



WQPN 100, APRIL 2007

Motor sport facilities near sensitive waters

Purpose

Motor sport venues provide facilities for a range of different events involving motorised vehicles and can attract large numbers of participants, officials and spectators. However, they can pose environmental risks to water resources through:

- clearing of native vegetation;
- leaks or spills of chemicals or petroleum hydrocarbons from storage areas, mechanical servicing areas and on the race tracks;
- turbid or contaminated stormwater runoff;
- inappropriate containment or disposal of solid waste and wastewater from mechanical servicing and washdown areas; and
- amenities for the congregation of large numbers of people.

The Department of Water is responsible for managing and protecting the State's water resources. It is also a lead agency for water conservation and reuse. This note offers:

- the Department's current views on motor sport facilities near sensitive waters;
- guidance on acceptable practices used to protect the quality of Western Australian water resources; and
- a basis for the development of a multi-agency code or guideline designed to balance the views of industry, government and the community, while sustaining a healthy environment.

This note provides a general guide on issues of environmental concern, and offers potential solutions based on professional judgement and precedent. The recommendations made do not override any statutory obligation or Government policy statement. Alternative practical environmental solutions to suit local conditions may be proposed. Regulatory agencies should not use this note's recommendations without a site-specific assessment of any project's environmental risks. Any conditions set should consider the values of the surrounding environment, the safeguards in place, and take a precautionary approach. The note shall not be used as this Department's policy position on a specific matter, unless confirmed in writing.

Scope

This note applies to any venue (permanent or temporary) that provides facilities for competitive activities involving motorised vehicles (eg cars, motorcycles) located near sensitive water resources (details provided in [Appendix C](#)).

This note is not intended to apply to non motorised sport facilities or those located where they do not affect sensitive water resources; however, it may offer some useful guidance on potential risks

to the environment and good environmental practice. This note also does not apply to static displays of motor vehicles.

Recommendations

Location of motor sport facilities

1. These facilities should be located on land with the following attributes:
 - a. site zoned for the activity in the local government (council) planning scheme;
 - b. access to essential services, including waste collection, treatment and recycling facilities;
 - c. sufficient on-site area to provide for safe and effective management of crowds and waste products;
 - d. sufficient area provided for likely future premises expansion;
 - e. stable soils which are not flood prone;
 - f. located outside of those sensitive environments where the activity is excluded by statute, Government plan or policy, or it cannot be demonstrated that there is insignificant risk to environmental values;
 - g. have appropriate protective separation distances to sensitive environments, for example residential areas and sensitive water resources; and
 - h. a minimum vertical separation distance of two metres to the maximum (wet season) groundwater table for free-draining soils, to avoid waterlogging and allow for soil contaminant filtration and aerobic microbial action.

Within Public Drinking Water Source Areas (PDWSA)

Public Drinking Water Source Area (PDWSA) is the collective name given to any catchment area declared for the management and protection of a water source used for public drinking water supplies. PDWSA include Underground Water Pollution Control Areas, Water Reserves and Catchment Areas proclaimed under the *Metropolitan Water Supply, Sewerage and Drainage Act 1909* or the *County Areas Water Supply Act 1947*. For details on these statutes and associated regulatory measures in PDWSA, see [Appendix B](#). Information on the location of PDWSA is provided at www.water.wa.gov.au, select *Maps, data and atlases* > *Geographic Data Atlas* > then click *Environment* > *Public Drinking Water Source Areas*.

Within PDWSA, three protection classification areas for land (Priority 1, 2 and 3) are used, based on present land use and vulnerability of the water resource to harm. These areas are each managed in a different way to protect water resource quality. Priority classifications are assigned in specific Drinking Water Source Protection Plans issued by this Department. These plans are prepared in consultation with State government agencies, landowners, local government, key industry and community stakeholders. Additional constraints may apply in zones closest to the point where drinking water is harvested or stored – described as Wellhead Protection Zones (WHPZ) and Reservoir Protection Zones (RPZ). For additional explanatory information on PDWSA, refer to this Department's Water Quality Protection Note *Land use compatibility in Public Drinking Water Source Areas* (see [Appendix A, Reference 5c](#)).

