



Operational Guidelines

Refer to Strategy for Fire Management 2003 and Fire Management Manual 2004.
Brief all personnel involved in suppression operations on the following issues:

Resource	Guidelines
Aboriginal Cultural Heritage Site Management (NPWS FMM 4.11)	No known sites in Reserve. If new sites are located consult with a senior NPWS officer.
Historic Heritage Management (NPWS FMM 4.10)	No known sites in Reserve. If new sites located consult with a senior NPWS officer.
Threatened Fauna Management (NPWS FMM 4.12 & 5.2)	<ul style="list-style-type: none"> Avoid impact on rainforest. Avoid impact on streams. Protect large and hollow-bearing trees. FA1 - Clear a one metre radius around large and hollow bearing trees and logs and timber bridges adjacent to control lines prior to back burning. NO helipad construction. NO earthmoving machinery.
Threatened Flora Management (NPWS FMM 4.12)	No records in Reserve. If new sites are located consult with a senior NPWS officer.
Threatened Property	<ul style="list-style-type: none"> Where possible property owners with assets at risk from a wildfire event should be kept informed regarding the progress of the fire; and asked for an assessment of their current level of fire preparedness.
General	Guidelines
Aerial Water Bombing (NPWS FMM 4.4 / NSW Fire Agencies Aviation SOPs O2-4 / NPWS Guidelines for Effective Aircraft Management)	<ul style="list-style-type: none"> The use of bombing aircraft should support containment operations by aggressively attacking hotspots and spot-overs. The use of bombing aircraft without the support of ground based suppression crews should be limited to very specific circumstances. Where practicable foam should be used to increase the effectiveness of the water. Ground crews must be alerted to water bombing operations.
Aerial Ignition (NPWS FMM 4.2.20 & 4.4 / NSW Fire Agencies Aviation SOPs O2-4 / NPWS Guidelines for Effective Aircraft Management)	<ul style="list-style-type: none"> Aerial ignition may be used during back-burning or fuel reduction operations where practicable, but only with the prior consent of a senior NPWS officer. Utilise incendiaries to rapidly progress back-burns down slope where required.
Backburning (NPWS FMM 4.8)	<ul style="list-style-type: none"> Temperature and humidity trends must be monitored carefully to determine the safest times to implement back-burns. Generally, when the FDI is Very High or greater, backburning should commence when the humidity begins to rise in the late afternoon or early evening. With a lower FDI backburning may be safely undertaken during the day. Where practicable, clear a 1m radius around dead and fibrous barked trees adjacent to containment lines prior to backburning, or wet down these trees as part of the backburn ignition. Avoid ignition of backburns at the bottom of slopes where a long and intense up slope burn is likely.
Command & Control (NPWS FMM 4.2)	<ul style="list-style-type: none"> 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.
Containment Lines (NPWS FMM 2.2 & 3.9)	<ul style="list-style-type: none"> No new containment lines to be constructed. Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation. All containment lines not required for other purposes should be closed at the cessation of the incident. All personnel involved in containment line construction should be briefed on both natural and cultural heritage sites in the location.
Earthmoving Equipment (NPWS FMM 4.2.20 & 4.3)	<ul style="list-style-type: none"> Earthmoving equipment may only be used with the prior consent of a senior NPWS officer, and then only if the probability of its success is high. Earthmoving equipment must be always 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 firefighting vehicle. Containment lines constructed by earthmoving equipment should consider the protection of drainage features, observe the Threatened Species and Cultural Heritage Operational Guidelines, and be surveyed, where possible, to identify unknown cultural heritage sites. Earthmoving equipment should be washed down, where practicable, prior to it entering NPWS estate.
Fire Advantage Recording	All fire advantages used during wildfire suppression operations must be mapped and where relevant added to the database.
Fire Suppression Chemicals (NPWS FMM 4.2.20 & 4.9)	<ul style="list-style-type: none"> Wetting and foaming agents (surfactants) are permitted for use in wildfire suppression. The use of fire retardant is only permitted with the prior consent of the senior NPWS officer, and should be avoided where reasonable alternatives are available. Exclude the use of surfactants and retardants within 50m of rainforest, watercourses, dams and swamps. Areas where fire suppression chemicals are used must be mapped and the used products name recorded. The Threatened Species Operational Guidelines are to be observed.
Rehabilitation (NPWS FMM 5.1)	Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Smoke Management (NPWS FMM 3.4)	<ul style="list-style-type: none"> The potential impacts of smoke and possible mitigation tactics must be considered when planning for wildfire suppression and prescribed burning operations. If smoke becomes a hazard on local roads or highways, the police and relevant media must be notified. Smoke management must be in accordance with relevant RTA traffic management guidelines.
Visitor Management (NPWS FMM 3.6 & 4.13)	The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.

