed to the proponent or referrer and to any other Minister or decision-making authorities to which the proposal relates.

The EPA and/or Minister also retain the right to inquire as to whether or not the implementation conditions relating to the proposal should be changed. Once the inquiry is complete, the EPA must report a recommendation to the Minister as to whether or not the implementation conditions should be changed.

extra information

How clearing of native vegetation is dealt with under Part IV

The regulation of clearing of native vegetation is primarily provided for under Part V of the *Environmental Protection Act 1986*. When a proposal that involves clearing is referred to the EPA under Part IV, the EPA will determine whether it will be assessed. Under Schedule 6 of the Act, if the proposal is assessed by the EPA, clearing of native vegetation that is done in accordance with an implementation agreement or decision is exempt from the requirement to obtain a clearing permit. The EPA can decide not to assess a proposal; if this occurs, the clearing of native vegetation may not be exempt and is subject to assessment under Part V of the Act.

Division 2 – Implementation of proposals

Once all appeals are decided upon, a Ministerial decision is made under section 45 of the Act. The Minister then serves copies of a statement setting out the implementation conditions and decision to the EPA, consulted decision-making authorities, the proponent and referrer (if this is not the proponent) and the statement is then published in the public notices of *The West Australian* newspaper and published on the Office of the Appeals Convenor website. If a decision is made that the proposal may not be implemented, the Minister shall notify relevant stakeholders and not issue a statement.

After a statement has been issued in relation to a proposal, the Minister may approve of the proponent changing the proposal without a revised proposal being referred to the EPA, where those changes to the proposal are not considered to have an effect on the environment different to the effect of the original proposal.

Once served a statement, the proponent is required to ensure that a proposal is implemented in accordance with implementation conditions; failure to do so is considered an offence.

- ▶ For more information, see the 'Environmental impact assessment' webpage of the EPA website www.epa.wa.gov.au.
- ▶ The Environmental Defender's Office of WA (Inc.) fact sheet *Environmental impact assessment in Western Australia*⁵ outlines the laws relating to EIA in WA.

Division 3 – Assessment of schemes

Division 3 assigns responsibility to the EPA to decide whether or not to assess a **scheme** referred to it and the actions to be taken once this decision is made.

Schemes generally establish the appropriate land uses for large areas of land. They include a map showing the zonings applied over a geographic area and accompanying text outlining the details of what kinds of land uses are allowed to occur. Schemes include regional planning schemes such as Metropolitan Region Scheme, local planning schemes for each local government area, and redevelopment schemes such as the East Perth Redevelopment Scheme.

The legislative process for scheme assessments was introduced in 1996 in recognition that in many instances it is more appropriate to apply environmental assessment at the rezoning or scheme formulation stage than to leave it to the subdivision or development stage.³ This principle is particularly relevant for wetlands. Providing for the protection of wetlands as part of broadscale planning processes is generally most effective. This is because wetland management and protection requires management of catchment scale processes, such as water management, and landscape scale processes such as ecological linkages and buffers.

- ▶ For a useful summary of the referral and assessment of schemes, see Chapter A3 'Environmental impact assessment of schemes' in EPA Guidance Statement No. 33, *Environmental Guidance for Planning and Development* (EPA 2008).
- ▶ A checklist of wetland issues to be considered during broadscale planning is available from Chapter B4 'Wetlands' in EPA Guidance Statement No. 33, *Environmental Guidance for Planning and Development*.³

The EPA is required to report to the Minister on the environmental factors relevant to the scheme and the conditions if any to which the scheme is to be subject.

This must occur within sixty days from the end of the public review period or thirty days after receiving a response to environmental issues raised in submissions or a period as the Minister allows. The Minister, after receiving the report and any recommendations made to him/her will publish the report and recommendations and provide copies to other Ministers concerned and to the responsible authority to which the scheme report relates. The Minister will then consult with the Minister of the responsible authority and if possible, agree with him/her on conditions, if any to which the scheme should be subject if implemented. If an agreement is reached, the Minister will provide copies of conditions to the Authority, the responsible Minister, the responsible authority and any relevant decision making authority and advise that there are no environmental reasons why the scheme should not be implemented.

A responsible authority may, after the publication of a statement of conditions and before the responsible Minister or the Governor grants final approval of the scheme, request the responsible Minister to initiate a review of the conditions set out in the statement. If the responsible Minister agrees to a request, the responsible Minister and the Minister shall consult each other and attempt to reach agreement on whether or not the relevant conditions should be altered and if so to what extent. If conditions are altered and an agreement is reached, copies of the new condition statement will be delivered to all the relevant stakeholders.

Scheme: a redevelopment scheme, a region planning scheme, a local planning scheme or a state planning policy to which section 32 of the *Planning and Development Act 2005* applies, or an amendment to any of these.

Division 4 – Implementation of schemes

Under Division 4, a responsible authority is required to monitor the implementation of its assessed schemes and those proposals under its assessed schemes, to ensure those assessed schemes and proposals subject to conditions are in compliance and conditions are being implemented. If the responsible authority finds a condition has not been complied with, it is required to report this to the Minister and to exercise the power it has available under law in regards to the non-compliance.

When a proposal under an assessed scheme appears likely to have a significant effect on the environment comes to the attention of the responsible authorities in respect to the assessed scheme, the responsible authority must determine whether or not environmental issues raised by the proposal were assessed under the scheme and whether the proposal complies with the scheme and any conditions which it is subject. If the proposal does comply and environmental issues raised were assessed the proposal does not need to be referred to the EPA.

Clearing of native vegetation that is done in the implementation of a proposal made under an assessed scheme in accordance with a subdivision approval, a development approval or a planning approval given by the responsible authority is exempt from the requirement to obtain a clearing permit under Part V.

Part V – Environmental regulation

Part V establishes environmental regulation for pollution and environmental harm offences and clearing of native vegetation (including the declaration of environmentally sensitive areas).

It also provides for the administration of clearing permits, licensing and registration of prescribed premises, works approvals and licences and the circumstances under which the EPA may administer notices, orders and directions.

DEC has responsibility under this part of the Act for the licensing and registration of prescribed premises, licensing of controlled waste transporters, and administration of a range of regulations. It also monitors and audits compliance with clearing permits, works approvals and licence conditions, takes enforcement actions as appropriate, and develops and implements departmental permitting, licensing and regulatory policy.

Division 1 – Pollution and environmental harm offences

Division 1 establishes the following offences:

- to cause pollution or allow pollution to be caused;
- to intentionally or with criminal negligence emit an unreasonable emission or cause an unreasonable emission to be emitted from any premises;
- to cause or allow waste to be placed in any position which is likely to cause pollution; and
- to cause or allow to be caused, serious or material environmental harm.

Regulations may require **authorisation** for conduct that might cause pollution or environmental harm.

Authorisation: a licence, permit, approval or exemption granted, issued or given under the Part V environmental regulations



What is environmental harm?

Environmental harm includes:

- the direct or indirect harm to the environment involving removal or destruction of, or damage to, native vegetation or the habitat of native vegetation or indigenous aquatic or terrestrial animals; or
- alteration of the environment to its detriment or degradation or to the detriment of an environmental value; or
- alteration of the environment of a prescribed kind.

The definition of environmental harm is provided in section 3A of the EP Act. It also defines 'material' and 'serious' environmental harm. The objective of the EP Act is not to outlaw day-to-day activities which cause some trivial harm to the environment. To be an offence under the Act, the harm must be more than trivial or negligible.



Figure 2. Officers of DEC's Pollution Response Unit. Photo – P Nicholas/DEC.

Clearing: any act that kills, destroys, removes or substantially damages native vegetation in an area. This includes severing or ringbarking of trunks or stems, draining or flooding of land, burning of vegetation and grazing of stock or any other act or activity that causes damage to some or all of the native vegetation in an area.

Native vegetation: native aquatic or terrestrial vegetation, and includes dead vegetation unless that dead vegetation is of a class declared by regulation to be excluded from this definition but does not include vegetation in a plantation or which was intentionally sown, planted or propagated unless that vegetation was sown, planted or propagated as required under law

Division 2 – Clearing of native vegetation

In July 2004, significant changes were made to the EP Act and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 ('the clearing regulations') were enacted to introduce provisions that protect native vegetation while allowing for permitted clearing activities.

This part of the Act establishes it to be an offence to cause or allow **clearing of native vegetation** unless it is done in accordance with a clearing permit, or is exempt. The Act applies to all land in WA, including private property, public and Crown land, pastoral leases and mining tenements. Commonwealth lands are the only land that may not be subject to the clearing regulations. The Act also applies to all waters in the state, including rivers, streams, wetlands, dams and all other natural and artificial watercourses and waterbodies. It also applies to coastal waters which include marine areas within 3 nautical miles (5.5 kilometres) of the low tide mark.

The exemptions specified in Schedule 6 of the EP Act generally relate to activities that are authorised under other law. For example:

- clearing that is caused by the grazing of livestock on land held under a pastoral lease, provided that the grazing is not in breach of the *Land Administration Act 1997*, the pastoral lease or any relevant condition set or determination made by the Pastoral Lands Board.
- clearing authorised under a licence 'to take' protected flora under the *Wildlife Conservation Act 1950* as issued by DEC.⁶

Regulation 5 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 contains a further set of exemptions for day-to-day activities. Examples of the types of activities exempt under these regulations include clearing for firewood, clearing for vehicular tracks and clearing along fence lines. Some of these exemptions limit the amount of clearing for any purpose to a total of one hectare per property per financial year. Differing to the Schedule 6 exemptions contained in the Act, the exemptions under the regulations do not apply where the activity is proposed to be undertaken in an area declared to be an 'environmentally sensitive area' by the Minister for Environment.



What are environmentally sensitive areas?

There are a number of declared environmentally sensitive areas (ESAs) within Western Australia where the exemptions in the clearing regulations do not apply. Section 51B of the EP Act enables the Minister for Environment to declare by notice either a specified area of the state or a class of areas of the state to be an ESA. Declared ESAs are listed in the *Environmental Protection (Environmentally Sensitive Areas) Notice 2005*. These include 'defined wetlands' and the area within 50 metres of the defined wetland (Figure 3), and threatened ecological communities listed by the Minister for Environment, which include many wetland areas. The location of ESAs can be viewed on the 'Native Vegetation Map Viewer' on the Department of Environment and Conservation website: <http://maps.dec.wa.gov.au/idelve/nv/index.jsp>



Figure 3. Lake McLeod, in the Shire of Carnarvon, is one of many wetlands in the state that are declared environmentally sensitive areas in accordance with the *Environmental Protection (Environmentally Sensitive Areas) Notice 2005*.

- The document, *A guide to the exemptions and regulations for clearing native vegetation under Part V of the Environmental Protection Act 1986*⁷, provides more details. It is available on DEC's website www.dec.wa.gov.au.

If an activity is not exempt under the clearing regulations or Schedule 6 of the EP Act then a person proposing to clear native vegetation must apply for a clearing permit.

DEC has primary responsibility for regulating the clearing of native vegetation in WA. Under section 20 of the EP Act, DEC has delegated certain provisions to the Department of Mines and Petroleum (DMP) for the administration, assessment and approval of clearing for mineral and petroleum activities.⁸ Applications for a clearing permit should be made to DEC, unless the application relates to mineral or petroleum activities, in which case the application should be made to DMP.

There are a number of clearing principles which the relevant department must have regard to when deciding whether to grant a clearing permit. These include the level of biological diversity in the area to be cleared, the importance of the vegetation to maintain a significant fauna habitat, and the impact of clearing on the quality of the surface or groundwater. The assessing department must also take into consideration planning and other matters including schemes and strategies, policies or plans adopted under a scheme, state planning policies and local planning strategies, and the department must ensure that the clearing permit is consistent with any approved planning instruments.

extra information

How wetlands are considered under the clearing principles

Under section 51O of the EP Act, the CEO must have regard to ten clearing principles when deciding to grant, or refuse, a permit. The CEO must also have regard to planning instruments (such as town planning schemes) and other relevant matters.

The ten principles, as specified in Schedule 5 of the EP Act, are listed below (with those especially relevant to wetlands in italics, although wetlands may also be relevant to each of the other principles):

- Native vegetation should not be cleared if it comprises a high level of biological diversity.
- Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.
- Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.
- Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.
- Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.
- Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.*
- Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

How wetlands are considered under the clearing principles

(cont'd)

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

(i) *Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.*

(j) *Native vegetation should not be cleared the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.*

More information is available from *A guide to the assessment of applications to clear native vegetation under Part V of the Environmental Protection Act 1986*.⁷

The relevant department must also invite comment from any public authority or person which/who has, in the opinion of the CEO, a direct interest in the subject matter of the application and the department must advertise the application (Monday's *The West Australian* newspaper and on online via the Clearing Permits Reporting System; see below), inviting the general public to comment. The department must then take any comments into consideration before deciding to grant or refuse a permit. Conditions may be attached to a clearing permit for the purposes of preventing, controlling, abating or mitigating environmental harm or offsetting the loss of the cleared vegetation. For instance, conditions can include permit holders to establish and maintain vegetation on other land, enter into a conservation covenant or agreement to reserve, monitor operations, investigate options for measures to prevent, control or avoid environmental harm and implement and adhere to an environmental management system and plans.

If an application is refused, the department is required to give the applicant written notice. The applicant has the right to appeal the decision to refuse to grant a clearing permit and the decision to refuse to grant all the clearing applied for. Anyone may appeal the condition of the clearing permit. Anyone, except the applicant, may appeal the decision to grant a clearing permit. Appeals must be made within twenty-one days of the decision. Once an appeal is lodged with the Minister, the Appeals Convenor will consult with the department and the person who lodged the appeal. The Appeals Convenor may consult with any other person they think necessary and make a report to the Minister. The Minister makes a decision about the appeal. Once the Minister has made a decision, there is no further appeal allowed. In the incidence that a permit is subject to an appeal, the permit holder cannot undertake any clearing until the appeal has been resolved.⁶



Publicly available information on native vegetation clearing permit applications

Information on clearing permits is available to the general public:

- Notices of clearing applications and decisions are advertised in *The West Australian* newspaper and available on the DEC website.
- The Clearing Permits Reporting System on the DEC website (https://secure.dec.wa.gov.au/cps_reports/index.cfm) states whether clearing has been authorised, and if so, what conditions apply.

There are two types of clearing permits—area permits and purpose permits.

Area permits are those granted for clearing a defined area and can only be granted to the owner of the land or someone acting on the owner's behalf. This permit is transferable upon change of ownership on request from the new owner. Area permits are generally valid for a maximum of two years and are granted for activities such as the clearing of bushland to expand an agricultural activity and the removal of seagrass from coastal waters.

Purpose permits are granted for clearing in various areas from time to time for a specified purpose (such as a program of works) and when the applicant is not the owner of the land they wish to clear but has authority under a written law or permission to access the land to undertake clearing. Purpose permits are generally valid for a maximum of five years. These permits allow the holder to undertake a series of works or activities that involve the clearing of vegetation, over a period without having to apply for a separate area permit on each occasion. Purpose permits are granted for activities such as clearing to construct a new road or highway, where there are a number of different locations to be cleared and the project may take a long time to complete; or progressive clearing of an area for mining over an extended period of time.^{6,9}

The department assessing a clearing application must give precedence to decisions made by the Minister regarding related proposals. If a proposal is a component of an environmental impact assessment under Part IV of the Act, the department cannot grant or refuse an application to clear under Part V of the Act until the Minister for the Environment has made a decision on the proposal under Part IV of the EP Act. Only then can the department make a decision, which must be in accordance with the decision of the Minister.

Under the Act, a person who causes or allows clearing of native vegetation commits an offence unless that clearing is done in accordance with a clearing permit or is exempt. The holder of a clearing permit who contravenes conditions established on the permit also commits an offence under the EP Act. DEC's *Enforcement and Prosecution Policy 2008*¹⁰ outlines the principles that are followed in seeking compliance with the legislation.

Division 3 – Prescribed premises, works approvals and licenses

Division 3 establishes that it is an offence to carry out works which cause a premise to become a **prescribed premises** unless in accordance with a works approval.

Certain industries with a significant potential to pollute the environment are designated as prescribed premises under the EP Act and must hold a works approval (for construction) and a licence or registration (for operation).

DEC has responsibility under the EP Act for the licensing and registration of prescribed premises, licensing of controlled waste transporters, and administration of a range of regulations. DEC also monitors and audits compliance with works approvals, licence conditions and regulations, takes enforcement actions as appropriate, and develops and implements departmental licensing and industry regulation policy.

Division 4 – Notices, orders and directions

Division 4 of the Act provides the CEO of the relevant department with powers to issue an environmental protection notice to the owner and/or occupier of a premise if the CEO suspects that there is, or is likely to be, an emission from the premises that would not comply with a required standard or is likely to cause pollution, serious or material environmental harm.

Prescribed premises: premises prescribed for the purposes of Part V of the *Environmental Protection Act 1986* as specified in Schedule 1 of the *Environmental Protection Regulations 1987*

An environmental protection notice may require an investigation, the preparation of a plan to prevent, control or abate the emission/pollution/environmental harm; measures to prevent, control or abate the emission/pollution/environmental harm; limit waste, noise, odour or electromagnetic radiation; monitor and report associated offences.

An environmental protection notice binds each owner or occupier to whom it is given and each successive owner or occupier of the land to which the EP notice relates.

The CEO of the relevant department may extend the period within which a requirement contained in the notice is to be complied with or may revoke or amend any requirement contained in the notice or the notice itself.

