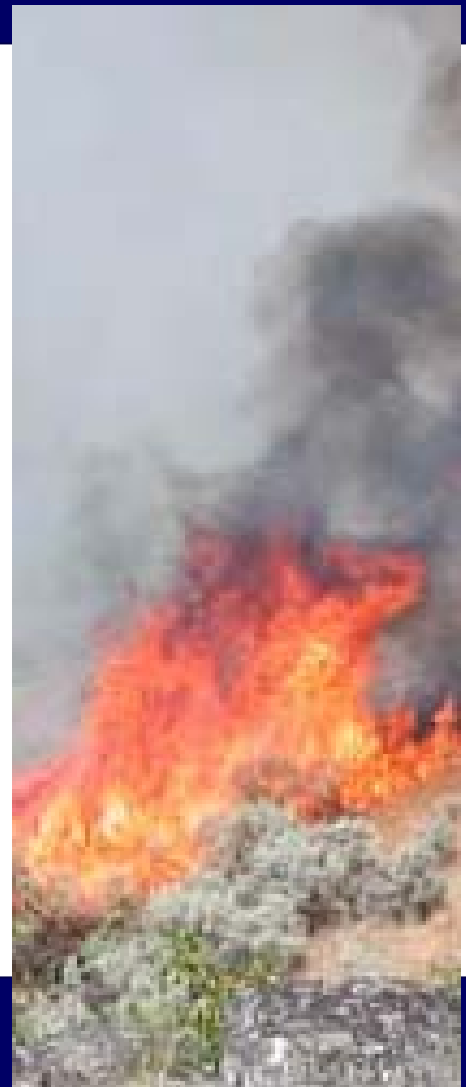




# Manage Ground Operations at Vegetation Fires

## *Student Notes*



**Unit Standard 20396**

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## Acknowledgments

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### Update Summary

A summary of all updates made to this material from date of first publication is recorded below:

March 2006, pp 18-19 minor format changes to *Six Minutes for Safety*.  
 Dec 2006, Moved exercises to Workbook; inserted Risk Management Process and Stages of Control from Referral Notes.

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## What do I need to know?

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### Welcome

Welcome to this course on how to *Manage Ground Operations at Vegetation Fires*, supporting Unit Standard 20396.

### Who's it for?

This resource is intended for people who may be required to take a leadership or management role at rural fires and could be assigned to work in any one of a range of positions supervising or managing fireline suppression activities.

These positions could relate to those of:

- Sector Supervisor, or
- Division Commander, or
- Operations Manager (to a limited extent)

### Before I start this course...

It's essential that people undertaking this learning are experienced fire crew leaders and people managers. A thorough understanding of the following subjects is required:

- The effects of the fire environment on vegetation fire behaviour
- Fire Danger Rating and the Fire Weather Index (FWI) System
- Demonstrate knowledge of vegetation fire behaviour

### What are the course pre-requisites?

You'll need to show you have competence in Unit Standards 4648, *Demonstrate knowledge of vegetation fire behaviour*, and 14564, *Demonstrate knowledge of the fire environment on vegetation fire behaviour*, or equivalent knowledge and skills. It's also desirable that you have competence in Unit Standards 3290, *Exercise Initial Response, Command and Control for Vegetation Fire Operations* and 3291, *Lead a Vegetation Fire Crew*, or equivalent knowledge or skills.

### What does this material cover?

This course covers the management of fireline activities at rural fires and the requirements necessary for carrying out this work. It supports the initial phases of a fire incident through to an extended action phase of a large or complex rural fire incident (e.g. in the role of **Sector Supervisor**, Division Commander, or to a limited extent the Operations Manager).

In particular we will cover:

- Leadership
  - Safety Management
  - Responsibilities
  - Planning
  - Implementation
  - Monitoring
  - Mobilisation and demobilisation
  - Administration
-

## How do I use the material?

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### What now?

- Read through these notes and complete the questions in the Workbook
- Update and correct your answers as you learn new information

Your resources include the Rural Fire Management Handbook (RFMH), access to your RFA policy documents (eg Fire Plan) as well as the knowledge of others within your organisation. Use all of these resources to help you answer the questions in this material. A set of Referral Notes is available from your course director by request.

- Your completed Workbook will be part of your formal assessment

- Return your completed Workbook to your course director for checking at least one week before the face to face training session. You'll get them back when you attend the session.

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### Assessment

*There are specific assessment guidelines compiled by FRSITO for this unit standard.*

*Satisfactory completion of this training package will contribute towards your portfolio of evidence for assessment against the Unit Standard 20396. The designated assessor will require the participant to at least complete the following satisfactorily:*

- 1 The Workbook completed and submitted for approval to the Assessor.
  - 2 Attendance and participation in the training session.
  - 3 Delivery of a *Six Minutes for Safety* briefing and completion of course exercises.
  - 4 Because each participant's practical experience differs, your next step will be to contact an approved Assessor and discuss any other requirements you may need to fulfill. This could include attestation of previous practical experience and/or practical assessment.
-

# Terminology

**Terminology** used in these guidelines is in accordance with the “Rural Fire Management Glossary of Terms” issued by the National Rural Fire Authority. The following provides an explanation of key terms that are used in these guidelines. Further definitions can be found in Appendix A of the RFM Handbook.

