Tarawi Nature Reserve
Fire Management Strategy
2013

Office of Environment & Heritage

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Related documents

- Office of Environment and Heritage (2012) *Fire Management Manual 2012 - 2013*

Additional notes

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Communications Information

Service	Channel	Location and Comments
NPWS HF Radio	1 - 6	
RFS PMR Radio	50 45	Wenba (primary) Coombah (secondary)
Mobile phone		No coverage
Satellite Phone		Yes, Globalstar network has intermittent service due to reduced satellite numbers.
UHF - CB	3	

Contact Information

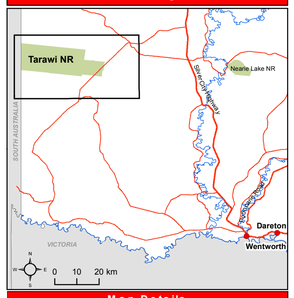
Agency	Position / Location	Phone
National Parks & Wildlife Service	Far West Regional Duty Officer (24 hour)	08 8080 3222
	Buronga Office (bus. hours)	03 5021 8900
	Tarawi Nature Reserve	03 5027 1232
Lower Western Zone	Operations Manager: Steve Walker	0428 598 376
NSW Rural Fire Service	Lower Western Zone RFS Office	03 5027 4422
Emergency Services		000
Ambulance	Mildura (Vic) and Wentworth enquiries only	03 5023 0011
SES	Emergencies	13 2500
	Wentworth	03 5027 5100
Police	Dareton	03 5027 7599
	Wentworth	03 5027 3102
	Buronga	03 5023 2262
Council	Wentworth Shire Council	03 5027 5027
	After hours and emergency	03 5027 5091

Fire Season Information

Wildfires	The critical wildfire season occurs during November to February. This period may extend into the first half of March. Particular care is required during periods of negative Southern Oscillation Indices. The end of the critical fire season is often marked by a decline in temperature and rising humidity.
Prescribed Burning	Prescribed burning should be undertaken before autumn rain occurs to maximise effectiveness. Burning may also be considered during late winter and early spring dependent on seasonal factors. Prescribed burning undertaken near the commencement of the statutory bushfire season should be fully contained.

In case of emergency call duty officer 08 8080 3222 (24 hours 1st Oct - 31st Mar)

Locality



Map Details

Datum: Geocentric Datum of Australia (GDA) 1994
Projection: Map Grid of Australia (MGA) Zone 54
Data: Spot Satelite Imagery: 2005. 1:100k Topographic Map – Scotia 7131
Scale: Scales are accurate when printed on A1 size paper

Bushfire Risk Management Strategies

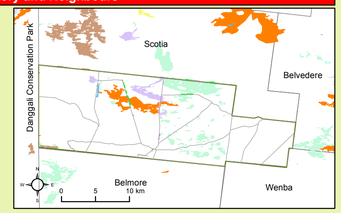
Fire Management Zones

Asset Protection Zones	The objective of **APZs** is the protection of human life and property. This will have precedence over guidelines for the management of biodiversity. Maintain Overall Fuel Hazard at Moderate or below.
Strategic Fire Advantage Zones	The objective of **SFAZs** is to reduce fire intensity across larger areas. Maintain Overall Fuel Hazard at High or below, however adherence to guidelines for biodiversity will take precedence where practical.
Land Management Zones	The objective of **LMZs** is to conserve biodiversity and protect cultural and historic heritage. Manage fire consistent with fire thresholds.

Fire History and Neighbours

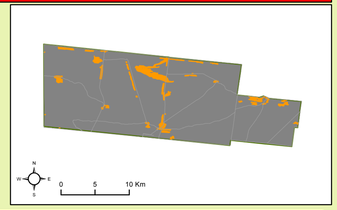
	Fire 1977 - 1980
	Fire 1980 - 1985
	Fire 1995 - 1998
	Fire 1998 - 2000
	Fire 2000 - 2002
	Fire 2002 - 2004
	Fire 2004 - 2005
	Fire 2005 - 2007
	Unburnt 1972 - 2013
	Prescribed burns that occurred within the last 5 years (2008/09 to 2012/13)

Neighbours details can be found within the Regional Incident Procedures (RIP) book



Status of Biodiversity Thresholds

Too frequently burnt	Consecutive fire intervals are shorter than the recommended minimum interval.
Vulnerable to frequent fire	The current fire interval is shorter than the recommended minimum interval.
Within threshold	The time-since-fire is greater than the recommended minimum, and less than the recommended maximum.
Long unburnt	The current fire interval is longer than the suggested interval.



