

POLICY STATEMENT NO. 19

FIRE MANAGEMENT POLICY

1. OBJECTIVE

The Department will manage prescribed fire and wildfires on lands managed by the Department to protect and promote the conservation of biodiversity and natural values whilst also providing for protection of human life and community assets. The Department will also promote fire management that protects biodiversity on lands not managed by the Department.

Fire management will be planned and implemented in partnership with other landowners and land managers, fire authorities and the community. The Department will implement an informed and balanced approach to risk management. A variety of fire regimes incorporating different frequency, intensity, season and scale will be applied at the landscape scale on lands for which the Department has a fire management responsibility.

2. BACKGROUND

The rationale and the principles upon which this policy is based are provided in the Appendix.

3. LEGAL BASE

- Sections 33(1)(a) and 33(3) of the *Conservation and Land Management Act 1984* (CALM Act) provide for the Department to manage lands to which the Act applies, according to management plans or, in the absence of a management plan, in accordance with the necessary or compatible operations provisions of the Act depending on the land category. Fire management activities are subject to these provisions.
- The *Bush Fires Act 1954* applies to land throughout the State including Department-managed lands. The provisions of the Bush Fires Act do not, however, affect the provisions of the CALM Act and the Department is generally not bound by the Bush Fires Act.
- Section 39 of the Bush Fires Act provides wide-ranging powers for a bush fire control officer to take necessary steps to extinguish a fire. If an authorised CALM Act officer is present at a fire on or near any Crown land, the officer may take supreme control of the fire as if the officer were a bush fire control officer appointed by a local government authority. The Bush Fires Act also provides other powers to designated Departmental officers. Section 56 of the Act imposes a specific duty on an authorised CALM Act officer to take enforcement actions under the Bush Fires Act (eg. to demand the name and address of an offender, to require a person to produce an authorisation to light a fire, and to apprehend an alleged offender without a warrant).

- The *Wildlife Conservation Act 1950* and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provide special protection to threatened species (both Acts). The Commonwealth Act also protects threatened ecological communities. These impose an obligation to conduct fire management activities accordingly.
- Under common law, the Department falls under a duty as an occupier to take all reasonable care to eliminate or minimise foreseeable risks of harm. The Department could be held liable for injury or loss caused by fire that a Departmental employee had negligently lit or negligently failed to control.
- In July 2003 the Department was allocated the role of managing fire preparedness on non-metropolitan, non-townsite unallocated Crown land and unmanaged reserves. The responsibility for fire suppression on these lands remains with local government.
- Under the Western Australian Emergency Management Arrangements that are outlined in the State Emergency Management Committee Policy Statement No 7, the Department is recognised as the Hazard Management Agency (HMA) for wildfires on or near CALM-managed lands. Under these arrangements, the HMA “is responsible for ensuring that emergency management activities pertaining to the prevention of, preparedness for, response to and recovery from a wildfire are undertaken”. The HMA’s responsibilities include the preparation of a strategic plan or arrangements (WESTPLAN-WILDFIRES) that is designed to cope with wildfires on or near CALM-managed lands, and that includes details of joint agency operational arrangements.

4. RELATIONSHIP TO OTHER DEPARTMENTAL POLICIES

The Department’s Fire Management Policy is consistent with and recognises the requirements contained in other Departmental policies:

- Policy 3 Management of Phytophthora and Disease caused by it
- Policy 9 Conservation of Threatened Flora in the Wild
- Policy 10 Rehabilitation of Disturbed Land
- Policy 31 Management of Reserves for the Conservation of Nature
- Policy 40 Road Management
- Policy 41 Beekeeping in Public Land
- Policy 49 Radio Communications
- Policy 60 Occupational Health and Safety
- Media Relations Policy
- Public Participation Policy
- Wilderness Policy

5. POLICY

5.1 Safety and Risk

Safety	Firefighter and public safety is the first priority in every fire management activity.
Risk management	The protection of human life and biodiversity, cultural and community assets will be undertaken commensurate with the risk posed by fire to human life and those assets and the consequence of fire impacting on human life and those assets.