2. *Within Priority 1 and 2 PDWSA, WHPZ or RPZ*, the establishment or expansion of motor sport facilities is considered incompatible with management objectives for the water resource. This Department will oppose development or expansion of such facilities in these areas or zones.

3. *Within Priority 3 PDWSA*, motor sport facilities are compatible with conditions, provided best practice environmental management is implemented. Guidance on acceptable environmental management practice is given in this note or defined in project specific conditions set by this Department. Our nearest regional office should be contacted for location information and approval procedures (see www.water.wa.gov.au then select *Contact us*).

Near natural waterways or within Waterways Management Areas

4. Adequate separation distances should be maintained between all land use facilities and natural waterways to minimise the risk of degradation of water quality. These separation distances are determined on the basis of the waterway values, vulnerability and biophysical criteria (see [Appendix A, References 5d and 5e](#) for supporting information). For advice on buffer selection, see the Department's Note *Vegetation buffers to sensitive water resources* (see [Appendix A, References 5c](#)).
5. Five Waterways Management Areas have been declared via the *Waterways Conservation Act 1976* to provide special protection to estuaries and their associated waterways that are considered especially vulnerable to degradation. These areas are the Albany Waterways, Avon River, Leschenault Inlet, Peel–Harvey Estuary, and Wilson Inlet. If a development is located within a Waterways Management Area, prior written approval is required from the agency administering the waterway. Information on waterway values and the location of these management areas can be obtained by contacting the Department of Water's regional office (see www.water.wa.gov.au and select *Contact us*).

Within the Swan River Trust management area

6. Approval from the Minister for the Environment is required for any land or water-based development within or abutting the Swan, Canning, Helena and Southern Rivers and adjoining lands within the management area established via the *Swan River Trust Act 1988* and the *Swan and Canning Management Act 2006*. For details, see web site www.swanrivertrust.wa.gov.au, or phone the Trust on 9278 0900.

Near conservation valued wetlands

The Department of Environment and Conservation aims to ensure that chemicals or contaminated waters do not enter the environment close to sensitive waters such as wetlands. See [Appendix C](#) for a description of sensitive water resources.

7. Wetlands require an adequate buffer to protect them from potential adverse impacts (eg impacts associated with nutrients and pollutants) and to maintain ecological processes and functions within the wetland. The width of the buffer should be determined based on the values of the wetland, the threats posed by the adjacent land use and the protective management techniques used at the facility to maintain or improve wetland values. Recommended buffer distance criteria for the Swan Coastal Plain are provided in *Position Statement: Wetlands* (Water and Rivers Commission, 2001) see [Appendix A, Reference 3d](#). A minimum buffer width to the wetland boundary of 50 metres is recommended.

Additional information on identifying wetland buffers is contained in Chapter B4 of the Environmental Protection Authority's *Draft Guidance Statement No. 33 Environmental Guidance for Planning and Development* (see [Appendix A, Reference 2](#)).

8. Details of development proposed within 500 metres of any wetland (eg lakes, sumplands, damplands and palusplain wetlands) listed as a sensitive water resource in [Appendix C](#), should be forwarded to the nearest regional office of the Department of Environment and Conservation for assessment, with supporting information addressing the environmental risks.

Construction

Native vegetation protection

9. Clearing of native vegetation for the construction of race tracks and associated infrastructure should be minimised and vegetated buffers along waterways and wetlands retained to preserve the biodiversity of plants and animals, and to reduce contamination and salinity problems.
10. The clearing of native vegetation is regulated under the *Environmental Protection Act 1986* and Environmental Protection (Clearing of Native Vegetation) Regulations 2004. For information on constraints on the clearing of native vegetation, contact the Department of Environment and Conservation's nearest regional office or refer to the brochure *Protecting Native Vegetation – New laws for Western Australia*, available at www.dec.wa.gov.au, select *Department of Environment > Land > Native vegetation protection*.

