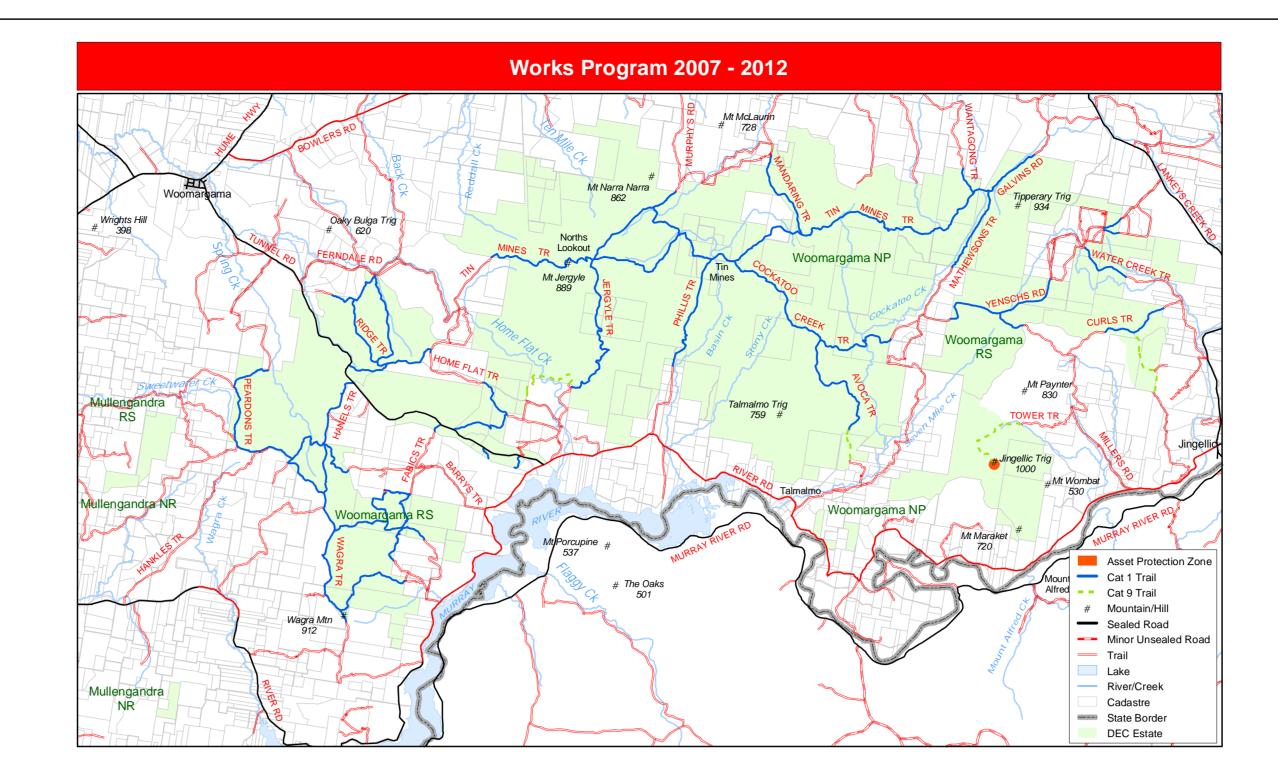


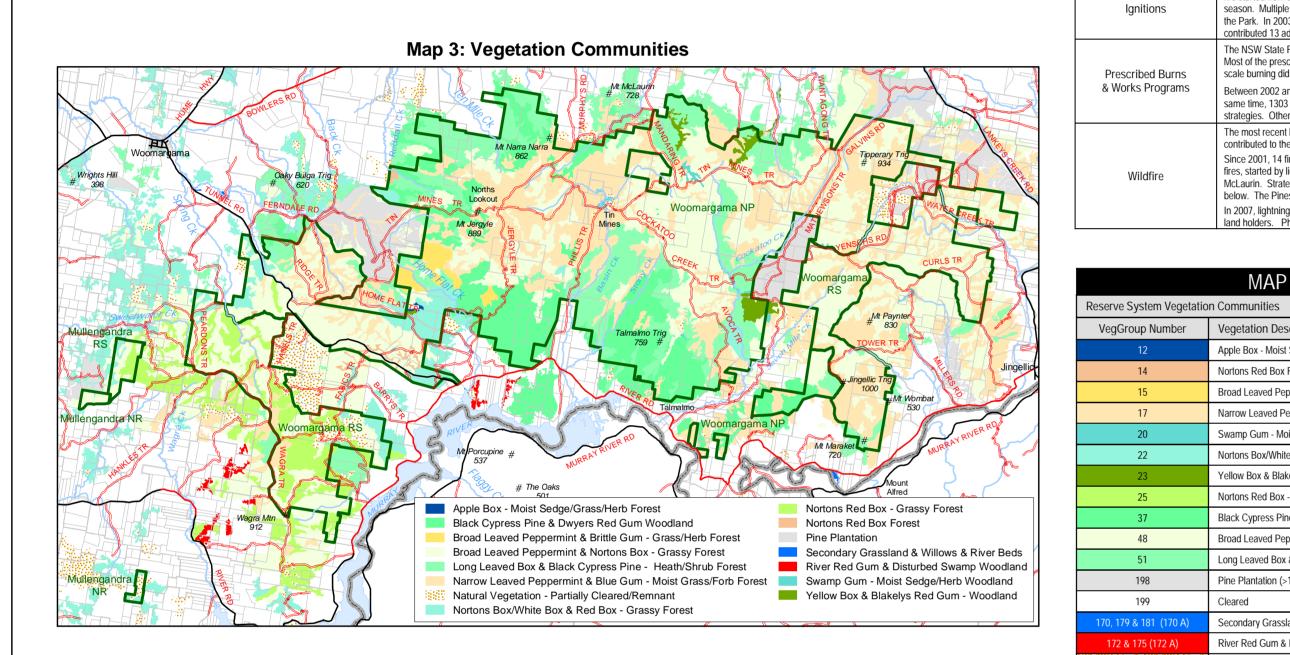
3810.1

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260.9

Vegetation Management Considerations & Guidelines





	MAPS 1 & 2: FIRE HISTORY
Ignitions	There have been 51 recorded ignitions within or near the Park boundary since 1980 (58% occuring on park). Lightning is the main cause of the ignitions. Only one fire started from an illegal burn. Of the lightning strike ignitions recorded, the worst year for fires in the park was in 1985 (16 ignitions) were recorded during that fire season. Multiple lightning strikes occurred during the summer of 1985, when a strong south westerly frontal system, produced a dry, electrical storm that affected the Park. In 2003, a similar electrical storm system approached from the south west, only 2 lightning strikes occurred. During 2007, dry storms during February contributed 13 additional lightning ignitions to the reserve area records. Of the 13 ignitions, 10 were contained under 1 hectare.
Prescribed Burns & Works Programs	The NSW State Forests implemented approximately 8 prescribed burn programs, targeting over 68% (21,355 hectares) of the Park area between 1967 and 1997. Most of the prescribed burns occurred after the 1985 fire. Two prescribed burns (1991-92 and 1993-94) have been omitted from the threshold analysis as broad scale burning did not occur and only an edge effect resulted.
	Between 2002 and 2005, the National Parks and Wildlife Service implemented three prescribed burn programs on approximately 3775 hectares of the Park. At the same time, 1303 hectares was treated during joint prescription burning programs on adjacent private property to consolidate Park and private fire management strategies. Other programs, such as trail maintenance and clearing, have been applied and will continue as part of the Reserve System operations/works program.
Wildfire	The most recent large-scale fire within the Park occurred in 1985, where most of the Park (76%) was affected by fire. Mulitple lightning ignitions recorded in 1985 contributed to the extent of the fires. There were difficulties suppressing large numbers of ignition points under extreme and changing weather conditions.  Since 2001, 14 fires have occurred in the Park, most fires were contained within 24 hours and were <3 hectares in size. Only two fires, Mandaring and The Pines fires, started by lightning strikes, escaped the Park. Mandaring fire was contained to Mandaring and Tin Mines Trails in the Park and on private land east of Mt McLaurin. Strategically, cleared private land proved easier to control a north easterly fire spread, where fire approached from the timbered hill tops to clear country below. The Pines Fire (2007) was contained in timbered country north east of the reserve boundary.  In 2007, lightning ignited timbered country to the west of Phillis Trail. The fire was contained to 2750ha through vigorous fire suppression by NPWS, RFS & private land holders. Phillis Fire was contained within the reserve and private property timbered land.

MAP 3: VEGETATION COMMUNITIES & THRESHOLDS

VegGroup Number Vegetation Description

