

Most Recent Burn

by Fire Season

Morton National

Inset 4: Most Recent Burn

Last 10 Years, Prescribed

Burns and Wildfires.

Fire Management

Inset 3: Fire Management Zones

Fire Interval (in years)

H - 25 - 200

Urban, Rural, Waterbodies

Inset 2: Vegetation Fire Regimes

Morton National Park





Fire Management Strategy

ts employees disclaim liability for any act done on the information in the data and any consequences of such acts or omissions.

Grid Interval 1000m Australian Map Grid Zone 56 Please forward comments on this strategy to: sc.fireplans@environment.nsw.gov.au or NPWS Highlands Area Office , 'Yarrunga' Nowra Rd Fitzroy Falls NSW 2577.

They are framed by current cooperative arrangements with other fire authorities. NPWS strategies for fire management, reserve management plans, neighbours and other sitespecific issues that need to be considered. Feedback on these matters is always appreciated and should be directed to NPWS Highlands Area, 'Yarrunga', Nowra Rd, Command and Control: The NPWS is responsible for fire management within the

reserve. Any fire authority may initiate size-up and attack with advice to the NPWS upon initial fire sighting or report. See Contacts section to advise fire reports in or within 8km initial attack agency following assessment and advice by NPWS. Visitor Safety: Consider public safety within initial response operations (i.e., clearing likely visitor use areas and sites, warnings and information, on-site protection, closures or evacuation where instructed by Police).

Fire Suppression: Firefighter safety is paramount. Containment options should consider using existing roads, trails, walking tracks and recently burnt areas. Where possible to limit unnecessary damage, earthmoving equipment should be limited to compartments. If extreme fire conditions prevail - fall back to property protection of

adjacent urban areas – and rural dwellings. Earthmoving Equipment: Except for immediate initial attack, the use of earthmoving equipment for fire suppression within the reserve requires NPWS consent. There are significant natural and cultural values at unnecessary risk from unplanned use of earthmoving equipment. Contact NPWS if earthworks are required. ALL use of earthmoving equipment will be consistent with NPWS safety, operational and

Foam and Retardant Use: Avoid foam and retardant use within the reserve unless

there is a significant necessary operational advantage. DO NOT use on or near rainforests, watercourses, wetlands or swampy areas. DO NOT use foams or retardants near water storages or supply infrastructure. Unless under emergency conditions always obtain permission before using rural water supplies / sources. Take care when tanker filling not to contaminate water sources Aerial operations: Aerial operators should be briefed on location of transmission lines in the area. Not all powerlines are shown on map. Consider safety implications where aircraft will operate over adjacent urban areas, rural dwellings or operate from publicly accessible fireground sites. Aerial operations should be postponed or abandoned if there is a high risk of a storm moving through the area, or there is a significant wind change anticipated. Avoid contamination of urban water supply - Fitzroy Falls reservoir – aerial dipping only from Northern half of dam. Smoke Management: This reserve is adjacent to built-up areas and busy roads. Consider prompt advice to communities downwind and consider traffic management Prescribed Burning operations. Cold air drainage patterns in this area may also carry smoke some distance from the fireground and may adversely affect transport operations. Notify nearby highway and airspace management agencies if a smoke hazard to traffic is likely. This reserve is within the notifiable area for air quality concerns within the Sydney Basin. Check for "no-burn" constraints - notify if required.

Rehabilitation: Earthmoving equipment and other resources should be allocated to soil

