



Guideline

2.3.4

Remote Area Fire Teams

The ACT Rural Fire Service Chief Officer has issued this Guideline under Section 38(1) of the *Emergency Act 2004* – A Chief Officer may determine standards and protocols.

Purpose

Use of Remote Area Firefighting Teams (RAFT) requires a coordinated approach that may involve more than one agency. This guideline has been developed to establish requirements for the use of RAFT, including qualifications and selection of team members, equipment, risk assessment and management, and operations. This will ensure that the ACT Emergency Services Agency (ESA) is prepared to deploy RAFT teams when required to ensure the safety and protection of the people and resources of the ACT and to support other jurisdictions when required.

For joint RAFT operations with NSW RFS, operations must be conducted in conjunction with the *Joint Operation Protocol for Remote Area Firefighting*.

Scope

This guideline is applicable to personnel engaging in RAFT operations within the ACT, which includes personnel from ACT Rural Fire Service (ACT RFS) and ACT Parks and Conservation Service (PCS).

This policy applies to any class of remote fire and includes remote prescribed burning operations. All agencies have a duty of care to ensure that their personnel tasked to remote area firefighting operations are competent and capable of undertaking the tasks allocated to them and that those tasks are undertaken as safely as possible.

Background

Remote area firefighting can be an extremely effective and efficient tool for the suppression of wildfires in remote areas, which are accessible only by foot or helicopter deployment. The safety of teams deployed in remote areas is extremely important and must be the first consideration of any process and decision to use RAFT.

Definition of remote

Definition: A location is 'remote' if it is located a 45 minute walk or greater from support or guaranteed means of extraction.

Remote work requires teams and personnel to be self-sufficient for the duration of the shift and suitably prepared in case they become stranded. Remote Area Firefighting often involves strenuous firefighting activities in challenging terrain.

Additional agency involvement

Agencies other than those covered by this guideline may operate within the ACT under their organisation's existing operating procedures or guidelines so long as there remains compliance with the following sections of this guideline:

- Qualifications for RAFT firefighters
- RAFT operational procedures
- Aviation.

Applicability of this guideline

Personnel will comply with this guideline when deployed at any incident in the ACT. The IMTs, agency representatives and agency personnel are responsible for compliance with this guideline.

Remote area firefighting

Suppression of fires in remote terrain can be essential to preventing or controlling the natural development of large, potentially destructive fires. RAFTs are established as a pivotal tool to enable Incident Controllers to deal with remote fire incidents. RAFT deployments by their nature require hard, protracted physical activity.

Rapid Aerial Response Teams (RART)

NSW RFS and NSW NPWS RART operations are beyond the scope of this guideline and are addressed in other jurisdiction/agency documentation. This is a future capability to be considered by the ACT.

Qualifications for RAFT firefighters

RAFT medical and fitness requirements

ACTRFS sets minimum medical and fitness standards for members participating in remote area firefighting operations.

Personnel should only be deployed operationally or involved in strenuous training if they satisfy ACTRFS medical and fitness requirements.

Medical clearance

ACT Rural Fire Service medical and fitness assessment consists of the following steps:

1. Complete the pre-exercise questionnaire for medical fitness.
2. If the results of the questionnaire indicate that a medical examination is required, the member should attend the doctor, obtain a signed medical clearance and complete the Fitness clearance (Arduous Pack Test).
3. If the results of the questionnaire indicate that no medical clearance is required, proceed to the Fitness clearance (Arduous pack Test).

Fitness clearance

The minimum fitness standard for all remote area firefighting personnel is the Arduous Pack Test. No firefighter can be deployed to a remote area for operations or training if they have not successfully completed the Arduous Pack Test within a designated time period set by their respective agency.

The Arduous Pack Test must be completed by all ACTRFS RAFT members as per 3.1.3 Work Capacity Test Standard Operating Procedure. The 'Arduous Pack Test' involves candidates walking:

- a total of 4.83km
- wearing a 20.4kg vest or pack
- in a time of 45 minutes or less.