Apple Box - Moist Sedge/Grass/Herb Forest

Swamp Gum - Moist Sedge/Herb Woodland

Nortons Red Box - Grassy Forest

48 Broad Leaved Peppermint & Nortons Box - Grassy Forest

Pine Plantation (>10 years)

178 & 173 (173 A) Natural Vegetation - Partially Cleared/Remnant

with vegetation management guidelines.

potential areas decreasing in biodiversity and structural diversity.

Nortons Box/White Box & Red Box - Grassy Forest Yellow Box & Blakelys Red Gum - Woodland

Black Cypress Pine & Dwyers Red Gum Woodland

River Red Gum & Disturbed Swamp Woodland

Broad Leaved Peppermint & Brittle Gum - Grass/Herb Forest Narrow Leaved Peppermint & Blue Gum - Moist Grass/Forb Forest

Long Leaved Box & Black Cypress Pine - Heath/Shrub Forest

Secondary Grassland & Willow Riparian & River Gravel Beds

Nortons Red Box Forest

Fire	Recorded in	Common Name	Scientific Name	TSC		Vu	Ine	rab	le 8	ı/or	Bre	edir	ng F	g Period	
Grou	Vegetation Groups	Common vame	Scientific Name	Status	J	F	М	А	М	J	J	А	S	0	١
	17, 20, 51, 170 & 172B	Booroolong Frog	Litoria booroolongensis	Е	/	/	Г	Γ			П	П	П	П	_
_	17, 20, 48, 199, 170 & 172A	Southern Bell Frog	Litoria raniformis	Е	/	/	Г	Γ			П	П			,
A	#17, 48, 51 & 172A	Freckled Duck	Stictonetta naevosa	V									/	/	
	17, 20, 37, 199 & 172A	Painted Snipe (Australian Subspecies)	Rostratula benghalensis australis	V	/	/	/	/	/	/	/	/	/	/	
	14, 17, 22, 37 & 48	Barking Owl	Ninox connivens	V			Г	Γ		/	/	/	/	/	
	17, 22, 25, 37, 48, 173 & 199	Brown Treecreeper	Climacteris picumnus	V	/	/	Г	Γ			/	/	/	/	
	17, 48, 51 & 199	Eastern False Pipistrelle	Falsistrellus tasmaniensis	V	/	/	Г	Γ			П	П	П	П	
	17, 22, 23, 25, 37, 48 & 51	Gang-gang Cockatoo	Callocephalon fimbriatum	V	/		Г	Г		П	П	П	П	/	
В	17 & 48	Greater Long-eared Bat	Nyctophilus timoriensis	V	/	/	Г	Г		П	П	П	П	$\neg$	
В	17, 23, 25, 48 & 51	Powerful Owl	Ninox strenua	V	Г		Г	Г	/	/	/	/	/	/	
	# 23, 37, 170A & 172A	Superb Parrot	Polytelis swainsonii	V	/	/	Г	Г		П	П	П	/	/	
	17, 48 & 51	Squirrel Glider	Petaurus norfolcensis	V	Г	П	Γ	Г		/	/	/	/	$\overline{\ }$	
	17, 25, 48 & 51	Turquoise Parrot	Neophema pulchella	V	Г	П	Γ	Г	П	П	П	/	/	/	ľ
	# 17 & 48	Yellow-bellied Sheathtail-bat	Saccolaimus flaviventris	V	/	/	/	/	/	/	П	П	П		ľ
	# 17	*Barred Cuckoo-shrike	Coracina lineata	V	/		Γ	Г		П	П	П	П	/	
	# 12, 22, 23, 37, & 172A	Black-chinned Honey-eater (Eastern Subspecies)	Melithreptus gularis gularis	V	Г		Г	Γ		/	/	/	/	/	
	# 20, 22, 25, 170A & 173A	Bush Stone-curlew	Burhinus grallarius	Е	/	/	/	/	/	/	/	/	/	/	
	17, 22, 37, 48 & 173A	Diamond Firetail	Stagonopleura guttata	V	/							/	/	/	
	# 12, 22 & 51	Grey-crowned Babbler (Eastern Subspecies)	Pomatostomus temporalis temoralis	V	/	/	/	/	/	/	/	/	/	/	
С	17 & 48	Hooded Robin	Melanodryas cucullata	V							/	/	/	/	
	17, 51 & 173A	Koala (Last record - Heard 1995)	Phascolarctos cinereus	V	/	/	/	/	/		/	/	/		
	17, 37 & 199	Painted Honeyeater	Grantiella picta	V	/	/						/	/	/	
	17, 20, 37 & 199	Painted Snipe (Australian Subspecies)	Rostratula benghalensis australis	V	/	/	/	/	/	/	/	/	/	/	
	# 12, 14, 22, 23, 25, 37 & 51	Regent Honey-eater	Xanthomyza phrygia	Е	/							/	/	/	
	22, 25, 37 & 51	Speckled Warbler	Pyrrholaemus sagittatus	V	/	17				1 7		/	/	/	