5.2 Use of Fire

Objectives for fire management	Fire will be used to achieve a range of land management objectives, including the conservation of biodiversity; maintenance of ecosystem health and productive capacity; conservation of soil, water and catchment values; conservation of natural and cultural heritage; regeneration and protection of native forests and plantations; and protection of human life, community assets, indigenous heritage sites, recreation sites and scenic values. These objectives, and the methods used to achieve them, will be specified in individual burn prescriptions.
Prescribed burning	Prescribed burning plans will integrate biodiversity conservation and asset protection objectives in order to optimise outcomes. In the planning of prescribed burning programs the assessment of fire requirements for biodiversity outcomes will be given first consideration and any shortcomings from this approach for other objectives will be taken into account subsequently so that prescribed burn plans achieve all priority objectives.
Manage for diversity	A variety of fire regimes incorporating different frequency, intensity, season and scale will be applied at the landscape scale (tens of thousands of hectares) and other scales. Planned fire regimes will incorporate the incidence of wildfires.
Fire planning	Planning for prescribed burns will incorporate the need for biodiversity conservation and strategic protection from wildfires, at both the landscape scale and land management unit scale (several hundred to several thousand hectares). Three year indicative prescribed burning plans and annual burning plans will be prepared. The planning and application of fire regimes will require consideration of interacting factors such as invasive species (weeds and feral animals), regeneration of native species, grazing impacts, fire history and the size of the park/reserve/forest. This is of particular concern in fragmented landscapes where Department-managed lands are surrounded by extensive urban and agricultural land uses.
Community consultation	During the planning process for prescribed burning the Department will consult with traditional owners, the community, government agencies and specific stakeholders. In particular a formal process of public consultation and engagement will be implemented during the preparation of the three year indicative prescribed burning plans for the south-west forest regions and annual plans for other regions. Fire management will be considered during public consultation on the content of area management plans prepared for the Conservation Commission. Consultation processes will also be used as an opportunity to develop community understanding and support for fire management programs.
Community awareness and education	The Department will make available to the community information concerning the outcomes of the community consultation process. Information on fire management and the Department's planning and operational processes will also be published and posted on the internet.

Qualified personnel	Prescribed burns will be planned, directed and conducted by qualified and experienced staff. Written prescriptions will be prepared by trained staff, with appropriate input from other Departmental staff and sources external to the Department.
Approvals	Every prescription will be reviewed and approved by the responsible manager prior to implementation. Each year the three year indicative prescribed burning program and the proposed annual burn program for the south-west forest regions will be brought to Corporate Executive by the Director of Regional Services for endorsement.
Monitoring and audit	The extent to which prescribed burn objectives have been achieved will be monitored and recorded in order to continue the process of adaptive management. Fire management plans and prescriptions will contain performance indicators and monitoring criteria against which achievements can be measured. The outcomes of monitoring and performance appraisal will be reported at appropriate intervals to the Executive Director. The achievement of fire management objectives contained in CALM's prescribed burning programs and in area management plans will be subject to periodic audit by the Conservation Commission.
Smoke management	Prescribed burns will be managed to reduce the risk of smoke causing detrimental impacts on population centres and other sensitive areas through application of smoke management guidelines. Potential impacts of smoke and ash on water catchments, road traffic, neighbours and visitors, and firefighters will be considered when planning and implementing prescribed burns.

5.3 Fire Suppression

Suppression capacity	The Department will maintain its fire management, suppression and response capability in accordance with sound risk management principles recognising the availability of resources from local government volunteers, fire authorities and other sources. This requires an adequate state of preparedness and standards of fire suppression relative to the values at risk, and to the difficulty of controlling fires in a safe and cost-effective manner.
Readiness	The Department will, in consideration of risk assessment outcomes and the availability of resources from other agencies, maintain an effective and efficient fire-suppression capability of personnel, equipment and aircraft. Resources need to be mobile and personnel must be fit, skilled and well trained.
Detection	The Department will, in high risk or high value areas, maintain fire detection and fire reporting systems that will give timely and accurate warning of fires threatening community or environmental values. Lower level detection and reporting systems will apply in other areas.