<b>Allocated Resources</b>	<i>Resources dispatched to an incident</i>
<b>Assigned Resources</b>	<i>Resources checked in and assigned work tasks on an incident</i>
<b>Available Resources</b>	<i>Incident-based resources ready for deployment</i>
<b>Briefing</b>	<i>A general overview of an operation</i>
<b>Changeover</b>	<i>The orderly replacement of personnel (as in CIMS definition)</i>
<b>Check-in</b>	<i>The process whereby resources first report to an incident</i>
<b>CIMS</b>	<i>Coordinated Incident Management System. A structure to systematically manage emergency incidents</i>
<b>Command</b>	<i>The internal direction of members and resources of an agency (or organisation) in the performance of that agency’s role and tasks. Command relates to single agencies and operates vertically within an agency.</i>
<b>Control</b>	<i>The overall direction of response activities in an emergency situation. Control relates to situations and can operate at either the single agency level or horizontally across (multiple) agencies.</i>
<b>Co-ordination</b>	<i>The bringing together of agencies and resources to ensure a consistent and effective response to an incident.</i>
<b>Debriefing</b>	<i>A critical examination of an operation done to evaluate actions for documentation and future improvements.</i>
<b>Demobilisation</b>	<i>The orderly release of resources no longer required at an incident.</i>
<b>Fire Ground</b>	<i>Any area of land, vegetation, or property where the fire is burning, or has burnt, or is threatening (to burn), in the opinion of the Fire Officer.</i>
<b>Fireline</b>	<i>That portion of the fire perimeter upon which resources are deployed and are actively engaged in fire suppression action.</i>
<b>Handover</b>	<i>The passing of control of an incident from one person or organisation to another.</i>
<b>IAP</b>	<i>Incident Action Plan: A statement of objectives, strategies, and critical functions to be taken at an incident.</i>
<b>ICP</b>	<i>Incident Control Point: The location where the Incident Controller provides overall direction of response activities.</i>
<b>Initial Attack</b>	<i>The action taken to halt the spread or potential spread of a fire by the first fire fighting force/s to arrive at the fire.</i>
<b>Logistics</b>	<i>The provision of facilities, services, and materials in accordance with the Incident Action Plan.</i>
<b>Objective</b>	<i>A statement of what is to be achieved.</i>
<b>Operations</b>	<i>The direction, supervision, and implementation of tactics in accordance with the Incident Action Plan.</i>
<b>Planning/ Intelligence</b>	<i>The collection, evaluation, and dissemination of information related to the incident and the preparation and documentation of the Incident Action Plan.</i>
<b>Situation Report</b>	<i>A brief of an incident, usually given at regular intervals (CIMS)</i>
<b>Strategy</b>	<i>A statement detailing how an objective is to be achieved.</i>
<b>Tactics</b>	<i>Specific actions or tasks to implement incident strategies.</i>
<b>Task</b>	<i>A job given to a team or individual.</i>

# The Green Book – RFMH

You've probably seen the green book already - you might even have your own copy – one that you've thrown in with your gear and not looked at much. Or you might have flicked through it and decided it wasn't going to help much.

A key tool

**The Rural Fire Management Handbook (RFMH) is one of your key tools on the job.**

Why?

**It's a source of vital technical information that can support correctly informed decisions.**

But like any *tool* it will only be effective, if you know how to use it. When you're in the middle of managing a fire line, you don't have time to learn how to use a tool – you need to know exactly where to find the information you need and how to use it, *before* you are on the job.

**As a Sector Supervisor, you need to make informed predictions on fire behaviour. Section 6 of the RFMH is designed to support this part of your role.**

It is a quick reference guide on general fire behaviour with relevant equations and relationships that assist in fire management decision making. Fires can be potentially dangerous at any level of fire danger – this means you need to be aware of the limitations of the models contained within this section and able to recognize unique or unusual situations.

Layout of  
Section 6 of the  
RFMH

**Section 6 contains 19 subsections:**

Section 6.1	Introduction
Section 6.2	FWI System Structure
Section 6.3	Available Fuel Load (AFL) – Forests
Section 6.4	Available Fuel Load (AFL) – Grasslands
Section 6.5	Available Fuel Load (AFL) – Scrublands
Section 6.6	Headfire Rate of Spread (ROS) – Flat Terrain
Section 6.7	Slope Correction Factor Graph
Section 6.8	Dense Scrub Slope Correction Factor
Section 6.9	Headfire Intensity Equations
Section 6.10	Headfire Intensity – ROS/AFL Relationship
Section 6.11	Headfire Intensity – Flame Length Relationship
Section 6.12	Headfire Intensity – Fire Suppression Effectiveness
Section 6.13	Fire Danger Class Criteria – Forest Fire Danger Graph
Section 6.14	Fire Danger Class Criteria – Grassland Fire Danger Graph
Section 6.15	Fire Danger Class Criteria – Scrubland Fire Danger Graph
Section 6.16	Fire Danger Class Criteria
Section 6.17	Simple Elliptical Fire Growth Model
Section 6.18	Wind Speed Estimation
Section 6.19	Abbreviations and Conversions

You'll find these tables useful when completing some of the exercises in these Student Notes.

# What makes a good leader?

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## Introduction

**As you move into the role of a fireline manager you step up a level of responsibility in leadership. You are now a manager of a section of the fireground. The most essential element of successful rural firefighting is competent and confident leadership.**

Leadership means providing purpose, direction and motivation for rural firefighters working to accomplish difficult tasks under dangerous, stressful circumstances. So what makes a good leader?

**In confusing and uncertain situations, a good operational leader will:**

- **Take charge** of assigned resources
- **Motivate** firefighters with a *can do safely* attitude
- **Demonstrate initiative** by taking action in the absence of orders
- **Communicate** by giving specific instructions and asking for feedback
- **Supervise** at the scene of action

**Complete Exercises 1 & 2 in the Workbook.**

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# Safety Management

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## The Manager's Role in Safety

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Why is Safety important?

*The safety of everyone engaged in firefighting is “the personal business of everyone, for oneself and one's fellow firefighters”*

Because of your fireground experience you know you are responsible to look out for the safety of yourself and others. As a fireline manager this responsibility steps up - you are now responsible to see that others understand and follow the rules for fireground safety. It may seem obvious to you, but you need to be able to explain why fireground safety is so vital.

- Firefighter and public safety is the first priority for every fire management activity

• It's never worth endangering people to protect resource or property; all actions and plans must reflect this commitment and this principle. The goal must be for all personnel to return home from an assignment fit and well.

- The safety of the public in the proximity of both wildfires and prescribed burning is paramount - ensure that the public do not enter danger zones around the fire and are cleared from within such areas. The assistance of the police may be required in carrying out such operations.