Arson: Report ALL fires of unknown cause or suspected arson to Police via Fire

erosion control works and remedial restoration before standing down from fire

Control. Protect likely ignition point/s or evidence. Report any suspicious activity on or Locked Gates: Any NPWS locked gates within the reserve are fitted with standard key kept in fire tankers and available from Fire Control. Report any missing or damaged may need to left in closed position - but not locked. Close/lock NPWS gates after operations. Where safe, leave farm gates as you find them. Map Grid: (zone 56) Datum for map grid shown is AGD 66. This will remain in use until the majority of map sheets covering the area are revised to the newer GDA datum. To approximately locate a map reference given in GDA to this map (AGD 66) move approximately 200 metres to the southwest from the given grid reference. Conversely, to relay a grid reference from this map (AGD 66) to someone with a GDA map, give the reference of a point approximately 200m to the northeast of the position shown on this Catchment Management: Most of the reserve areas shown on this map are within catchment areas for urban water supply for Sydney and the local area. Some areas adjacent to impoundments are declared Special Areas under the Sydney Catchment Authority, e.g. Tallowa Dam, Fitzroy Falls Reservoir. Where possible avoid introducing higher intensity fire within catchment areas (sedimentation), and note constraints on the

Special site considerations Wildlife: Where possible, protect hollow trees adjacent to control lines during fire suppression operations. Prepare control lines to avoid introducing fire to these "habitat" trees during prescribed burning activities (also saves considerable "mop-up" effort). Rare or threatened plant species - known sites: Fireground control personnel should seek relevant information and brief all personnel involved in control line construction and suppression activities on the location of threatened species sites or habitats and appropriate actions to protect these sites – refer to relevant strategies table. Cultural sites – known Aboriginal and Historic sites: Fireground control personnel should seek relevant information and brief all personnel involved in control line construction and suppression activities on the location of sites within the operational

area and appropriate actions to protect these sites – refer to relevant strategies tables.

use of foam and fire retardant chemicals.

Service	Channel	Location and Comments
RADIO		
NPWS - VHF	31 & 24	Access to Redrocks and Ellesmore repeaters.
NPWS - VHF (Fireground Comms)	43 & 36	17-18 - 5 Watt Channels.
NPWS - VHF (Portable Repeater)	14	Stored at Nowra Area depot / transportable.
NPWS / RFS (X-band Repeater)	14	Stored at Nowra / transportable. Full range of both simplex & duplex NPWS VHF & RFS PMR channels.
RFS - PMR - UHF	CH 29	Redrocks (Shoalhaven RFS)
	CH 224	Fitzroy Falls Area (Robertson RFS)
	CH 109	Bundanoon (Wingecaribee RFS)
RFS - GRN	NA	
CB - UHF		
Aircraft - VHF		As advised by State Ops.
PHONE		
Public Phones		Bundanoon, Fitzroy Falls, Kangaroo Valley.
Mobile Phone - CDMA		Poor coverage available -Telstra.
Mobile Phone - GSM		Unreliable away from main towns.
Satellite Phone		Available for deployment ex Highlands and Nowra Area offices – can be unreliable.

122	onices – can be u	unreliable.			
MapID	Threatened Species - Fire Management Strategies	Species		Species status	
Flora			<u> </u>	17.1	
FL 1	 No fire more than once every 10 years. No slashing, trittering or tree removal at these sites. 	Boronia deanei	Boronia deanei	Vulnerable	
FL 2	 No fire more than once every 10 years. No slashing, trittering or tree removal at these sites. 	Grevillea molyneuxii	Grevillea molyneuxii	Vulnerable	
FL 3	 No fire. No slashing more frequently than every 10 years, no trittering or tree removal 	Pomaderris cotoneaster	Pomaderris cotoneaster	Endangered1	
FL 4	 No fire more than once every 25 years. No slashing, trittering or tree removal at these sites. 	Pterostylis pulchella	Pterostylis pulchella	Vulnerable	
FL 5	 No fire more than once every 10 years. No slashing more frequently than every 10 years, no trittering or tree removal. 	Zieria murphyi	Zieria murphyi	Vulnerable	
Fauna FA 1	No burning of allocasuarina thickets. Machanical bazard reduction all avoid allocasuaring thickets.	Calyptorhynchus lathami	Glossy-Black Cockatoo	Vulnerable	
FA 2	 Mechanical hazard reduction ok, avoid allocasuarina thickets. No slashing, trittering or tree removal at these sites. 	Cercartetus nanus	Eastern Pygmy- possum	Vulnerable	
FA3	Requirements undetermined.	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	
FA 4	 No slashing, trittering or tree removal at these sites. No use of earthmoving equipment, and no disturbance of rocks within 20 metres of escarpment. 	Reptile Habitat	Reptile Habitat		
FA 5	 No slashing around maternity sites. No burning around known roost sites. 	Miniopterus schreibersii	Common Bentwing-bat	Vulnerable	
FA 6	Requirements undetermined.	Neophema pulchella	Turquoise Parrot	Vulnerable	
F A 7	 No burning around known nesting sites at any time. No slashing trittering or tree removal around nesting sites. 	Ninox connivens	Barking Owl	Vulnerable	
FA 8	 No burning around known nesting sites at any time. No slashing trittering or tree removal around nesting sites. 	Ninox strenua	Powerful Owl	Vulnerable	
FA 9	Requirements undetermined.	Petaurus australis	Yellow-bellied Glider	Vulnerable	
FA 10	No slashing, trittering or tree removal at these sites.	Petrogale penicillata	Brush-tailed Rock-wallaby	Vulnerable	
FA 11	 No slashing, trittering or tree removal at these sites. 	Potorous tridactylus	Long-nosed potoroo	Vulnerable	
FA 12	 Exclude known roost sites from fire or mechanical forms of hazard reduction. 	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	
FA 1 3	Requirements undetermined.	Scoteanax rueppellii	Greater Broad- nosed Bat	Vulnerable	
FA 14	 No burning around known nesting sites at any time. No slashing, trittering or tree removal at these sites. 	Tyto tenebricosa	Sooty Owl	Vulnerable	