A person who does not comply with a requirement contained in the notice commits an offence and may be convicted of that offence.

Part VI – Enforcement

Part VI of the Act provides for the appointment of inspectors for the purposes of monitoring, inspecting, evaluating and analysing samples, records, monitoring and other equipment and installations approved for detecting the presence, level and other characteristics of noise, odour, waste and electromagnetic radiation, and for inspecting native vegetation.

The powers of inspectors are prescribed in the Act, generally entitling inspectors to enter at any time (i) any premises used as a factory or in which an industry, trade or process is being carried on (ii) any site classified as contaminated under the *Contaminated Sites Act 2003* and (iii) premises which the inspector has reasonable grounds to believe that an offence against the Act has been or is likely to be committed.

Part VII – Appeals

Part VII prescribes the process of lodging an appeal in respect to the level of assessment set, reports on proposals and conditions or procedures attached to a decision made by the EPA. The right of decision-making authorities, responsible authorities, proponents or other persons to appeal any decision made by the EPA is prescribed here.

Part VII, section 101 prescribes the process of lodging an appeal against native vegetation clearing permit decisions made by DEC's CEO.

Part VIII – General

Part VIII of the Act prescribes other offences, administrative procedures, codes of practice and regulations, dispute resolution between the EPA and any public authority and for review of the EP Act and operations of the EPA.

Part VIII provides for the production and publication of administrative procedures for the purpose of establishing principles and practices for environmental impact assessment. Codes of practice may also be issued in relation to activities that involve an emission or environmental harm.

The *Wildlife Conservation Act 1950*

The *Wildlife Conservation Act 1950* provides for the conservation and protection of wildlife. DEC is responsible for administering this Act.

It specifically provides protection for native flora and fauna, making it an offence 'to take' protected flora or fauna unless a license authorised by the Minister for Environment is first obtained from DEC.

Under section 6(1) of the WC Act, 'fauna' is legally defined as any animal indigenous to or which periodically migrates to and lives in any State or Territory of the Commonwealth or the territorial waters of the Commonwealth. An animal includes all parts of the animals' body and includes eggs, larvae, semen, carcass, skin, plumage or fur.



Figure 4. 'Taking' of fauna, such as native turtles, is an offence unless a license authorised by the Minister for Environment is first obtained from DEC. Photo – A Matheson/DEC.

Threatened fauna: fauna that is rare or likely to become extinct and gazetted as such by the Minister for Environment

Red list criteria: developed by the International Union for the Conservation of Nature (IUCN) to allocate species of flora and fauna into threat categories of critically endangered, endangered and vulnerable, based on their likelihood of becoming extinct

Also under section 6(1) of the Act, 'to take' in relation to fauna includes to kill or capture any fauna by any means or to disturb or molest any fauna by any means or to use any method whatsoever to hunt or kill any fauna whether this results in killing or capturing any fauna or not; and also includes every attempt to take fauna and every act of assistance to another person to take fauna.

Section 14 of WC Act provides for the listing of fauna which is likely to become extinct, or is rare, or otherwise in need of special protection as 'specially protected fauna'. Those fauna listed as likely to become extinct, or is rare, are referred to as **threatened fauna**. A range of wetland fauna species are identified as threatened fauna.

- For information on specific threatened wetland fauna species, see the topic 'Wetland ecology' in Chapter 2.

Threatened fauna are listed by the Minister in Schedule 1 (extant species) and Schedule 2 (extinct species) of a Wildlife Conservation (Specially Protected Fauna) Notice in the Government Gazette. This Notice is usually published each year following recommendations to the Minister from the Threatened Species Scientific Committee and DEC. Assessment of threatened fauna is based on **Red list criteria** developed by the International Union for the Conservation of Nature (IUCN).

The Notice (Schedule 3) also includes migratory bird species protected under the international agreements: the Japan-Australia Migratory Bird Agreement (JAMBA); the China-Australia Migratory Bird Agreement (CAMBA); and the Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA). Many of these bird species have specific relationship with wetlands.

Other specially protected fauna are included in the Notice in Schedule 4, and include fauna which have direct association with wetlands, for example, crocodile species and Burdekin duck (*Tadorna radjah*).

All fauna included on the Wildlife Conservation (Specially Protected Fauna) Notice, that is, in any Schedule to the Notice, have an increased penalty provision under the Act if not taken in accordance with the Act. The penalty is a fine of up to \$10,000.

The Minister (or DEC, under delegated power) may grant a licence to take fauna, including threatened fauna. There are a limited number of licence types that may be granted, such as licences for the taking of fauna causing damage to property, and licences to take and mark fauna for research purposes. People who carry out fauna surveys for scientific purposes are required to hold a Regulation 17 Licence to Take Fauna for Scientific Purposes. As a condition of the licence, the licensee is required to submit a return detailing the species and numbers that were captured or sighted.

Provisions are made under the Act to allow individuals to care for sick, injured or orphaned wildlife until such a time as it can be returned to the wild. A licence is not required unless the animal cannot be returned back to the wild through illness, disability or environmental issues. The decision then to grant a licence or send the animal to another facility or euthanase it will be made by DEC.

► For more information on fauna licensing, refer to the DEC fauna licensing webpage.¹¹

Under the Act 'flora' is legally defined as any plant which is native to Western Australia or which is published in the Government Gazette as flora for the purposes of the Act (including any wildflower, palm, shrub, tree, fern creeper or vine). A plant includes any part of flora and all seed and spores thereof.

'Protected flora' are those types of flora that are declared (in the Government Gazette) to be protected flora for the purposes of the Act, and hence to which the provisions of the Act apply. Classes of flora that are currently protected are the Spermatophyta (flowering plants, conifers and cycads), Pteridophyta (ferns and fern allies), Bryophyta (mosses and liverworts) and Thallophyta (algae, fungi and lichens).

Under Section 23F of the Act, where the Minister is of the opinion that any protected flora is likely to become extinct or is rare or otherwise in need of special protection, the Minister may declare that flora to be 'rare' throughout the State. Such specially protected flora is termed 'declared rare flora', or commonly referred to as **threatened flora**. Threatened flora are listed by the Minister in Schedule 1 (extant species) and Schedule 2 (extinct species) of a Wildlife Conservation (Rare Flora) Notice in the Government Gazette. As with the specially protected fauna, this Notice is usually published each year following recommendations to the Minister from the Threatened Species Scientific Committee and DEC. Assessment of threatened flora is based on Red list criteria developed by the International Union for the Conservation of Nature (IUCN).

► For information on specific threatened wetland flora species, see the topic 'Wetland vegetation and flora' in Chapter 2.

'To take' as referred to in section 6(1) of the Act in relation to flora includes to gather, pluck, cut, pull up, destroy, dig up, remove or injure the flora. Therefore taking of flora includes everything from direct impact by removal or destruction by human hand or machine to indirect activities such as grazing livestock on flora, introducing pathogens that attack it, altering soil moisture, inundation of the flora or allowing air pollutants such as pesticides to harm foliage etc (K Atkins pers. comm.).

In general, the Act regulates the taking of part or all of a WA native plant (protected flora) through the issuing of licences. DEC does not issue such licences where the taking of the flora has been authorised through another legislative process. In this regard, the clearing of native vegetation is regulated under the *Environmental Protection Act 1986* and requires a clearing permit to be obtained from DEC unless exempt. Where a clearing permit has been issued, the further issue of a Wildlife Conservation Act licence is not required by DEC. For more information please refer to the information on Part V of the *Environmental Protection Act 1986* in this topic.

Threatened flora: flora that has been assessed as being at risk of extinction or is rare or otherwise in need of special protection and gazetted as such by the Minister for Environment. These species are commonly referred to as declared rare flora

Under Section 23C, people who wish 'to take' flora on lands other than on private property (i.e. Crown land) for scientific study, education, hobby, propagation, or other non-commercial purposes must hold a Scientific or Other Prescribed Purposes Licence obtainable from DEC for a small annual fee. This licence does not entitle the holder to sell any of the flora taken, or use it for any commercial purpose.

If the flora is being taken from Crown land for commercial uses, including for sale, a commercial purposes licence is required. Before it can be issued, the applicant must demonstrate that they have an area on which they can harvest flora. This will include the written permission of any government agency that is managing the land. There is an annual fee for a commercial purpose licence.

Special restrictions apply to the taking of flora from nature reserves, national parks or conservation parks, and such reserves are normally excluded to commercial pickers.

Under Section 23D, no Wildlife Conservation Act licence is required for taking flora from private property, but the permission of the land owner must first be obtained. However, a licence is required to cover the sale of any protected flora taken from the property. This includes the sale of seed that has been collected for revegetation use.

Rare (threatened) flora are provided with additional (special) protection under Section 23F(4) of the Act, whereby the written consent of the Minister must first be obtained before such flora can be taken, irrespective of whether a licence to take protected flora or the permission of the land owner has been granted, or a clearing permit issued. This requirement applies to any person on any land (Crown and private) throughout the state. The penalty for taking rare flora without obtaining the consent of the Minister is a fine of up to \$10,000.

Species may also be listed as nationally threatened under the national *Environment Protection and Biodiversity Conservation Act 1999*. See the listing under *Environment Protection and Biodiversity Conservation Act 1999* for more detail.

The Western Australian Government has made a commitment to the repeal and replacement of the *Wildlife Conservation Act 1950* with a Biodiversity Conservation Act that will include the elements expected in a modern biodiversity conservation legislation.

- For more information on flora licenses and permits see the DEC flora licensing webpage.¹²

Threatened ecological community: naturally occurring biological assemblages that occur in a particular type of habitat that has been endorsed by the WA Minister for Environment as being subject to processes that threaten to destroy or significantly modify it across much of its range

extra information

Threatened ecological communities

The three main elements of biodiversity are genetic diversity, species diversity and ecosystem diversity. Modern biodiversity conservation strategies are aimed at conserving all these elements. Threatened biodiversity conservation strategies were traditionally aimed at species, however, species conservation now includes consideration of genetic diversity, and the interaction of species is accounted through ecological community conservation.

Ecological communities are defined as naturally occurring biological assemblages that occur in a particular type of habitat. They are the sum of species within an ecosystem and, as a whole, they provide many of the processes which support specific ecosystems and provide 'ecological services'. Those ecological communities that are determined to be at risk of being totally destroyed or significantly modified across much of their range are termed **threatened ecological communities** (TECs).

Threatened ecological communities (cont'd)

There is currently no state legislation specifically covering the listing of TECs. Instead, an informal, non-statutory process is in place, with formal endorsement of TECs being provided by the Minister. Recommendation on TECs are made to the Minister by the Western Australian Threatened Ecological Communities Scientific Committee (TECSC). This committee is appointed by the Minister for Environment, with administrative support provided by DEC. Anyone can submit a nomination for listing or amending the listing of a TEC to the TECSC. Currently there are sixty-nine TECs endorsed by the WA Minister for Environment. Of these, thirty-seven are wetland communities (see Appendix 3 for more information).

TECs receive a level of protection through reference in environmental and planning policies, and environmental impact assessment under the *Environmental Protection Act 1986*. TECs are listed as special environmental areas in the *Environmental Protection (Environmentally Sensitive Areas) Notice 2005*, and are one of the clearing principles under Part V of the EP Act, and consequently receive specific consideration under the Environmental Protection (Clearing of Native Vegetation) Regulations 2004.

Ecological communities may also be listed as nationally threatened under the national *Environment Protection and Biodiversity Conservation Act 1999*. See the listing under *Environment Protection and Biodiversity Conservation Act 1999* for more detail.

For more information, see 'WA's threatened ecological communities' webpage: www.dec.wa.gov.au/management-and-protection/threatened-species.html and DSEWCaP's 'Threatened species and ecological communities' webpage: www.environment.gov.au/biodiversity/threatened/index.html

The *Conservation and Land Management Act 1984*

The *Conservation and Land Management Act 1984* provides for the use, protection and management of certain public lands and waters and the flora and fauna in them, and for establishment of authorities responsible for these lands.

The Act relates to state forest, timber reserves, national parks, conservation parks, nature reserves, marine nature reserves, marine parks, marine management areas and other land reserved by the Minister for Lands under the *Land Administration Act 1997*.

Many of the state's high conservation value wetlands are within these areas. For example, approximately 60 percent (56,977 hectares) of the nationally important wetlands within the south west agricultural zone area are managed by DEC as part of the conservation estate.¹³

The Act also establishes a number of statutory bodies to facilitate the protection and management of public lands, including DEC and the Conservation Commission of Western Australia. Terrestrial conservation reserves in WA are vested in (owned by) the Conservation Commission of Western Australia.¹⁴

- More information about the role of the Conservation Commission is provided in the topic 'Roles and responsibilities' in Chapter 5.

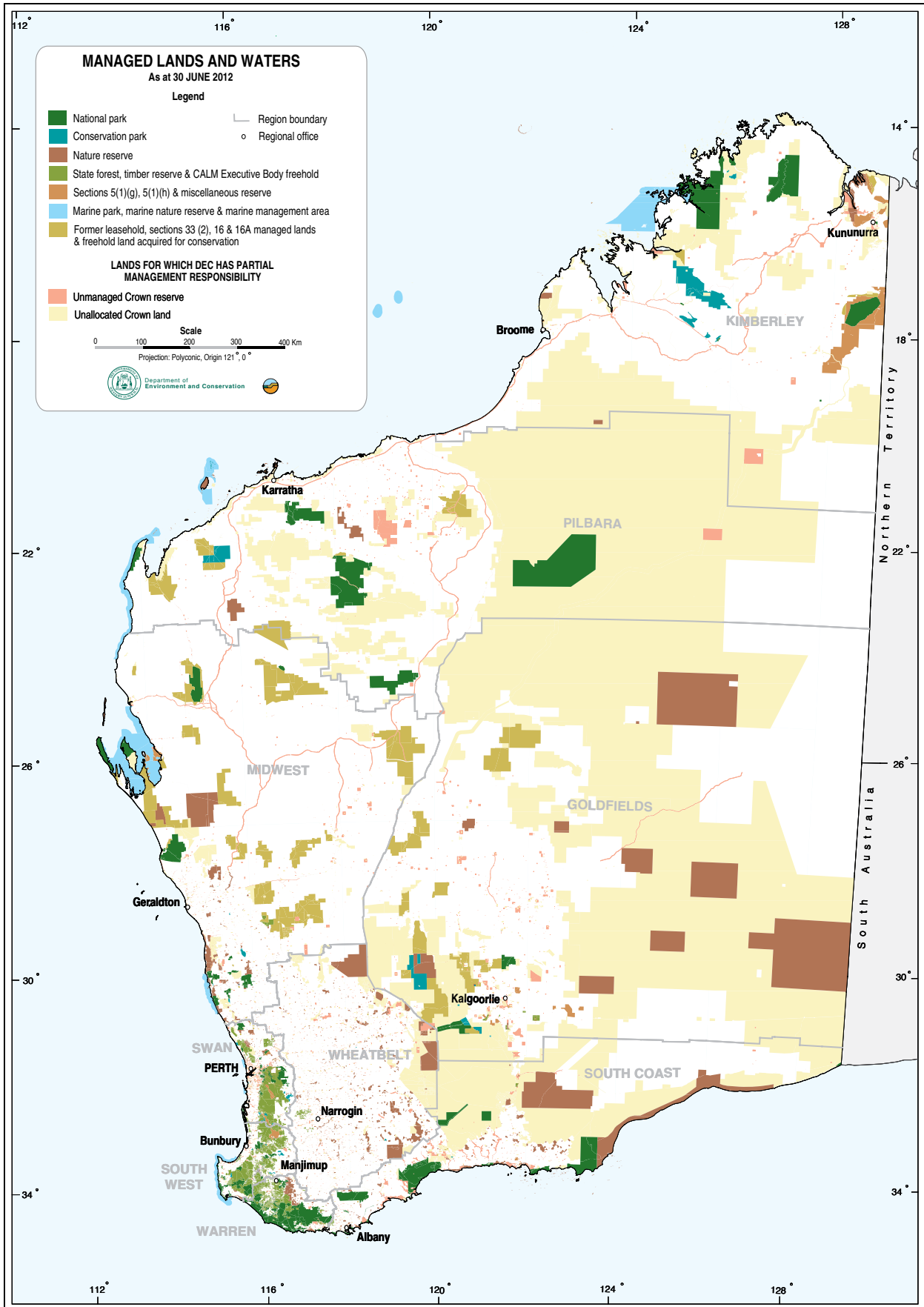


Figure 5. DEC managed lands and waters at 30 June 2012.

Where an **endorsed management plan** exists for a national park, conservation park or nature reserve, DEC must manage the reserve in accordance with the plan. If there is no management plan for a reserve, DEC must undertake only 'necessary operations' or 'compatible operations'. DEC's management of conservation land is subject to performance review by the Conservation Commission.

The Act specifies offences and the penalties and prosecution powers available to the relevant authority under the Act.

The operation of the CALM Act cannot derogate (override) the operation of the *Mining Act 1978*, *Petroleum Act 1967* (or any other Act relating to minerals or petroleum). However in relation to mining on 'reserved land' (a sub-category of crown land that includes all land formally managed under the CALM Act) the Minister for Mines must (according to the class and category of reserve) obtain either the agreement or recommendations of the Minister responsible for the reserve regarding whether and under what conditions mining or exploration activities may proceed. In relation to CALM Act lands, this Minister is the Minister for Environment.