• Employers are bound by law to exercise a 'duty of care' towards employees to ensure their safety, physical and mental well being in the workplace - in this respect both volunteer fire fighters and contract fire fighters are regarded as being fire authority 'employees' when engaged in fire control activities

- Work emergencies (like entrapments) can be avoided by having well trained and confident crew leaders to ensure that sound work practices are used

Why is management important?

**A fireline manager MUST NOT become involved in hard physical work or other activities that reduce his or her ability to manage a sector/division including:**

- Management of resources
- Monitoring the weather, the fire behaviour, the crew's performance and resources
- Providing information for incident planning
- Implementing the requirements of the IAP
- Anticipating changes that may constitute a hazard/s to the personnel involved

*Continued on next page*

## The Manager's Role in Safety, Continued

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What does Safety mean in practice?

As fireline manager you are responsible for appropriate:

- crew deployment
- crew rotation
- shift lengths
- transport arrangements
- hydration arrangements
- meals
- rest breaks

As fireline manager you are responsible to:

- minimise smoke exposure by crew replacement and/or rotation rather than by use of respirators, which when used may give a false sense of security
  - encourage self-pacing of work effort. Some people will have a different level of work output than others. Firefighters are not in competition with each other. They need to be working as a team to control the fire
- eg • The 'step-up' technique in building fireline encourages self-pacing

**Trained and experienced firefighters are safer to work with and more productive than novices.**

**Remember that firefighting is hot, hard, sweaty work – but personal risk is minimised if they wear the right clothing, drink frequently, maintain their energy levels, work at their own pace, avoid excessive radiant heat, and look after each other.**

Whose Safety are you responsible for?

The responsibility for safety at all levels in the management structure at a fire is as follows:

- (a) The **Incident Controller** has overall responsibility of an incident and must make appropriate strategic decisions based on fire environment, weather forecasts, knowledge of the fire behaviour and resources available so as not to deploy people into potentially dangerous situations.
  - (b) **Fireline Managers** and **Crew Leaders** have the responsibility within their Divisional or Sector assignments to deploy crews and machinery at the local level to ensure the safety of both. They also have a major responsibility to keep the Incident Controller informed of any developments likely to be of value in re-assessing the situation.
  - (c) **Individuals** have responsibility for their own personal safety and that of co-workers to avoid any action or lack of action that would jeopardise safety, and as a consequence, that of any rescuers.
-

# Risk Management Process

Understanding and applying the principles of **Risk Management** is key to safe decision-making. For you to make informed decisions that consider safety first, you need to be able to answer:

*What's the risk assessment on this?*

These steps outline the risk assessment and risk management process. Fireground management personnel have obligations with respect to each of them.

<b>Step 1</b>	<b>Situation Awareness</b>	
	<ul style="list-style-type: none"> <li>• Gather information</li> <li>• Identify hazards</li> <li>• Current and future situations (fire behaviour)</li> <li>• Local factors</li> </ul>	<ul style="list-style-type: none"> <li>• Communications plan</li> <li>• Weather forecast</li> <li>• Who's in charge</li> <li>• Scout the fire</li> <li>• Tactical Instructions</li> </ul>
<b>Step 2</b>	<b>Hazard Assessment</b>	
	<ul style="list-style-type: none"> <li>• Estimate potential fire behaviour hazards</li> <li>• Identify tactical hazards</li> <li>• Watch out situations</li> </ul>	<ul style="list-style-type: none"> <li>• Look up/look down/look around indicators</li> <li>• What other safety hazards exist?</li> </ul>
<b>Step 3</b>	<b>Hazard Control</b>	
	<ul style="list-style-type: none"> <li>• Fire Orders</li> <li>• LACES</li> </ul>	<ul style="list-style-type: none"> <li>• What other controls are necessary?</li> <li>• Continually re-evaluate</li> </ul>
<b>Step 4</b>	<b>Decision Point</b>	
	<ul style="list-style-type: none"> <li>• Are controls in place for identified hazards?</li> <li>• Are selected tactics based on expected fire behaviour?</li> <li>• Have instructions been given and understood?</li> </ul>	<ul style="list-style-type: none"> <li>• NO - Reassess situation YES - Next question</li> <li>• NO - Reassess situation YES - Next question</li> <li>• NO - Reassess situation YES - Initiate action</li> </ul>
<b>Step 5</b>	<b>Evaluation</b>	
	<ul style="list-style-type: none"> <li>• Do the personnel skills match the tasks?</li> <li>• Fatigue or stress?</li> </ul>	<ul style="list-style-type: none"> <li>• Is the situation changing?</li> <li>• Are the strategy and tactics working?</li> </ul>

**Complete Exercises 3 & 4 in the Workbook.**

# Six Minutes for Safety<sup>1</sup>

**Clear, concise communication on relevant topics is a skill that every leader needs to develop. 6 Minutes for Safety was designed to highlight specific safety issues at campaign fires.**

**These specific briefings are in addition to your safety briefing!**

Think about how much attention experienced travelers pay to the aircraft safety briefing. Experience can dull a firefighter's alertness to hazards - we assume we know enough about safety.

## Benefits

These short briefings have at least 3 benefits:

- You provide an in-depth briefing on a very present hazard eg Powerlines
- You upskill your crew on that particular hazard
- You raise their awareness of safety generally

## Format

The briefing follows a simple 3-step format:

<b>Subject preparation</b>	1. Take a minute to note key points as a reference for your briefing delivery.	1 minute
<b>Delivery</b>	2. Talk to your crew for up to 2 minutes on the details of a specific hazard you can identify from where you stand.	2 minutes
<b>Questions + answers</b>	3. Allow time for your crew to clarify.	3 minutes

Here are two illustrations of *Six Minutes for Safety* briefing outlines:

e.g.  
*Six Minutes for Safety*

### **No Communication Link With Crew Members, Supervisors, Adjoining Forces**

Watchout Situation #5 is a danger that must be mitigated by maintaining good communications while working on fires. Firefighters must constantly ask themselves the following questions as situations change on the fireline:

#### **Can communications be established?**

- Talk about how communications are set up on fires
- Review situations where communications were a problem and what was done to fix the problem

#### **Is the communication triangle complete?**

- Review the communication triangle and where it comes up in the **10 Standard Fire Orders** and the **20 Watchout Situations**
- Discuss ways that firefighters can maintain the communication triangle on the fireline

#### **Reduce the risks**

- If the situation is complex, wait until communications are in place
- Talk about the fires where crews had to leave the line, didn't go out on the line, or something negative happened because communications were inadequate. Discuss what was done to establish communications.