Response	The Department will respond to fires occurring on or near Department-managed lands to a degree that is appropriate to the values at risk, the prevailing and forecast weather, the availability of resources, the cost of the suppression operation, and the likelihood of long-term impact or net gains to the environment. In circumstances where impacts of the wildfire are likely to be low or resources are limited, the response may mean observation, rather than active suppression.
Control	The Department will take control of, or provide assistance at fires on or near Department-managed lands in accordance with State and local arrangements between the Department and fire authorities and other agencies;
Access	The Department will maintain an effective system of roads, fire access tracks and helipads to provide access and safety for firefighters.
Environmental harm	The Department will fully consider the protection of environmental and other values in determining strategies for fire suppression. Where appropriate, fires may be contained within management units defined by existing roads rather than by constructing new firelines around the perimeter of the fire. Where firelines are constructed during suppression operations, they will be subsequently rehabilitated to minimise the threat of soil erosion, weeds or spread of dieback disease.
Training	The Department will develop and deliver high quality training and performance assessment programs for Departmental staff for appropriate roles in fire and incident management.
Interagency arrangements	The Department will establish interagency agreements and working arrangements with fire authorities and volunteers to provide cooperative and coordinated fire fighting that can deal successfully with the full range of emergencies on or near Department-managed lands.

5.4 Wildfire Prevention

Prevention	The Department will plan and conduct wildfire prevention activities to minimise the incidence of preventable wildfires (ie. unplanned fires of human origin).
Identify fire cause	The Department will, where practical, attempt to identify the origin and cause of wildfires on lands under its control and will investigate fires that result in damage to private or community property. Where regulations have been breached, the Department will take appropriate action to identify and, as appropriate, arrange prosecution of offenders.

Arson	The Department does not have jurisdictional responsibility to effect initiatives for arson prevention or preparing communities for wildfire events. However, the Department will work closely with the Fire and Emergency Services Authority, the Police Arson Squad and local government authorities in developing and implementing coordinated fire prevention and preparedness programs.
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5.5 Liaison

Interagency arrangements	CALM will participate with other State agencies and local government authorities in developing approaches to fire risk mitigation, including in peri-urban areas.
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Partnerships	The Department will carry out its fire management role in partnership with other relevant agencies, primarily the Fire and Emergency Services Authority, the Forest Products Commission, local government authorities and Volunteer Bush Fire Brigades.
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5.6 Research

Research and knowledge	The Department will sponsor and undertake research into fire management and ensure that the resultant knowledge is disseminated to fire managers and the community.
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6. POLICY IMPLEMENTATION REQUIREMENTS

- To enable a consistent, reliable and transparent assessment of the risk and consequence of wildfire to biodiversity, cultural and community assets, the Department will utilise the Australasian Standard (AS/NZS 4360 Risk Management) as the basis for its approach to wildfire risk management.
- The Department recognises the importance of science, local knowledge and expertise and indigenous knowledge to underpin fire management. The Department will continue to promote and support research into fire ecology, fire behaviour, fire information systems and fire control systems and to apply adaptive management principles in its fire management operations.
- The Department will work with fire management agencies and research organisations to investigate and implement fire management strategies that mitigate against the impacts of climate change with respect to fire ecology and wildfire management.
- In order to facilitate support and assistance for cooperative and coordinated fire management across jurisdictional boundaries, the Department will implement education and awareness programs for neighbours and the community on best practice fire management.
- In order to promote the safe, efficient, effective and integrated management of fire and fire related activities on lands managed by the Department, a comprehensive set of standards, procedures and prescriptions will be published and maintained.

