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 (ACTRFS) and ACT Parks and Conservation Service (PCS) when under the jurisdiction of the ACTRFS.

This guideline also applies to RAFT Operational deployments outside of the ACT which will be coordinated by the ACTRFS.

This policy applies to any class of remote fire and includes remote prescribed burning operations under the control of the ACTRFS. 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

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.

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.

It is acknowledged that PCS has its own procedures for medical and fitness assessments which achieve the same outcome.

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.

Advanced Firefighter

Advanced Firefighter (AF) is the level of competency needed to fight bush and grass fires without constant supervision. Two courses make up the AF qualification. Advanced Firefighter Principles (AFP) covers safety, fire weather, fire behaviour and fire prevention. Advanced Firefighter Technical (AFT) covers equipment maintenance, map reading and pumping. Both AFP and AFT are required to participate in RAFT.

First Aid

The First Aid qualification provides the skills to provided first aid and initial care to injured persons under operational conditions, i.e. at an incident, or in general.

Operate in Remote Environments

Operate in Remote Environments (ORE) provides the level of competency needed to navigate and operate safely away (e.g. a few kilometres) from any ground-based support.

It is designed to take a member with existing advanced bush firefighting knowledge and skills and enable them to hike considerable distances through remote and trackless areas with appropriate equipment as part of a self-sustaining or air supported team.

The prerequisites for ORE are AF, arduous fitness and first aid.

Work Safely Around Aircraft

Work Safely Around Aircraft (WSAA) contains all the underpinning knowledge needed to commence training programs associated with aviation.

Helicopter Insertion Techniques

Helicopter Insertion Techniques covers two specific methods on insertion/extraction needed by Remote Area Firefighting Teams.

Hover Entry/Exit involves a helicopter inserting crews either by hovering above the ground or landed only with one pad touching the ground.

Undertake Helicopter Winch provides the skills required to insert or extract from operations by winching.

The pre-requisite for Helicopter Insertion Techniques are the AF and ORE qualifications, arduous fitness first aid and work safely around aircraft.

Additional qualifications to support RAFT operations

A mix of additional qualifications are required to support RAFT operations. RAFT members may be offered training in one or more of the qualifications listed below.

Crew Leader

Crew Leader is the level of competency needed to lead a crew, or crews, and resources at a fire/incident. Leading a crew in this context includes being the Incident Controller of a small incident or a Crew Leader or Sector Leader within an incident management structure at a larger incident.

4WD

4WD training allows a member to drive RFS vehicles off formed roads and tracks.

Chainsaw

Chainsaw operations are broken up into three distinct operator levels:

Trim and Cross Cut Felled Trees (TFT)
Tree Falling Intermediate (TFI)
Tree Falling Advanced/Fireline (TFF)

It is highly desirable to have at least one chainsaw operator at TFT/TFI level per team. Certain operations may require operators at TFF level.

Remote Area First Aid

This qualification provides the knowledge and skills to perform first aid in remote situations where medical attention or assistance is delayed, and the first aider may be required to attend to an injured or ill person for an extended period.

Sling Load Operations (under development)

This specialist program is designed to provide members with the knowledge and skills to conduct external load-lifting operations in a helicopter, including preparing, performing, conducting load-lifting operations and responding to external load operational emergencies and abnormal situations.

Remote Land Search (under development)

This specialist program provides members with the required skills and knowledge to perform a land search as a member of a team, under the direction of a team leader, searching for and locating missing persons and/or objects in a range of environments and conditions.

Rapid Aerial Response Teams (RART)

RART are currently performed by NSW RFS and NSW NPWS are outside the scope of this guideline. This is a future capability to be considered by the ACT.

RAFT composition

A RAFT will consist of a minimum of four firefighters including one qualified crew leader. 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	Arduous Pack Test	Advanced Fire fighter	First Aid	Operate in Remote Environments	Hover Entry/Exit & Winch	CL	Remote First Aid	4WD	Chainsaw
4	ALL	ALL	ALL	ALL	ALL	1	2	1	1
6	ALL	ALL	ALL	ALL	ALL	1	3	2	2
8	ALL	ALL	ALL	ALL	ALL	2	4	2	2

Selection of team members

Joining RAFT

The Chief Officer will determine the number RAFT members required to support operations within the ACT and interstate.

An expression of interest process will occur every two years for members to either remain in team or join as new members.

To be considered eligible to join the team and commence further training, potential members must meet the medial and fitness requirements, hold the Advanced Firefighter qualification and a current first aid qualification. If a member does not meet the pre-requisites eligibility may be considered on an individual basis with the Director Operations / Chief Officer.

PCS will conduct an internal process to determine the members of PCS RAFT however the same prerequisites will apply as to RFS members.

Currency in RAFT

To be considered current in RAFT, and available for deployment, members must maintain currencies in arduous fitness, first aid and helicopter insertion techniques. Members must also commit to involvement in minimum of 2 training events/exercises relevant to remote area operations in a calendar year.

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 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.

Unless specifically approved by the Incident Controller, no chainsaw operations are permitted after last light.

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 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 Pilot In Command (PIC) in consultation with the RAFT Crew Leader and RAFT, 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.
Rohan Scott	4.0	11/03/2021	Update to qualifications required and selection of RAFT members.
Wayne Dalton	5.0	17/06/2021	Administrative review. Update to RAFT composition table with respect to remote area first aid.

Name	Title/Role	Signature	Date
Rohan Scott	CO ACT RFS		23·07·4

Document Owner

Position	Section
Director	Operations

Next review due: 1/4/2022

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

Signed documents will be scanned and filed in TRIM.