References: Pink card

*Continued on next page*

<sup>1</sup> For extra reading, check out *The Six Minutes* homepage – [http://www.nifc.gov/sixminutes/dsp\\_sixminutes.php](http://www.nifc.gov/sixminutes/dsp_sixminutes.php)

## Six Minutes for Safety, Continued

e.g.  
*Six Minutes for  
Safety*

### **In Country Not Seen In Daylight**

Often firefighters arrive on a fire after dark. This is recognised as Watchout Situation #2. Before safely fighting fire in country not seen in daylight, firefighters must be able to answer the following questions:

- Can the resources you are replacing give you a thorough briefing?  
Identify whom you might get information from.  
Can you meet up with the departing crew/engine leaders?
- Can you observe the area/use scouts?  
List ways you could observe the area you need to work.
- Have escape routes and safety zones been thoroughly scouted and marked for night use?  
Talk about what constitutes an escape route and a safety zone; who would identify them; and in what ways might they be marked.
- Have potential dangers been located; can they be mitigated?  
What are the dangers associated with Watchout Situation #2?  
How can they be worked around?

#### **Reduce the risks by:**

- Posting lookouts
- Checking communications
- Retreat if you have doubts about your escape routes or safety zones or the situation becomes too complex. Give examples of arriving on a fire after dark and what was done to allow you to fight fire safely in country not seen in daylight.

References: Pink card

### **Any effective briefing requires:**

- Accurate and appropriate content – appropriate language and structure
- Opportunity for questions and answers
- Clear delivery (clear, loud, not too fast/slow)

At the training session we'll illustrate a briefing delivery and you'll get the opportunity to clarify content, practice and present a briefing.

**Complete Exercise 5 in the Workbook.**

# Overview

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## Responsibilities

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**The biggest change this role brings is that you are no longer responsible for the whole fire – you are now responsible only for one patch of the fireground and the management of the resources assigned to you.**

**What are your overall responsibilities as fireline manager?**

As the fireline manager your responsibilities include knowing:

- The various role responsibilities
- Communication and reporting lines and the CIMS structure
- The safety of all personnel assigned to you - constant review of what your personnel are doing, where they are, and what the fire is likely to do

**Remember these distinctions?**

- **Authority** is *the power to command and control others and enforce obedience*
- **Responsibility** is *having control and authority and the liability to be called to account for the persons or things for which one is responsible*
- **Accountability** is *being answerable for conduct or performance or non-performance of duty – or being responsible to someone or for something*

**Fireline managers have authority, responsibility and accountability:**

- **For the crews under their command**
- **To ensure that the strategies of the Incident Action Plan (IAP) are carried out**
- **And for the management of resources under their control**

Fireline managers are **accountable** to the Incident Management Team for the consequences of the decisions (or lack of decisions) they make in the management of the resources under their control.

At the start of a shift:

- Determine the levels of your authority, responsibility and accountability from the Incident Management Team - verify the command structure and span of control within your section of the fireground
- Let people know who they refer information and decisions to - as fireline manager you need to let people know you are in control - verify the communications plan (eg call signs, channels) within your section of the fireground<sup>2</sup>
- Identify yourself by the use of a command vest

**See also** Sections 4 and 5 – Rural Fire Management Handbook

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<sup>2</sup> See the IAP section of your Referral Notes for an example of a standard communications plan or visit [www.nrfa.org.nz](http://www.nrfa.org.nz) then Incident Mgmt. Forms

# Fireline Roles

## Incident Controller (IC)

Major responsibilities include:

- Establishing command and control
- Establishing the Incident Control Point (ICP)
- Protecting life and property
- Controlling personnel and equipment
- Maintaining accountability for responder and public safety
- Establishing and maintaining effective liaison with other organisations

See also  
Note

### Section 4 – Incident Management of the Rural Fire Management Handbook

1. The IC maintains responsibility on a fire until it is declared out, or control of the fire has been handed over to another IC.
2. In the event that the fire escalates in size or complexity, the initial IC may be re-allocated to a fireline supervision position.

These positions are under the direction of the IC and are appointed to ensure that the IAP is implemented and objectives are met in the assigned area. They have the same or very similar responsibilities to those of the IC at a small incident.

## Fire Fighter

- Is responsible and accountable for personal safety and watches out for the safety of others
- Carries out the work skills and functions of this position under the direct supervision of a Crew Leader

## Crew Leader (CL)

- Is responsible and accountable for the safety and welfare of the crew
- Implements the work assignment given by a fireline manager, by directly supervising the fire crew

## Fireline Managers

As incidents grow, the IC may delegate authority for performing certain functions to others, as required. The IC may establish other staff functions such as the:

- Sector Supervisor
- Division Commander
- Operations Manager

**Remember that the role of Sector Supervisors is significantly different from that of the Crew Leader. Your responsibility now is to provide the management link between your section of the fireground and incident control and the operational link across fireline resources assigned to you, to ensure that work gets done productively and safely.**

# Organisational Structure and Incident Control

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**Introduction** Every incident requires a management structure to ensure that control is carried out in a manner that is appropriate to the scale and complexity of the incident. Regardless of size there are four key functions that must be addressed at any incident:

- Incident Control
- Operations Management
- Planning and Intelligence
- Logistics

**CIMS** The NZ Coordinated Incident Management System (CIMS) is an organisational structure, which builds from the top down with overall responsibility placed with the IC who is responsible for the overall management of an incident.

The major benefit of CIMS is that it can change as the incident develops. The organisational structure develops to match the incident by delegation of responsibilities.<sup>3</sup>

At small or initiating incidents, all of the key functions are carried out by one individual - the IC. As an incident escalates in size and/or complexity, various functions are delegated to others.