Earthworks

11. An erosion and sediment control plan should be prepared and implemented to minimise environmental impacts of stormwater runoff during construction activities. Information on control measures that may be included in the plan are provided in the Department's Note *Roads in sensitive environments* (see [Appendix A, Reference 5c](#)).
12. Where motor sport tracks are located on highly permeable soils, they should (where practical) be amended with clay or other low permeability material to lessen the risk of fuel, hydraulic fluid and coolant seepage into groundwater and aid cleanup after accidents.
13. Where the construction of motor sport facilities is likely to disturb acid sulfate soils (ASS) or change groundwater levels in an area of ASS risk, an ASS investigation should be undertaken to determine the potential impacts the project may have and an ASS management plan developed. Further information on the identification and management of ASS can be found at the Department of Environment and Conservation's website (see [Appendix A, Reference 3a](#)).
14. A dust management plan should be prepared and implemented to ensure public health and occupational health and safety while undertaking earth movement. Wind break fencing, soil watering or applying hydromulch or other soil stabilisers are all effective methods of minimising dust emissions. Guidance for dust management issues can be obtained from the Department of Environment and Conservation's website (see [Appendix A, Reference 3c](#)).

Infrastructure

15. Infrastructure such as roads, car parks, drainage, communication, power, gas and water services are important considerations for the construction and operation of motor sport facilities. This Department encourages land developers to use existing infrastructure where practical.

16. Where there is no existing infrastructure or current infrastructure needs to be upgraded, best management practices outlined in the Department's note *Infrastructure corridors near sensitive water resources* should be followed (see [Appendix A, Reference 5c](#)).

Operation

Vehicle maintenance

17. Maintenance and servicing of vehicles, including vehicle refuelling should be restricted to a dedicated pit area. This area should be located at least 200 metres from any estuaries, waterways or wetlands, to provide a buffer should a chemical or oil spill occur.
18. In order to minimise the risk of contaminating sensitive waters, the pit area should have the following attributes:
- a low-permeability pad or floor (such as reinforced concrete) that has been chemically sealed to minimise seepage and assist in the cleanup of spilt fluids;
 - adequately weatherproofed (where practical) to prevent the intrusion of stormwater;
 - security to prevent intruders and vandalism; and
 - designed to contain any chemical/oil spills, eg by an impervious perimeter bund, or a floor that is graded to an internal collection sump.

This Department's note *Mechanical servicing and workshops* (see [Appendix A, Reference 5c](#)) provides further guidance on the design and management of the pit area.

Storage of fuels and chemicals

19. Where fuel or chemicals are to be stored on-site, they should be contained within a secure, weatherproof compound with impervious flooring.
20. Fuel, oils and chemicals brought onto the site on race days should be held in a centrally located, bunded area or compound, with impervious flooring to contain any leaks or spills.
21. Any fuel storage area should have a minimum volume capacity of 110 per cent of the largest tank's storage capacity in order to prevent any potential fuel overflow into the environment.
22. Fuel or hazardous chemical storage may require a licence from the Department of Consumer and Employment Protection. For details see www.docep.wa.gov.au, then select *Resources safety > Dangerous goods*.

For further information on storage of fuels and chemicals see the Department's Note *Tanks for elevated chemical storage* (see [Appendix A, Reference 5c](#)).

Wash down areas

23. Wash down of vehicles should occur on a bunded, impervious pad that is weatherproof to minimise stormwater access. High pressure, steam cleaning, scrubbing or quick break detergents are the preferred methods of cleaning vehicles.

24. All runoff should be directed to a wastewater detention and/or treatment facility such as a sediment trap, oil de-emulsification basin and oil separator.
25. Treated wastewater should be recycled, reused or exported for disposal at an approved facility or discharged to sewer (if available and meets the service provider's industrial waste acceptance criteria). Further information on wash down areas is given in this Department's Note *Washdown of mechanical equipment* (see [Appendix A, Reference 5c](#)).