Operational Guidelines - Heritage

Resource	Guidelines
Aboriginal Cultural Heritage Site Management	*Ground based sites (AS2), including artefacts and grinding grooves* • Protect site from any ground disturbance, including the use of earth-moving equipment, vehicles and water bombing • Apply a machinery exclusion area where there is a high concentration of known sites (adjacent to Canegrass Bore) • Area may be burnt
Historic Heritage Site Management	*Heritage Sites (yards, brush breaks, campsites)* • Protect the site from fire through slashing in high ephemeral growth years. • Protect site from any ground disturbance, including the use of earth-moving equipment, vehicles and water bombing • Exclude site from fire where possible, including the construction of a control line around the perimeter • Foam may be used to protect the site, or to extinguish fire
Threatened Species Management	• Heavy machinery will be excluded from known threatened species habitat areas. • Exclude heavy machinery from known malleefowl nest sites. • Apply minimum interval of at least 20 years between fire in all mallee vegetation communities. • Monitoring to record fire response must be initiated after a fire event • Maintain fire trails and turning bays to avoid any widening during incidents

Operational Guidelines

General	Guidelines
Aerial operations	• Aerial operations will be managed by trained and competent personnel. This includes directing aerial bombing and aerial ignition operations • The use of bombing aircraft without the support of ground based suppression crews should be limited to very specific circumstances. • The use of bombing aircraft should support containment operations by aggressively attacking hotspots and spot-overs. • Where practical foam should be used to increase the effectiveness of bombing operations. • All aerial ignition operations require the consent of the NPWS Regional Manager or the Section 44 Appointee. • Utilise incendiaries to rapidly burn out large areas where required.
Backburning	• All personnel must be fully briefed before back burning operations begin. • Back-burning is a valid and useful fire fighting tool in mallee environments, but should only be undertaken when temperature and humidity allow (generally late afternoon and evening), by experienced personnel and after careful consideration by the Incident Management Team. • Prior to back-burning, where practical, clear a 1m radius around dead or hollow bearing trees and active malleefowl nests adjacent to containment lines, or wet down these trees during the ignition.
Command & Control	• Standard Incident Management Systems are to be applied • The first combatant agency on site may assume control of the fire, but then must ensure the relevant land management agency is notified promptly. • On the arrival of other combatant agencies, the initial Incident Controller will consult with regard to the ongoing command, control and incident management team requirements as per the relevant BFMC Plan of Operations. • Where OEH is not the first responding fire authority to arrive at the fire on OEH managed lands a competent officer of the first arriving fire authority will direct operations until a competent OEH officer assumes control (unless prior arrangements have been made).
Containment Lines	• Construction of new containment lines should be avoided, where practicable, except where they can be constructed with minimal environmental impact. • New containment lines require the prior consent of a senior NPWS officer. • The biodiversity objectives and locations of significant species will be considered when locating control lines. Link up with SFAZ's, recently burnt areas and areas with low fuel loads as much as possible when planning and constructing control lines. • Where practical, all attempts will be made to exclude the construction of control lines within 100 metres of cultural heritage sites, scientific survey sites and dune crests. • All personal involved in containment line construction should be briefed on, and must consider both natural and cultural heritage sites in the location. • Containment line construction using earth moving equipment must be in accordance with the earth moving guidelines outlined below. • All containment lines not required for manangement purposes will be closed at the cessation of the incident.
Earthmoving Equipment	• Earth moving equipment may only be used with the prior consent of a senior NPWS Officer, and then only if the probability of success is high. • Earthmoving equipment must always be guided and supervised by an experienced officer, and accompanied by a support vehicle. When engaged in direct or parallel attack, this vehicle must be a fire fighting vehicle. • Earthmoving equipment must be washed down, where practicable, prior to it entering NPWS estate and again on exiting NPWS estate. • Experienced NPWS personnel will operate heavy plant in preference to contractors. • Construction of control lines with heavy plant along dune crests will be avoided where practical. • Dozers will operate with rakes in preference to blades to reduce soil disturbance. • Graders will be preferred in speargrass fuel conditions in open vegetation communities.
Fire Suppression Chemicals	• The use of foam, gels and retardants will be permitted on the reserve • Fire suppression chemicals are not to be applied within 50m of standing water.
Rehabilitation	• Containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Watering points	• Consider deployment of a bulk water carrier to support fire operations.
Smoke Management	• Potential smoke impacts and mitigation tactics will be assessed during the planning of fire operations. • If smoke becomes a hazard on local roads, the police and relevant media must be notified. • During fire operations, signage may be required on the Pine Camp-Springwood Road.
Visitor Management	• The reserve may be closed during periods of extreme fire danger.
WARNINGS	• **ROADS MAY BECOME BOGGY AND UNTRAFFICABLE AFTER RAIN.** • **FIRE BEHAVIOUR IN MALLEE COMMUNITIES CAN BE EXTREME AND UNPREDICTABLE.**