* Specific requirements undetermined – No species specific fire requirements known at present, however the potential impact of firefighting chemicals and heavy machinery use should be considered and minimised where possible.

Fire Regimes - Vegetation In order to maintain biodiversity within the reserve the following fire regimes are indicated for vegetation types that <u>may</u> be present. The aim is for a range of areas with differing times since fire within these intervals. Within APZs these thresholds may be exceeded where necessary for asset protection. Fire frequency in SFAZs may trend toward lower thresholds in order to provide a strategic advantage in containing wildfire. The below intervals are broad guidelines only and fire requirements for specific species may need to

The years	tation types listed below are not all necessaril	v present within	the area covered
	re Management Strategy.	y present within	ille alea coveleu
Map ID Regime	Vegetation type	Minimum fire interval	Maximum fire interval
Α	Coastal complex, Woodland, Grassy dry forest	5	30
В	Wetlands	6	35
С	Open forest, Woodland	5	40
D	Grass forest, Riparian forest, Coast/Plateau complex, Dry forest	5	50
E	Coastal Dune Scrub, Coastal Sands Forest, Open Forest, Dry Forest, Heathland	7	30
F	Riparian Forest, Dry Forest, Swamp Forest, Moist Forest	7	35
G	Acacia Scrub, Shrubland, Grassland	8	30
Н	Moist Forest, Gorge/Gully Forest	25	200
ľ	Rainforest Exotic Forest Mangrove	Exclude fire	Exclude fire

Map ID	Vegetation type	Minimum fire	Maximum fire
Regime		interval	interval
Α	Coastal complex, Woodland, Grassy dry	5	30
	forest		
В	Wetlands	6	35
C	Open forest, Woodland	5	40
D	Grass forest, Riparian forest,	5	50
	Coast/Plateau		
	complex, Dry forest		
Е	Coastal Dune Scrub, Coastal Sands	7	30
	Forest,		
	Open Forest, Dry Forest, Heathland		
F	Riparian Forest, Dry Forest, Swamp Forest,	7	35
	Moist Forest		
G	Acacia Scrub, Shrubland, Grassland	8	30
H	Moist Forest, Gorge/Gully Forest	25	200
ľ	Rainforest, Exotic Forest, Mangrove,	Exclude fire	Exclude fil
	Marsh	where possible	where possi
No	Rural, Urban, Waterbodies	N/A	N/A
Regime			

Inset 6: Bushfire Behaviour

Radio Coverage.