In relation to the Petroleum Act, the Minister responsible for the reserve is required to be consulted by the Minister responsible for the Petroleum Act before the tenement holder may access the reserved land to carry out activities or operations authorised under the Act.

Under the Mining Act or Petroleum Act the Minister for Mines may grant tenements without consulting the responsible Minister, however, under the Mining Act the convention is normally to consult the responsible Minister before grant of tenure over reserved lands. Exceptions are the grant of a mining lease over national park or class A nature reserve, which requires support of both Houses of Parliament.

extra information

Regional parks

Regional parks are a land management system that provides the opportunity for a coordinated planning and management approach by a number of management agencies and private landowners for areas identified as having regionally significant conservation, landscape and recreation values.

These parks are not afforded special legal status, but are rather a recognition of geographically related areas that have a common management focus. DEC coordinates management but they are not reserved under the *Conservation and Land Management Act 1984*, and hence DEC does not have management responsibility for these areas. They comprise a range of land tenures vested in a range of managing authorities.¹⁴

Many significant wetlands are within Perth's regional parks, including the Rockingham Lakes Regional Park, Herdsman Lake Regional Park, Yellagonga Regional Park, Jandakot Regional Park and Beeliar Regional Park.

Endorsed management plan: a management plan that has been approved and/or modified by the Minister for Environment as he/she thinks fit

The *Planning and Development Act 2005*

The *Planning and Development Act 2005* (PD Act) is the principal land use planning legislation in WA, providing for efficient land use planning in the State. It is administered by the Western Australian Planning Commission (WAPC), with the authority for some decisions delegated to the Department of Planning.

Land use planning is carried out at state, regional and local scales. Figure 6 shows how state, regional and local planning processes interact.

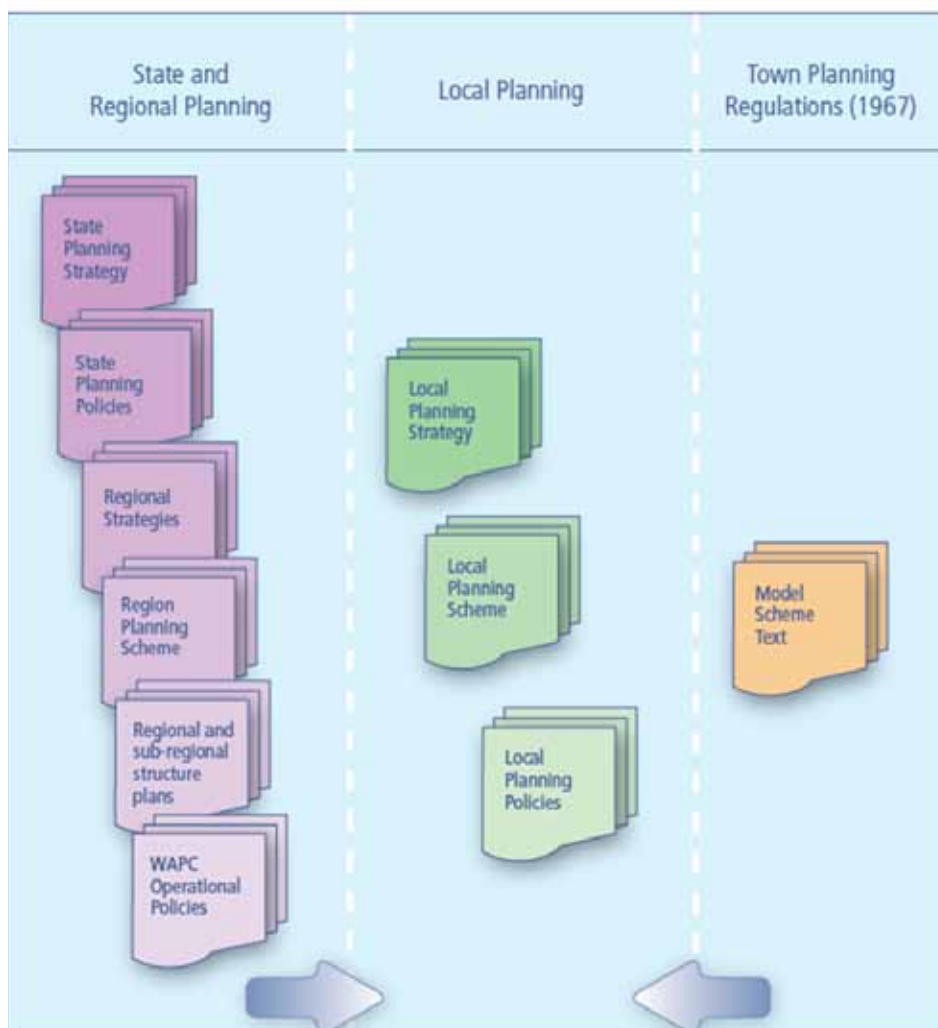


Figure 6. State, regional and local planning instruments. Image – Western Australian Planning Commission.¹⁵

Land use planning plays a decisive role in the protection afforded to wetlands, particularly in urban areas. It can determine whether a wetland is protected or if it may be developed over or altered into an artificial system. It can also determine what activities can occur in the catchment that will ultimately have a significant effect on the long-term integrity of wetland ecosystems. Therefore, the *Planning and Development Act 2005* is critical to wetland protection in WA.

This Act primarily replaces three repealed planning Acts: the *Western Australian Planning Commission Act 1985*; *Metropolitan Region Town Planning Scheme Act 1959*; and the *Town Planning and Development Act 1928*. These Acts were amalgamated to simplify planning legislation, make it more accessible to users, provide greater consistency and certainty in planning decision making and promote the sustainable use and development of land.¹⁶

The PD Act prescribes key planning processes including:

- Part 3 - state planning (policies, structure planning and planning strategies and bulletins)
- Part 4 - region schemes
- Part 5 - local planning schemes
- Part 8 - improvement plans
- Part 9 - subdivision and development
- Part 13 - enforcement and legal proceedings
- Part 14 – applications for review.

An overview of the application of these planning processes in the context of wetland protection is provided below.

State planning policies

Part 3 of the PD Act provides for the preparation of policies on state planning matters by the Western Australian Planning Commission. These are called state planning policies (SPPs) and are statutory policies prepared under the Act, approved by the Minister for Planning and the Governor and published in the Government Gazette.

These policies are concerned with broad general planning and facilitate the coordination of planning throughout the state by all local governments. SPPs can be made for matters which may be the subject of a local planning scheme or which relate to a specific region or area of the state. Examples include statewide policies for coastal planning and rural land use planning, and specific regional policies for the protection of bushland, the Peel-Harvey coastal plain catchment and Gnangara and Jandakot groundwater mounds.

The WAPC prepares SPPs in consultation with Western Australian Local Government Association. The WAPC and local governments must have 'due regard' to the provisions of state planning policies when preparing or amending local planning schemes. The State Administrative Tribunal is also required to have due regard for relevant state planning policies when determining applications for review.

The consultative requirements for development of SPPs facilitate input from community, local government, and agencies into these policies. Copies of SPPs must be made publicly available and a notice published in a daily and Sunday newspaper stating the purpose of the SPP and detailing a submission period of sixty days or more within which submissions can be made.¹⁶

- A number of state planning policies have a significant bearing on wetland conservation and protection in WA. These include:
 - *State Planning Policy 2: Environment and Natural Resources*
 - *State Planning Policy 2.1: Peel-Harvey Coastal Plain Catchment*
 - *State Planning Policy 2.2: Gnangara Groundwater Protection*
 - *State Planning Policy 2.3: Jandakot Groundwater Protection*
 - *State Planning Policy 2.8: Bushland Policy for the Perth Metropolitan Region*
 - *State Planning Policy 2.9: Water Resources*

These policies are described in this topic in the section 'Policies for wetland conservation'.

Region planning schemes

Part 4 of the PD Act provides for the continuation and preparation of **region planning schemes**. These schemes outline objectives for state and regional development and provide a statutory mechanism to assist strategic planning, coordinate the provision of major infrastructure and set aside areas for **regional open space** (Figure 7) and other community purposes. Examples include the Metropolitan Regional Scheme, Greater Bunbury Regional Scheme and Peel Regional Scheme. The Greater Bunbury Regional Scheme and Peel Regional Scheme are subsidiary legislation made under the PD Act.

A region planning scheme usually covers more than one local government area. The content of the scheme may vary for each region, but generally regional schemes establish broad land use **zones** or policy areas and identify land required for regional purposes. Regional schemes generally outline the broad framework within which local planning schemes are developed under.



Figure 7. Lightning Swamp in Noranda, a suburb in Perth, has been reserved under the Metropolitan Region Scheme. Photo – J Lawn.

For areas not covered by a region planning scheme, the classification of scheme reserves and zones is generally made through local planning schemes.¹⁶

The PD Act states that during the preparation or amendment of a region planning scheme, the scheme must be referred to the EPA for consideration of the need for an environmental assessment. Other relevant regulators and/or interested groups may also be invited to comment. The EPA may issue an instruction to the responsible authority to undertake an environmental review, which must be completed before the scheme is advertised during the public exhibition period of the scheme.¹⁶

Region planning scheme (region scheme): a planning scheme prepared for matters of state or regional importance to enable effective planning and coordination of land use and development. Also known as a region scheme.¹⁶

Regional open space: land defined under a region scheme, regional structure plan or sub-regional structure plan as a parks and recreation reserve or regional open space reserve, to accommodate active and passive recreation such as major playing fields and/or regional conservation and environmental features¹⁷

Zone: designates uses within a specified area of land as being permitted, prohibited or requiring approval

The Metropolitan Region Scheme – Perth’s blueprint

The Metropolitan Region Scheme (MRS) is a region planning scheme for land use in the Perth metropolitan area. It has been in operation since 1963 and provides the basis for planning in the Perth metropolitan region. The scheme is amended as necessary.

The area covered by the MRS stretches from south of Rockingham to north of Yanchep and east of Mundaring.

The principle functions of the MRS are to:

- reserve land required for public purposes and acquire it as necessary
- identify non-reserved land and classify it into zones such as urban, industrial or rural
- control development on reserved and zoned land, particularly by issuing decisions on development applications.

More detailed plans, known as ‘local planning schemes’ are prepared by local governments. Local planning schemes must be consistent with the MRS. Where there is an inconsistency the MRS prevails and the local planning scheme is to be amended.

The MRS consists of a set of maps and a scheme text. The scheme text provides planning rules for zones and reservations that are shown on the maps in different colours and patterns. The scheme maps and text are updated to reflect changing needs.¹⁶

It, and the other region schemes, is available to view online at www.planning.wa.gov.au including in GIS format at https://www.landgate.wa.gov.au/foundationr2/enter_planning_channel.do

Local planning scheme: a set of provisions that identifies the way land in the scheme area is to be used and developed. It may comprise a scheme map(s), a text and an explanatory report¹⁶

The Minister can consent to public submissions being sought on the proposed region planning and any environmental submissions made during the public exhibition time must addressed by the EPA. The Minister may then approve or refuse the scheme and may impose environmental conditions into the scheme.

Local planning schemes

Part 5 of the PD Act provides for the development of **local planning schemes**. They are developed and administered by local government authorities and have the force of law following approval by the Minister for Planning and publication in the Government Gazette. The Town Planning Regulations 1967 prescribe the procedures for initiating, preparing, advertising and approving local (town) planning schemes and their amendments.

Local planning schemes set out the way land is to be used and developed. This is done by dividing land in the scheme area into zones and reserves. This classifies areas for land use and includes provisions to coordinate infrastructure and development in a locality. This usually includes a zoning or land use class table and controls to ensure long-term strategic planning objectives are achieved.

Local planning schemes complement the provisions of a region planning scheme by detailing land uses. For example, region planning schemes have a broad urban zone. In the urban zone the local planning scheme may detail residential density, identify commercial sites, local open space, primary school sites, light and service industrial areas and other uses.¹⁶

Local planning schemes are an important mechanism for wetland protection. Schedule 7 of the Act specifically provides for the conservation of the natural environment and the conservation of water to be dealt with by planning schemes. Wetlands can be protected in various ways including reservation, appropriate zoning, and special control areas. Wetlands and buffers may be **reserved** for public purposes as **public open space** for the purpose of conservation. Reserves may be purchased by government or ceded to government, but cannot be developed without approval. The Act provides that an affected owner can claim for compensation for land that is reserved under certain circumstances. The local government can also buy the land instead of paying compensation.

- More information on public open space can be found in Development control policy 2.3: Public open space in residential areas.¹⁸

Controls on development in and near wetlands may also potentially be achieved by the use of special control areas (SCAs). SCAs apply planning controls to clearly defined areas within local planning schemes, and can be used to designate controls on development on and near wetlands. These clearly defined areas may be shown as overlays to the zoning map or on a separate scheme map or maps. The SCAs provide planning controls for a variety of purposes; those most relevant to wetlands include SCAs for the purposes of:

- landscape protection
- establishment of buffers and setbacks
- protection of water catchments
- development controls in flood-prone land
- development controls in bush fire prone areas.

The provision of a SCA include its purpose, and where necessary, specific development requirements and/or performance criteria to be applied to development within SCAs.

SCAs have, for example, been applied to wetlands of conservation significance within local planning schemes in WA, and detailed the development requirements in relation to these sites.

- For more information, refer to section 3.5.7 of the *Local Planning Manual: a guide to the preparation of local planning strategies and local planning schemes in Western Australia*.¹⁵

For a local planning scheme or scheme amendment to be considered for approval it must be submitted to the WAPC and EPA for consideration of the need for an environmental assessment (as outlined in Division 3 of Part IV of the *Environmental Protection Act 1986*). If an environmental assessment is required, the EPA issues an instruction and the local government must undertake an environmental review.

- For more information, see the section in this document entitled '*Environmental Protection Act 1986*'.

Section 88 of the Act specifies that local governments are to consolidate their planning scheme or prepare a new scheme every five years. This enables the Minister, WAPC and the community an opportunity to comment on the development of a locality.

Reserved: set aside for public purposes

Public open space: land used or intended for use for recreation or conservation purposes by the public; it includes district, neighbourhood and local open spaces and parks, but excludes regional open space or foreshore reserves^{15,17}

Structure planning – also referred to as outline development plans and subdivision guide plans

Some aspects of land use planning are dealt with by operational policy rather than specific provisions in the TP Act. Structure planning is one such planning mechanism.

Structure planning can be a particularly crucial phase for wetland protection. Structure plans are sometimes also known as *outline development plans* and *subdivision guide plans*. Structure plans incorporate a report, map and additional technical supporting documents. They provide a framework for the coordinated provision and arrangement of land use, subdivision and development in new urban areas ('greenfield' sites) and the redevelopment of areas ('brownfield' sites). They coordinate many aspects of land use including transport networks, public open space, utility services, urban water management and environmental protection and management (as shown in the Stirling City Centre Structure Plan map in Figure 8).

There are several different types of structure plans that are relevant to wetland protection:

- sub-regional structure plans
- district structure plans
- local structure plans

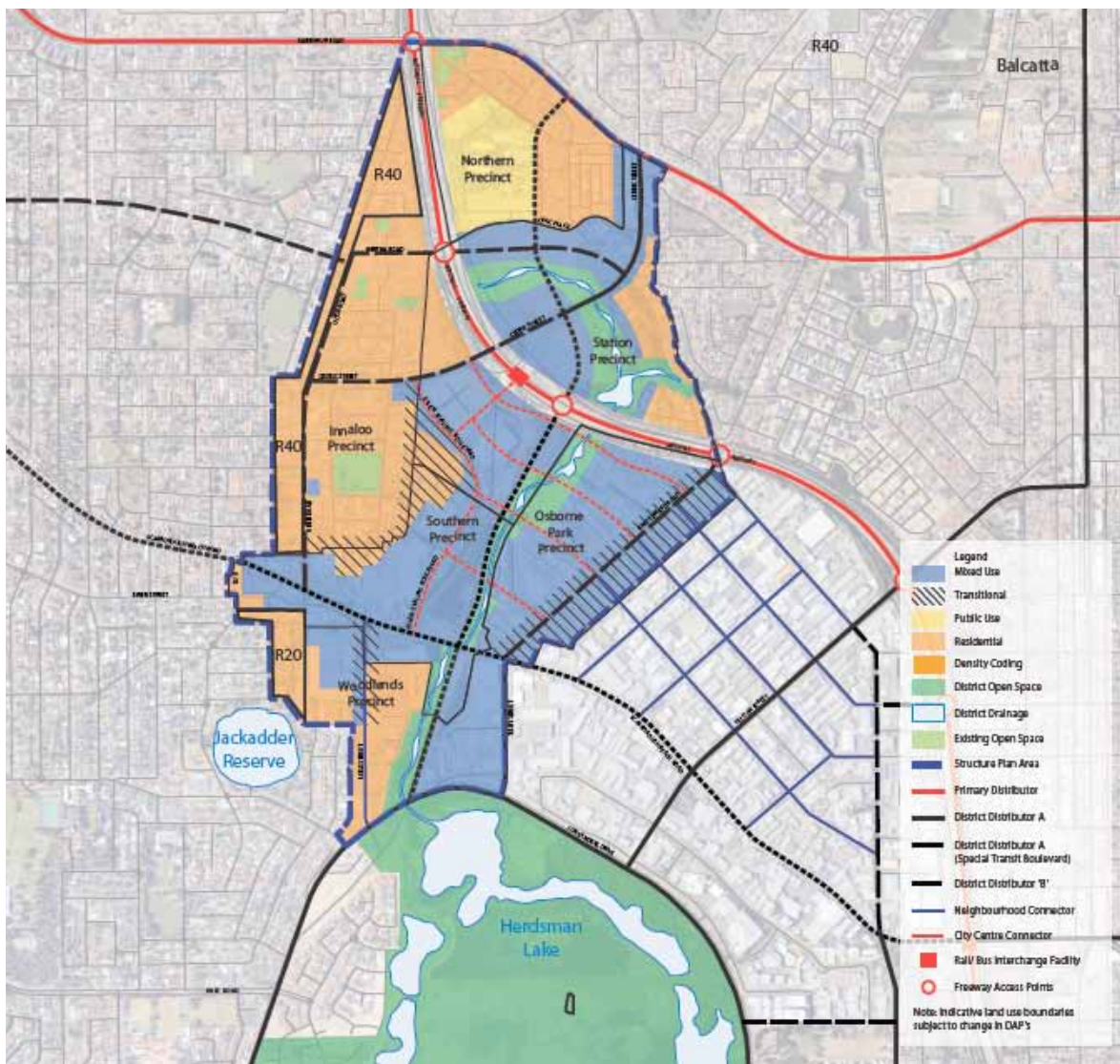


Figure 8. Stirling City Centre Structure Plan. Image – Stirling City Centre Alliance, www.stirlingcitycentre.com.au