Suppression Strategies

Conditions	Guidelines
Mallee Dune-Swale Communities	
Fire danger rating LOW - HIGH	• Aim to reduce the incidence and extent of fire in old (>60 years) age class mallee-spinifex vegetation communities. • Where possible and without excessively increasing fire size allow wildfires in younger age classes to be contained by previously burnt areas and natural low fuel areas. Consider broad containment strategies using existing roads, allowing for the long-term management requirements of biodiversity • Direct and parallel attack may be applied with earthmoving machinery and fire units only on dead edges, or in vegetation with LOW OFH..
Fire danger rating VERY HIGH - EXTREME	• Fallback to existing trails and roads, recently burnt areas or vegetation with LOW OFH. • Do not attempt backburning in the predicted path of running fire in this vegetation. • Backburning must be carefully timed and planned to avoid adding to fire runs. • Backburning effectiveness will drop significantly in the afternoon as humidity starts to rise, and wind drops, in the early evening. • Parallel attack may be applied with earthmoving machinery and fire units only on dead edges, or in vegetation with LOW OFH.
Mallee Sandplain Community	
Fire danger rating LOW - HIGH	• Aim to reduce the incidence and extent of fire in old (>60 years) age class mallee-spinifex vegetation communities. • Where possible and without excessively increasing fire size allow wildfires in younger age classes to be contained by previously burnt areas and natural low fuel areas. Consider broad containment strategies using existing roads, allowing for the long-term management requirements of biodiversity. • Direct and parallel attack may be applied with earthmoving machinery and fire units only on dead edges, or in vegetation with LOW OFH.
Fire danger rating VERY HIGH - EXTREME	• Fallback to existing trails and roads, recently burnt areas or vegetation with LOW OFH. • Do not attempt backburning in the predicted path of running fire in this vegetation. • Backburning must be carefully timed and planned to avoid adding to fire runs. • Backburning effectiveness will drop significantly in the afternoon as humidity starts to rise, and wind drops, in the early evening. • Parallel attack may be applied with earthmoving machinery and fire units only on dead edges, or in vegetation with LOW OFH.
Belah-Rosewood Mixed Woodland	
Fire danger rating LOW - HIGH	• Consider a broad containment strategy using existing roads, allowing for long-term management requirements of biodiversity • Direct and parallel attack may be applied with earthmoving machinery and fire units only on dead edges, or in vegetation with LOW OFH.
Fire danger rating VERY HIGH - EXTREME	• Fallback to existing trails and roads, recently burnt areas or vegetation with LOW OFH. • Do not attempt backburning in the predicted path of running fire in this vegetation. • Backburning must be carefully timed and planned to avoid adding to fire runs. • Backburning effectiveness will drop significantly in the afternoon as humidity starts to rise, and wind drops, in the early evening. • Parallel attack may be applied with earthmoving machinery and fire units only on dead edges, or in vegetation with LOW OFH.

Vegetation

Vegetation Community	Vegetation management guidelines	Fire Behaviour
Pearl/Black Bluebush	• Fire events (including prescribed burns) should always be avoided	• Only occurs in small areas within the reserve. Fire intensity is likely to be low – moderate.
Open Herbland	• Fire events (including prescribed burns) should always be avoided	• Only occurs in small areas within the reserve. Fire intensity is likely to be low – moderate.
Mallee Dune-Swale Community	• Recent research indicates that a minimum of 15 years is required before fuel loads are sufficient to allow wildfire and that there is no maximum threshold. A minimum of 20 years should apply to communities containing *Callitris*. Older age class (> 60years) *mallee-spinifex* communities should be protected from large scale wildfire if possible. Under ephemeral fuel loads fires may burn more frequently.	• Fire intensity in mallee communities may range from moderate to very high and is largely influenced by the OFH comprised primarily of spinifex, ephemeral growth and weather conditions.
Mallee Sandplain Community	• Recent research indicates that a minimum of 15 years is required before fuel loads are sufficient to allow wildfire and that there is no maximum threshold. A minimum of 20 years should apply to communities containing *Callitris*. Older age class (> 60years) *mallee-spinifex* communities should be protected from large scale wildfire if possible. Under ephemeral fuel loads fires may burn more frequently.	• Fire intensity in mallee communities may range from moderate to very high and is largely influenced by the OFH comprised primarily of spinifex, ephemeral growth and weather conditions.
Belah-Rosewood Mixed Woodland	• Fire intervals of less than 20 years should be avoided. Fire should be avoided where there is a chenopod understorey.	• Fire intensity is usually moderate – high as fires will only occur when ephemeral fuel loads are high.

OFH – Overall fuel hazard - A rating system that includes leaf litter, grasses, shrubs, bark type and bark condition
Ephemeral conditions – Occur after consecutive years of high rainfall which leads to a build up of fine fuels such as grasses and herbs which has the potential to create a continuous fuel loading across all of the vegetation communities listed above.