NPWS Channel 31

Good

Inset 5: Radio Coverage

Ch 31 Red Rocks Repeater

Cambewarra

Emergency Calls - Fire, Ambulance, Police	
Call "000" stating service required	
\$4 AAA	ironment & Conservation)
Emergency Contact	
Business Hours - 0830-1630 MonFri.	(02) 4423 2170
After Hours / All areas	1800 629 104
NPWS Highlands Area Office	
Nowra Rd, Fitzroy Falls NSW 2577	(02) 4887 7244
South Coast Regional Office 55 Graham St. Nowra NSW 2541	(02) 4423 2170
Rural Fire Service	
For Brigade Contact No.s - Contact Fire Control	
Goulburn/Mulwaree Fire Control Centre	
Business Calls	4822 2900
Emergency calls Shoulbowen Fire Control Control	6226 3100
Shoalhaven Fire Control Centre	AAAA AAAA
Business Calls	4424 4424
Wingecarribee Fire Control Centre	4074 0705
Emergency calls	4871 3765
Business Calls For Brigade Contact No. 6 Contact Fire Control	4871 2666
For Brigade Contact No.s - Contact Fire Control	
NSW Fire Brigades	4000 4440
Bowral Fire Station	4862 1446
Bundanoon Fire Station	4883 6333
Moss Vale Fire Station	4868 1288
Forests NSW	
Softwood/Pine plantations	MARIN 2444
Moss Vale District office	4877 1939
Bombala Regional office	6458 3177
Hardwood Forests	00 00
Batemans Bay	4472 6211
Police	1000 0011
Bundanoon Police Station	4883 6044
Robertson Police Station	4885 1224
Bowral Police Station	4862 9299
Marulan Police Station	4841 15 16
State Emergency Service (SES)	syranar ununun
Emergency Assistance No.	132500
Wingecarribee Headquarters	4871 2433
Shoalhaven City	4423 0081
Sydney Catchment Authority	9997-1467-164-07 A MILLIAM COM
Moss Vale Office	4868 4444
Local Government	1595501500 MARK 5000
Goulburn/Mulwaree Council	4823 4444
Goulburn/Mulwaree Council (After Hours)	4822 2148
Shoalhaven City Council	4429 3111
Shoalhaven City Council (After Hours)	4421 3100
Wingecarribee Council	4868 0888
Wingecarribee Council (After Hours)	0408 483 203
Community Contacts	
WIRES (Wingecarribee)	4862 1788
WIRES (Mulwaree Goulburn)	4822 3888
Nearest Hospital/s	
Powerland District Hagnital	4964 0000

Emergency Calls - Fire, Ambulance, Police

Fire Management Strategy Information

annually, post fire season.

Bowral and District Hospital

For fire management planning the reserve is divided into three main types of fire management zones each with strategies to address fire management in the particular area. Other strategies apply to the whole reserve (e.g., fire access network) or address fire management for particular values found in the reserve (e.g., threatened species, cultural sites). These strategies guide the fire management and related works within this reserve. Guidelines are also provided to assist with operational matters - see table. Fire Management Zones - Morton National Park (North) APZ Asset Protection Zones: Within these areas the focus is on protection of life and adjoining higher risk assets. Bush fire fuels are managed towards lower

levels and fire may be more frequent than desirable to conserve biodiversity.

SFAZ Strategic Fire Advantage Zones: These zones are strategically placed and

managed to provide an advantage for fire fighters in containing and suppressing wildfires. Here, fire frequency may occur towards the lower thresholds necessary to conserve biodiversity, ie more often. HMZ Heritage Management Zones: Within these zones fire is managed towards a range of intensities and frequencies required in order to conserve natural processes (biodiversity) and cultural assets. Fire authorities continue to aim at containing wildfires in these areas For more information on the strategies and purposes of these zones refer to the NSW NPWS Strategy for NB: Some zones may extend beyond the boundaries of the Reserve to a logical fire break or boundary for the zone. Where these are outside the Reserve the owners / managers need to be contacted for details of fire management options for these areas.