**Fireline Manager** Generally, the first function delegated is that of Operations Management – this is where the fireline manager role comes in.

- Responsible for overall safety within the section of the fireground
- Directs and controls operations within the section of the fireground
- Ensures the safety of operations personnel within the section of the fireground
- Provide input to the development of the IAP
- Implements the IAP for their section of the fireground
- Requests resources in collaboration with the IC
- Keeps the IC informed of the situation
- Reports special occurrences/events (accidents, structure/improved property loss or damage, sickness, etc) to immediate supervisor

**Span of Control** Span of control is defined as the number of individuals or functions one person can manage effectively. In CIMS, the span of control for any person falls within a range of three to seven resources, with five being the optimum. Safe and effective operations require that all fire management positions maintain this span of control. Exceeding this has the potential to break down the efficiency and effectiveness of the command and control system.

• \_\_\_\_\_  
<sup>3</sup> Refer to The NZ Coordinated Incident Management System (CIMS) booklet – “Teamwork in Emergency Management” for further information.



# Getting the Job Done – Planning

## Overview

Incident management responsibilities can be viewed as 4 overlapping components:

- Planning the work
- Doing the work
- Monitoring the work, and
- Recording the work (Administration)

The rest of these Student Notes will examine how the role of fireline manager fits within, but before we do that, lets look at the detail of tasks and responsibilities that make up this role.

<b>Tasks and Responsibilities of Incident Management</b>	
<b>Initial Response</b>	
<ul style="list-style-type: none"> <li>• Confirm fire location</li> <li>• Establish planning process</li> <li>• Size-up fire</li> </ul>	<ul style="list-style-type: none"> <li>• Organise resources</li> <li>• Brief personnel</li> <li>• Protect area of fire origin</li> </ul>
<b>Establish Command and Control System</b>	
<ul style="list-style-type: none"> <li>• Formal take-over of incident</li> <li>• Set up Incident Control Point (ICP)</li> <li>• Set up system to record movements in and out of fireground</li> <li>• Set up Incident Management System</li> <li>• Warnings / Evacuation required</li> </ul>	<ul style="list-style-type: none"> <li>• Establish fire log</li> <li>• Develop IAP</li> <li>• Develop communications plan</li> <li>• Advise other organisations of fire in vicinity</li> <li>• Arrange notification to RFA responsible for fire</li> </ul>
<b>Fire Behaviour Observations</b>	
<ul style="list-style-type: none"> <li>• Organise fire behaviour documentation</li> </ul>	<ul style="list-style-type: none"> <li>• On site weather observations</li> </ul>
<b>Fire Suppression Operations</b>	
<ul style="list-style-type: none"> <li>• Resource mobilisation</li> <li>• Resource deployment and management</li> <li>• Response to fire escalation</li> </ul>	<ul style="list-style-type: none"> <li>• Fire out declaration</li> <li>• Patrols and Mop-up</li> <li>• Resource demobilisation</li> <li>• Safety management</li> </ul>
<b>Follow-up</b>	
<ul style="list-style-type: none"> <li>• Fire Report prepared and lodged</li> <li>• Fire Investigation</li> <li>• Notify NRFA within 24 hours if claim on Rural Fire Fighting Fund is likely</li> </ul>	<ul style="list-style-type: none"> <li>• Notify NRFA in the event of significant fire damage</li> <li>• Fire Statistics details</li> <li>• Notify NRFA and OSH in event of serious injury or death</li> </ul>

## Overview, Continued

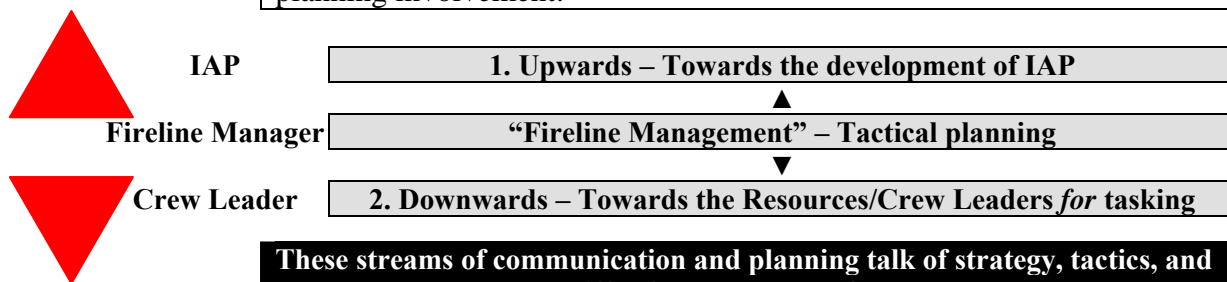
Why is planning vital?

Successful fireline operational planning supports *efficient, effective* and *safe* fire management.

***People don't usually plan to fail, they usually fail to plan***

The role and responsibilities of Fireline Management need to be established and understood by all in the command structure at the start of an incident – they are a vital part of the planning requirements.

A fireline manager needs to input into two streams of communication and planning involvement:



**These streams of communication and planning talk of strategy, tactics, and tasks – so, how do they differ from each other?**

### Strategy

- Defines what is going to be done – a broad plan
- Developed in support of the incident control objective that is used to address the incident

### Tactics

- Indicate how a job will be done / strategy will be implemented
- Enable redeployment resources at an incident to secure all or part of a strategy
- Are implemented by managers who are responsible for the deployment of resources eg. Fireline managers
- Specify jobs that must be completed within stated parameters (time, size, equipment used etc)

### Tasks

- Tasks are the smallest components of the IAP
- Once tactics are in place the actual work can be allocated to those who will perform it - **Tasking**

### **What information do you need to input into the IAP?**

*Situation assessment* and the *size-up of the fire* provide you with information that you need to report up to Incident Management. They:

- Are ongoing assessment tools that require you to keep informed of *weather information and fire behaviour*; and
- Allow you to do the *tasking* – which you need to report up towards the IAP

There is a strong relationship between them all these elements – and they are carried out concurrently.