Unsealed race tracks, access roads and car parks

26. Unsealed race tracks, access roads and car parks have the potential to cause dust problems, particularly in dry windy conditions. Methods of reducing dust on unsealed surfaces include:
 - a. regularly watering unsealed roads and race tracks (clean water applied at one to two litres per square metre generally using a tanker truck with rear spray bar);
 - b. applying speed limits on site access roads and car parks;
 - c. the use of wind fences/breaks; and
 - d. covering exposed sites with a dust suppressant such as compacted road base, an aggregate or an organic dust-binding agent (eg polyacrylamide water additive). Waste oil or other contaminants should not be used on unsealed surfaces as a dust suppressant due to the risk of oil, detergents and metals seeping or washing into local water resources.
27. Unsealed roads and race tracks also have the potential to generate turbid stormwater. Increased turbidity in water bodies can affect light levels, water temperature and dissolved oxygen levels impacting on community composition and can also limit the effectiveness of water treatment for water supply purposes. In order to minimise erosion of access roads and race tracks, they should (where possible) run parallel to the land contour and avoid slopes exceeding one in ten. Where steep slopes are unavoidable, erosion prevention measures and drainage structures should be employed to minimise environmental harm.

Catering facilities

28. This Department's Note *Rural restaurants, cafes and taverns in sensitive environments* (see [Appendix A, Reference 5c](#)) provides advice on the locating of food vending stalls, and the management of food waste and wastewater generated from food premises.

Maintenance of grounds for spectators

The grounds of permanent motor sport facilities are often landscaped with lawns and gardens, which may be supported by the application of pesticides and fertilizers. Some pesticides remain mobile and toxic in the environment for long periods of time, or their carrier solvents do not degrade and have the potential to be transported into surface water and groundwater. Leached nutrients from fertilizers can be easily transported through the soil into water bodies, where they can affect the water quality and foster algal blooms.

29. The use, application, storage, mixing and disposal of pesticides within PDWSA should comply with this Department's State-wide Policy No 2 *Pesticide use in Public Drinking Water Source Areas 2000* (see [Appendix A, Reference 5a](#)), the WA Department of Health's Health (Pesticide) Regulations 1956 and follow the supplier's instructions.

30. Fertilizer application should be tailored to suit plant requirements and only be applied during the growth season when it can be readily absorbed by the plant. Leaf tissue analysis, combined with soil testing can provide useful information for determining the nutritional needs of the plant.

For further information on the establishment, irrigation and application of pesticides and fertilizers to grassed areas refer to this Department's Guideline, *Environmental guidelines for the establishment and maintenance of turf and grassed areas* (see [Appendix A, Reference 5b](#)).

31. If the grounds are irrigated by water from surface or groundwater sources, a licence may be required under the *Rights in Water and Irrigation Act 1914*. For further information on licensing requirements, contact this Department's nearest regional office (see www.water.wa.gov.au and select *Contact us*).

Overnight camping

32. If overnight camping occurs at the motor sport facility, this should be restricted to a dedicated camping area that has adequate vegetated buffers from any sensitive water resources (see the Department's Note *Vegetation buffers to sensitive water resources* for more information on the establishment and maintenance of buffers). Appropriate facilities (eg water supply, toilets and rubbish bins) should be provided.

Stormwater management

Motor sport facilities generally contain large areas of impervious surfaces, which can result in substantial surface water runoff. As there is also the potential for fuel or oil spills it is important that stormwater is managed appropriately.

33. Interceptor traps should be installed and maintained for stormwater runoff that contains or is likely to contain oils, silt or waste.
34. Clean stormwater runoff from roofs, paths and landscaped areas should not be discharged into sewage management systems. It should be kept separate from potentially contaminated waters by appropriate drainage systems.
35. Stormwater runoff during high rainfall events should be minimised by using vegetated drainage paths and buffers. Vegetated buffers trap sediments and remove a portion of nutrients that may otherwise discharge in waterways and wetlands.

Guidance on stormwater system design, management, treatment and disposal are given in this Department's Note *Stormwater management at industrial sites* (see [Appendix A, Reference 5c](#)) and the *Stormwater Management Manual for Western Australia* (see [Appendix A Reference 5f](#)).