Structure planning – also referred to as outline development plans and subdivision guide plans (cont'd)

WAPC's *Structure plan preparation guidelines*¹⁷ states that structure plans should identify:

- the wetlands present in the structure plan area, including an aerial photo showing their location and extent
- their significance
- existing and proposed conservation areas
- the tenure of the land containing wetlands
- buffers
- a structure plan overlay showing the proposed structure plan over the wetland and buffer
- an environmental assessment and management strategy for the structure plan area, including wetlands, by a qualified environmental consultant
- discuss how the wetlands have been addressed by the structure plan, including any relevant environmental studies, analyses and management measures
- discuss how identified or potential water issues are to be addressed and management, including the requirements for sustainable water supply and existing/new bore licences
- provision of open space for significant conservation and water management functions
- management arrangements and responsibilities for the proposed open spaces
- water management strategy in accordance with *Better Urban Water Management*⁹
- the proposed drainage network and infrastructure
- mosquito constraints

Structure plans can be statutory or non-statutory. Non-statutory structure plans include sub-regional and most district structure plans. These are prepared for land that is either not yet zoned for urban land use or requires a guiding framework to ensure coordination of subsequent layers of more detailed planning and development is achieved.¹⁷ They often cover more than one local government area. District structure plans include a map and text. Wetlands and buffers can be identified as sites to be protected in a district structure plan. Water management requirements to protect the water regime of a wetland can also be addressed through the district structure plan.

Statutory structure plans are required and prepared in accordance with the provisions of a local planning scheme. They are statutory once endorsed by the WAPC. These are usually local structure plans and activity centre structure plans (which are at the neighbourhood scale, that is two suburbs or less, and activity centre scale respectively). Local structure plans are a bridge between the local planning scheme and the subdivision stage of land use planning. New regulations, the Planning and Development (General Provisions for Local Planning Schemes) Regulations, have been proposed to provide a uniform statutory process for the approval and modification of structure plans.¹⁷

The WAPC states that consultation with stakeholders is essential when preparing a structure plan.¹⁷

Subdivision and development control

Subdivision and development of land occurs once land has been appropriately zoned in a region planning scheme or local planning scheme and any required preliminary planning, for example a structure planning process, has been finalised.

Part 10 of the Act requires the approval of the WAPC for the **subdivisions** or amalgamation of lots. The WAPC is not to give approval that is inconsistent with the local planning scheme, unless provided for in circumstances outlined under section 138 of the PD Act.

Subdivision proposals are referred for comment to local government, relevant public authorities (such as DEC and Department of Health) and utility service providers (such as Water Corporation, Telstra, Western Power and Alinta Gas). Referral bodies have forty-two days to respond to the WAPC (unless otherwise agreed), after which it will be deemed that the referral body has no objection or recommendation. The WAPC may consider some referral agencies' advice to be critical to the assessment of an application, and on that basis can provide referral agencies with additional time to provide a recommendation.¹⁶

Following review of comments, a report and recommendation is made to the WAPC who will then consider the application in respect to any region or local planning scheme, together with any relevant planning policies. The WAPC has ninety days from the date the plans are submitted to approve or refuse the application with or without imposing conditions. If an applicant is not satisfied with the WAPC's decision, they can request WAPC to reconsider their decision or can apply to the State Administrative Tribunal for a review.

Conditions of subdivision may be applied for many purposes, including the conservation or protection of wetlands. Conditions of subdivision are applied by the WAPC and the applicant is responsible for complying with their requirements. If the WAPC is satisfied that conditions have been complied with, it is to endorse the diagram or plan of survey that enables the Registrar of Titles to issue certificate of titles for the new lots.

Proponents who propose to subdivide an area which encompasses a wetland are often required, as a condition of subdivision, to prepare and implement a wetland management plan. The standard condition is: 'Prior to the commencement of subdivisional works a wetland management plan is to be prepared and approved to ensure the protection and management of the site's environmental assets with satisfactory arrangements being made for the implementation of the approved plan'.²⁰ DEC or the local government authority is commonly the clearing agency for this condition. Urban water management plans are generally also required in urban areas where water issues are of concern, such as when significant wetlands are in or near the subdivision. The standard condition applied is: 'Prior to the commencement of subdivisional works, an urban water management plan is to be prepared and approved, in consultation with the Department of Water, consistent with any approved Local Water Management Strategy/Drainage and Water Management Plan'.²⁰ Local government is commonly the clearing authority for this condition.

- The *Model Subdivision Conditions Schedule*²⁰ provides the wording of commonly applied subdivision conditions. It is available at www.planning.wa.gov.au/dop_public/Model_Subdivision_Conditions_3_October_2012.pdf

Most types of development approvals are delegated by WAPC to the local government authority to administer through their local planning schemes. Where the WAPC considers types of development may have regional significance, it has the power to retain or regain development control.

Subdivision: the division of land into lots

Enforcement

The enforcement of local planning schemes and conditions of planning approvals are the responsibility of the local government. The Minister for Planning may give orders to local government or may utilise powers in order to enforce the local planning scheme and approvals. The contravention of a planning scheme or undertaking unauthorised works is deemed an offence and so the person committing the offence may be liable to a penalty.

If a development contravenes a planning scheme or approval, the responsible authority can direct the landowner or person undertaking the development to stop and rectify the contravention even if this involves measures such as removing or pulling down structures and restoring the land. The responsible authority may also apply to the Supreme Court to grant an injunction to restrain a person from continuing to contravene a planning scheme or approval.

Infringement notices can be issued under the *Planning and Development Act 2005*. These notices deal with minor offences where a contravention is clear and apparent. For example: the unlawful use of buildings or illegal parking of commercial vehicles in residential areas.

To ensure environmental conditions are met in the implementation of a development, the Minister for Planning may also issue a written order to the person undertaking development to immediately cease for 24 hours and cause the responsible authority to serve a notice and take necessary steps to rectify any non-compliance with conditions.

► The following resources provide more information on the *Planning and Development Act 2005*:

- *An introduction to the Western Australian Planning System*¹⁶
- *Fact sheet 3: Planning laws*²¹
- *Fact sheet 4: Development controls*²²

The Rights in Water and Irrigation Act 1914

The *Rights in Water and Irrigation Act 1914* (RIWI Act) provides for the regulation, management, use and protection of water resources. It is the principal legislation governing the allocation and management of water resources for consumptive use. Under the Act, the taking and use of that water without appropriate authorisation (such as a water allocation licence) is prohibited. It is administered by the Department of Water.

The objectives of the Act are to:

- provide for the sustainable use and development of water resources and for the protection of the environment
- promote the orderly, equitable and efficient use of water resources
- foster consultation with members of local communities and to enable them to participate in administration
- assist the interaction of the management of water resources with the management of other natural resources.

A 5C licence allows the licence holder to 'take' water from a watercourse, wetland or underground source. Under the provisions of section 5C of the RIWI Act, unless a person holds a licence, any unauthorised taking of water is prohibited except where a person has another right to do so or is exempt from licensing. The stock, domestic and riparian rights allow water to be taken without a licence in some circumstances, although this is generally limited to taking it for domestic purposes, fire fighting and for watering stock not held under intensive conditions.



Figure 9. Groundwater abstraction is licensed by the Department of Water under the *Rights in Water and Irrigation Act 1914*. Image – Department of Water.

A 26D licence is issued under the provisions of 26D of the Act to construct or alter wells. A 25D licence is required to commence, construct, enlarge, deepen or alter any artesian well or commence, construct, enlarge, deepen or alter any non-artesian well in a proclaimed groundwater area.

The Department may grant or refuse licenses based on whether the application is in the public interest, ecologically sustainable and environmentally acceptable.

The impacts of accessing the state's water resources are managed by placing appropriate terms and conditions in licences to take and use water, granted under section 5C and 26D of the RIWI Act.

extra information

RIWI Act licences: a critically important mechanism for wetland protection

There are more than 14,000 RIWI Act licences in WA.²³ To find out more about the water allocation planning process, see the following resources:

- *Water allocation planning in Western Australia 2011*²⁴ provides a summary of the policy and planning framework for these licensing decisions
- *Groundwater risk-based allocation planning process*²⁵ provides information on how ecological water requirements for groundwater dependent ecosystems are taken into consideration in the allocation planning process.
- Department of Water's webpage: www.water.wa.gov.au/allocationplanning

The Act also provides for the protection of water resources (and associated wetland/ riparian land) by requiring permits for activities that interfere with the beds and banks in proclaimed rivers, surface water management areas and irrigation districts (Sections 17, 11 and 21A). Outside proclaimed areas, the powers extend to interferences for taking water from Crown-owned watercourses or wetlands with public access (Sections 11 and 21A).

The Department of Water may grant or refuse permits based on whether the application is in the public interest, ecologically sustainable, environmentally acceptable and consistent with land use planning instruments and other agency policies (Clause 7(2) of Schedule 1 and Regulation 7 Part 2 of the *Rights in Water and Irrigation Regulations 2000*).

Conditions can be made in relation to the use, management, protection and enhancement of any water resource and its ecosystem, including the wider environment around the water resource (Appendix to Schedule 1).

Obstructing or destroying watercourses is an offence (Sections 18 and 25). Under section 5E a “person taking or using water from a water resource” is required to “take all reasonable steps to minimise the degradation of the resource”. Degradation is defined in this Act as “the sensible diminishing of the quality or quantity of water” (Section 2(1)).

A direction is a written notice given under the provisions of the Act. The department (on behalf of the Minister for Water) has the power to issue a direction to any person in any part of the state, irrespective of whether they hold a licence or permit.

The *Soil and Land Conservation Act 1945*

The *Soil and Land Conservation Act 1945* (SLC Act) controls land degradation, including the drainage of saline land and applies to all agricultural and pastoral land in WA. The SLC Act is administered for the Minister for Agriculture by the Commissioner of Soil and Land Conservation through the Office of the Commissioner.

The management of drainage of saline land is a critical wetland management issue in agricultural areas affected by salinity. The use of downstream wetlands as ‘sacrificial’ wetlands that receive saline drainage from agricultural land can significantly degrade these wetlands, even those that are naturally saline.



Figure 10. Drainage of saline land is subject to the *Soil and Land Conservation Act 1945*.

The penalty is \$2,000 for individuals and up to \$10,000 for companies. Furthermore approvals often apply under other legislation. For example, drainage may involve approvals to develop, clear, take groundwater and undertake earthworks on the bed or banks of watercourses. Unauthorised actions may cause environmental harm under the *Environmental Protection Act 1986*.

A soil conservation notice (SCN) may be applied where land degradation has occurred, or is likely to occur, on a pastoral or agricultural land. ‘Land degradation’ includes salinity, erosion, flooding and the removal or deterioration of natural or introduced vegetation.

- Although drainage and groundwater pumping for salinity control are regulated under the SLC Act, the Act does not clearly define the roles of all the participants

The Soil and Land Conservation Regulations 1992 were introduced to control the drainage of saline land in WA. Regulation 5 requires landholders (owner or occupier) intending to drain or pump water from under the land surface to notify the Commissioner of Soil and Land Conservation at least 90 days before work commences. This includes draining or pumping within the same property.

The aim of the notification is to allow for an assessment of the proposed works to be carried out and to ensure that neighbouring landholders and affected public authorities are given the opportunity to comment on the proposal.

Regulation 6 states that within the Peel-Harvey catchment area, a notice of intention is required for any draining or pumping works.

It is an offence not to give notice of intent to drain when required to do so.

of these schemes. The *Policy framework for inland drainage*²⁶ defines the roles and responsibilities of drainage practitioners and other stakeholders including regulators. It also provides the principles for assessing drainage proposals.

- ▶ A publication series entitled 'Conservation practices for agricultural land' outlines best management practice standards for graded banks, grassed waterways, leveed deep drains, open deep drains and shallow relief drains. See www.agric.wa.gov.au/PC_93235.html?s=1532050204.

The Land Administration Act 1997

The *Land Administration Act 1997* (LA Act) is the key Act governing the use of pastoral leases. It is administered by the Pastoral Lands Board (through the Department of Regional Development and Lands) and applies to pastoral lessees, and has implications for wetland management on pastoral lands.

It requires that:

- pastoral lessees must use methods of best pastoral and environmental management practice
- land is not to be used for any other purpose other than pastoral except in accordance with the permit
- the lessee must maintain the indigenous pasture and other vegetation on the land
- non-indigenous pasture cannot be sown on a lease without a permit
- permits to clear or develop pastoral land cannot be approved unless the requirements under other legislation, including the Wildlife Conservation Act 1950 and Soil and Land Conservation Act 1945, have been complied with.¹



Figure 11. Pastoral areas of the state encompass many wetlands of conservation significance. The *Land Administration Act 1997* requires pastoral lessees to use methods of best pastoral and environmental management practice. Photo – L Bayley/Department of Agriculture and Food.

The *Aboriginal Heritage Act 1972*

The *Aboriginal Heritage Act 1972* (AH Act) provides for the protection of Aboriginal cultural heritage. The AH Act provides protection for all places and objects of importance to Aboriginal people in WA because of connections to Aboriginal culture. These places are referred to as 'Aboriginal sites of significance'. Many of these sites are wetlands or are near wetlands.



Figure 12. Many wetlands are designated 'Aboriginal sites of significance' under the *Aboriginal Heritage Act 1972*. This mosaic was prepared as a collaborative art project by students of Newton Moore Senior High School and the Bunbury Learning Centre in recognition of the importance of the Big Swamp environment, Bunbury. Photo – J Lawn/DEC.

The Act provides for the establishment (section 28) and operation (section 39) of the Aboriginal Cultural Material Committee, to evaluate the importance of places and objects and record and preserve information relating to them and advise the Minister of Indigenous Affairs and trustees.

In accordance with Section 18 of the Act, the Department of Indigenous Affairs (DIA) maintains a Register of Aboriginal Sites as a record of places and objects of significance to which the Act applies. Information on the register that is not culturally sensitive is available to the public. It is the duty of anyone who becomes aware of an Aboriginal site to report it to DIA. The presence of an Aboriginal site places restrictions on what can be done to the land. Anyone who wants to use land for research, development or any other cause, must investigate whether there is an Aboriginal site of significance on the land.

Under the Act it is an offence for anyone to excavate, damage, destroy, conceal or in any way alter an Aboriginal site without the Minister's permission. The AH Act protects all Aboriginal sites whether or not they are recorded on the Register of Aboriginal Sites or otherwise known to the Registrar of Aboriginal Sites, DIA or the Aboriginal Cultural Material Committee. The register operates primarily as a form of notice that places may be of Aboriginal site of significance, and indicate that a place has been assessed by the ACMC and has met the criteria for definition as an Aboriginal site, and hence the provisions of the Act will apply.

- For more information, see the Department of Indigenous Affairs website: www.dia.wa.gov.au

The Fish Resources Management Act 1994

The *Fish Resources Management Act 1994* (the FRM Act) regulates the management, utilisation and conservation of fish (which includes all aquatic organisms except reptiles, birds, mammals and amphibians) and their habitat. This includes all waters of the state and therefore includes its inland wetlands, estuaries and waterways. The Act also prohibits any person from engaging in any activity if it causes pollution or is likely to pollute the aquatic environment. The Department of Fisheries is responsible for administering this Act.

The FRM Act lists the objectives for the management and conservation of fish and their habitats and provides a number of tools for the Department of Fisheries to use when managing fish resources. These tools include subsidiary legislation established under the Act, including the Fish Resources Management Regulations 1995, management plans, notices and orders. Under this legislation, the Minister for Fisheries can declare fish habitat protection areas and can regulate or prohibit the taking of certain fish species or can regulate or restrict certain activities in a designated area.

Under the FRM Act, the Department of Fisheries is responsible for controlling the introduction and spread of introduced fish and crayfish, and regulating fishing and fish stocking of state water bodies. It maintains the noxious fish species list and operates the FISHWATCH Service, which is responsible for receiving reports of sightings of freshwater fish species (including introduced freshwater crustaceans), mass fish kills and illegal fishing activity. The FRM Act also contains controls on establishment of **aquaculture** farms.