 These zones will form part of the overall Bush Fire Risk Management Plan for the Shoalhaven,
 Wingecaribee & Southern Tablelands Fire Districts. Other areas requiring special fire management consideration FEA Fire Exclusion areas: Where fire should not to be introduced and where possible excluded. These are areas such as rainforests and wetlands though at times during drought and adverse fire weather these areas may burn.

Fire Management Zones and strategies for Morton National Park (North) Strategies to be used for Fire Management and Bushfire Suppression

Asset Protection Zones & Strategies APZ APZ Long Point Lookout APZ, Fitzroy Falls APZ.

Strategies

Assess APZ for bush fire fuel management and maintenance works

Enable clear access for firefighters and limit available fire fuels by keeping

Maintain slashed breaks where marked – as required.

zone clear of rubbish, gardening debris and property – as required. Seek cooperation of local RFS brigades in the monitoring of APZ fuel conditions, and the assistance of neighbours in watching for unauthorised use of the APZ that may lead to arson, rubbish dumping or compromise emergency Identify limited and isolated areas within APZ to allow regeneration - in order to sustain tree canopy and windbreak – where required. Thin trees to separate canopy – where required. Continue direct and cooperative contact with neighbours and communities to

enable a better mutual understanding of bush fire management, asset protection, fire season preparedness and personal safety – ongoing. Strategic Fire Advantage Zone Strategies SFAZ

SFAZ SFAZ - The management of SFAZs within the study area may require the application of any of the following strategies. Review fire management works program for the zone - annually - post fire season. This assessment includes bushfire fuel, fire history, biodiversity maintenance and the condition of fire control facilities within the zone such as fire access tracks, slashed areas, gates, information signs, identified water points etc. Fire related works for reserve declared and reported to District Bush Fire Management Committee. Annually – pre-season. fuel assessments and biodiversity maintenance requirements – as required. Maintain identified fire access tracks to indicated standard – as required. Assess and report condition of fire access tracks to emergency services – pre

Maintain cooperative management and communication with adjoining landholders so that effective fire risk management is maintained across the zone and adjoining bushlands. Seek cooperation of local RFS brigades in the monitoring of SFAZ fuel and

HMZ – The management of HMZs within the study area may include the application of any of the following strategies.

Review fire management works program for the zone - annually - post fire season. This assessment includes, fire history, biodiversity maintenance and the condition of fire control facilities within the zone such as fire access tracks slashed areas, gates, information signs, identified water points etc. Undertake burning under prescribed conditions - where indicated by above assessment for biodiversity maintenance requirements – as required.

Overall Fire Response and Management Strategies

Fire Detection: The NPWS maintains and contributes to cooperative fire detection and response arrangements across the Shoalhaven, Wingecaribee & Southern Tablelands Fire Districts. This includes lookouts, surveillance flights, lightning detection and communications systems. During periods of higher fire danger this reserve may be patrolled and restrictions placed on visitor access and use of fire. Fire Response: Apart from any specific conditions indicated in the Operational Guidelines, the NPWS as a NSW fire authority prepares and maintains personnel and resources are also provided under cooperative contact, callout and incident management arrangements within the Shoalhaven, Wingecaribee & Southern Tablelands Fire Districts Fire Suppression: Areas close to urban and identified visitor use areas will require a prompt response aimed at assessing fire size, access, and options for containment/limit to spread of fire. Fire suppression tactics in all areas will primarily consider immediate visitor and firefighter safety, minimising unnecessary disturbance and will have regard to constraints defined within the reserve Plan of Management. Prescribed Fire: May be introduced to maintain biodiversity or meet protection obligations as identified within the fire management zones as mapped. The NPWS maintains a record of known fire history and will annually review the need to undertake prescribed burning. Each proposal is subject to environmental assessment and operational safety planning. All burning proposals for the coming season (July-June) are

map (in red) to a trafficable standard for Category 1 and/or Category 9 fire tankers as indicated. At a minimum these will be reviewed prior to the fire season and when the annual fire management works program is prepared. Other management tracks will be maintained as required for reserve management operations or to limit environmental effects and should always be assessed before being used for fire operations. Any firefighting access problems should be immediately notified to the NPWS Area office (see Contacts). Also refer to operational guidelines. Community Information: The NPWS will participate in cooperative community information programs in the Shoalhaven, Wingecaribee & Southern Tablelands Fire Districts. For this reserve these will focus on fire management works and biodiversity maintenance, property preparation and protection and the NPWS role in cooperative fire management and response in the reserve. Slashing / other bush fire fuel management works: The NPWS will maintain slashed areas as indicated within the reserve. For information on other slashed areas or fire

listed with the relevant Bush Fire Management Committee. For details or enquiries