# = Potential Vegetation Community \* = Vagrant E = Endangered V = Vulnerable / = Time species is most vulnerable to disturbance

RESOURCE INFORMATON

IMPORTANT: The following planning information is based on the best possible data for each table category. When used in conjunction with other information in the plan, concessions may be needed

Woomargama National Park, Crown Reserve, Mullendgandra Nature Reserve and Crown Reserve are located approximately 20kms south of Holbrook and 30kms north east of Albury, NSW.

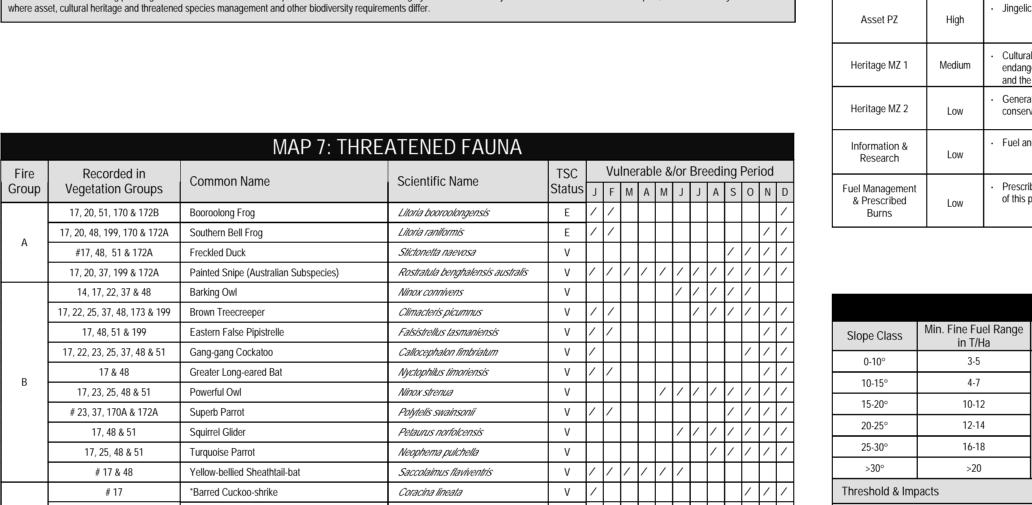
In most cases in the document the collective reference for the Park and the Reserves is the "Reserve System", unless otherwise stated.

- Parks and Wildlife Division, National Parks and Wildlife Service.

- South West Slopes Region, Riverina Highlands Area

Hume Zone (Bush Fire Management Committee)

Rural Fire Service



Farrer Federal Electorate.

- Greater Hume Local Government Area - Albury & District Aboriginal Land Council

- Murrumbidgee Catchment Management Authority

Sovernment Areas - Albury & Wagga Wagga State Electorate.

Other Agencies

Asset	Priority	Name, Area or Detail	Management Strategy	Proposed Works	
Trails	High	Management Trail (Cat 1 vehicles)	Maintain management trails for safe 4WD access for Cat 1 vehicles.     All trails to be clearly signposted at intersections and trailheads.	Assess annually.     Initiate maintenance programs and works as required, or as specified in Regional Operations Program.     Ensure all trails to be clearly signposted, monitor	
	Medium	Management Trail (Cat 7-9 vehicles)	Maintain access for Cat 7-9 Vehicles, as part of the NPWS multipurpose management trails.     All trails to be clearly signposted at intersections and trailheads.	maintenance and ensure signs are legible and visible	
Asset PZ	High	Jingelic Tower.	Reduce bushfire behaviour potential using the Asset Risk Assessment Fire Management guidelines.	Follow asset risk management guidelines.	
Heritage MZ 1	Medium	Cultural heritage, threatened, vulnerable & endangered species, habitats, communities and the landscape.	Manage and protect natural & cultural heritage values with appropriate fire management regimes.	Monitor thresholds every 5 years, and after major fire events.	
Heritage MZ 2	Low	General landscape, natural and cultural conservation values.	Manage and protect natural & cultural values with appropriate fire management regimes.		
Information & Research	Low	Fuel and vegetation monitoring.	Continue measuring/monitoring fuels at all established sites.     Maintain photographic site records.	<ul><li>Revisit directly after fire events.</li><li>Analyse floristic and structural changes in established sites.</li></ul>	
Fuel Management & Prescribed Burns	Low	Prescribed fire may be used during the life of this plan where appropriate.	Any proposed prescribed burns must be managed in accordance with DEC policy and agreements with Local Bush Fire Management Committee.	Work in accordance with DEC policy and agreements with Local Bush Fire Management Committee	