Communications Information

Service	Channel	Location and Comments
NPWS - VHF	8	Mount Nardi
NPWS - VHF (Fireground Comms)	40	Fireground chat channel (single frequency - monitors channel 8)
NPWS - VHF (Portable Repeater)	13	Blue Code. Stored at Kyogle PWD Depot
RFS - PMR - UHF	73/62	Coolgardie and Knockrow
RFS - GRN	-	No service available
SF - VHF	-	Not applicable
CB - UHF	-	To be confirmed with RFS brigade captain on the day
Aircraft - VHF	125.45 MHz	As directed by Incident Controller or Air Operations
Mobile Phone - CDMA	-	Coverage varies. Best reception at elevated points.
Mobile Phone - GSM	-	Coverage varies. Best reception at elevated points
Satellite Phone	-	Not applicable

Contact Information

Agency	Position / Location	Phone
NPWS	Regional Office 24 hrs	6627 0200
	Aboriginal Cultural Heritage Officer	6627 0200
RFS	Duty Officer Northern Rivers 24 hrs	6632 3044
Emergency		000
NSW Fire Brigade	Lismore Commander Station	6624 5384
SES	Richmond/Tweed Unit	6625 2070
Police	Ballina Station	6681 8699
Ambulance	Ballina Station	131233
Hospital	Lismore Base (Emergency Department)	6620 2400
Council	Ballina Shire Council	6686 4444
Local Aboriginal Land Council	Jali Local Aboriginal Land Council	6683 4413

Strategy Information

Fire Season Information

Wildfires Have been known to start as early as late August, but usually the potential for a large fire event is greatest between October and December. This period may extend into January in more severe years.

Prescribed Burning (NPWS Fire Management Manual 4.7) General season is Autumn to late Winter. Burning is possible in early Spring but not desirable on a regular basis from an ecological or tourism point of view.

Suppression Strategies

Current FDR	Forecast FDR	Strategy
Low - Mod	Low - Mod	<ul style="list-style-type: none"> Undertake direct, parallel or indirect attack along existing containment lines. Where practicable consider maximising the fire area in accordance with the requirements of any proposed prescribed burns.
Low - Mod	= > High	<ul style="list-style-type: none"> In order to minimise the fire area and secure the flanks as soon as possible, undertake direct, parallel or indirect attack along the closest containment lines. Pay particular attention to the flank on the next predicted down wind side.
High	All	<ul style="list-style-type: none"> Undertake indirect attack along existing or newly constructed containment lines. Secure and deepen containment lines along the next predicted downwind side of the fire. If applicable consider broader than normal containment strategies to avoid wasted effort and high risk of failure.
All	All	<ul style="list-style-type: none"> Ensure there is sufficient time to secure containment lines prior to the fire impacting upon them; otherwise fall back to the next potential line.

Fire Thresholds

Overburnt	Fire thresholds have been exceeded. Protect from fire as far as possible.
Vulnerable	The area will be Overburnt if it burns this year. Protect from fire as far as possible.
Recently Burnt	Time since fire is less than the optimum interval, but before that it was within threshold. Avoid fires if possible.
Within Threshold	Fire history is within the threshold for vegetation in this area. A burn is neither required nor should one necessarily be avoided.
Almost Underburnt	The area is close to its threshold and may become underburnt with the absence of fire. A prescribed burn may be advantageous. Consider allowing unplanned fires to burn.
Underburnt	Fire frequency is below fire thresholds in the area. A prescribed burn may be advantageous. Consider allowing unplanned fires to burn.
Unknown	Insufficient data to determine fire threshold.

NB. Fire thresholds are defined for vegetation communities to conserve biodiversity