- Strategies other than prescribed burning, such as mechanical treatments of vegetation (eg. rolling or slashing) and grazing with livestock will be considered and applied where appropriate in meeting management objectives for the land in question.
- The need for effective fire management will be recognised in the policies and plans prepared by the Department. This includes area management plans prepared for the Conservation Commission for regions, State forest, parks and reserves as well as fire protection plans for high value assets, property, plantations etc as required. Every district will annually prepare a Fire Preparedness and Response Plan and a Prescribed Burning Plan.
- All instructions, prescriptions or guidelines developed for fire management activities undertaken by the Department must be consistent with the fire management principles and operational rationale in the Appendix.
- The Department will provide appropriate awareness and training programs for all staff likely to participate in any aspect of fire management to ensure adequate understanding, knowledge and skill levels to implement the fire policy in an environmentally sensitive, safe and cost-effective manner.
- The Department will use its best endeavours to both consult and involve traditional owners in fire management activities where the objective is to replicate traditional burning practices.
- The Department will contribute to State-wide fire management by representation on community based and interagency committees and working groups concerned with fire management at local, regional and State levels.
- The Department will maintain formal liaison with fire management authorities in other countries, States and Territories to ensure the currency of mutual aid arrangements and the transfer of knowledge on best practice fire management.
- Departmental staff must meet their obligations under this Policy through assigned levels of delegation, approved budgets, sourcing and planning as provided for in the Department's table of delegations, Departmental and other instructions.
- The implementation of this Policy will be subject to Departmental audit and periodic audit by the Conservation Commission in assessing the implementation of management plans.

7. CUSTODIAN

The Director of Regional Services is the custodian of this Policy.

8. EXECUTIVE DIRECTOR APPROVAL

Approved on 17 October 2005
 by K. J. McNamara
 Executive Director

Appendix to Fire Management Policy

This appendix outlines the rationale for fire management plans and activities implemented by the Department of Conservation and Land Management. A set of principles to guide fire management is also outlined.

Rationale

- Fires have occurred regularly on most lands managed by the Department. Fires from natural causes (eg. lightning) will inevitably occur. Fires from human activities, either deliberate or accidental, will also occur, but unplanned fires may be minimised by effective public education and awareness, and by enforcement of legislation and compliance management.
- Aboriginal people have inhabited Western Australia for more than 40,000 years and over this period they have used fire as a management tool for hunting, access and spiritual reasons. The landscapes that European settlers and their descendents have come to recognise as being distinctively Australian have been fashioned by fire over many generations.
- Fire is a natural environmental factor that can have both destructive and beneficial effects. It can regenerate, recycle nutrients, create and maintain habitats, but can also kill, injure and destroy. The impact of fire varies with the frequency, intensity, scale, time of year and the fire sensitivity of the community in which it occurs.
- Wildfires do not distinguish between land tenures. Fire protection and fire management regimes must involve all State Government agencies with land management or fire management responsibilities, local government authorities and private land managers working cooperatively to achieve agreed fire management objectives.
- Fire has very different impacts on the biota contained in the twenty-six bioregions represented in Western Australia. Fire regimes must be appropriate to the needs of each bioregion.
- Exclusion of fire from naturally fire prone vegetation over large areas results in the gradual build-up of live and dead vegetation which becomes fuel and increases the risk of large, intense and costly fires. In most vegetated ecosystems, the exclusion of fire for long periods over large areas is difficult to achieve, and may also be undesirable from a biodiversity conservation and community protection point of view.
- A regime of too frequent fires, planned or unplanned, can have adverse impacts on biodiversity for some species and in some ecosystems including riparian zones, granite outcrops, wetland ecosystems and small patches of remnant vegetation.
- Planned fire will be excluded from representative scientific reference areas, including fire sensitive ecosystems, and these will provide an important benchmark against which the effects of other fire regimes can be evaluated. Some biota and ecosystems may also benefit from long periods of fire exclusion. The location and size of fire exclusion areas should take account of firefighter safety and other management influences.
- Planned fires can be used in natural areas to minimise loss of life, property and services, and to achieve biodiversity conservation objectives. This is likely to be a more cost-effective and predictable method of fuel management over large areas than using alternative methods including manual, mechanical, chemical and biological methods.