Slope Class	Min. Fine Fuel Range in T/Ha	Erosion Potential
0-10°	3-5	
10-15°	4-7	<ul> <li>Based on the modelled fuel loads and slope classes, 38% (11754 ha) of the Reserve System has fuel cover less than that</li> </ul>
15-20°	10-12	required to maintain soil and slope stability.
20-25°	12-14	• Fine fuel ranges below the recommended levels for each slope class are expected to decrease slope stability, increase erosion
25-30°	16-18	potential, reduce water quality and potentially reduce vegetation recovery.
>30°	>20	
Threshold & Im	pacts	

<ul> <li>Fine fuel ranges below the recommended tonnes per hectare for the corresponding slope class are expected to increase slope instability, affect water quality and may affect some vegetation propagation.</li> </ul>
Fire Management Guidelines
Where possible:  Avoid fire in areas where the fine fuel range does not meet the corresponding slope class thresholds.  Avoid trail construction on slopes >25 degrees.  If hazard reduction burning, ensure burn areas are strategically implemented across the landscape so that large areas and slopes are not left exposed.  Control lines or fuel breaks constructed during an incident should be adequately drained to prevent erosion.

Map 4: Vegetation Threshold Analysis	
Wrights Hill 398  Woomargama NP  Mt Mara Narra 862  Mines TR  See Norths  Lookout  Woomargama NP  Mines Ro  CREEK	Tipperary Trig # 934  WATER REEK TR  SERVICE CURLS TR
Mullengandra NR  Woomargama RS  M/Porcupine #  Since M/Porcupine #  Sinc	Woomargama RS  Mt Paynter #830  TOWER TR  Jingellic Trig 1000  Mt Wombat 530  Mt Maraket # 720
Mullengandra NR	Overburnt OK Vulnerable Almost Underburnt Recently Burnt Underburnt

>10 - <40	Apple Box - Moist Sedge/Grass/Herb Forest 12	Most species within the community are predicted to decline if successive fires occur <10 years apart or where frequent fire is applied.  Where possible,  Planned fire should be excluded from this community until at least 2015.  Avoid felling mature and hollow bearing trees.
>10 - <100	Nortons Red Box - Grassy Forest 25	33% of species are predicted to decline if successive fires occur <10 years apart or where fires occur >35 years apart. Declines and some extinctions predicted for shrub and over storey species if fires occur >100 years apart. Soils are susceptible to erosion if exposed by intense or frequent fire. Vegetation group 25 provides critical habitat for many fauna species.  Where possible,  Contain all fires to small areas and minimise the potential for fire to consume patches of shrubs.  Avoid felling mature and hollow bearing trees.
>15 - <35	Broad Leaved Peppermint & Brittle Gum - Grass/Herb Forest Yellow Box & Blakelys Red Gum - Woodland 15 & 23	Frequent fire <15 years apart, may cause declines in community species. Extinctions predicted for ground species if fires or other disturbances occur >35 years apart. Soils are prone to degrading or erosion with high intensity or frequent fire.  Where possible,  Avoid felling mature and hollow bearing trees.
>20 - <60	Nortons Red Box Forest &Broad Leaved Peppermint & Nortons Box - Grassy Forest 14 & 48	Frequent fire may cause declines if fires occur <20 years apart Where possible, Contain all fires to small areas and minimise the potential for fire to consume shrub layers. Avoid felling mature and hollow bearing trees during mop up.
>25 - <100	Narrow Leaved Peppermint & Blue Gum - Moist Grass/Forb Forest, Swamp Gum - Moist Sedge/Herb Woodland Nortons Box/White Box & Red Box - Grassy Forest Black Cypress Pine & Dwyers Red Gum Woodland Long Leaved Box & Black Cypress Pine - Heath/Shrub Forest 17, 20, 22, 37 & 51	VG 17 & 20 & 22 & 37 - Some common species may experience declines if consecutive fire occurs <25 years apart.  VG 51 - Some species may decline if consecutive fires occur <30 or <55 years apart and extinctions where infrequent fires occur >100.  Overall, these vegetation groups are at risk of simplification, due to fire history and frequency, placing this communities and species reliant on the habitat type at risk of localised decline or extinction.  Where possible,  Contain all fires to small areas and minimise the potential for fire to spread and or consume shrub layers.  Avoid felling mature and hollow bearing trees.

Threshold	Veg Group	% of Park	Interpretation & Management Guidelines
Overburnt	17, 20, 37, 48, 51	3	According to the vegetation regime thresholds, two consecutive fires have been recorded too close together and the area is Overburnt. Additional fire in this area will lead to adverse fire regimes and may threaten community biodiversity and lead to potential extinctions.
Vulnerable	15, 17, 20, 22, 23, 37, 48, 51	36	These vegetation communities are vulnerable to further burning.
Recently burnt	12, 15, 17, 20, 22, 23, 37, 48, 51	21	Time since fire is less than the threshold intervals.
Underburnt	23	<1	May require fire for Asset protection, strategic or ecological reasons if area does not burn after 2007.
Almost Underburnt	N/A	0	May require a burn this year  — either for Asset protection, strategic or ecological reasons  — otherwise it will fall into the Underburnt Category
OK	14, 17, 20, 22, 23, 25, 37, 48, 51	39	Areas where thresholds have been assigned to, that do not fall into one of the above categories. Fire is neither required or to be avoided.
Jnknown/ No Regime Assigned	173A, 199	1	Areas that do not have a threshold assigned to them or data is missing, limiting the modelling capabilities in DEC GIS.