Waste management and disposal

36. An adequate number of waste collection and recycling bins should be provided at strategic locations around the site to prevent littering and reduce pollution risks and fire hazards. Waste and litter should be removed regularly or securely stored on-site (eg in enclosed skips or large lidded rubbish bins) for removal at the end of the racing day or event.

Waste management facilities should prevent access by scavengers or loss of food residues that may be washed into surface or ground waters. Where necessary a litter clean-up should take place following an event.

37. Motor sport sites should (where practical) be connected to reticulated sewerage for the disposal of wastewater generated from toilets, wash rooms and kitchen areas. However, where connection to reticulated sewerage is not practical, wastewater should be treated and disposed of in accordance with the *Government Sewerage Policy – Perth Metropolitan Area, 1996* or the *Draft Country Sewerage Policy, 1999* (see [Appendix A, Reference 7](#)). Further information on wastewater treatment systems can be obtained from this Department's Note *Wastewater treatment – onsite domestic systems* (see [Appendix A, Reference 5c](#)) or the Department of Health's Environmental Health Guides (see [Appendix A, Reference 4](#)).
38. Used fluids such as lubricating or hydraulic oils, brake fluids and coolants should be drained into product-specific secure containers for recycling or disposal at an approved facility.
39. Hydrocarbons recovered by oil separators should be collected and securely stored in weather-proof containers for recycling, destruction by incineration or disposal at a site approved in accordance with the *Health Act 1911* and the *Environmental Protection Act 1986*.
40. Solid wastes, including empty chemical/fuel containers, oil filters and used motor parts should be disposed off-site at an approved facility.

Emergency response

41. A contingency plan should be available on-site to address emergency situations that could put local water resources at risk (eg accidents, fires, chemical spills and vandalism). Appropriate employees and contractors should be trained and assigned roles in site emergency response procedures.
42. During major events adequate emergency response services such as security, communications, medical personnel and emergency vehicle access should be provided.

Spill containment

43. Any spilt fluids should (where practical) drain to sealed collection sumps. These wastes should then be transferred to a sullage tank, pending either export off-site or treatment prior to disposal. Absorbent materials such as sand or inert absorbent litter (atapulgitite or 'kitty litter') should be kept on-site to assist in the immediate clean-up of spilt oil or other liquids. Contaminated litter and soil should be placed in a skip for off-site disposal to an approved location. For further information see the Department's Note *Contaminated spills – emergency response* (see [Appendix A, Reference 5c](#)).

Fire prevention and management

44. Native vegetation fuel loads should be managed prior to the onset of summer to limit the risk of wildfire. Clear fire control buffers should be maintained where practical to infrastructure.

45. Appropriate fire fighting equipment should be located at regular intervals around the track and within the pit area and staff should be well trained in fire management.
46. Fire fighting foam is an effective way of controlling fire (particularly those involving fuel). However, fire fighting foams have a number of properties (including surfactants, oxygen demand, aquatic toxicity, biodegradability and oil emulsification) that can impact on surface water and groundwater if released into the environment or disrupt sewage treatment if sent to a wastewater treatment plant. Therefore, if fire fighting foam is to be used on-site, foam capture and control should form part of the contingency plan.

Environmental monitoring and reporting

47. Operators should regularly inspect all on-site waste holding and treatment systems such as fuel storage areas and oil and sediment traps. Any waste matter that has accumulated in oil and sediment traps should be removed and disposed of at an approved facility.
48. If a significant spill occurs that may harm the environment, this should immediately be reported to the Department of Environment and Conservation's Pollution Response Team, phone 1300 784 782. If located within a Public Drinking Water Source Area, contact Water Corporation, phone 1800 625 897.

More information

We welcome your views on this note. Feedback provided on this topic is held on this Department's file No. **WT1062**. This note will be updated periodically as new information is received or industry/activity standards change. Updates are placed on the Department's internet site www.water.wa.gov.au, select *Water Quality > Publications > Water Quality Protection Notes*.

To comment on this note or for more information, please contact the Water Source Protection Branch in Perth, phone (08) 6364 7600 (business hours), fax 6364 6516 or use *Contact us* at the Department's Internet site, citing the note topic and version.