- Suppression difficulty and damage potential to life and property of a bushfire are proportional to the size of the fire, the conditions under which it is burning, and the rate and amount of heat energy released (fire intensity). The intensity and speed at which fire burns is related to the quantity and structure of accumulated litter, bark and plant material, which is in turn related to the period since last fire. In most vegetated ecosystems, accumulated fuel loads can be reduced by low intensity prescribed fires. This reduces the likelihood of intense fires even under extreme conditions and improves the capacity for firefighters to safely control a fire. Under extreme fire danger conditions, the spread of fire may only be retarded in light fuels.
- Threshold levels of available fuel quantities or fire intervals have been identified in many major vegetation types which represent the upper limits beyond which fire behaviour in summer conditions will be severe and too dangerous to be suppressed by either ground or aerial fire suppression methods. In situations where a number of fires are burning simultaneously and fire fighting resources are fully committed, the existence of strategically-located areas of reduced fuel provides fire managers with greater flexibility in the deployment of available resources. Fires burning into light fuels may be given lower priority for attention because they are less likely to exhibit severe fire behaviour.
- Maintaining air quality is a major challenge in the execution of approved prescribed burning programs. The need for prescribed fire to conserve biodiversity and to protect community values presents a risk to achieving the standards of air quality regulations in high population areas. This risk can be minimised through the use of sophisticated smoke prediction models.
- Public understanding of the role and effects of fire, and application of planned fire and fire suppression operations is vital. Effective communication and consultation with the community leads to greater understanding and support for fire management programs, and ensures that knowledge within the community is made more readily available to managers.

Principles for Fire Management

- The vegetation and climate across Western Australia make it highly prone to bushfire. Over millions of years fire has contributed to the evolution of the State's ecosystems. Fire is an important disturbance factor that will continue to influence the biotic composition and structure of all natural ecosystems.
- Plant and animal species and communities vary widely in their adaptations to, and reliance on fire. Species and communities require particular fire regimes for their long-term survival. Such requirements may vary within the ecological and geographical range of species.
- There is no single fire regime that is suited for all flora, fauna and ecosystems. Organisms have developed with a great variety of fire regimes, and thrive in different circumstances. A fire regime that enables one organism to gain competitive advantage will disfavour a competitor.
- Diversity and variability in fire regimes at the landscape level help maintain biodiversity. The application of ecologically based fire regimes that provide for an interwoven mosaic of vegetation and habitats representing a range of fire intervals, fire intensities, seasons and scales will help optimise the conservation of biodiversity. Patchiness of burning is an important factor in providing environmental heterogeneity at a local level. In some instances fire exclusion will be planned. On the other hand, widespread, high intensity fires will periodically remove most of this local patchiness from the landscape. Patchiness can be achieved through applying fire during periods of fuel moisture differential, through the lighting pattern used, and by burning adjacent to light fuels.

- Fire management at a very local level may be critical for the survival of some threatened species and ecological communities.
- Following fire, other factors such as climatic events (eg. drought) and insect attacks often drive ecosystems towards a new transient state with respect to species composition and structure. This may preclude the identification of changes specifically attributable to fire.
- Climate has a major influence on fire regimes, and is one of the fundamental factors determining the distribution of vegetation communities at a regional scale. Some regions of the State have experienced significant shifts in climate over the past three decades and there is an expectation amongst the scientific community that the rate of climate change may accelerate in the future. Fire management should therefore be based on an understanding of climatic trends and adapt to meet changing circumstances.
- All available knowledge including life histories, vital attributes of the native flora and fauna and knowledge of indigenous traditional fire regimes will be used to develop ecologically-based fire regimes.
- Fire management policies and practices should adapt to new knowledge gained through strategic long-term and short-term research and monitoring programs. This adaptive approach to fire management should be flexible to any changes to community values and expectations.
- Fire management planning on lands managed by the Department must address the threats and impacts of wildfire, accommodate the use of planned fire and provide for the achievement of specified land management objectives.
- The response to the threat of wildfire on Departmental lands must consider legal requirements, be thoroughly planned, safe, effective, cost-efficient and environmentally sensitive. All fire management activities, including fire suppression and prescribed burning, must be conducted in accordance with clearly defined procedures that provide for safe work practices and have outcomes monitored and recorded.
- Planning an appropriate response to the occurrences of wildfires must include an assessment of the threat to human life, community assets and services, and natural values, and consider these in conjunction with the management objectives of the area.
- Principles of environmental care must guide all preparedness, suppression, recovery and prescribed burning activities.