**Complete Exercise 6 in the Workbook.**

# Input into IAPs - Situational Assessment

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## Situation Assessment - overview of the entire fire area

Situation assessment is about looking at the “big picture” (the entire fire area). It is an analysis of the overall situation and circumstances that may have an impact on section of the fireground you are responsible for..

This is an ongoing function and requires that all of the following aspects be continually observed and action taken to mitigate risks and safety concerns associated with each of them:

<b>Fire Behaviour</b>	<ul style="list-style-type: none"><li>• Fuels and topography ahead of the fire</li><li>• Predicted weather (eg cold fronts and associated winds)</li></ul>
<b>Personnel Safety</b>	<ul style="list-style-type: none"><li>• Situational awareness – being constantly aware of what’s going on around you</li><li>• Adequate escape routes and safe areas</li><li>• Adequate communication and lookouts</li><li>• Fatigue</li></ul>
<b>Operational Control</b>	<ul style="list-style-type: none"><li>• Maintaining span of control</li><li>• Experience/skill levels match the task</li></ul>
<b>Dangerous situations</b>	<ul style="list-style-type: none"><li>• Fire behaviour</li><li>• Watch out situations</li><li>• LACES</li><li>• Hazardous materials</li></ul>
<b>Operational situations</b>	<ul style="list-style-type: none"><li>• Concerned residents</li><li>• Entry and exit from fire area</li><li>• Traffic control and public safety</li></ul>
<b>Additional information to consider:</b>	<ul style="list-style-type: none"><li>• Good vantage point for a lookout</li><li>• Reconnaissance of the sector</li><li>• Predicted fire behaviour</li><li>• Weather forecast</li><li>• Updated map if available</li><li>• Status of adjacent sector / resources</li><li>• Will additional resources be available from adjacent sectors if needed?</li></ul>

# Input into IAPs - Sector Size-up

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## **Sector Size-up - your sector**

Sector size-up is about looking specifically at your sector or division and observing what's currently happening (fire behaviour and resource activities), what's likely to happen, what values are threatened, what dangerous situations are there, and what can be done to control the fire perimeter within your sector.

Fires can be grouped into three categories:

1. Those that can be dealt with the resources on hand.
2. Those where there is doubt if they can be dealt with resources on hand.
3. Those that are beyond the capability of the resources at hand.

## **Consider these major factors during the size-up of the sector or division:**

- Size of fire area
  - Fire behaviour (present and expected ROS and fire intensity)
  - Fuels involved and ahead of the fire
  - Topography
  - Weather conditions - current and forecasted
  - Length of fire perimeter
  - Values threatened (life, property, environmental, etc.)
  - Time of day
  - Method of attack
  - Production rates of suppression resources
  - Define hazards and evaluate escape routes/safety zones
-

# Input into IAPs - Weather Information and Fire Behaviour

**Fire behaviour prediction** is the first line of defence. When things go wrong and firefighters are burned by the fire they are engaged in fighting, it's usually because they've failed to predict a fire behaviour change in time.

Changes in fire behaviour take place because the forces of wind, slope or preheating of the fuel change in their aggregate alignment or strength. When these forces of change come into alignment the fire potential is great. When they go out of alignment the fire potential is reduced.

Your observations made on the fire should indicate the potential for these forces to come into alignment. The degree of variation between the forces is important information to use in making predictions. You can use observations of the current fire and the fire environment factors to make fire behaviour predictions of the fire becoming worse or easier.

The timing and the position of the fire and firefighters are critical elements and must be well managed as part of the tactical approach. When firefighters are positioned in front of a fire that is coming into alignment they are making the same common mistake as have the many victims of numerous fire turnovers, e.g. Mann Gulch, South Canyon, Thirty Mile Fire etc.

*Fireline Managers need to learn to act on the potential rather than waiting for the fire to make the first move.*

## Example

**Case 1** NW aspect  
NW wind  
9am

Forces are not in alignment

**Case 2** NW aspect  
NW wind  
3pm

Forces are in alignment

When wind, slope and solar preheat forces go into alignment, the fire makes runs. If firefighters learn to see this condition setting up they can avoid being in the path of the fire.

When they fail to recognise the potential their evacuation is implemented too late to avoid becoming over-run by fire.

# Input into IAPs - Resource Requirements

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## **Determination of Resource Requirements**

You need to consider the following factors in any estimate of resources required – their influence may raise or lower your estimates regardless of the process you use.

## **Personnel**

Number of experienced personnel available to direct work

- Crew leaders, sector supervisors, division commanders
- Specialty positions – engine operators, tree felling, dozer operators

Efficiency and fitness of personnel

Accessibility and mobility of personnel

Fatigue of personnel

- Long steep repetitive hikes to the fireline
- Number of days spent working

Elevation and temperature affecting output per person

- Local forces vs people from other areas
- Different parts of the country (elevation, heat, humidity)
- Acclimatisation

## **Control method(s) used**

- Minimum impacts standards
- Scratch line
- Finished line
- Direct or indirect attack