Where a conflict arises between the Department of Water's recommendations and any proposed activity that may affect a sensitive water resource, this note may be used to assist negotiations with stakeholders. The negotiated outcome should not result in a greater risk to water quality than if the Department's recommended protection measures were used.



Appendices

Appendix A References and further reading

1. Australian Government – National Water Quality Management Strategy
 - a. *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* 2000;
 - b. *Australian Guidelines for Water Quality Monitoring and Reporting* 2000;
see web page www.deh.gov.au/water/quality/nwqms/index.html
 - c. *Australian Drinking Water Guidelines*, 2004;
see web page www.nhmrc.gov.au/publications/synopses/eh19syn.htm
 - d. *Policies and Principles*, 1994;
 - e. *Implementation guidelines*, 1998;
 - f. *Rural land uses and water quality- a community resource*, 2000;
see web page www.awa.asn.au, email bookshop@awa.asn.au, or request from a library service.

2. Brisbane City Council
Pollution Solutions, Motor Service Industries, April 2000.
see web page www.epa.qld.gov.au, select *Ecoaccess > Business and Industry > Motor racing > Environmental Guides – Motor Service Industries*.

3. Department of Environment and Conservation (WA)
 - a. Acid sulfate soils
Guidance for acid sulfate soil management, see web page www.dec.wa.gov.au, select *Department of Environment > Land > Acid sulfate soils > Publications > Guidelines*.
 - b. Clearing of native vegetation
Permits under the *Environmental Protection Act 1986*, see web page www.dec.wa.gov.au, select *Department of Environment > Land > Native Vegetation Protection > Forms > Clearing Permits*.
 - c. Dust management
Guidance for dust management issues, see web page www.dec.wa.gov.au, select *Department of Environment > Air Quality > Publications > Guidelines > Land Development Sites and Impacts on Air Quality*.
 - d. Wetlands policy and guidelines
 - *Position statement: Wetlands*, WRC 2001;
see web page www.dec.wa.gov.au, select *Department of Environment > Water > Wetlands > Publications > Policy > Wetlands Position Statement*.
 - e. Waste management
 - *Guidelines for acceptance of solid waste to landfill*, 2001;
 - *Landfill Waste Classification and Waste Definitions*, as amended;
 - *Western Australian Waste Reduction and Recycling Policy*, 1997;
see web page www.dec.wa.gov.au, select *Department of Environment > Land > Waste Management > Publications > Guidelines*.

4. Department of Health (WA)
Wastewater treatment systems

- *Environmental Health Guide: Understanding Septic Systems*;
 - *Environmental Health Guide: Aerobic Treatment Units*;
- see web page www.population.health.wa.gov.au, select *Health Topics A-Z > Aerobic Treatment or Septic Tank Systems*.

5. Department of Water (WA)

- a. Water source protection policies
Pesticide Use in Public Drinking Water Source Areas 2000;
see web page www.water.wa.gov.au, select *Policies*.
- b. Water Quality Protection Guidelines
 - *Environmental guidelines for the establishment and maintenance of turf and grassed areas*;
 see web page www.water.wa.gov.au, select *Water quality > Publications > Water Quality Protection Guidelines*.
- c. Water Quality Protection Notes
 - *Contaminant spills – emergency response*;
 - *Infrastructure corridors near sensitive water resources*;
 - *Land use compatibility in Public Drinking Water Source Areas*;
 - *Mechanical servicing and workshops*;
 - *Mechanical equipment washdown*;
 - *Nutrient and irrigation management plans*;
 - *Outdoor events in Public Drinking Water Source Areas*;
 - *Protecting Public Drinking Water Source Areas*;
 - *Roads near sensitive water resources*;
 - *Rural restaurants, cafes and taverns near sensitive water resources*;
 - *Stormwater management at industrial sites*;
 - *Tanks for elevated chemical storage*;
 - *Wastewater treatment – on-site domestic systems*;
 - *Vegetation buffers to sensitive waters*;
 see web page www.water.wa.gov.au, select *Water Quality > Publications > Water Quality Protection Notes*.
- d. Waterways policy
 - *Foreshore Policy 1 – Identifying the Foreshore Area, WRC 2002*;
 see web page www.water.wa.gov.au, select *Water Quality > Waterways > Foreshore policies*.
- e. Water Notes
 - *Water Note 10 – Protecting riparian vegetation*;
 - *Water Note 11 – Identifying the riparian zone*;
 - *Water Note 23 – Determining foreshore reserves*;
 see web page www.water.wa.gov.au, select *Water Quality > Publications > Water notes*.
- f. Stormwater
Stormwater Management Manual for Western Australia;
see web page www.water.wa.gov.au, select *Water Management > Publications > Stormwater Publications > Stormwater Management Manual*.