RAFT firefighters

RAFT firefighters must be trained, qualified and equipped by their respective agency for remote area firefighting or operations to standards set by their agency.

RAFT leaders

RAFT crew leaders are to be qualified as a Crew Leader in their respective agency, as well as trained, qualified and equipped in Remote Area Firefighting as set by their agency.

RAFT operational procedures

Typical RAFT taskings

RAFT firefighters are typically deployed to:

- areas that are only accessible by helicopter landing, hover entry/exit and winching
- areas that are only accessible by boat
- areas that are only accessible by foot.

RAFT carry out tasks that require a high level of fitness and endurance over extended periods of time in steep and/or uneven terrain. Such tasks include:

- initial attack on small fires
- containment line construction
- close containment
- helipad construction
- mop up and patrol
- path finding
- fire observation and reconnaissance
- remote burning operations
- remote operational support
- assisting other agencies when required.

Incident Controller authorisation

RAFT can only be deployed if authorised by the Incident Controller.

RAFT risk management

RAFT can only be deployed following careful consideration of the specific risks involved with the taskings. Risks should be assessed using the RAFT Risk Assessment shown in Appendix A and the risks and their controls must be addressed in the Incident Action Plan (IAP)

Some key risks associated with most RAFT operations include:

- fire behaviour and overrun
- falling trees and branches
- physical exhaustion and fatigue
- loss of communications
- dehydration
- exposure (heat and cold)
- chainsaw injuries
- helicopter insertion risks
- falls
- rock falls
- allergies
- medical conditions
- thunderstorms and severe weather.

Incident Action Plan

The Incident Management Team should consider including a RAFT representative where incidents have more than one RAFT team deployed. RAFT deployment will be included in the IAP and detail the following information that is specific to the RAFT operation:

- safety and contingency planning
- taskings for RAFT
- communications and channel allocation
- reporting mechanisms and timeframes
- Evacuation Plan
- Medical Emergency Plan
- other factors affecting the operation of RAFT.

RAFT briefing

Prior to RAFT deployment, the Incident Controller, RFS DO or delegate from the IMT must provide:

- a specific RAFT briefing
- an IAP
- a topographic map to each firefighter
- a fire map that can be overlaid on the topographic map to each firefighter
- an opportunity for RAFT to ask questions and ensure satisfaction with the taskings
- links to AVENZA mapping or equivalent for incident information.

Evaluation of tasking

On receipt of the briefing, maps and IAP, the RAFT must be satisfied with the tasking, communications arrangements, crew welfare and safety prior to any deployment proceeding. It is the responsibility of
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the RAFT leader to ensure unanimous satisfaction amongst the members. The RAFT leader may seek clarification of and amendments to the tasking from the IMT at this stage if required.

Night operations

In considering RAFT deployment, Incident Controllers are encouraged to consider the advantages of night time firefighting operations if and when safe to do so. If night operations are actioned, the ACTAS Duty Officer must be notified in case a medical evacuation from the site is required.

Fire line camping

Incident Controllers should also consider the advantages of camping crews on or near the fire line, if and when safe to do so. Fire line camping can assist by avoiding time lost by crews travelling to and from the fire ground and take advantage of evening and early morning conditions.

RAFT composition

A RAFT will consist of a minimum of four firefighters including one qualified crew leader and must have at least two firefighters qualified in First Aid. The crew size and skill set will be considered based on the tasking, aircraft capacity (if applicable) and risks of the operation. The following table lists the qualifications and skill mix required for teams of 4, 6 and 8 RAFT members.