Aquaculture: the keeping, breeding, hatching, or culturing of fish



Figure 13. The destructive, introduced eastern gambusia, *Gambusia holbrooki*, is listed as a noxious species. Photo – C Lawrence/Department of Fisheries.

- The noxious fish species list is available from www.fish.wa.gov.au/Sustainability-and-Environment/Aquatic-Biosecurity/Translocations-Moving-Live-Fish/Pages/Noxious-Banned-Fish.aspx

Regulation of aquaculture in WA

Aquaculture operations in inland and marine environments are managed under the Act through provisions in the Fish Resources Management Regulations 1995 which are established under the Act.

Due to the intensive nature of farms, the need for clean water and high output of phosphorus and nitrogen, they have the potential to cause significant environmental harm. For this reason, there are various restrictions on starting and operating an aquaculture farm. A person must apply for an aquaculture licence to engage in aquaculture, sell fish or take fish for the purpose of sale from waters on private land or to receive or purchase fish taken from private land for the purpose of sale. Exemptions do apply such as in an instance where fish are kept for display or ornamental purposes or fish are kept at a restaurant for the purpose of serving it as a meal to the public. Depending on the location and scale of a proposal, the Environmental Protection Authority may also need to assess it. Licensees must develop Management and Environmental Monitoring Plans (MEMPs) in support of their licences (with the exception of marron licences). The penalty for engaging in aquaculture without a licence is a maximum fine of up to \$10,000 for an individual and \$20,000 for a body corporate.²⁷

Under the FRM Act, Aboriginal people are not required to hold a recreational fishing licence provided that they are fishing in accordance with continuing Aboriginal tradition and that the fish taken are for the individual or his or her family and not for a commercial purpose.

The Western Australian Government has initiated reform of fisheries legislation, and advised of the commencement of work on a new Act of Parliament to replace the *Fish Resources Management Act 1994*.²⁸

NATIONAL LEGISLATION

The Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legal framework to protect and manage nationally and internationally listed species, critical habitats, and heritage places, defined in the Act as matters of national environmental significance (NES). The Act is administered by the Australian Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) and the Australian Minister for Environment is the decision-making authority.

There are seven matters of national environmental significance that are protected under the EPBC Act:

- World Heritage properties
- National Heritage places
- Wetlands of international importance
- Listed threatened species and ecological communities
- Migratory species protected under international agreements
- Commonwealth marine areas
- Nuclear actions (including uranium mines)

In order to understand how the *Environment Protection and Biodiversity Conservation Act 1999* can benefit wetland conservation, the matters of national environmental that relate most specifically to wetlands conservation are outlined below.

Wetlands of international importance (Ramsar wetlands)

The Convention on Wetlands of International Importance Especially as Waterfowl Habitat is an international treaty that focuses on the conservation of internationally important wetlands. The Convention was signed in 1971 at a meeting in the town of Ramsar, in Iran – hence the Convention is better known as the ‘Ramsar Convention’.

The EPBC Act enhances the management and protection of Australia’s Ramsar wetlands through recognition of these sites as matters of national environmental significance. A ‘declared Ramsar wetland’ is an area that has been designated under Article 2 of the Ramsar Convention or declared by the Australian Minister for Environment to be a Ramsar wetland under the EPBC Act.



Figure 14. Lake Argyle is a declared Ramsar wetland. Photo – A Shanahan.

As a matter of national environmental significance, an action that has, will have, or is likely to have, a significant impact on the ecological character of a Ramsar wetland must be referred to the Minister and undergo an environmental assessment and approval process. An action includes a project, development, undertaking, activity, or an alteration of any of those things.

The EPBC Act provides the following definition for 'significant impact':

an action that has, will have or is likely to result in:

- (i) areas of the wetland being destroyed or substantially modified
- (ii) substantial and measurable change in the hydrological regime of the wetland (e.g. a substantial change to the volume, timing, duration and frequency of water flows to the wetland)
- (iii) seriously affected the habitat of native species dependant upon the wetland or
- (iv) a substantial and measurable change in the salinity, nutrient or pollutant levels of the wetland.

Failure to refer a proposal which has a significant impact is an offence, and is liable to a maximum civil penalty of \$550,000 for an individual and \$5.5 million for a corporation.

The EPBC Act also establishes a process for identifying Ramsar wetlands and encourages best practice management through nationally consistent management principles. The purpose of management is to (i) describe and maintain the ecological character of the wetland and (ii) to develop and implement planning that promotes conservation of the wetland and wise and sustainable use of the wetland for the benefit of humanity in a way that is compatible with the natural properties of the ecosystem.

These principles have been set out in regulations and cover matters relevant to the preparation of management plans, environment assessment of actions that may affect the site, and the community consultation process.

A management plan for a Ramsar wetland cannot be endorsed unless it is in accordance with these principles. The principles may also be used for the management of any wetland throughout Australia.

- For information on roles and responsibilities for nominating, listing and managing Ramsar wetlands, see the topic 'Roles and responsibilities' in Chapter 5.

Listed threatened species and ecological communities

The EPBC Act provides for the listing of nationally threatened native species and ecological communities, native migratory species and marine species.

The EPBC Act protects Australia's native species and ecological communities by providing for:

- identification and listing of species and ecological communities as threatened
- development of conservation advice and recovery plans for listed species and ecological communities
- development of a register of critical habitat
- recognition of key threatening processes
- where appropriate, reducing the impacts of these processes through threat abatement plans.

Any person may nominate a native species, ecological community, or threatening process for listing under any of the categories specified in the EPBC Act. An invitation to nominate is extended each year by the Minister ahead of a new assessment cycle. Nominations submitted within the advertised invitation period and that satisfy the EPBC regulations are forwarded to the Commonwealth Threatened Species Scientific Committee, who prepare a proposed priority assessment list of nominations for consideration by the Minister.

As matters of national environmental significance, any action that is likely to have a significant impact on listed threatened species and ecological communities under the EPBC Act must be referred to the Minister and undergo an environmental assessment and approval process.

Under the EPBC Act, activities in Commonwealth areas that may result in killing, injuring, taking, trading, keeping, or moving a member of a listed threatened species or ecological community, a member of a listed migratory species or a member of a listed marine species are illegal without a permit.

Most State-listed threatened species are also listed as nationally threatened under the EPBC Act. The State and Commonwealth Governments are working cooperatively to better align the State and Commonwealth threatened species lists to reduce confusion when dealing with both legislative processes.

Many of the ecological communities endorsed as TECs by the WA Minister for Environment are also listed as nationally TECs, such as those included in the listing of claypans of the Swan Coastal Plain, including Drummond claypan (Figure 15 and 16).



Figure 15. Drummond claypan, one of the claypans of the Swan Coastal Plain listed as critically endangered. Photo – J Lawn/DEC.



Figure 16. Herbs in Drummond claypan, near Toodyay, in spring, prior to the claypan drying out. Photo – M Kruger/DEC.

- ▶ DSEWCaP's 'Threatened species and ecological communities' webpage: www.environment.gov.au/biodiversity/threatened/index.html
- ▶ To find out which species and ecological communities are listed as threatened under the EPBC Act, go to the 'EPBC Act lists' webpage of the DSEWPC website: www.environment.gov.au/epbc/about/lists.html#species

Listed migratory species

Migratory species are those animals that migrate to Australia and its external territories, or pass through or over Australian waters during their annual migrations. Examples of migratory species are species of birds (such as albatrosses and petrels), mammals (such as whales) or reptiles (such as marine turtles).

Section 209 of the EPBC Act provides for the listing of those migratory species that are listed in the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention), China-Australia Migratory Bird Agreement (CAMBA), Japan-Australia Migratory Bird Agreement (JAMBA) and Republic of Korea-Australia Migratory Bird Agreement (RoKAMBA).

All species on the list of migratory species are matters of national environmental significance under the EPBC Act. An action will require approval if the action has, will have, or is likely to have, a significant impact on a listed migratory species. The action must be referred to the Minister and undergo an environmental assessment and approval process. Note that some migratory species are also listed as threatened species.

- ▶ The migratory species list is available from the 'EPBC migratory species lists' webpage of the DSEWPC website: www.environment.gov.au/cgi-bin/sprat/public/publicshowmigratory.pl

POLICIES FOR WETLAND CONSERVATION

The term 'policy' is often defined as a goal or position, an official strategy to achieve an objective, a framework to manage a resource, or guidelines to assist stakeholders. The policies considered below are all government policies.

Environmental policies can be statutory or non-statutory. Administrative policies and guidelines are non-statutory instruments that state how particular laws are to be enforced and administered in practice. For instance, the EPA publishes administrative policies to establish environmental values for particular environments, provide guidance on specific matters such as threatened species and environmental offsets, and publish the position of the EPA on specific aspects of environmental protection, such as wetland protection. Non-statutory policies include EPA guidelines.

Statutory policies are those which are legally binding and enforceable by law. Examples are state planning policies (SPPs) and environmental protection policies (EPPs).

This section outlines key policies for wetland management and protection in WA as outlined in Table 2.

Wetlands Conservation Policy for Western Australia

The *Wetlands Conservation Policy for Western Australia* (Government of Western Australia 1997) is the primary policy for wetland conservation in WA. It outlines the state government's commitment to the goal of identifying, maintaining and managing wetland resources in the state, including the full range of wetland values. It also facilitates coordination across state government in matters affecting wetlands and wetland conservation.

The Wetlands Coordinating Committee was established in 1998 by the then Minister for Environment to oversee the implementation of the policy. The committee aims to implement the policy via a cooperative approach to wetland conservation involving, in particular, all levels of government, as well as the community, local groups and the private sector.

The scope of the policy applies to the full range of wetland types covered by the Ramsar definition; however, the strategy for implementation applies principally to those types of environments that are traditionally regarded as wetlands, and does not cover waterways, estuaries, floodplains or marine environments.

The policy has two main components; a statement of policy and a strategy for implementation. The five primary objectives in the statement of policy provide a framework for actions for implementation listed in the strategy.

The five primary objectives of the policy are:

1. To prevent the further loss or degradation of valuable wetlands and wetland types, and promote wetland conservation, creation and restoration.
2. To include viable representatives of all major wetland types and key wildlife habitats and associated flora and fauna within a statewide network of appropriately located and managed conservation reserves which ensure the continued survival of species, ecosystems and ecological functions.
3. To maintain, in viable wild populations, the species and genetic diversity of wetland-dependent flora and fauna.
4. To maintain the abundance of waterbird populations, particularly migratory species.
5. To greatly increase community awareness and appreciation of the many values of wetlands, and the importance of sound management of the wetlands and their catchments in the maintenance of those values.

The strategy for implementation outlines specific priority actions and the state government agency with primary (but not exclusive) responsibility for each action.

The Wetlands Coordinating Committee has overseen a review of the policy with a view to updating it.

- ▶ Web link: www.dec.wa.gov.au/management-and-protection/wetlands/publications/policies.html
- ▶ Web link to Wetlands Coordinating Committee: www.dec.wa.gov.au/management-and-protection/wetlands/wetlands-coordinating-committee.html
- ▶ For more information on the Wetlands Coordinating Committee, see the topic 'Roles and responsibilities' in Chapter 5.

Draft Framework for mapping, classification and evaluation of wetlands in Western Australia

This draft framework outlines a statewide process for the mapping, classification and evaluation of wetlands in WA. Specifically the framework aims to provide the following outcomes:

- coordination and consistency across the state in the approach to wetland mapping, classification and evaluation in WA
- greater certainty that data is collected using valid methodologies

- avoidance of repetition in project planning
- assist establishment of achievable aims in terms of scope and detail
- a mechanism to ensure that data is made publicly available
- a mechanism to endorse the results at a state level

Each stage of the mapping, classification and evaluation process is discussed independently within the framework, giving guidance on the important aspects of each stage for consideration.

- The *Draft Framework for mapping, classification and evaluation of wetlands in Western Australia*²⁹ is available on request from wetlands@dec.wa.gov.au; and when finalised will be available from the 'Wetlands' webpage of DEC website: www.dec.wa.gov.au/wetlands

Draft Guideline for the determination of wetland buffer requirements

This document provides guidance on determining an appropriate buffer distance between a wetland and a land use located in the vicinity of a wetland.

The objectives of the guideline are to:

- provide a clear, concise and repeatable method to determine a **wetland buffer**
- provide guidance on acceptable buffer distances that will ensure a wetland's values will be maintained, if not enhanced
- provide guidance on acceptable management and use of the wetland buffer area which will complement wetland conservation and protection and buffers
- provide guidance on the recommended contents in the wetland buffer report.

In essence, the guideline takes users through a logical step by step process to apply the guideline by assessing the values of the wetland, identifying the threats from the surrounding land use and determining the need and extent of a wetland buffer including management outcomes.

- Once finalised, the *Guideline for the determination of wetland buffer requirements* will be available from the 'Wetlands' webpage of DEC website: www.dec.wa.gov.au/wetlands

Guidelines checklist for preparing a wetland management plan

These guidelines are for use when a wetland management plan is required to be prepared to the satisfaction of DEC as a condition of development, subdivision or scheme amendment approval or similar.

The guidelines provide a checklist of information that should be provided in the plan.

- See: www.dec.wa.gov.au/management-and-protection/wetlands/publications.html

WA Environmental Offsets Policy

The Western Australian Government's policy position on **offsets** is outlined in this document. It serves as an overarching framework to underpin environmental offset

Wetland buffer: an interface adjoining a wetland that is designated to assist in protecting the wetland's natural values from the threats posed by the surrounding land use(s)

assessment and decision-making in Western Australia, with associated guidelines and an environmental offset register to be developed.

The policy defines direct and indirect offsets, and principles for the use of offsets. It states that the use of environmental offsets will not replace proper on-site environmental practices, such as avoidance and mitigation. It seeks to ensure that environmental offsets are applied in specified circumstances in a transparent manner to engender certainty and predictability, while acknowledging that there are some environmental values that are not readily replaceable.

- The direct web link to the *WA Environmental Offsets Policy* is www.epa.wa.gov.au/EPADocLib/WAEnvOffsetsPolicy-270911.pdf

Environmental offset: an offsite action or actions to address significant residual environmental impacts of a development or activity³⁰

Environmental protection policies (EPPs)

As described in the 'Legislation for wetland conservation' section, environmental protection policies are prepared by the EPA under Part III of the *Environmental Protection Act 1986*. Once ratified by Parliament and published in the Western Australian Government Gazette, EPPs have the force of law.

- EPPs are available from the EPPs webpage³¹ of the EPA website www.epa.wa.gov.au
- Associated digital mapping can be downloaded from the 'Spatial data' webpage³² of the EPA website.

Environmental Protection (Swan Coastal Plain Lakes) Policy 1992

Commonly referred to as the 'Lakes EPP', the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992* prohibits the filling, excavating, mining, discharge or disposal of effluent or drainage into or out of an identified wetland on the Swan Coastal Plain, unless authorised under the EP Act or any other written law. Typically, authorisation involves referral of the proposal to the EPA for environmental impact assessment.³



Figure 17. Lake Gwelup, in the northern Perth suburb of Gwelup, is one of many wetlands protected under the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992*.

'Identified wetlands' protected by the Lakes EPP are those that held 1,000 square metres or more of water on December 1, 1991. These are identified on the Department of Land Administration Miscellaneous Plan No. 1815. The map can now also be viewed in digital format (see below). The method of identifying which areas on the Swan Coastal Plain were to be subject to this policy was for the purpose of identifying administrative boundaries. Its purpose was not to use scientific methods for identifying wetland boundaries. This is an important distinction that explains why there are two wetland mapping datasets for the Swan Coastal Plain; one is administrative, identifying areas of inundation at a given date, while the other identifies the full spatial extent of a full range of wetland types. There is no process by which wetlands can be removed from Miscellaneous Plan No. 1815 or from being identified for protection by this policy.

Any prohibited activity, such as filling or excavation of an identified wetland, is required to be referred to the EPA for environmental impact assessment. Upon referral, the EPA will assess the values of the wetland and the potential impact of the proposal.

If the EPA considers that there is no significant environmental impact caused by the activity, due to the limited remaining values of the wetland or management of the activity, the EPA is unlikely to require a formal assessment.

DEC is responsible for investigating potential breaches of the Lakes EPP. A fine of \$62,500 plus \$12,500 per day for a continuing offence applies to individuals, and \$125,000 plus \$25,000 per day for a continuing offence applies to a body corporate.

- Miscellaneous Plan No. 1815 can be viewed at DEC's Perth library. The digital mapping of listed wetlands can be downloaded from the 'Spatial data' webpage³¹ of the EPA website www.epa.wa.gov.au



The draft Wetlands EPP – proposed but not enacted

As required under section 36 of the EP Act, a review of the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992* was initiated by the EPA in 1999. The EPA proposed a draft revised policy, the *Environmental Protection (Swan Coastal Plain Wetlands) Policy 2004*, widely referred to as the 'draft Wetlands EPP'. The draft Wetlands EPP proposed to prohibit a range of activities in and close to all high value wetlands on the Swan Coastal Plain. It extended its scope from those that are permanently or seasonally inundated to those wetland types that are only waterlogged. After consideration of public submissions and the advice of an independent regulatory panel in 2006, the Minister for the Environment announced to Parliament his decision not to gazette the draft revised policy and in accordance with section 31(e) of the Act published the reasons for this decision in the Government Gazette (Refusal to approve draft Environmental Protection Policy (Swan Coastal Plain Wetlands) Order 2006; No. 193, 21 November 2006). The reason for the Minister's decision was essentially that the existing mechanisms to protect wetlands, including the Environmental Protection (Clearing of Native Vegetation) Regulations 2004, were adequate, and an additional statutory mechanism was not warranted. Accordingly, the Lakes EPP remains in force.

Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998

The *Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998* (herein 'South West Wetlands EPP') protects wetlands registered under the policy from further degradation by such damaging human activities as filling, excavating, discharging of effluent, draining and damaging or clearing fringing native vegetation. It also promotes the rehabilitation of wetlands in the south west agricultural zone of the State. This area is, broadly speaking, from north of Geraldton, to east of Merredin and east Esperance.

Wetlands may be nominated for registration under the policy if they are on Crown land or on private land where landowner consent has been given. Currently there are only two wetlands on the Register of Protected Wetlands: Lake Monjingu in the Shire of Esperance and Koojeda Swamp in the Shire of Northam.³³

The EPA commenced a review of the policy in 2005, in accordance with the statutory requirement that EPPs be reviewed after seven years of operation (section 36 of the EP Act). The EPA published a report entitled *Review of the Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998*¹³ and invited submissions on this report. The EPA acknowledged that complex pressures such as salinity and altered catchment water balances are outside the scope of the policy, with many of the pressures impacting wetlands not able to be prevented through the use of a single legislative instrument such as the South West Wetlands EPP.

The EPA is responsible for preparing a revised draft policy and recommendations to be submitted to the Minister for Environment for consideration. In the interim, the existing policy remains in force.

Environmental Protection (Western Swamp Tortoise Habitat) Policy 2011

The western swamp tortoise (*Pseudemys umbrina*) (Figure 18) is the most endangered tortoise/turtle species on Earth. It is listed under the *Wildlife Conservation Act 1950*, the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* and the United Nations Convention on International Trade of Endangered Species (CITES) as a critically endangered species.



Figure 18. Adult male *Pseudemys umbrina* at Ellen Brook Nature Reserve. Photo - G Kuchling.

The purpose of the Western Swamp Tortoise Habitat EPP is to protect habitat suitable for the long-term survival of the wild populations of the western swamp tortoise. It designates a policy area encompassing the known wild habitat of the tortoise (Twin Swamps Nature Reserve, Bullsbrook and Ellen Brook Nature Reserve, Upper Swan and surrounding areas in the City of Swan, north-east of Perth on the Swan Coastal Plain). The EPP outlines a range of decision or actions taken under various Acts which must have regard to the policy, and a range of activities that are considered may degrade the tortoise habitat, including the abstraction of groundwater, the use of fertilisers and pesticides, waste disposal, mining, clearing and lighting unauthorised fires. The EPP outlines a program of protection for landowners and local and state government to implement.

This policy replaces the *Environmental Protection (Western Swamp Tortoise Habitat) Policy 2002*. The policy should be read in conjunction with the environmental assessment guideline *Guidance Statement No. 7 Protection of the Western Swamp Tortoise Habitat, Upper Swan/Bullsbrook* (described below).

Environmental Protection Authority environmental protection bulletins

EPA environmental protection bulletins (formerly position statements) are published as a means of informing the public about the EPA's views on matters of environmental importance and to define important environmental values and functions. They are not statutory documents.

- EPA environmental protection bulletins are available from the EPA website: www.epa.wa.gov.au

Two environmental protection bulletins are considered most specific and/or pertinent to wetland protection and management:

- Position Statement No. 4 *Environmental Protection of Wetlands*
- Position Statement No. 9 *Environmental Offsets*

Position Statement No. 4 Environmental Protection of Wetlands

Position Statement No. 4 presents the EPA's principles and overarching goals for wetlands and the aspects of wetland protection that are considered important in guiding decisions and advising government.

It lists significant environmental values and functions of wetlands, including primary production, recreational and landscape amenity, hydrological balance, water quality protection and wildlife habitat, and recognises wetlands as being among the most biologically productive and diverse habitats in the State.

It states that the EPA's overarching goals for wetlands are:

- to protect the environmental values and functions of wetlands in Western Australia;
- to protect, sustain and, where possible, restore the biological diversity of wetland habitats in Western Australia;
- to protect the environmental quality of the wetland ecosystems in Western Australia through sound management in accordance with the concept of 'wise use', as described in the Ramsar Convention, and ecologically sustainable development principles, regardless of land use or activity; and
- to have as an aspirational goal, no net loss of wetland values and functions.

Position Statement No. 9 Environmental Offsets

Note: the EPA has stated that Position Statement No. 9 is being updated.

Position Statement No. 9 establishes the EPA's policy on emissions and ecological offsets. The focus of this position statement is those proposals that are deemed to pose significant adverse impacts to ecosystems and or contribute emissions to the environment.

The EPA policy position is that environmental offsets should be used with an aspirational goal of achieving a 'net environmental benefit'. This position recognises that the environment has been significantly compromised in the past and that halting and reversing the decline of the environment is now a priority.

Achieving a net environmental benefit means that each offset proposal should address **direct offsets** and **contributing offsets** to meet the following offset principles:

- environmental offsets should only be considered after all other reasonable attempts to mitigate adverse impacts have been exhausted
- an environmental offset package should address both direct offsets and contributing offsets
- environmental offsets should ideally be 'like for like or better'
- positive environmental offset ratios should apply where risk of failure is apparent
- environmental offsets must entail a robust and consistent assessment process
- environmental offsets must meet all statutory requirements
- environmental offsets must be clearly defined, transparent and enforceable
- environmental offsets must ensure a long lasting benefit.

Position Statement No. 9 also establishes **critical environmental assets**. These represent the most important environmental assets in the state that must be fully protected and conserved. The position statement establishes the EPA's presumption against recommending approval for proposals that are likely to have significant adverse impacts to 'critical assets'. The EPA does not consider it appropriate to validate or endorse the use of environmental offsets where projects are predicted to have significant adverse impacts to critical assets. Many wetlands are identified as critical assets:

- Ramsar wetlands core conservation areas
- wetlands listed in *A Directory of Important Wetlands in Australia*, 3rd edition³⁴ and more recent additions as contained in the *Australian Wetlands Database*³⁵
- environmental protection policy (EPP) wetlands
- conservation category wetlands identified in the *Geomorphic Wetlands Swan Coastal Plain* dataset^{36,3} (see also EPA 2008³)

Many wetlands also support critical assets such as threatened ecological communities, declared rare flora and threatened fauna.

Direct offsets: activities which counterbalance the environmental impact of a proposal and are in addition to normal environmental management requirements. This includes restoration (offsite), rehabilitation (offsite), re-establishment, sequestration and acquisition of other land/s under threat for inclusion into conservation estate.

Contributing offsets: complementary activities which, together with direct offsets, meet the offset principles. These include education, research, removal of threats, and or contribution to an approved credit trading scheme or trust fund.

Environmental Protection Authority environmental assessment guidelines statements

Environmental assessment guidelines (formerly guidance statements) are developed by the Environmental Protection Authority specifically to assist proponents, responsible authorities, consultants and the public to achieve environmentally acceptable outcomes. In particular, guidance statements aim to inform stakeholders about aspects of the environmental impact assessment process, views of the EPA and the minimum requirement for environmental management that the EPA would expect to be met when a proposal is considered during the process. Proponents are encouraged to do better than the minimum.

- EPA environmental assessment guidelines are available from the EPA website: www.epa.wa.gov.au/Policies_guidelines/EAGs/guidance/Pages/ReportPages.aspx

Five environmental assessment guidelines are considered most specific and/or pertinent to wetland protection and management:

- Guidance Statement No 7 *Protection of the Western Swamp Tortoise Habitat, Upper Swan/Bullsbrook*
- Guidance Statement No 10 *Levels of assessment for proposals affecting natural areas within the System 6 region and the Swan Coastal Plain portion of the System 1 region*
- Guidance Statement No 19 *Environmental offsets*
- Guidance Statement No 28 *Protection of Lake Clifton catchment*
- Guidance Statement No 33 *Environmental guidance for planning and development*
- Guidance Statement No 40 *Management of mosquitoes by land developers*

Guidance Statement No. 7 Protection of the Western Swamp Tortoise Habitat, Upper Swan/Bullsbrook

The purpose of guidance statement no. 7 is to protect the habitat of the critically endangered western swamp tortoise (*Pseudemydura umbrina*) in the Ellen Brook Nature Reserve, Bullsbrook and the Twin Swamps Nature Reserve, Upper Swan (managed by DEC). These are the only two areas where populations of the western swamp tortoise have been continuously recorded since the 1960s. The policy area is as defined in the *Environmental Protection (Western Swamp Tortoise Habitat) Policy 2011* (the western swamp tortoise habitat EPP), which contains the surface and groundwater catchment around the Twin Swamps Nature Reserve and Ellen Brook Nature Reserve. These catchments are poorly understood and therefore application of the precautionary principle prevails in defining the boundary of the policy area and in managing the habitat for the tortoise.

This guidance statement identifies activities and development that are incompatible near the tortoise habitat, such as intensive animal industries, subdivision and vegetation clearing. The guidance statement provides guidance on the environmental impact assessment of proposals that may impact on the tortoise habitat areas.

- Direct link: www.epa.wa.gov.au/EPADocLib/2138_GS7.pdf

Critical environmental assets: the most important environmental assets in the state that should be protected and conserved

Guidance Statement No. 10 Level of assessment for proposals affecting natural areas within the System 6 region and the Swan Coastal Plain portion of the System 1 region

The purpose of guidance statement no. 10 is to address the environmental impact assessment of proposals, planning schemes and scheme amendments involving the clearing of, or other significant impacts to, natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 area (Figure 19).

Specifically, the intended purpose of this guidance statement is to ensure that proponents or responsible authorities planning and designing schemes and proposals potentially impacting on bushland protected by *Bush Forever* and other regionally significant natural areas are guided on the likely manner in which the EPA will assess their schemes and proposals. It aims to ensure developments are compatible with the identified conservation values of these areas.

Wetlands identified as other regionally significant areas under this guidance statement include wetlands listed as nationally significant in *A Directory of Important Wetlands in Australia*^{34,35} and conservation category wetlands in the *Geomorphic Wetlands Swan Coastal Plain* dataset.³⁶

► Direct link: www.epa.wa.gov.au/EPADocLib/1015_GS10.pdf

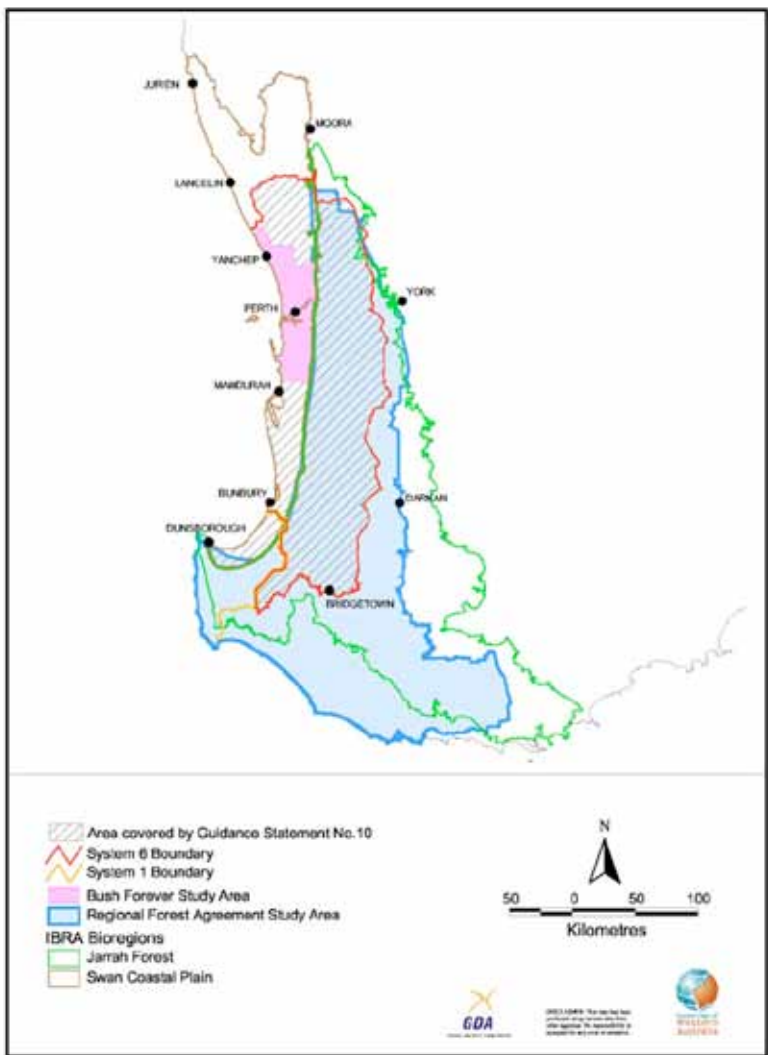


Figure 19. Area covered by Guidance Statement No. 10 and areas referred to in the guidance statement.

Guidance Statement No. 19 Environmental offsets

Guidance Statement No. 19 specifically addresses environmental offsets for proposals or schemes subject to environmental impact assessment that impact on biodiversity. It should be read in conjunction with Position Statement No. 9 *Environmental Offsets* (EPA 2006). The guidance statement was developed to augment the position statement in order to clarify several issues relating to its interpretation and implementation.

This guidance statement provides clarification of these issues, particularly in relation to the technical application of biodiversity offsets and the presentation of offsets packages to the EPA. Generally, it outlines the EPA's expectations and requirement for environmental offsets associated with development proposals and planning schemes subject to environmental impact assessment. It also encourages proponents and responsible authorities to demonstrate that requirements in this guidance statement are incorporated into proposals and schemes, in a way that ensures that they are enforceable and auditable.

► Direct link: www.epa.wa.gov.au/EPADocLib/2783_GS19OffsetsBiodiv18808.pdf

Guidance Statement No. 28 Protection of the Lake Clifton catchment

The purpose of this guidance statement is to describe the position of the EPA in relation to protection of Lake Clifton, identified by the EPA as one of the most significant wetlands in Western Australia. It describes environmental criteria established by the EPA as a basis for managing new land uses and changes to certain existing land uses on private land within the catchment of Lake Clifton.

Environmental criteria described in the guidance statement focus on maintaining the ecological integrity of Lake Clifton to support its internationally significant, threatened ecological community of **thrombolites** (Figure 20). In particular the guidance statement addresses the need to maintain water balance in the Lake Clifton catchment, and manage nutrient loads and developments in order to protect the thrombolites, wetland vegetation and the buffer of Lake Clifton.

► Direct link: www.epa.wa.gov.au/EPADocLib/1023_GS28.pdf



Figure 20. The ancient thrombolites of Lake Clifton. Photo – K Wilson.

Thrombolite: a type of microbial structure formed by microbial communities precipitating calcium carbonate

Guidance Statement No. 33 Environmental Guidance for Planning and Development

Chapter B4 of EPA Guidance Statement No. 33 is a key reference for information on the management and protection of wetlands via WA's land use planning and development processes.

It provides an extensive list of wetlands that, for the purposes of environmental impact assessment, the EPA considers to be of high conservation significance and to require a high level of protection. This list is available on page 4 of Chapter B4. A proposal that is likely, if implemented, to have a significant impact on any of these wetlands is likely to require referral to the EPA for environmental impact assessment under Part IV of the EP Act. Examples of significant impacts include: clearing of native vegetation, mining, filling, excavating, draining or disposal of waste, allowing emissions into the wetland, and activities located near the wetland without the provision of an appropriate setback or buffer, such as clearing or groundwater abstraction.

Other chapters outline how other environmental factors, such as water in the landscape more generally, should be managed via the land use planning system.

It should be noted that some information in the guidance statement is now out of date. In particular, the information regarding the levels of assessment that EPA may assign to a proposal is no longer current, with the previous five levels superceded by two levels. Furthermore a range of appeal rights previously available within the environmental impact assessment process have been removed.

► Direct link: www.epa.wa.gov.au/EPADocLib/2717_GS33.pdf

Guidance Statement No. 40 Management of Mosquitoes by Land Developers

Guidance no. 40 provides information on what the EPA will consider when assessing proposals where mosquito management is a relevant environmental factor in an environmental impact assessment. Importantly, it identifies that responsibility for managing mosquitoes lies with land developers as well as local government authorities.

Physical, chemical and biological methods of controlling nuisance mosquito populations can have significant environmental impacts on wetlands. In this guidance statement the EPA establishes its expectation that mosquito control measures should maintain healthy wetland ecosystems and minimise the physical alteration of wetlands. The use of water sensitive urban design principles is also encouraged to ensure appropriate management of urban stormwater.

► Direct link: www.epa.wa.gov.au/EPADocLib/1025_GS40.pdf

State Planning Policies

The Western Australian Planning Commission develops state planning policies in accordance with the statutory procedures set out under Part 3 of the *Planning and Development Act 2005*. These are statutory instruments concerned with broad planning controls and/or specific matters, which may be the subject of a local planning scheme or relate to a specific region or area of the state. Some are titled 'statements of planning policy' while others are a 'state planning policy', though all are generically referred to as 'state planning policies' (or SPPs for short) and identified as such in this topic. There are a number that relate specifically to wetlands or are pertinent to wetland protection and management:

- *State Planning Policy 2 Environment and Natural Resources Policy* (2003)
 - *State Planning Policy 2.1 Peel-Harvey Coastal Plain Catchment* (1992)
 - *State Planning Policy 2.2 Gnangara Groundwater Protection* (2005)
 - *State Planning Policy 2.3 Jandakot Groundwater Protection* (1998)
 - *State Planning Policy 2.8 Bushland Policy for the Perth Metropolitan Region* (2005)
 - *State Planning Policy 2.9 Water Resources* (2006)
- State planning policies are available from www.planning.wa.gov.au/5132.asp

State Planning Policy 2 Environment and Natural Resources Policy

SPP 2 is a broad, overarching state planning policy that addresses environmental protection and the use of the state's natural resources.