Fire Management Access: The NPWS will maintain the fire tracks identified on the

contact the NPWS Area (see Contacts) or the relevant Fire Control.

management works contact NPWS Highlands Area or relevant Fire Control The works program arising from the above strategies is prepared and reviewed annually This program is prepared from the post fire season assessment of each of the zones as above. Also considered are seasonal weather trends, available resources and cooperative arrangements with neighbours, other fire authorities and land managemen agencies. Fire related works for the reserve are summarised and presented to the local District Bush Fire Management Committee annually usually before the bushfire dange period. Some works indicated may not be completed due to prevailing weather patterns or the necessary redirection of effort and resources to other priority fire tasks such as wildfire control and rehabilitation. In most cases, such deferred works are carried

the district RFS headquarters.

Fire Season information and weather patterns Wildfires: Fire history indicates fires of greater intensity and control difficulty during late spring, summer and early autumn, though periods of drought may extend this period October. During summer, moister north-east sea-breezes may push inland against

available from local NPWS offices and the relevant Bushfire Management Committee at

predicted patterns though this effect diminishes further from the coast and may cause highly changeable conditions on the fireground. Likewise, the effects of southerly maritime changes is later and lesser than along coastal areas. Thunderstorm activity the summer months may produce sudden changes in wind speed and direction with possible lightning ignitions and highly variable rainfall. **Prescribed Burning:** Late summer / autumn / and winter are the preferred seasons for prescribed burning where desirable stable conditions and trends are more likely. Areas at higher altitudes may commence earlier in the season. Burning may take place outside these periods for specific operational and biodiversity management objectives.

Do not cut down trees Use of foams, wetting agents and retardants is acceptable AH-B As far as possible – protect site from fire Avoid all ground disturbance including the use of earthmoving machinery, handline construction and driving over sites. Avoid water bombing, which may cause ground disturbance. AH-C Avoid all ground disturbance including the use of earthmoving machinery, handline AH-C Avoid all ground disturbance including the use of earthmoving machinery, handline AH-C Avoid all ground disturbance including the use of earthmoving machinery, handline Sites least affected by four prone to disturbance including the use of earthmoving machinery, handline AH-C Avoid all ground disturbance including the use of earthmoving machinery, handline	Aborig	jina	l Heritage Sites	
Avoid all ground disturbance including the use of earthmoving machinery, handline construction and driving over sites. Avoid water bombing, which may cause ground disturbance. AH-C Avoid all ground disturbance including the use of earthmoving machinery, handline Avoid all ground disturbance including the use of earthmoving machinery, handline Avoid all ground disturbance including the use of earthmoving machinery, handline Avoid all ground disturbance including the use of earthmoving machinery, handline Avoid all ground disturbance including the use of earthmoving machinery, handline Avoid all ground disturbance including the use of earthmoving machinery, handline	AH-A	• • •	Do not cut down trees Use of foams, wetting agents and retardants is	
AH-C • Avoid all ground disturbance including the use of earthmoving machinery, handline Sites least affected by	AH-B		Avoid all ground disturbance including the use of earthmoving machinery, handline construction and driving over sites. Avoid water bombing, which may cause ground	
22 23 3303	AH-C	•	0	Sites least affected by fire

Bushfire Fuel Types and comparative fire behaviour This map shows modelling of comparative fire behaviour that may be expected in the an operational guide to assist fire suppression and prescribed burning operations but does not replace constant surveillance of on-site fire behaviour, weather trends and local terrain effects.