Number in Team	Bush Fire fighter	Arduous Pack Test	Advanced Fire fighter	RAFT CL	Remote 1 st Aid	1 st Aid	Chainsaw	4WD	HEE/ Winch	Aviation Communication & Evaluation
4	ALL	ALL	ALL	1	0	2	1	1	ALL	0
6	ALL	ALL	ALL	1	1	2	2	2	ALL	0
8	ALL	ALL	ALL	1	1	3	2	2	ALL	1

RAFT equipment

Team equipment

RAFT Firefighters must be properly equipped for the assigned task. Standard agency equipment should be available to all RAFTs pre-deployment. The RAFT crew leader in consultation with the RAFT should make a determination on the specific equipment the team should take to the fire ground once the RAFT briefing has been completed.

Personal equipment

It is the responsibility of the agency to ensure adequate personal equipment for RAFT operations is provided to each RAFT firefighter.

It is the responsibility of RAFT firefighters to select which personal equipment to take on each deployment taking into consideration the specific nature of the operation and the potential associated risks. All RAFTs face the possibility of becoming stranded overnight in remote bushland, therefore all remote area firefighters must be prepared and equipped for this possibility.

Personal protective equipment & clothing

All agencies have minimum standards for PPE/C on a fire ground. Remote area firefighters must comply with their agency's standards in relation to this and ensure carriage and use of such PPE/C in line with their agency requirements.

Safety

If at any stage during the deployment the IC, IMT Staff, Sector or Divisional Commander or RAFT members become concerned with the safety and welfare of the RAFT, they can authorise the need for immediate extraction or relocation to a safety refuge through the IC.

Aviation

Aviation support

Incident Controllers are strongly encouraged to deploy aircraft to support RAFT. Aircraft not only provide increased safety but greatly increase the effectiveness of RAFT. Aircraft can supply water bombing to firefighting operations and may transport both personnel and equipment efficiently.

Helicopter insertion

The RAFT Crew Leader, in consultation with the RAFT and aircrew will make the final determination whether or not the RAFT insertion takes place.

Helicopter insertion and extraction methods

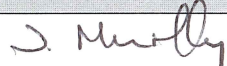
There are 3 options for aerial insertion and extraction, these are landing, hover entry/exit and winching (hoisting).

Winching should only be approved by the IC when other options are not possible. Procedures must be in accordance with *the NSW and ACT Fire Agencies Bushfire Aviation Standard Operating Procedures 2018 version 4.1*.

Document information

Version history

Author	Version	Version Approval Date	Summary of Changes
Andrew Starke	1.0	15/02/2011	First version SOP 3.1
Joe Murphy	2.0	21/12/2018	Major update SOP 3.1
Rohan Scott	3.0	12/03/2020	No changes, adapted to new template/numbering.

Name	Title/Role	Signature	Date
Joe Murphy	CO ACT RFS		12/03/2020

Document Owner

Position	Section
Manager	Operations

Next review due: 12/03/2022

Related documents

Document name
Joint Operational Protocol for Remote Area Firefighting
NSW RFS / NPWS Operational Agreement – 2011 Remote Area Firefighting
NSW and ACT Aviation Standard Operating Procedures, 2018
3.1.3 Work Capacity Test Service Standard
3.3.1 Work Capacity Test Administration Guideline
Training Information Book
RAFT Capability Framework

Signed documents will be scanned and filed in TRIM.

Appendix A – Remote Area Firefighting Risk Assessment Template

Incident:		Period From:		Period To:		MAX FDI During Period:		Thunderstorms Forecast:		Winch Change Forecast:	
Applicable Sectors:							RAFT Operations Included in IAP		Medical and Evacuation Plan Completed		