In regards to wetlands, it identifies areas of high biodiversity and/or conservation value, including the following wetlands:

- Ramsar wetlands and wetlands recognised as habitat for migratory species
- nationally significant wetlands listed in the *Directory of Important Wetlands in Australia*^{34,35}
- wetlands identified in any relevant Environmental Protection Policy (EPP), such as the Swan Coastal Plain Lakes EPP and the South-West Agricultural Zone EPP

SPP 2 states that planning strategies, schemes and decision-making should protect these areas via the use of protection mechanisms; avoiding potential impacts of land use or development; the establishment of a comprehensive, adequate and representative reserve system; suitable ecological linkages and habitat corridors; use of planning controls and conservation covenants and management plans.

SPP 2 also recognises that the careful management of water resources, both in terms of quantity and quality, is essential to support natural ecosystems. With respect to wetlands it states that planning strategies, schemes and decision-making should consider mechanisms to protect, manage, conserve and enhance these groups of wetlands; ensure maintenance of water quality and quantity for the environment; encourage water sensitive design in the urban environment to protect wetlands; ensure adequate setbacks (buffers) to maintain and improve their ecological function; and consider the risks associated with nuisance or disease vector insects (midge and mosquitoes) and manage potential conflict with amenity, health and environmental values.

- Direct link: www.planning.wa.gov.au/publications/1161.asp

State Planning Policy 2.1 Peel-Harvey Coastal Plain Catchment

SPP 2.1 establishes appropriate planning controls to prevent land use changes within the catchment of the Peel-Harvey estuarine system that are likely to cause environmental damage to the estuary. The catchment of the estuary contains extensive areas of wetland, including many significant wetlands. A key purpose of this policy is to ensure that landowners seek development approval prior to committing their investments. The policy does not require a new series of approvals for existing developments. This policy has implications for wetlands in the catchment of the estuary, through restrictions placed on rezoning of land for urban processes, management of intensive agriculture to reduce or eliminate nutrient export from the land, restrictions placed on vegetation clearing and keeping of livestock and specific drainage and sewage requirements for specific development proposals.

► Direct link: www.planning.wa.gov.au/publications/1162.asp

State Planning Policy 2.2 Gnangara Groundwater Protection

The purpose of SPP 2.2 is to prevent, control and manage development and land use changes in Gnangara, Wanneroo and Mirrabooka that are likely to cause detrimental effects to the groundwater resources in the policy area. The policy area extends into the Cities of Wanneroo and Swan and the Shires of Gingin and Chittering. The policy applies to all land use activities on zoned and reserved land, recreational land uses, and public areas in the policy area. SPP 2.2 facilitates the identification and zoning/reservation of land for groundwater protection purposes.

The main objectives of the policy are to:

- ensure that all land use changes in the policy area are compatible with the long-term protection and management of groundwater quality and quantity for public drinking water supply. This is assisted by the identification of priority areas for source protection and the activities deemed acceptable within each of these priority areas
- protect groundwater quality and quantity in order to maintain the dependent ecosystems, ecological values and integrity of wetlands and native vegetation, in accordance with recognised conservation values
- protect and/or enhance the quality and quantity of groundwater, in accordance with accepted water quality guidelines and standards for various uses.

► Direct link: www.planning.wa.gov.au/publications/1164.asp

State Planning Policy 2.3 Jandakot Groundwater Protection

The purpose of SPP 2.3 is to ensure development over the Jandakot groundwater mound is compatible with long-term use of groundwater for human consumption. Under SPP 2.3 land use changes within the policy area that are likely to cause detrimental effects to the groundwater are brought under planning control and prevented or managed. The policy area extends into the following local governments: the cities of Armadale, Canning, Cockburn, Gosnells; the Town of Kwinana and the Shire of Serpentine-Jarrahdale.

The objectives of the policy are to:

- ensure that all land use changes in the policy area are compatible with the long-term protection and management of groundwater for public supply and maintenance of ecosystems
- to prevent land uses likely to result in contamination of groundwater through nutrient or contamination export
- to balance environmental protection with the economic viability of the existing land uses
- to maintain or increase natural vegetation cover over the policy area and
- to protect groundwater quality and quantity in the policy area in order to maintain the ecological integrity of important wetlands hydraulically connected to that groundwater, including wetlands outside the policy area.

► Direct link: www.planning.wa.gov.au/publications/1165.asp

State Planning Policy 2.8 Bushland Policy for the Perth Metropolitan Region

SPP 2.8 provides a statutory policy and implementation framework to ensure bushland protection and management issues in the Perth Metropolitan Region (PMR) are appropriately addressed and integrated with broader land use planning and decision-making, to secure long-term protection of biodiversity and associated environmental values.

It addresses the protection and management of the 51,200 hectares of regionally significant bushland contained within 287 Bush Forever sites identified in *Bush Forever*.^{37,38} Many of these sites contain significant wetlands. SPP 2.8 outlines policy measures which are to apply to any proposal or decision-making that is likely to have an adverse impact on regionally significant bushland within Bush Forever sites.

It also addresses bushland (inclusive of wetlands) with regional values that were not designated as Bush Forever sites due to wider social and economic considerations. It supports the preparation of local bushland/biodiversity protection strategies by all local governments within the Perth Metropolitan Region, which in turn, should inform local and regional planning strategies.

SPP 2.8 states that proposals or decision-making should support a general presumption against clearing of bushland or other degrading activities in natural areas that support values, including significant wetlands including conservation category wetlands, wetlands protected under the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992*; and their buffers.

► Direct link: www.planning.wa.gov.au/publications/1170.asp

State Planning Policy 2.9 Water Resources

The purpose of SPP 2.9 is to ensure water resources are conserved and their quality protected where possible through the land use planning system.

The objectives of SPP 2.9 are to:

- protect, conserve and enhance water resources that are identified as having significant economic, social, cultural and/or environmental values
- assist in ensuring the availability of suitable water resources to maintain essential requirements for human and all other biological life with attention to maintaining or improving the quality and quantity of water resources
- promote and assist in the management and sustainable use of water resources.

In regards to wetlands, SPP 2.9 specifically states that planning should contribute to their protection and wise management by ensuring local and regional planning strategies, structure plans, schemes, subdivisions, strata subdivision and development applications:

- protect, manage, conserve and enhance the environmental attributes, functions and values of significant wetlands, such as Ramsar wetlands, conservation category wetlands and wetlands identified in any relevant environmental protection policy
- manage, conserve and, where possible, restore the environmental attributes, functions and values of resource enhancement wetlands
- ensure use of best management practices in the development and use of multiple use wetlands, consistent with the principles of total water cycle management
- ensure adequate and appropriate buffering of wetlands to maintain or enhance the environmental attributes, functions and values of the water resource and minimise the impact of nearby land uses, both existing and future.

► Direct link: www.planning.wa.gov.au/publications/742.asp

Planning bulletin 64/2009: Acid sulfate soils

The purpose of this planning bulletin is to provide advice and guidance on matters that should be taken into account in the rezoning, subdivision and development of land that contains acid sulfate soils.

This planning bulletin introduces a set of revised *Acid sulfate soils planning guidelines*, which outline the range of matters which need to be addressed at various stages of the planning process to ensure that the subdivision and development of land containing acid sulfate soils is planned and managed to avoid potential adverse impacts on the natural and built environment.

The bulletin supersedes *Planning Bulletin 64 Acid sulfate soils* (2003), and the planning guidelines and risk maps appended to it.

► Direct link: www.planning.wa.gov.au/publications/726.asp

Acid sulfate soils planning guidelines

The guidelines outline the range of matters which need to be addressed at various stages of the planning process.

This is to ensure that the subdivision and development of land containing acid sulfate soils is planned and managed to avoid potential adverse impacts on the natural and built environment.

- Direct link: www.planning.wa.gov.au/publications/725.asp

Policy framework for inland drainage

This aim of this policy is to facilitate the use of drainage as an option to manage salinity and waterlogging in inland WA. This policy addresses the key areas of governance, risk management, planning and assessment, and operation and maintenance of drainage projects in inland Western Australia. In doing so, the framework seeks to guide better management of water resources and public assets, including wetlands of conservation value.

Appendix 1 of the framework outlines roles and responsibilities of a range of stakeholders. Appendix 2 outlines the principles for drainage proposal assessment.

- Direct link: www.water.wa.gov.au/PublicationStore/first/104329.pdf

Better Urban Water Management Strategy

The purpose of the *Better Urban Water Management Strategy* is to facilitate water sensitive urban design on the Swan Coastal Plain with particular concern for the Swan-Canning and Vasse-Geographe catchments. The implementation of this strategy is a critical to the protection of wetlands on the Swan Coastal Plain.

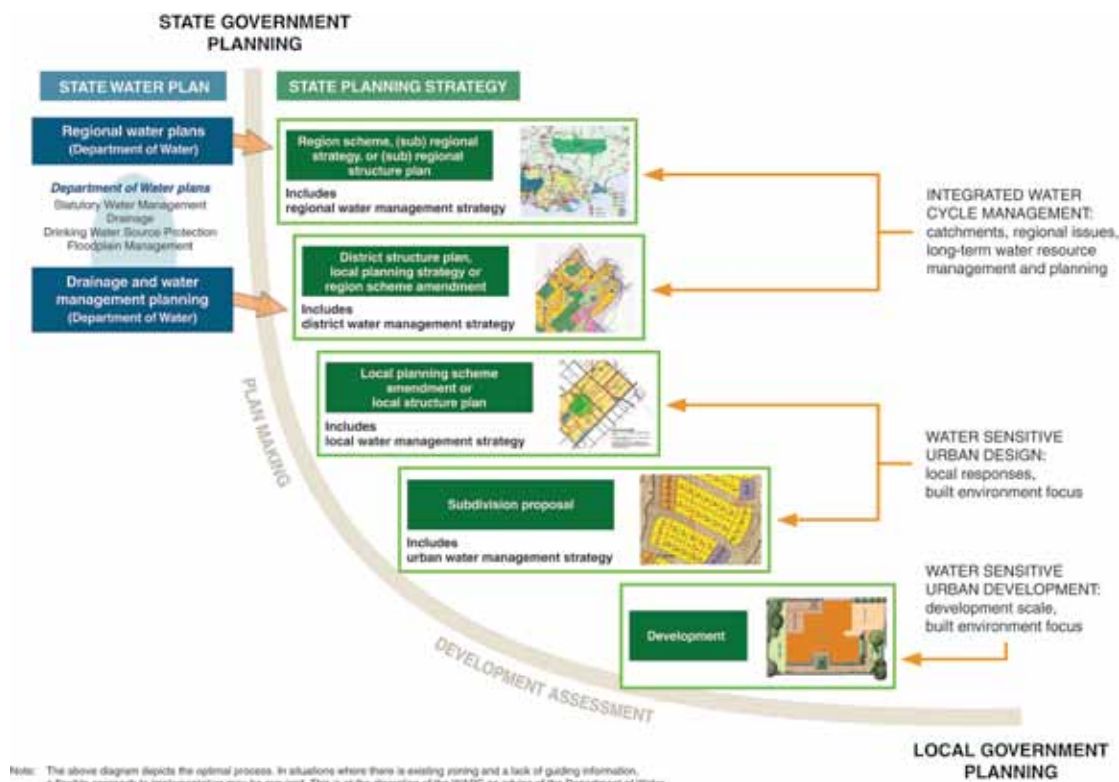


Figure 21. Better integration of land and water planning processes, as established in *Better Urban Water Management*, means more holistic consideration of wetlands and better wetland outcomes. Figure – Western Australian Planning Commission.

This strategy provides guidance on urban water management matters which need to be considered by the Western Australian Planning Commission, local governments and applicants when reviewing planning proposals and applications for new residential, rural-residential, commercial and industrial areas.

The strategy facilitates better management and use of urban water resources by providing a framework for consideration of water resources at each planning stage (Figure 21). It also identifies the agencies responsible for provision of water resource information.

The design criteria identified as a guide for development of better urban water management systems include:

- water conservation and efficiency
- water quantity management
- water quality management
- stormwater modelling criteria
- disease vector and nuisance insect management.

► Direct link: www.planning.wa.gov.au/publications/741.asp

State Water Plan

The *State Water Plan 2007* provides a framework for water resources management in Western Australia, with a planning horizon to 2030. It is a whole-of-government initiative with 11 agencies sharing more than 100 priority actions over the first five years. It addresses the challenges of climate change and variability, resource scarcity and the increasing demand for water. It takes a whole-of-the-water-cycle approach – from protecting water resources to recycling. This improves certainty of future water availability for the environment, the community and all water users.

It establishes the vision: *'Our precious water resources are managed and developed in a sustainable manner to maintain and enhance our natural environment, cultural and spiritual values, our quality of life and the economic development of the state.'*

This vision is underpinned by seven key objectives:

- use and recycle water wisely
- plan and manage water resources sustainably
- invest in science, innovation and education
- protect ecosystems, water quality and resources
- enhance the security of water for the environment and use
- develop water resources for a vibrant economy
- deliver services for strong and healthy communities.

► Direct link: www.water.wa.gov.au/PublicationStore/first/74923.pdf

Water allocation planning in Western Australia: a guide to our process

This Department of Water document describes the water allocation planning process, which governs how much water can be licensed for abstraction under clauses 5D and 26D of the *Rights in Water and Irrigation Act 1914* and how much water is left in the system for the environment.

It outlines the documents prepared and the opportunities for community input into these documents at various stages in the planning process.

Associated resources include:

- *Groundwater risk-based allocation planning process*²⁵ provides information on how ecological water requirements for groundwater dependent ecosystems are taken into consideration in the allocation planning process.
- Department of Water's webpage: www.water.wa.gov.au/allocationplanning
- Direct link: www.water.wa.gov.au/PublicationStore/first/100774.pdf

Stormwater management manual for Western Australia (DoW 2004–2008)

The stormwater management manual has been developed to provide best practice advice and **stormwater** management options that may be suitable to a range of built environments across WA.

The manual identifies objectives for stormwater management in WA, that have significant potential to positively impact wetland management and protection:

- water quality - to maintain or improve the surface and groundwater quality within the development areas relative to pre development conditions
 - water quantity - to maintain the total water cycle balance within development areas relative to pre development conditions.
 - water conservation - to maximise the reuse of stormwater.
 - ecosystem health - to retain natural drainage systems and protect ecosystem health.
 - development - to ensure delivery of best practice stormwater management through planning and development in accordance with sustainability and precautionary principles.
- Direct link: www.water.wa.gov.au/Managing+water/Urban+water/Stormwater/default.aspx#1

Decision process for stormwater management in WA (DoW 2009)

Within the manual, a decision process is outlined which provides a framework for the planning and design of stormwater management systems and provides guidance to identify what stormwater management issues need to be addressed during land development and redevelopment projects.

The methodology outlined in the decision process also aims to minimise changes to the volume of surface water flows and peak flows resulting from the urbanisation of an area.

Stormwater: water flowing over ground surfaces and in natural streams and drains as a direct result of rainfall over a catchment

The management of these changes has important implications for wetland management and protection by reducing negative impacts on the water regime, water quality, habitat diversity and biodiversity in receiving water bodies.

It states that wetlands should be retained and restored; that no new constructed stormwater infrastructure should be installed in conservation or resource enhancement management category wetlands or their buffers, or other wetlands of high conservation significance or their buffers unless authorised by DEC or EPA. It also states a presumption against the creation of artificial lakes or permanently inundated water bodies.

- Direct link: www.water.wa.gov.au/Managing+water/Urban+water/Stormwater/Decision+process+and+management+objectives/default.aspx#1



Figure 22. Requirements regarding the placement of stormwater infrastructure in and near wetlands is outlined in the *Decision process for stormwater management in WA*. Photo – J Lawn.

Wetland Policy of the Commonwealth Government of Australia (Commonwealth Government of Australia 1997)

The purpose of the Commonwealth wetland policy is to build wetland conservation into the daily business of the Commonwealth Government. The stated goal of the policy is to conserve, repair and manage wetlands wisely. To achieve this, the policy sets out six strategies, which encompass Commonwealth responsibilities from managing commonwealth lands and waters, to international actions.

GLOSSARY

Aquaculture: the keeping, breeding, hatching, or culturing of fish

Authorisation: a licence, permit, approval or exemption granted, issued or given under the Part V environmental regulations

Clearing: any act that kills, destroys, removes or substantially damages native vegetation in an area. This includes severing or ringbarking of trunks or stems, draining or flooding of land, burning of vegetation and grazing of stock or any other act or activity that causes damage to some or all of the native vegetation in an area.

Contributing offsets: complementary activities which, together with direct offsets, meet the offset principles. These include education, research, removal of threats, and or contribution to an approved credit trading scheme or trust fund.

Critical environmental assets: the most important environmental assets in the state that should be protected and conserved

Decision making authority: a public authority empowered to make a decision in respect of a proposal. Often abbreviated to DMA.

