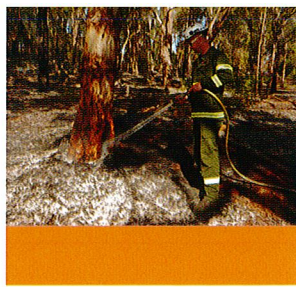
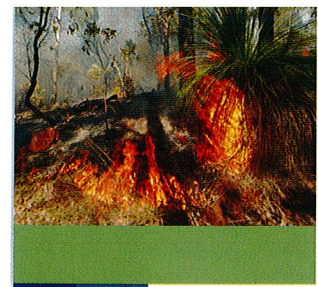


LIBRARY

Department of Biodiversity,
Conservation and Attractions

This PDF has been created for digital preservation. It may be used for research but is not suitable for other purposes. It may be superseded by a more current version or just be out-of-date and have no relevance to current situations.



Prescribed burning



Parks and Wildlife's prescribed burning program protects lives, property and infrastructure from bushfires through a carefully planned regime of controlled burns.

What is prescribed burning?

Prescribed, controlled and planned burns are the same thing.

In Western Australia, they are referred to as prescribed burns because in addition to being planned and controlled, science-based conditions are set to tailor burning for specific objectives and outcomes.

Why does Parks and Wildlife conduct prescribed burns?

The department uses prescribed burning for a number of purposes:

- to mitigate the severity of bushfires and to help protect lives, property and infrastructure by reducing the build-up of flammable vegetation and ground fuels based on a prioritisation of assessed fire risk
- to maintain biodiversity
- to rehabilitate vegetation after disturbance, such as timber harvesting and mining
- to undertake research on fire and its interactions with our environment.

What is involved in prescribed burning?

Prescribed burning involves careful planning, professional expertise, consultation and monitoring, including:

- determining what vegetation needs to be burnt and what needs to be left unburnt (to create a mosaic), the desired fire intensity and the season
- considering the history and variety of past fire events over the landscape
- studying and measuring the quantity, arrangement and moisture content of fuels
- determining, monitoring and forecasting the right weather conditions for igniting a burn using knowledge about fire behaviour
- determining the best time of day to ignite a burn in a specified pattern and sequence to achieve the desired outcomes and to prevent the burn from escaping

- monitoring the results of a burn to determine how well the operation met the objectives set
- using knowledge gained and lessons learned to improve future prescribed burning operations.

All of this is underpinned by a rigorous risk management assessment and burn approvals process.

When does burning occur?

In some regions, prescribed burning takes place in spring and autumn when weather conditions are cooler and more stable, and vegetation and fuels are in a suitable state to enable the desired outcomes to be achieved.

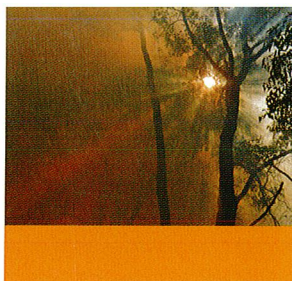
In the Kimberley, which has distinct wet and dry seasons, burning is mostly conducted from March to June (late wet to early dry season), when winds are more predictable and the vegetation is not fully cured. Prescribed burns conducted at this time tend to have relatively low intensity, are patchy and limited in extent, and night conditions are often conducive to burns self-extinguishing.

Who is involved in prescribed burning?

In Western Australia, prescribed burning is a shared responsibility. Parks and Wildlife is responsible for prescribed burning on land that it manages. The department consults with and works effectively alongside the community, the Department of Fire and Emergency Services (DFES), local governments and industries such as grape growers and other landholders. Where feasible, Parks and Wildlife, DFES and local government may conduct prescribed burning programs in a collaborative and joint manner.

Is prescribed burning safe?

Community safety is our primary concern when carrying out prescribed burns. Prescribed burning depends on complex factors that have inherent and associated uncertainties; therefore, there is always an element of risk associated with burning. Each prescribed burn is carefully planned, peer-reviewed and must pass a rigorous approvals process before any ignitions can commence.



How does Parks and Wildlife manage the risk of escapes?

Prescribed burning is not without risk. However, the department, through decades of scientific research and operational experience, implements procedures to minimise the risk of potential escapes and ensure continual improvement.

Since 2012, the department has adopted major changes to ensure deliberate and proactive risk management is applied to keep the risks associated with prescribed burning as low as reasonably practicable. These changes have aligned the department's processes and practices with the International Standard ISO 31000 for risk management.

The Western Australian Government, through the Office of Bushfire Risk Management (OBRM), has endorsed this revised approach and continues to maintain audit and assurance processes.

Is prescribed burning effective?

Yes. Scientific research shows that prescribed burning is very effective, especially when managing bushfires, as fire behaviour is directly affected by the amount of available fuel. Therefore, bushfire suppression is more likely to succeed where fuel loads and fire intensities are lower and where fires run into recently burnt areas.

The special inquiry report of the 2011 Perth Hills bushfire *A Shared Responsibility* highlights an example of the effectiveness of prescribed burning.

"The reduced fire intensity and rate of spread observed when bushfires enter a reduced fuel area allows firefighters greater opportunity to effectively combat the fire and to limit its impact. In fact, the Special Inquiry heard evidence that the Roleystone–Kelmescott fire was extinguished on one front when it entered a section of the Banyowla Regional Park that had been the subject of a prescribed burn by DEC (now the Department of Parks and Wildlife) four years ago, as discussed later in this chapter".

The 2011 Perth Hills bushfire caused serious damage but the destruction in this fire-prone area was limited by prescribed burns undertaken in the previous four years at strategic locations. While prescribed burning will not eliminate large, damaging bushfires, their likelihood will be reduced and opportunities for safe and effective suppression will be greatly enhanced.

What techniques are used for prescribed burning?

The Parks and Wildlife website details how the department carries out prescribed burns dpaw.wa.gov.au/management/fire/prescribed-burning/54-planning-for-prescribed-burning.

Where can I get more information?

To find out more, including what prescribed burning is happening in your area today, contact your local Parks and Wildlife office; or visit dpaw.wa.gov.au/todayburns

Further reading

Boer, MM, Sadler, RJ, Wittkuhn, RS, McCaw, L & Grierson, PF 2009, 'Long-term impacts of prescribed burning on regional extent and incidence of wildfires – Evidence from 50 years of active fire management in SW Australian forests', *Forest Ecology and Management*, vol. 259, pp. 132–142.

Burrows, N & McCaw, L 2013, 'Prescribed burning in southwestern Australian forests', *Frontiers in Ecology and the Environment*, vol. 11, pp. 25–34.

Wittkuhn, RS, McCaw, L, Wills, AJ, Robinson, R, Andersen, AN, Van Heurck, P, Farr, J, Liddelow, G & Cranfield, R 2011, 'Variation in fire interval sequences has minimal effects on species richness and composition in fire-prone landscapes of south-west Western Australia', *Forest Ecology and Management*, vol. 261, pp. 965–978.



For more information contact:

Department of Parks and Wildlife
17 Dick Perry Avenue
Technology Park, Western Precinct, Kensington WA 6151
Ph: (08) 9219 9000 Fax: (08) 9334 0498
Email: info@dpaw.wa.gov.au Web: dpaw.wa.gov.au