Risk Assessment Guidelines

1. Consequence Table (Worst Case after Controls Applied)		2. Likelihood Table		3. Risk Rating Matrix Table (Residual Risk) (Product of Consequence and Likelihood)					
Rating	Description	Likelihood	Description		Insignificant 1	Minor 2	Moderate 3	Major 4	Extreme 5
Extreme 5	Multiple fatalities and/or injuries with widespread medical attention required.	Highly Likely 5	The consequence is expected to be experienced in most circumstances (monthly). High level of known incidents.	Highly Likely 5	Low L7	Medium M4	High H4	Critical C4	Critical C1
Major 4	Single fatality, serious injuries or occupational illnesses with potential acute or chronic disabilities.	Likely 4	The assessed level of consequence will probably be experienced in most circumstances (annually). Regular incidents are known about.	Likely 4	Low L8	Medium M5	High H5	High H2	Critical C2
Moderate 3	Medical treatment required with potential short term absence <1 week with no fatalities or serious long term disabilities	Possible 3	The assessed level of consequence should be experienced at some time (2 - 5 years). Few, infrequent random occurrences are known about.	Possible 3	Low L9	Low L4	Medium M3	High H3	Critical C3
Minor 2	Minor injuries only, medical treatment required. Sick leave not required.	Unlikely 2	The consequence could be experienced at some time (5 – 15 years). Usually no known incidents recorded or experienced.	Unlikely 2	Low L10	Low L5	Low L2	Medium M2	High H1
Insignificant 1	Onsite first aid may be required.	Highly Unlikely 1	The consequence may be experienced only in exceptional circumstances (15+ years). Not known to have occurred.	Highly Unlikely 1	Low L11	Low L6	Low L3	Low L1	Medium M1

Risk Assessment Template

Hazard	Risk	Control Measures	Consequence	Likelihood	Residual Risk
Falling Trees or Branches	Serious Trauma				
Welfare	Dehydration				
	Lack of Food				
	Fatigue/Overexertion				
Bushfire	Fire Overrun				
	Excess Smoke Inhalation				
Environmental (Weather)	Exposure (Cold and Wet)				
	Exposure (Heat)				
Environmental (Remoteness)	Personnel Becoming Lost				
	Loss of Communications				

Uneven, steep, vertical or slippery terrain	Falls				
	Slips				
Chainsaw and Power Tool Operations	Cuts, Lacerations etc. (Blood Loss)				
	Flammable Liquids Igniting				
	Hearing Injuries (Loud Noise)				
Working Around Aircraft	Downwash Dislodging Branches and Trees				
	Water Bombing Injuries or Incidents				
Airborne Debris (Various Sources)	Eye Injuries				
Wildlife	Snake, Spider or Insect Bite				
Personnel	Allergies and Medical Conditions				
	Fitness and Health				
	Qualifications and Capability for Tasks				
Helicopter Operations	Serious Winching Incidents (E.g Falls, Swings)				
	Aircraft Failure/Crash				

Risk Assessment Prepared By:

Preparing Officer Signature:

Approving Incident Controller Signature:

DTG:

REMOTE AREA FIREFIGHTING TEAM (RAFT) - OPERATIONAL BRIEFING SHEET

REMOTE AREA FIREFIGHTING TEAM (RAFT) - OPERATIONAL BRIEFING SHEET															
INCIDENT NAME:			DTG FROM:			DTG TO:			AUTHOR:						
1. SITUATION						3. EXECUTION									
WEATHER		OTHER WEATHER NOTES				RAFT CALLSIGN		ALLOCATED SECTOR(S)		OPERATIONAL TASKINGS		TIME IN	TIME OUT		
TEMP															
RH %															
WIND (D)															
WIND KM/H															
STORMS															
FFDI MAX		OTHER SITUATIONAL NOTES													
2. MISSION															
OVERALL STRATEGY															
RAFT STRATEGY						LOC	DESCRIPTION	GRID REFERNCE	LOC	DESCRIPTION	GRID REFERNCE				
		1			4										
		2			5										
		3			6										
4. ADMIN & LOGS			5. COMMAND, CONTROL & COMMUNICATIONS					6. SAFETY							
FOOD & WATER			IMT CONTACT INFO			SECTOR COMMANDER INFORMATION			SAFETY TRIGGER		ACTIONS ON				
									DIVISIONAL COMMANDERS						
									1						
2															
OPERATIONAL LOGISTICS			COMMUNICATIONS												
			SECTOR		PRIMARY	SECONDARY	ALTERNATE	EMERGENCY							
								MEDICAL EMERGENCY PROCEDURES							