MAP 4. VEGETATION THRESHOLD ANALYSIS

re oup	South West Slopes Threatened Fauna Management Considerations & Guidelines				MAP 7: BUSHFIRE MANAGEMENT ZONES				
	Destabilisation of soil resulting from too frequent fire can lead to increased run off into streams and waterways, sedimentation and eutrophication, potentially impacting on these species.  High intensity fire can remove riparian vegetation and result in a decrease in the filtering effect of the vegetation. Loss of nutrient from the site can effect water quality and lead to algal				Definition	Management Guidelines			
\	blooms (Tolhurst 1992), potentially impacting on this species. It is likely that foams and fire retardants are harmful to frogs, particularly during breeding season and whilst tadpoles are developing.  Where possible;				Life, property and commercial assets in high risk Bushfire Behaviour Potential on DEC estate	<ul> <li>Assets should be evaluated annually to measure potential hazards and or increased threats.</li> <li>Works programs to follow Risk Assessment of Economic &amp; Private Property Guidelines.</li> </ul>			
	<ul> <li>Exclude prescribed fire from riparian areas and grassy areas adjacent to streams, swamps and waterways.</li> <li>All fires should be kept to small areas and managed to prevent destabilising soils or burning within 50m of streams, swamps and waterways.</li> <li>Surfactants, retardants, foams etc should not be applied or utilised within 50m away from streams, swamps and waterways.</li> <li>Earth disturbance should be avoided. Keep activities 50m away from streams, swamps and waterways.</li> </ul>	rt Zones	Herita (HM.		Areas of high priority natural and cultural conservation value. It identifies areas of 'recorded' cultural and natural assets. This zone is important for the protection of	<ul> <li>Heritage areas should be assessed annually to determine potential hazard, threats to cultural heritage, and thresholds for TSC and vegetation communities.</li> <li>Prescribed fire may be applied in these areas if appropriate for ecological purposes or protection of cultural heritage.</li> </ul>			
3	Any fire may lead to a reduction in food source, particularly for those reliant on seed. Frequent burning is likely to result in a simplification of the vegetation community both in terms of floristic composition and structural complexity (eg. loss of habitat strata). Loss of stumps and other hollow resources could occur from intense and or frequent fire. These species may tolerate a mild, patchy, mosaic burns from a prescribed burn. Further research is needed to clarify the relationships between fire, habitat and food supply of these species.	nagemer	(Filter)	- '/	cultural heritage and the conservation of some species habitat to prevent declining numbers or extinctions.	<ul> <li>Implement recovery plan guidelines (where they exist).</li> <li>Manage during incidents according to HMZ1 guidelines.</li> </ul>			
	Where possible;  Wildfire should be contained to small areas and managed to reduce intensity and promote mosaic burn patterns.  Implement mosaic fire regimes designed to maintain the floristic & structural diversity of the understorey, however minimise fire in grassy woodland areas.  Avoid felling hollow bearing trees during suppression and 'mop up' activities.	Heritage Mar	Heritage 2 (HMZ2)		This zone identifies areas of significance for natural and cultural features across the broader landscape. This generally means 'parts of the reserve that have not been surveyed and or have no records of significant features	<ul> <li>These heritage zones should be monitored to determine threats to biodiversity and managed in accordance with conservation policy and principles.</li> <li>Prescribed fire may be applied in these areas if appropriate for ecological purposes or protection of cultural heritage.</li> </ul>			
	Frequent burning is likely to result in a simplification of the vegetation community in terms of floristic composition and structural complexity (eq. loss of habitat strata). Loss of shrub layer				or threatened species'.	Manage during incidents according to HMZ2 guidelines.			

	WAP /. CULTURAL HERITAGE
	Key Management Guidelines
	<ul> <li>Identified sites must be protected.</li> <li>DEC Databases, AHIMS and HHIMS, must be accessed during incidents and or for preparation of Review of Environmental Factors for prescribed burning or other works programs to ensure new records are included. Aboriginal site information from AHIMS is sensitive and subject to a Memorandum of Understanding. Site data must respect this agreement and must be used appropriately.</li> <li>For prescribed burning programs, protection measures will be outlined in the Review of Environmental Factors, burn plans and implemented by task force crews. Where possible,</li> <li>Trained officers will provide advice on site protection methods.</li> <li>Activities will comply with all conservation management plans (where they exist).</li> </ul>
Schedule	Aboriginal Heritage  - Known sites must be protected during wildfire suppression and prescribed burning programs. Sites include, modified trees, scattered artefacts and rock art sites.  - Potential sites may include burials, ceremonial sites and rock arrangements, as well as intangible sites such as spiritual and special places.  - Follow operational quidelines to protect heritage during incidents.
E1	Known sites must be protected during fire suppression and fuel reduction burning programs. Sites include mining relics (shafts) which may be hazardous to crews and machinery during
V	Historic Heritage  Heritage  Suppression and prescribed activities.  Other relics providing evidence of past land use, such as ruins, fence lines etc may also exist across the landscape.  Propose and implement regular proposed accounts that along any debric not account durit the cities to degree as the patential of locing heritage feature.
V	<ul> <li>Prepare and implement regular preparedness programs that clear any debris not associated with the site to decrease the potential of losing heritage feature.</li> <li>Follow operational guidelines to protect heritage during incidents.</li> </ul>
	Note: Cultural heritage sites are based on data recorded on AHIMS and HHIMS databases and field data recorded as at Dec 2005.