Night or day work

Safety issues

Opportunities for use of machinery

Natural barriers and obstacles

- barriers to line construction efforts
- obstacles that have to be skirted

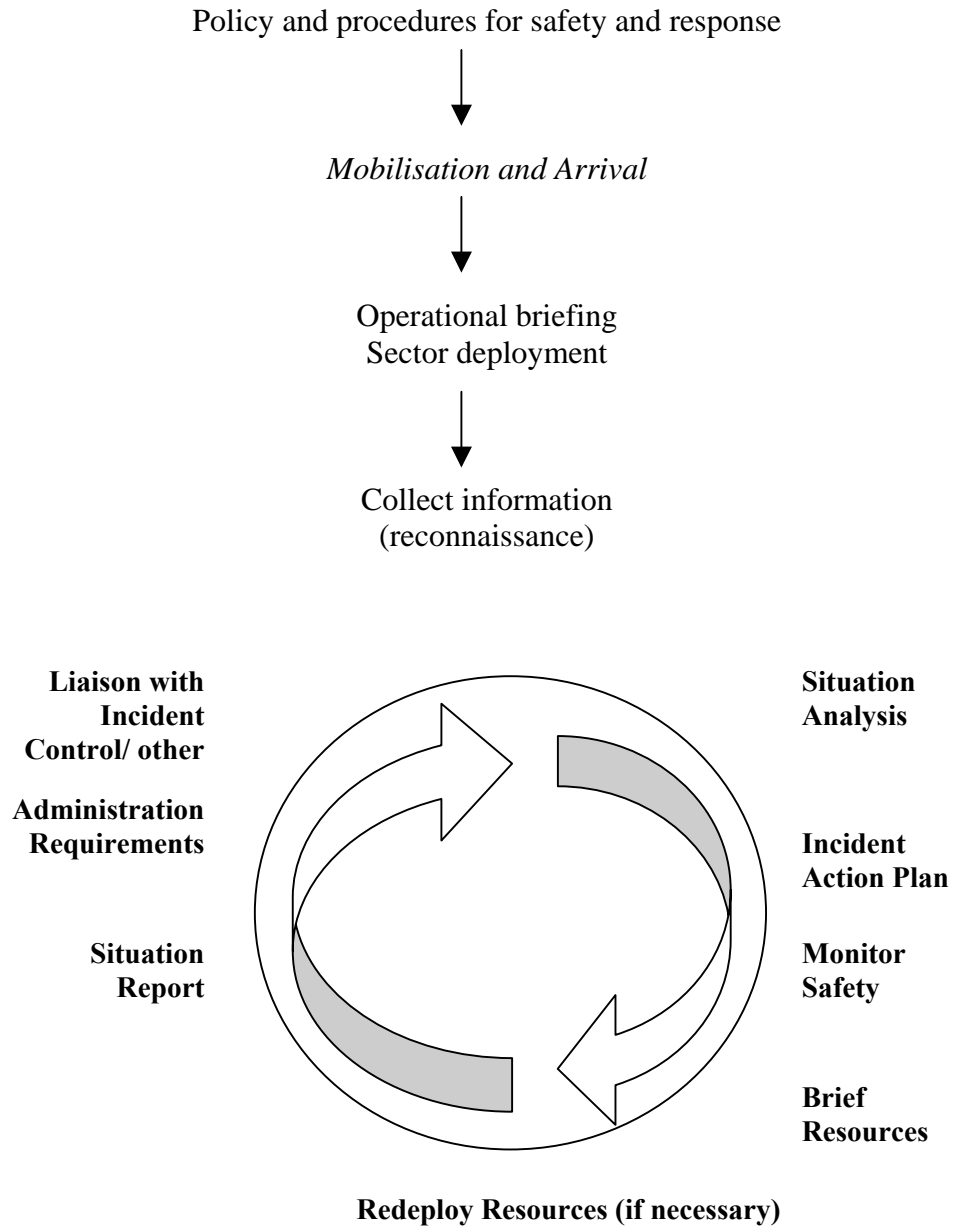
## **Supporting Resources**

Ability to support suppression resources tactically and logistically

- helicopters to transport personnel, haul suppression equipment, and provide helibucket support
- aerial support to reinforce fireline and knock-down hot spots and flare-ups
- ground transportation to and from the line
- food and water for personnel

# The Planning Loop

As we've described, planning is an ongoing process that involves continual updating of information – a bit like an ongoing loop:



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**Complete Exercise 7 in the Workbook.**

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# Getting the Job Done – Operations

## Implementation – Putting the IAP in context

### Incident Action Plan

Your responsibilities with respect to an IAP vary according to your role and the size of the incident.

- As a fireline manager, you've a responsibility to supply information to Incident Management for inclusion in the IAP
- Incident Management will then communicate the IAP to you to implement – i.e. resource deployment

You'll find the templates of the Incident Management documents at [www.nrfa.org.nz](http://www.nrfa.org.nz), Incident Mgmt. Forms.

In this section we come to terms with the IAP and your responsibilities to implement it. Complete the questions in your Workbook.

**When examining key components of an IAP, consider these questions.**

**Command** Who do you report to?

**Objective** What has to be achieved in a given time period? Is it realistic?

**Resources** What can be accomplished with resources on hand?  
Are they adequate to meet the objective?

**Attack strategies** Are you going to use direct, indirect or parallel attack?

**Tactics** Which type of attack will be most effective? Do you need to use pumps, hand tools, bulldozers, aircraft to meet the objectives?

**Point(s) of attack** Will the objectives be met by attacking the fire at one point or are there values to protect that will require splitting resources?

**Deployment** Where is the best area to deploy resources based on method and type of attack? Are resources distributed effectively so that they are performing at optimum level to meet the objective?

**Resource use** Plan how resources will be shifted around as the workload diminishes on particular tasks

**Escape Routes** Do all personnel know the routes? Are these routes practical and secure?

**Reporting** You have a responsibility to report observations made at the fire site to Incident Management.

**Complete Exercise 8 in the Workbook.**



# Implementation - Dispatch and Mobilisation

## Introduction

**In this context the dispatch and mobilisation applies to the role of a *Fireline Manager as the Sector Supervisor or Division Commander of an uncontrolled fire*. It does not include initial attack response. It does include the mobilization of assigned resources from the “assembly area” or “staging area” to the designated sector or division.**

**Effective dispatch and mobilization requires that you:**

- Provide for the safety, welfare, and accountability of assigned personnel during the entire period of command
- Recognize potentially hazardous situations
- Inform subordinates of hazards and ensure that appropriate safety precautions are implemented
- Ensure that special precautions are taken when extraordinary hazards exist
- Ensure adequate nutrition, hydration and rest is provided for all personnel
- Control location and operation of resources assigned

## Gather Information

**You need to obtain as complete information as possible from Incident Control (or staging area) - and gather information about the sector allocated and an overview of the fire relating to:**

- Overview of current situation
- Location / area involved / access / maps
- Ownership and boundaries
- Values at risk
- Suppression constraints and considerations - cultural, environmental, natural
- Fire size and behaviour
- Fire environment: Fuels, Terrain, Weather
- Known site hazards
- Incident Action Plan
- Assigned sector strategy - tasks
- Resources available, ordered
- Status of other sectors and their resources