6. Environmental Protection Authority (WA)

- *Guidance Statement No. 3 Industrial-residential buffer guidelines*;

- Guidance Statement No. 33 *Environmental Guidance for Planning and Development*, June 2005;
see web page www.epa.wa.gov.au, select *Guidance statements*.

7. Government of Western Australia

- *Government Sewerage Policy – Perth Metropolitan Region, 1996*;
 - *Draft Country Sewerage Policy – Document released for public comment, 1999*;
- contact the Department of Health for details, see
www.population.health.wa.gov.au/Environmental/index.cfm

8. Institution of Engineers Australia

Australian Rainfall and Runoff

see web page www.engaust.com.au/bookshop/eabookspub.html

Appendix B Statutory requirements and approval relevant to this note include:

What's regulated	Statute	Regulatory office
Subdivision of land	<i>Planning and Development Act 2005</i>	Western Australian Planning Commission
Land zoning and development approval		Department for Planning and Infrastructure
Statutory policies covering wetlands, drinking water catchments and estuaries	<i>Environmental Protection Act 1986, Part III: Environmental Protection Policies</i>	Minister for the Environment advised by the Environmental Protection Authority
Impact of significant development proposals on the values and ecology of land or natural waters	<i>Environmental Protection Act 1986, Part IV: Environmental Impact Assessment</i>	
Regulation of prescribed premises that could pollute;	<i>Environmental Protection Act 1986, Part V: Environmental Regulation</i>	Department of Environment and Conservation – regional office
Prohibited discharge of specified contaminants	Environmental Protection (Unauthorised Discharges) Regulations 2004	
Native vegetation clearing permits	<i>Environmental Protection Act 1986, Part V: Environmental Regulation</i> Environmental Protection (Clearing of Native Vegetation) Regulations 2004	
Licence to take surface water, groundwater or disturb proclaimed waterways	<i>Rights in Water and Irrigation Act 1914</i>	Department of Water – regional office
Approval to discharge waters into managed waterways	<i>Waterways Conservation Act 1976</i>	
Industrial sites in proclaimed public drinking water source areas	<i>Metropolitan Water Supply, Sewerage and Drainage Act 1909</i> <i>Country Areas Water Supply Act 1947</i>	
Development in the Swan River Trust Management Area	<i>Swan River Trust Act 1988</i>	Swan River Trust
Discharges into the Swan-Canning Estuary	<i>Swan and Canning Rivers Management Act 2006</i>	
Storage of fuels, solvent, explosive and dangerous goods	<i>Explosive and Dangerous Goods Act 1961</i> and associated Regulations	Department of Consumer and Employment Protection
Management of human wastes, Community health issues	<i>Health Act 1911</i>	Local Government
		Department of Health
Emergency response planning	<i>Fire and Emergency Services Authority of WA Act 1998</i>	Fire and Emergency Services Authority
Discharge to sewer (industrial waste permit) or to main drain	<i>Metropolitan Water Supply, Sewerage and Drainage Act 1909</i>	Water Corporation
	<i>Country Towns Sewerage Act 1948</i>	Designated water services provider

Note: Copies of relevant statutes are available from the State Law Publisher at Internet site www.slp.wa.gov.au

Appendix C Sensitive Water Resources

Clean water resources used for drinking, sustaining aquatic and terrestrial ecology, industry and aesthetic values, along with breathable air, rank as the most fundamental and important needs for viable communities. These water resources should remain within specific quality limits, and therefore require stringent and conservative protection measures. Guidance on water quality parameters necessary to maintain water values are published in the Australian Government's *National Water Quality Management Strategy Guidelines* (see web page www.deh.gov.au/water/quality/nwqms/index.html).