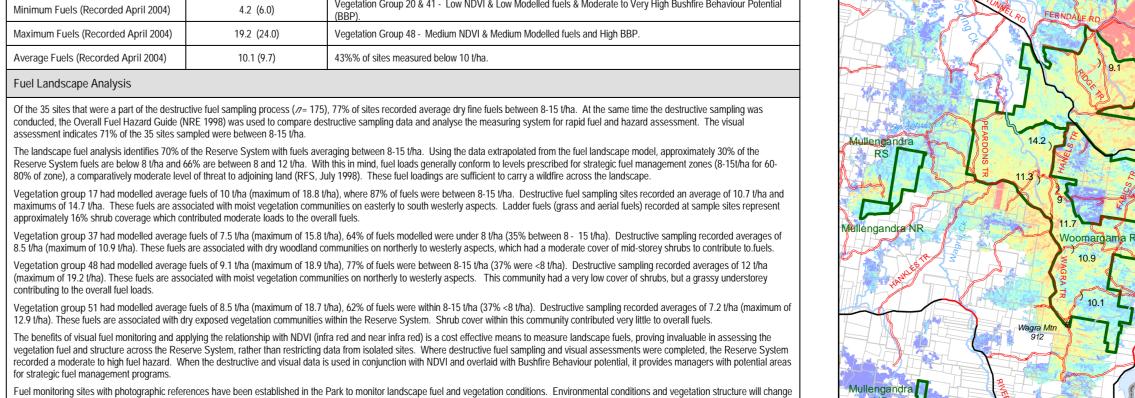
approximately 16% shrub coverage which contributed moderate loads to the overall fuels.

and fire management zones.

· Rehabilitation of control lines or fuel breaks constructed during fire events will be addressed during the incident in the Incident Action Plan

Modelled Total Fuels	T/ha	Notes
Minimum Fuels (Modelled April 2004)	1.4	This accounts for the smallest 25 X 25m area modelled. In actuality only 1% of the Reserve System modelled under t/ha (approximately 300 ha).
Maximum Fuels (Modelled April 2004)	23.7	Less than 1% of the Reserve System modelled over 15 t/ha (approximately 40 ha).
Average Fuels (Modelled April 2004)	9.0	42% of the Reserve System was modelled between 8 and 10 t/ha (approximately 13150 ha)
Recorded Fine Surface Fuels	T/ha (Visual Assessment)	Notes
Minimum Fuels (Recorded April 2004)	4.2 (6.0)	Vegetation Group 20 & 41 - Low NDVI & Low Modelled fuels & Moderate to Very High Bushfire Behaviour Potential (BBP).
Maximum Fuels (Recorded April 2004)	19.2 (24.0)	Vegetation Group 48 - Medium NDVI & Medium Modelled fuels and High BBP.
Average Fuels (Recorded April 2004)	10.1 (9.7)	43%% of sites measured below 10 t/ha.
Fuel Landscape Analysis		

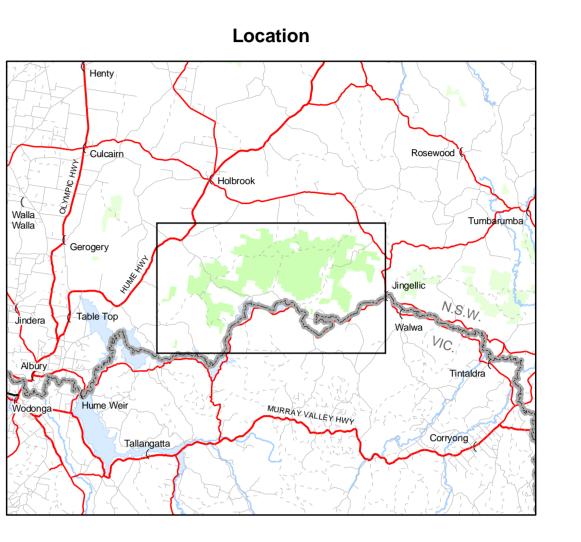
and these established fuel sites will, if monitored regularly, provide long term data to provide a greater understanding of the complexity of the fuel landscape. It will also provide data to revise fuel maps

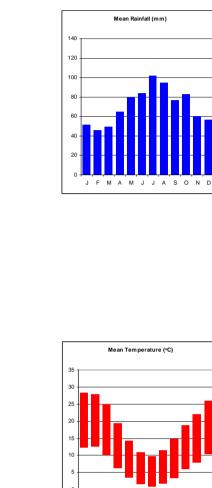


South West Slopes Region Woomargama & Mullengandra Reserves Fire Management Strategy Scale: Works Program map 1:150,000, Location map 1:750,000, other maps 1:175,000 Version: March 2007 ISBN: 1 74137 450 2 DEC: 2006/434 This Map should be used in conjunction with air photos and ground reconnaissance during incidents and the development of incident action plans. Copyright Department of Environment and Conservation. These data are not guaranteed to be free from error or omission. The Department of Environment and Conservation and its employees disclaim liability for any act done on the information in the data and any consequences of such acts or omissions.

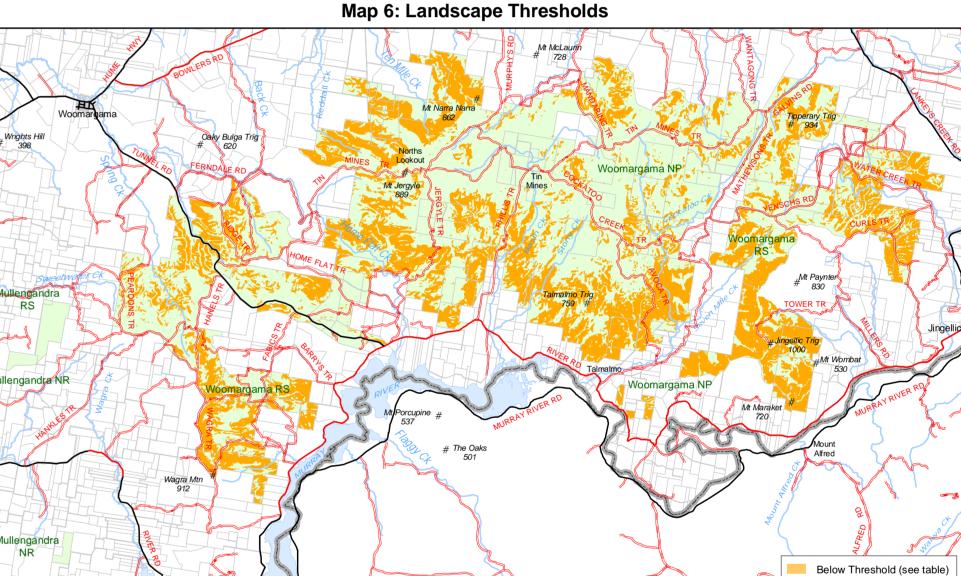
This map is based on Land and Property Information Standard 1:25000 Topographic Map Series.

