GOVERNMENT OF WESTERN AUSTRALIA
Department of **Biodiversity, Conservation and Attractions**
PARKS AND WILDLIFE SERVICE

Managing bushfire risk on Parks and Wildlife Service-managed land

Overview

The Department of Biodiversity, Conservation and Attractions' (DBCA) Parks and Wildlife Service manages approximately 20 million hectares of parks and reserves across Western Australia and assists with the management of a further 89 million hectares of other Crown land. One of the department's most important responsibilities across this vast area is to manage bushfire risk to people, communities and the environment.

Bushfire is a natural element of the Western Australian environment, so it is not possible to eliminate bushfire risk entirely. Instead, the department aims to manage bushfire risk to an acceptable level – where risk is balanced against the cost, social and environmental effects of treatments.

Many things contribute to managing bushfire risk, but scientific research and the department's experience over 60 years of managing fire, demonstrate that managing bushfire fuel is crucial to reducing the harm caused by bushfires. Fuel management reduces the amount of fuel available to be burnt by a fire and changes the structure of the remaining fuel. This reduces the intensity with which bushfires burn and makes them easier to control. Prescribed burning is the most efficient and effective way to manage fuels over large areas, but other methods may also be used to treat smaller areas.

The Parks and Wildlife Service's Bushfire Risk Management Framework (the Framework) defines how much fuel needs to be managed to achieve an acceptable level of bushfire risk. The amount of fuel management required varies according to the type of vegetation and the value of surrounding assets. The Framework applies scientific knowledge, State policy settings and expert judgement to determine the fuel management required Statewide. This requirement is then integrated with biodiversity conservation and other land management objectives to develop a fuel management program in each of the department's regions.

Why is the Framework needed?

Parks and Wildlife Service has a responsibility to the community to ensure that its fuel management program addresses bushfire risk across the State in a way that is efficient, effective and consistent. The Framework ensures we can measure the effectiveness of the fuel management program Statewide and that effort can be targeted to areas of greatest need. In the southwest, the Framework will also improve planning for fuel management by differentiating between the requirements for fuel management according to the management needs of the area and the type of bushfire fuel. In doing so, the Framework will assist the department to plan its prescribed burning program and to make decisions about the allocation of resources.

How does it work?

The Framework defines where fuels need to be managed, and how much fuel needs to be managed, to keep bushfire risk at an acceptable level on public lands. It considers the importance of the assets that need to be protected from fire and the way that bushfires behave in different types of fuels and weather conditions.

1. The land that Parks and Wildlife Service manages across the State is divided into eight Bushfire Risk Management Zones. These are areas where the natural and social environments are relatively similar, leading to a consistent bushfire risk profile.
2. The State's vegetation is divided into 13 fuel types based on the structure and arrangement of the flammable elements. These fuel types reflect the way that fuels accumulate and the way fire moves through them, rather than being indicative of ecological requirements. They allow the level of acceptable risk to be varied within a management unit according to the way that a bushfire might behave.



3. Assets that warrant protection from fire are identified and categorised. Parks and Wildlife Service used the National Emergency Risk Assessment Guidelines (NERAG) to describe bushfire scenarios that would threaten the State's core objectives for emergency management. The types of assets that may be affected in each scenario were identified and prioritised according to the NERAG process.
4. Department-managed land within each Bushfire Risk Management Zone was classified as being within one of four Fire Management Areas (FMAs). These areas reflect the management intent of the area:
    a. The Settlement-Hazard Separation FMA surrounds towns, subdivisions and other areas where large numbers of people gather. Reducing fuels to maximise protection of these high-value assets takes precedence over other management considerations in this FMA.
    b. The Critical Infrastructure Buffer FMA surrounds transportation, communication, energy and other infrastructure that is of State-wide significance. Localised fuel management is not always the most effective way to protect these sites from bushfire, but where it is, fuels may be managed relatively intensively.
    c. The Landscape Risk Reduction FMA applies to broad landscapes where a variety of assets are distributed throughout vegetated areas. Fuels must be managed across these areas to prevent the occurrence of large bushfires that may harm people, communities and the environment; overwhelm the buffers around towns and critical infrastructure and necessitate large fire suppression operations.
    d. The Remote Area Management FMA comprises areas that are far from high priority assets. Fuel management may be undertaken in these areas to facilitate nature conservation or cultural outcomes, but they will be a low priority for bushfire risk management.

    The extent of each FMA is determined by the Bushfire Risk Management Zone and fuel type that it occurs within. FMAs are more extensive in areas where bushfires are prone to spread by 'spotting' and more difficult to suppress where the social setting reduces the tolerance of bushfire occurrence.

    Ecological and area management sensitivities may exist within the FMAs which potentially require exclusion or protection from fire. These areas need to be identified and outlined during the fuel management planning process.
5. The level of acceptable risk for each FMA is defined as a percentage of the fuel managed so that it won't allow a bushfire to burn with extreme intensity on a bad bushfire day. The percentage of fuel to be managed and the frequency with which it must be treated are varied according to the Bushfire Risk Management Zone and the fuel type. The climatic record and expert judgement are used to define the fire weather conditions that are applied in this process in locations across the State.
6. Parks and Wildlife Service will monitor and assess the effectiveness of its fuel management program by comparing the distribution of fuels across the land that it manages to the level of acceptable risk defined in the Framework. Fuel management, including prescribed burning, will be planned to progress toward achieving and maintaining the acceptable level of bushfire risk. Priority will be given to completing works in areas where bushfire risk is greatest.

What happens next?

The criteria provided by the Framework must next be mapped across the State to facilitate fuel management planning and reporting. This will be achieved by each Parks and Wildlife Service region preparing a fuel management plan. These plans will map the assets discussed in the Framework and the FMA boundaries. They will also apply a second layer of asset prioritisation, by including an assessment of the exposure and vulnerability of assets to bushfire. The preparation of regional plans will include appropriate consultation with other fire managers, land managers, asset managers and the broader community. When all regional plans are complete, Parks and Wildlife Service will realign its planning and reporting procedures to the Framework.

Want more information?

For more information, contact your local DBCA Parks and Wildlife Service office or the department's Fire Management Services Branch on (08) 9219 9108.