Derived proposal: a proposal referred to the Environmental Protection Authority under section 38 of the *Environmental Protection Act 1986* that is declared by the EPA to have been identified in a strategic proposal that has been assessed and granted approval under Part IV of the Act⁴

Direct offsets: activities which counterbalance the environmental impact of a proposal and are in addition to normal environmental management requirements. This includes restoration (offsite), rehabilitation (offsite), re-establishment, sequestration and acquisition of other land/s under threat for inclusion into conservation estate.

Enacted: to make into law

Endorsed management plan: a management plan that has been approved and/or modified by the Minister for the Environment as he/she thinks fit

Environmental impact assessment: an orderly and systematic process for evaluating a scheme or proposal, including its alternatives where relevant, and its effects on the environment, including the mitigation and management of those effects

Environmental offset: an offsite action or actions to address significant residual environmental impacts of a development or activity²⁹

Environmental protection policies: whole of government policies which have been agreed to by Parliament and have the force of law as if part of the Act

Government Gazette: a government publication issued by the State Government which includes details of statutory matters, available from the State Law Publishers

Local planning scheme: a set of provisions that identifies the way land in the scheme area is to be used and developed. It may comprise a scheme map(s), a text and an explanatory report.¹⁶

Metropolitan Regional scheme (MRS): the region planning scheme for the Perth region

Native vegetation: native aquatic or terrestrial vegetation, and includes dead vegetation unless that dead vegetation is of a class declared by regulation to be excluded from this definition but does not include vegetation in a plantation or which was

intentionally sown, planted or propagated unless that vegetation was sown, planted or propagated as required under law

Prescribed premises: premises prescribed for the purposes of Part V of the *Environmental Protection Act 1986* as specified in Schedule 1 of the *Environmental Protection Regulations 1987*

Proponent: the person who is responsible for the proposal, or the public authority on which the responsibility for the proposal is imposed under a written law

Public open space: land used or intended for use for recreational purposes by the public; it includes district, neighbourhood and local open spaces and parks, but excludes regional open space or foreshore reserves¹⁷

Red list criteria: developed by the International Union for the Conservation of Nature (IUCN) to allocate species of flora and fauna into threat categories of critically endangered, endangered and vulnerable, based on their likelihood of becoming extinct

Regional open space: land defined under a region scheme, regional structure plan or sub-regional structure plan as a parks and recreation reserve or regional open space reserve, to accommodate active and passive recreation such as major playing fields and/or regional conservation and environmental features¹⁷

Region planning scheme (region scheme): a planning scheme prepared for matters of state or regional importance to enable effective planning and coordination of land use and development. Also known as a region scheme.¹⁶

Regulation: a law made under the authority of an Act of Parliament

Reserved: set aside for public purposes

Scheme: a redevelopment scheme, a region planning scheme, a local planning scheme or a State planning policy to which section 32 of the *Planning and Development Act 2005* applies, or an amendment to any of these

Significant proposal: a proposal likely, if implemented, to have a significant effect on the environment

State Environmental Policies (SEPs): non-statutory policies which are developed by the EPA under provisions of Part II of the EP Act through public consultation and are adopted following Cabinet consideration and approval

Statute: a law enacted by the State or the Federal Parliament

Strategic proposal: a future proposal that will be a significant proposal; or future proposals likely, if implemented in combination with each other, to have a significant effect on the environment

Structure plan: a plan that provides a framework for the coordinated provision of land use, development, infrastructure and allocation of services at either the regional, district or local level. Not always a statutory requirement.

Stormwater: water flowing over ground surfaces and in natural streams and drains as a direct result of rainfall over a catchment⁴⁹

Subdivision: the division of land into lots

Threatened ecological community: naturally occurring biological assemblages that occur in a particular type of habitat that has been endorsed by the WA Minister for Environment as being subject to processes that threaten to destroy or significantly modify it across much of its range

Threatened fauna: fauna that is rare or likely to become extinct and gazetted as such by the Minister for Environment

Threatened flora: flora that has been assessed as being at risk of extinction or is rare or otherwise in need of special protection and gazetted as such by the Minister for Environment. These species are commonly referred to as declared rare flora

Thrombolite: a type of microbial structure formed by microbial communities precipitating calcium carbonate

Wetland buffer: an interface adjoining a wetland that is designated to assist in protecting the wetland's natural values from the threats posed by the surrounding land use(s)

PERSONAL COMMUNICATIONS

Name	Date	Position	Organisation
Dr Ken Atkins	17/12/2012	Manager, Species and Communities Branch	Department of Environment and Conservation, Western Australia

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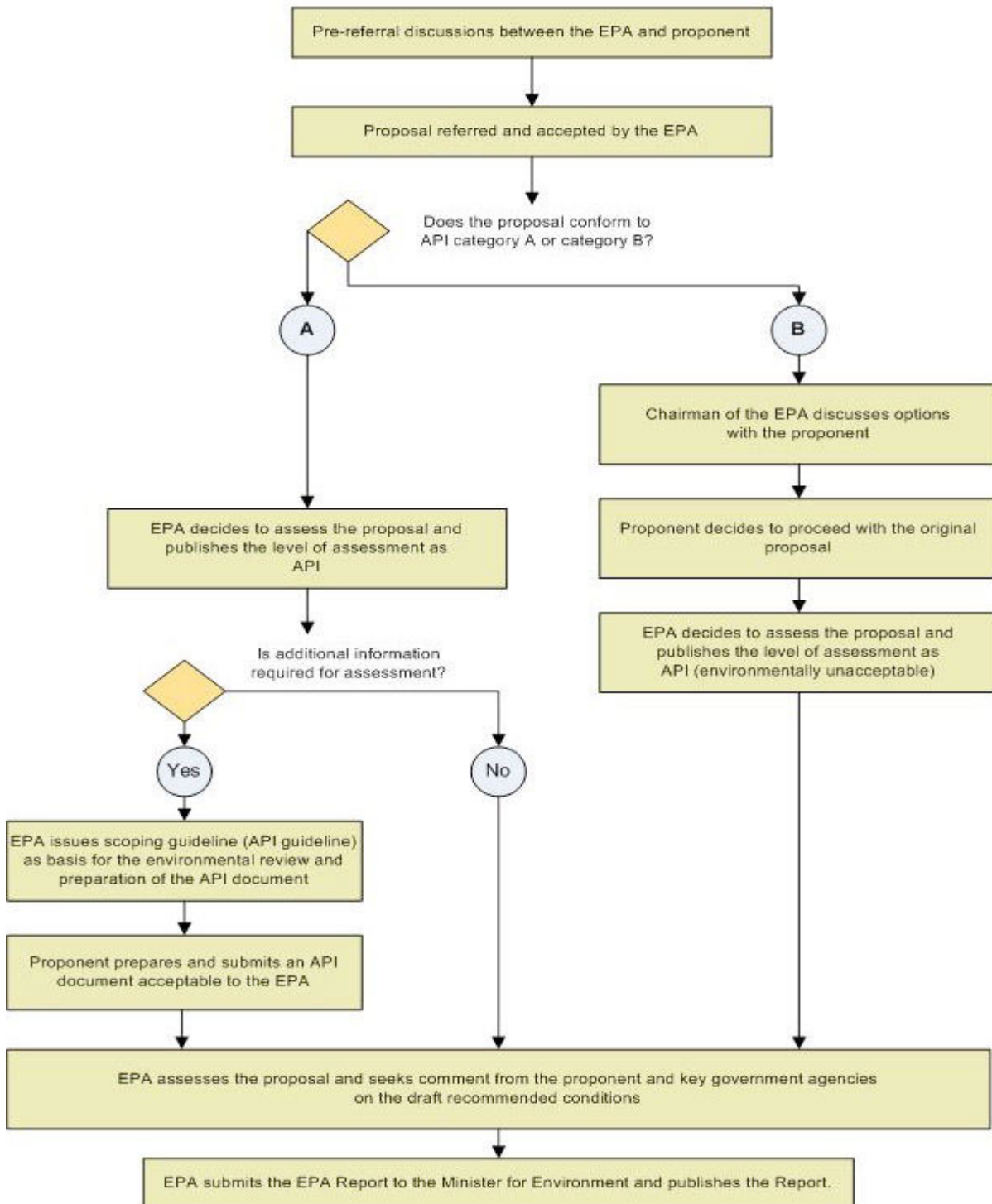
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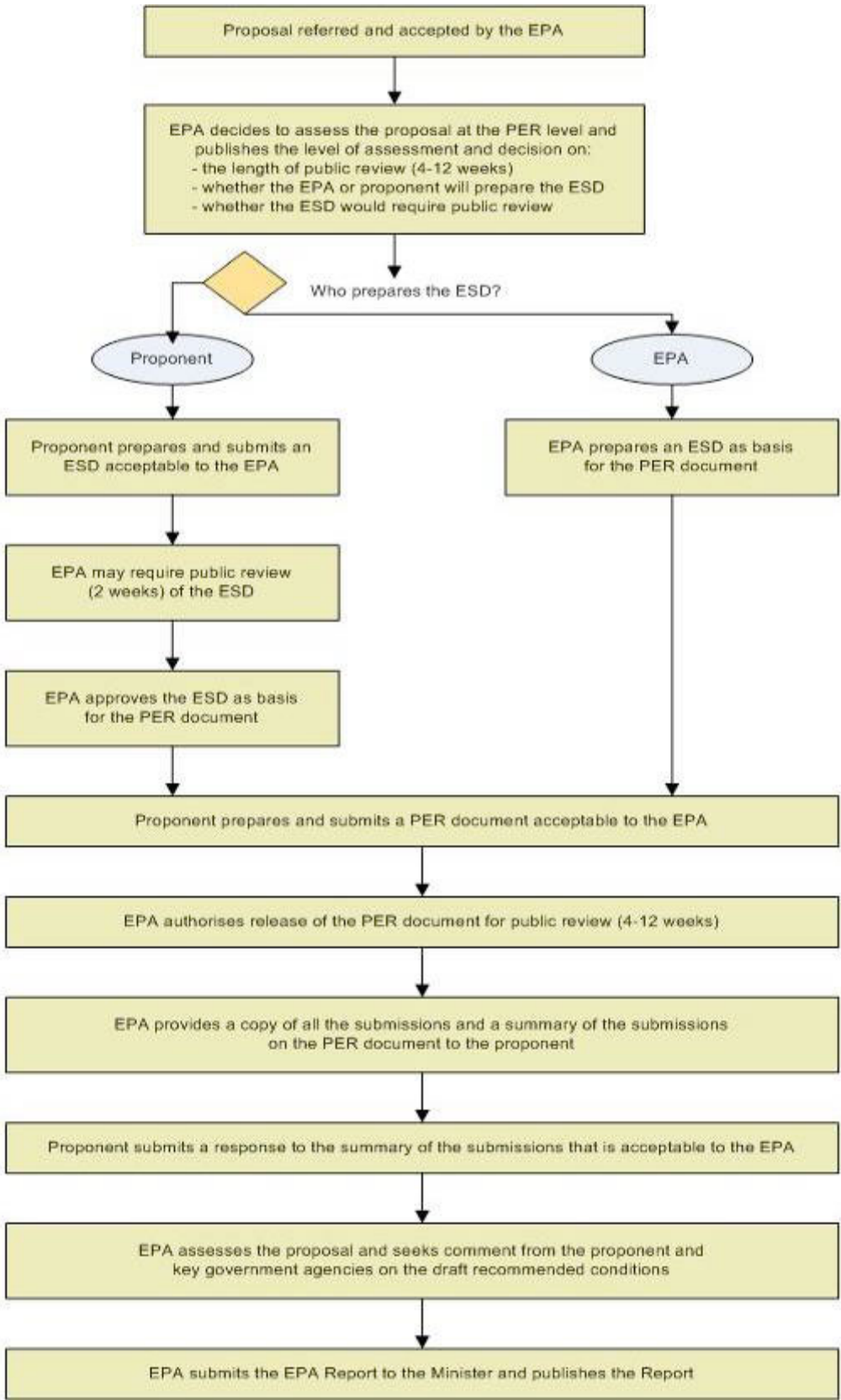
APPENDIX 1. EIA PROCESS DIAGRAM - ASSESSMENT ON PROPONENT INFORMATION

Source: Environmental Protection Authority website



APPENDIX 2. EIA PROCESS DIAGRAM – PUBLIC ENVIRONMENTAL REVIEW

Source: Environmental Protection Authority website



APPENDIX 3

Source: the Department of Environment and Conservation's Threatened Ecological Community Database endorsed by the Minister for the Environment (DEC, sourced April 2012)

Community identifier	Community name	General location (IBRA regions)
2. Toolibin	Perched wetlands of the Wheatbelt region with extensive stands of living Swamp Sheoak (<i>Casuarina obesa</i>) and Paperbark (<i>Melaleuca strobophylla</i>) across the lake floor.	Avon Wheatbelt
3. SCP10b	Shrublands on southern Swan Coastal Plain Ironstones (Busselton area)	Swan Coastal Plain
4. SCP19	Sedgeland in Holocene dune swales of the southern Swan Coastal Plain	Swan Coastal Plain
5. Clifton-microbialite	Stromatolite like freshwater microbialite community of coastal brackish lakes	Swan Coastal Plain
6. Richmond-microbial	Stromatolite like microbialite community of coastal freshwater lakes	Swan Coastal Plain
7. Mound Springs SCP	Communities of Tumulus Springs (Organic Mound Springs, Swan Coastal Plain)	Swan Coastal Plain
10. Nthiron	Perth to Gingin Ironstone Association	Swan Coastal Plain
11. Muechea Limestone	Shrublands and woodlands on Muechea Limestone	Swan Coastal Plain
14. SCP18	Shrublands on calcareous silts of the Swan Coastal Plain	Swan Coastal Plain
15. SCP02	Southern wet shrublands, Swan Coastal Plain	Swan Coastal Plain
16. SCP3a	<i>Eucalyptus calophylla</i> - <i>Kingia australis</i> woodlands on heavy soils, Swan Coastal Plain	Swan Coastal Plain
17. SCP3c	<i>Eucalyptus calophylla</i> - <i>Xanthorrhoea preissii</i> woodlands and shrublands, Swan Coastal Plain	Swan Coastal Plain
18. Thetis-microbialite	Stromatolite community of stratified hypersaline coastal lakes	Geraldton Sandplain
19. Scott Ironstone	Scott River Ironstone Association	Warren
21. SCP15	Forests and woodlands of deep seasonal wetlands of the Swan Coastal Plain	Swan Coastal Plain
32. SCP07	Herb rich saline shrublands in clay pans	Swan Coastal Plain
33. SCP08	Herb rich shrublands in clay pans	Swan Coastal Plain
34. SCP09	Dense shrublands on clay flats	Swan Coastal Plain
35. SCP10a	Shrublands on dry clay flats	Swan Coastal Plain
38. Morilla swamp	Perched fresh-water wetlands of the northern Wheatbelt dominated by extensive stands of living <i>Eucalyptus camaldulensis</i> (River Red Gum) across the lake floor.	Avon Wheatbelt
40. Bryde	Unwooded freshwater wetlands of the southern Wheatbelt of Western Australia, dominated by <i>Muehlenbeckia horrida</i> subsp. <i>abdlita</i> and <i>Tecticornia verrucosa</i> across the lake floor	Avon Wheatbelt
42. Greenough River Flats	<i>Acacia rostellifera</i> low forest with scattered <i>Eucalyptus camaldulensis</i> on Greenough Alluvial Flats.	Geraldton Sandplain
46. Themeda Grasslands	Themeda grasslands on cracking clays (Hamersley Station, Pilbara). Grassland plains dominated by the perennial Themeda (kangaroo grass) and many annual herbs and grasses.	Pilbara
49. Bentonite Lakes	Herbaceous plant assemblages on Bentonite Lakes	Avon Wheatbelt

63. Irwin River Clay Flats	Clay flats assemblages of the Irwin River: Sedgeland and grasslands with patches of <i>Eucalyptus loxophleba</i> and scattered <i>E. camaldulensis</i> over <i>Acacia acuminata</i> and <i>A. rostellifera</i> shrubland on brown sand/loam over clay flats of the Irwin River.	Avon Wheatbelt
72. Ferricrete	Ferricrete floristic community (Rocky Springs type)	Geraldton Sandplain
74. Herblands and Bunch Grasslands	Herblands and Bunch Grasslands on gypsum lunette dunes alongside saline playa lakes	Esperance Sandplain
80. Theda Soak	Assemblages of Theda Soak rainforest swamp	North Kimberley
81. Walcott Inlet	Assemblages of Walcott Inlet rainforest swamps	North Kimberley
82. Roe River	Assemblages of Roe River rainforest swamp	North Kimberley
84. Dragon Tree Soak	Assemblages of Dragon Tree Soak organic mound spring	Kimberley Region, Great Sandy Desert Bioregion
85. Bunda Bunda	Assemblages of Bunda Bunda organic mound spring	West Kimberley, Dampierland Bioregion
86. Big Springs	Assemblages of Big Springs organic mound springs	West Kimberley, Dampierland Bioregion
89. North Kimberley mounds	Organic mound spring sedgeland community of the North Kimberley Bioregion	North Kimberley
92. Black Spring	Black Spring organic mound spring community	North Kimberley
95. Mandora Mounds	Assemblages of the organic springs and mound springs of the Mandora Marsh area	West Kimberley, Dampierland and Great Sandy Desert Bioregions
97. Mound Springs (Three Springs area)	Assemblages of the organic mound springs of the Three Springs area	Avon Wheatbelt