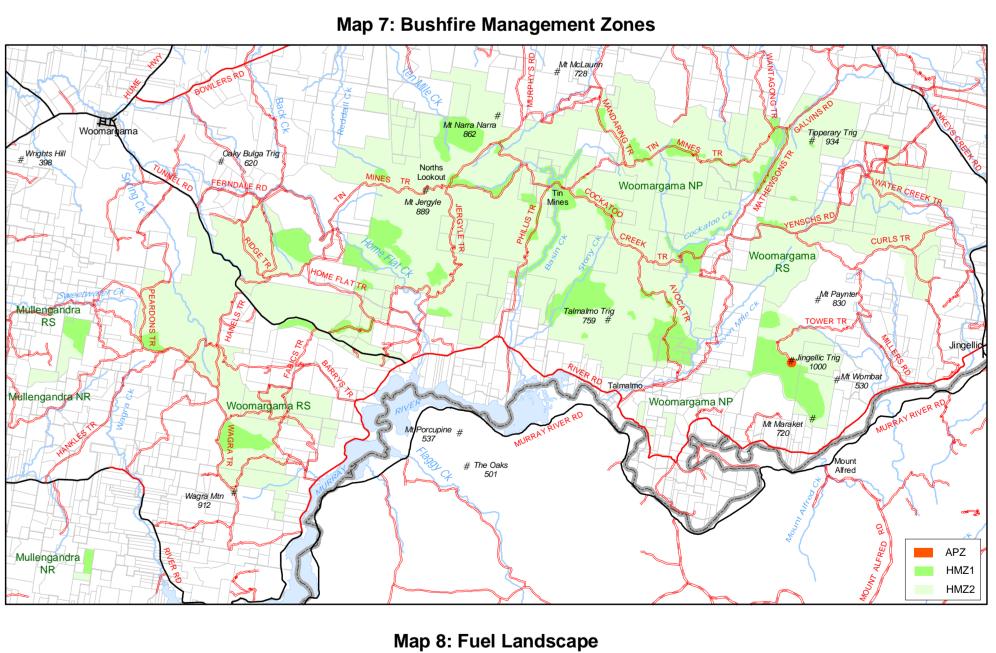
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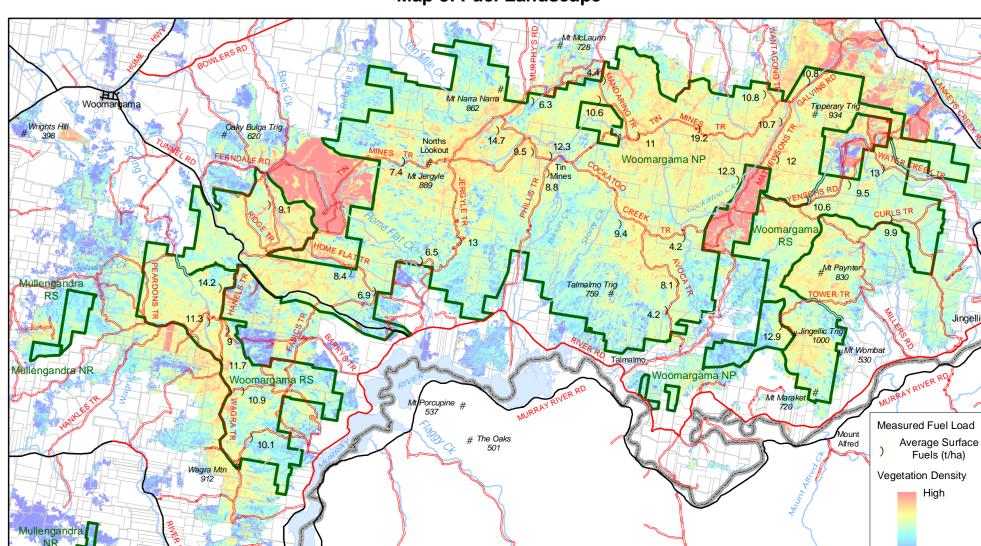




J F M A M J J A S O N D







Woomartama	9	Mt Narra Narri 862		Columbia Col	Ante-Sc.
# 398	Oaky Bulga Trig		Tin Mines	TR S & "SST	
The second	en CERNDALE DE	MINES TR Lookout	Camping Area  "Beaver Lodge"  Woomargama NP	The state of the s	
		Mt Jergyle 889	Tin Cockaroon Mines		ROREBKIR
		889 RRGYI	1 1 2	100 CK YENSERS RD	
		The state of the s	CREEK COU	CURLS	TR
	Samual Bollard Camping Area Camping Area	The F	A SE ALIENS	Woomargama RS	
Sweetwafer CK	Camping Area	TR MAN	73/1/2017	Mt Paynter	
Mullengandra			Talmalmo Trig	# 830 TOWER TR	r
No.	The state of the s	125			
	A RE &		10 3-	Uingellic Trigi	Jinge
	The party of the p		Falmalmo	Radio #Mit Wombat Repeater 539	
Mullengandra NR	Woomardama RS	NER NER	Woomargar	na NP	Y RIVER RD
	1/2/2/2	Mt/Porcupine #	WRIVER RD TO	Mt Maraket #	AYRIVE.
	A CONTRACTOR OF THE CONTRACTOR	537 #	IIIRRA'	1497 19	