The Department of Water strives to improve community awareness of catchment protection measures for both surface water and groundwater aquifers as part of a multi-barrier protection approach to maintain the quality of water resources and their values.

To be considered sensitive, water resources must support one or more of the environmental values described below. Human activity or land use poses a risk to water quality if contaminants could be washed or leached into sensitive water resources in discernible quantities. These water resources include shallow groundwater accessed by water supply wells, waterways, wetlands and estuaries. Community support for these values, setting of practical management objectives and implementation of sustainable protection strategies are seen as key elements in protecting and restoring the values of these water resources.

Sensitive water resource values include:

- a. Public Drinking Water Source Areas (ie Water Reserves, Catchment Areas or Underground Water Pollution Control Areas) proclaimed or assigned under the *Metropolitan Water Supply, Sewerage and Drainage Act 1909*, the *Country Areas Water Supply Act 1947* or the *Health Act 1911*.
- b. Private drinking water supply sources, including the following uses:
 - human or stock consumption;
 - commercial or industrial water supplies (with specific qualities that support the activities, eg aquaculture, cooling, food or mineral processing or crop irrigation); and
 - garden or municipal water supplies (which can affect people's health or wellbeing).
- c. Groundwater aquifers that sustain important ecological functions eg cave ecology.
- d. Waterways (excluding engineered drains or constructed features) with ecological and / or social values such as aesthetic appeal, boating, fishing, tourism and swimming, including:
 - waterways of High Conservation Significance as described in the Environmental Protection Authority's Draft Guidance Statement 33 *Environmental Guidance for Planning and Development* (Section B5.2.2) see www.epa.wa.gov.au, select *EIA > Guidance statements*;
 - waterways managed under the *Waterways Conservation Act 1976*, ie the Avon, Peel-Harvey, Leschenault, Wilson Inlet and Albany Waterways Management Areas; and
 - waterways managed under the *Swan and Canning Rivers Management Act 2006*.

Note: many waterways in the State have not been scientifically evaluated and their value classified. Any such waterways that are substantially undisturbed by human activity should be considered to have high conservation value, unless proven otherwise.

- e. Wetlands possessing recognised or probable conservation values (generally excluding those highly disturbed, unless subject to active management to restore specified environmental values), and including:
- RAMSAR wetlands (see Internet site www.ramsar.org);
 - Wetlands of High Conservation Significance as described in the Environmental Protection Authority's Draft Guidance Statement 33 *Environmental Guidance for Planning and Development* (Section B4.2.2), see www.epa.wa.gov.au, select *EIA > Guidance statements*;
 - Wetlands described by Department of the Environment and Heritage (Australia) in *A Directory of important wetlands in Australia*, (see web page www.deh.gov.au/water/wetlands/databases.html, or the Department of Environment and Conservation web page www.naturebase.net/content/view/813/861/);
 - Conservation and Resource Enhancement category wetlands identified in the *Geomorphic Wetlands of the Swan Coastal Plain* dataset, all wetlands identified in the *South Coast Significant Wetlands* dataset and high value wetlands identified in the *Geomorphic Wetlands Augusta to Walpole* dataset.

Note: many wetlands in the State have not been scientifically evaluated and classified. Any such wetlands that are generally undisturbed by human activity, should be considered to have high conservation value, unless proven otherwise. To date, the Augusta to Walpole wetland dataset has not been subject to a detailed evaluation process.

The Department of Conservation and Environment is the custodian of wetland datasets and is responsible for maintaining and updating the information within them. The datasets can be viewed or downloaded from the Internet site www.dec.wa.gov.au, select *Department of Environment > Tools, systems and data > Geographic Data Atlas > Inland waters > Wetlands*. Guidance on viewing the wetlands is provided on the same website at *Water > Wetlands > Data > Wetland mapping > How to view wetland mapping* or phone the Department on 6364 6500.