/egetation Fuel Haz	zard Rating (under moderate o		BEHAVIOUR POTENTI	/\L
	elling are specific to the reserve a anaged by the NPWS South We		ne information is not for comparing res	serves and landscapes outside the view area or
Rating	Veg Group Number	T -	es Mapped Across the Landscape	
Low	199 170 A (170, 179 & 181)	Cleared Secondary Grassland & Willow Riparian & River Gravel Beds		
Moderate High Very High	12 20 22 23 25 173 A (173 & 178) 172 A (172 & 175) 15 14 17 48 37	Swamp Gum - Moist : Nortons Box/White Bo Yellow Box & Blakely: Nortons Red Box - Gr Natural Vegetation - F River Red Gum & Dis Broad Leaved Peppe Nortons Red Box For Narrow Leaved Peppe Broad Leaved Peppe Black Cypress Pine &	Partially Cleared/Remnant sturbed Swamp Woodland rmint & Brittle Gum - Grass/Herb Forest	
Aspect Bushfire Behaviour			Slope Bushfire Behaviour	
Rating Aspect in degrees			Rating	Slope in degrees
Low	20 - 200		Low	0 - 10 degrees
Moderate	200 - 260		Medium	10 - 20 degrees
High	335 - 20		High	20 -30 degrees
Very High	260 - 290		Very High	>30 degrees
Extreme	290 - 335		This column intentionally left blank. Slopes	>30 degrees increase fire behaviour exponentially times >8.

MAP 7: THREATENED FLORA			
Fire Group	Common Name	Scientific Name	Schedule
	*Small Snake Orchid	Diuris pedunculata	E1
Α	Phantom Wattle	Acacia phasmoides	V
		Glycine clandestina	V
В	Grasslands, Swamp and Riparian Areas		

(short term) and hollowed stumps could occur from intense and or frequent fire. Temporary reductions in invertebrate abundance and diversity following fire, especially high intensity fire may

impact upon foraging success of these species. These species are unlikely to tolerate high intensity fire, during the breeding seasons. These species may tolerate a mild, patchy, mosaic

- All fire should be contained to small areas or managed to produce long term mosaic burn patterns of shrub, grassy woodlands and mature aged flowering vegetation.

burn. However, the extent and frequency of fire within the species habitat has the potential to promote rapid declines where species recovery is slow.

Fire Group	Vegetation Group	Threatened Flora Management Considerations & Guidelines
A	· 17 · 22 · 37 · 51	Species more susceptible to frequent fires than infrequent high intensity fire events (Briggs & McDougall pers. comm 2006). More research is required to determ the impacts high intensity fire, fire suppression techniques and chemicals have on this species. In the case of *Acacia phasmoides*, it is limited to the creek line of Basin Creek, but may also be found in Stony Creek. In the case of *Diuris pedunculata* the species has been recorded in a small area east of Basin Creek and Sixpenny Creek.  Where possible;  Avoid frequent fire where these species have been recorded.  Minimise the size and potential for fire to spread into areas the species are recorded.  Prescribed fire should not be implemented in areas where these species are recorded.  Avoid the use of earth moving equipment and or the construction of control lines where these species have been identified on the operations map or in Atlas records. Where control lines are required, ensure recorded sites remain on the opposite side of the control line to the approaching fire.
В	· 20 · 170 · 172 B	Thresholds for these vegetation groups should be used as a guide however, Where possible;  Minimise the size of fires during summer and periods of long drought.  Minimise trail or control line construction through Grasslands and avoid Swamp and Riparian Areas.  Minimise the use of foams and retardants within 50 m of swamps & water courses.

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		MAP 5: RISK ASSESSMENT - LIFE & PROPERTY					
		Asset Vulnerability & Impacts		Considerations & Guidelines			
		Tin Mines Camping Area	<ul> <li>Modelled in an area adjacent to moderate fuels and low to moderate bushfire behaviour potential.</li> <li>Escape route limited to Tin Mines Trail (east or west).</li> <li>Camp ground and facilities located on flat, clear grassland area.</li> </ul>	<ul> <li>Provide adequate fireplaces to contain campfires.</li> <li>Maintain access trails to provide safe exit routes for Park visitors.</li> <li>During the fire season rapidly respond to all unplanned fires to minimise potential spread to private lands.</li> </ul>			
		Jingelic Radio Tower	<ul> <li>Loss of asset may limit communications during and after an incident.</li> <li>Escape route limited one way trail (Tower Trail).</li> </ul>	<ul> <li>Establish an APZ around the asset extending 30m from outside infastructure. Keep fuels between 6 to 8 t/ha and shrubs below 50cm in height within 30m of asset and remove overhanging tree limbs or debris.</li> <li>Maintain access trails to a standard for Category 9 vehicles.</li> <li>During the fire season rapidly respond to all unplanned fires to minimise potential spread to private lands.</li> </ul>			
	Inholding Woomargama National Park	<ul> <li>Beaver Lodge is located on the north side of Tin Mines Trail.</li> <li>Potential for fire to escape the Park and inholding.</li> <li>Escape route limited to Mandaring (north) and Tin Mines Trail (east or west).</li> </ul>	<ul> <li>Maintain access trails within the Park for safe access.</li> <li>During the fire season rapidly respond to all unplanned fires to minimise potential spread to private lands.</li> <li>Consult with neighbour of intended fire operations and strategic programs in conjunction with RFS Zone Bush Fire Management Committee meetings.</li> </ul>				
	Other assets (including private property or other lands adjacent to the park)	<ul> <li>Property assets, including Plantation Timber, Orchards and Agricultural Land may be damaged by fire escaping the Park.</li> <li>Orchards and vineyards may be affected by smoke (eg. during prescribed burns).</li> </ul>	<ul> <li>Maintain access trails and firebreaks within the Park that will assist in fire fighting efforts.</li> <li>Participate in fire management proposals through RFS Zone Bush Fire Management Committee meetings.</li> <li>During the fire season rapidly respond to all unplanned fires to minimise potential spread to private lands.</li> <li>Consult with neighbours of intended fire operations and strategic programs.</li> </ul>				