**If mobilising as back-up or relief, ascertain the following information:**

- Incident / sector name
- Reporting location / person
- Communications / call signs
- Radio channels allocation
- Transportation arrangements
- Map and route information
- Reporting time/s

*Continued on next page*

## Implementation - Dispatch and Mobilisation, Continued

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**Assemble and Ready Resources**

**Assemble and check assigned resources for:**

- Crew leader names / qualifications / experience
- Any individual health/medical requirements
- Duration of crew availability / operational limitations
- Personal Protective Equipment (PPE)
- Types of equipment/tools and their condition
- Communications plan / radio frequencies and call signs for the sector
- Establish command structure for the sector
- Establish emergency procedures
- Any contingency plan

**Brief Crew Leaders**

**Brief Crew Leaders on their assignment:**

- Fire behaviour
- Duration of assignment
- Allocated tasks
- Support facilities
- Questions

**Brief Crew Leaders on travel arrangements, travel directions, including maps and procedures, as necessary:**

- Type of transportation
- Travel details

**Departure time**

**Depart within an acceptable period of time, with a fully equipped suppression force as determined in the IAP.**

**What's the most appropriate means?**

**Travel to the sector by the most appropriate means:**

- Vehicle (utility - van – bus)
- Aircraft (fixed wing – rotary wing)
- Boat
- On foot
- Combination of above

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*Continued on next page*

## Implementation - Dispatch and Mobilisation, Continued

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What's the most direct and safest route?

**Remember that the urgency of the situation does not permit you or your crews to undertake unsafe practices and/or use a chartered aircraft or boat that is not licensed for the transportation of people.**

- Use maps and other navigation aids to navigate to and locate the sector.
- Travel by the most direct and safest route.
- Follow safe travel practices:
  - Secure carriage of personnel, and equipment
  - Day / night visibility
  - Travel speed
  - Other traffic en route

Observations en route

**Observe and record information about the fire and surrounding area while en route and upon arriving at the sector:**

- Potential hazards
- Fire environment - weather, topographic features, fuels
- Smoke column (colour, direction)
- Fire behaviour
- Alternative access (escape routes)
- Fire fighting resources such as water supplies
- Opportunities that may assist with fire containment and control
- Anything that may contribute to fire cause investigations

**Locate the sector and arrive safely:**

- If there is difficulty in locating the sector, action is taken to check location and re-affirm location and directions.
  - Arrive safely at the sector within acceptable travel times.
  - On arrival provide an informative message (sitrep) to incident control
-

# Implementation – Components of the IAP

**There are two components of a basic incident action plan - words and a map.**

The *map* shows the plan diagrammatically and copies are distributed to each fireline manager.

The *words* describe what is to be achieved for the work shift. (Tables 1 & 2)

Table 1 The Overall Fire Objective: THE BIG PICTURE					
Time	Status	Now	Objective		
	Not Under Control Being Held Under Control Out	Perimeter km	Status Not Under Control Being Held Under Control Out	To be achieved by: Time/date/location	Expected perimeter of control line
1500	G	8 km	Contained	2000 today	20 km

- a. Specify the period (shift) for which it applies.
- b. Specify the overall fire objective to be achieved in that period.
- c. Specify for each Sector for that period:
  - The objective
  - The strategy to be employed
  - The tactics and resources to be used
  - The length of control line established and yet to be established

The current status and the status expected (i.e. going, contained, mop up)

Table 2 Objective by Sectors						
Sector Name	Status Now	Objective	Strategy	Tactics		
	Not Under Control Being Held Under Control Out Current fire perimeter	<u>Sector to be:</u> Not Under Control Being Held Under Control Out  <u>By: time/date/location</u>  <u>Expected fire perimeter</u>	Direct Indirect Monitor Protect assets Mop up Patrol	<u>Type of control line:</u> Hand trail Track Fire-break	<u>Type of action:</u> Existing Widen Construct	<u>Method:</u> Hand crew Dozer Burning out Aircraft Appliances Hoselay
Sector 1	Status: Not Under Control Perimeter: 8 km	Status: Controlled By: 2000 hrs Perimeter: 8 km	Direct then Mop up	Track	Construct	Dozer Appliances
Sector 2	Status: Not Under Control Perimeter: 0km	Status: Under Control By: 2000 hrs Perimeter: 16 km	Indirect	Track	Existing	Burning out & Appliances

# Implementation – IAP task allocation and briefing

## Resource Deployment

Fireline management involves five key tasks for the deployment of resources:

1. Brief and assign work to resources.
2. Direct the suppression operation in a safe and effective manner.
- 3. Keep abreast of changing conditions that will affect safety and suppression effectiveness.**
4. Adjust fire priorities and suppression action as needed to meet changing conditions.
5. Make provisions for an extended period of suppression operations.

### 1. Brief + assign work to resources

Brief (see checklist below) and keep the Crew Leaders of the assigned resources informed as to tactical actions and hazards, as well as other local factors and considerations affecting fire suppression.

Develop a tactical plan that includes:

- what, where, how, who, and when the suppression job is to be done

Ensure the priorities of the IAP and safety procedures for your sector of the fire are defined and understood by fire personnel under your control.

Recognise and protect local resources of natural, historic and cultural significance.

If applicable, secure and protect the general area of fire origin and/or any potential evidence of fire cause, to assist with the determination of the origin and cause of the fire.

Check		Personnel Briefing Checklist
Fire Suppression Factors	<input type="checkbox"/>	<b>Situation:</b> Extent of fire, values at risk, sketch map of area
	<input type="checkbox"/>	<b>Objective:</b> What the intent of the operation is
	<input type="checkbox"/>	<b>Strategy:</b> Type of attack to be used (direct, indirect), Incident Action Plan
	<input type="checkbox"/>	<b>Tactics:</b> What will be used (hose lays, hand lines, machinery, aircraft, etc.)
Fire Environment and Fire Behaviour Factors	<input type="checkbox"/>	<b>Tasks:</b> Assignments and locations, resources
	<input type="checkbox"/>	<b>Weather:</b> Wind speed, wind direction, temperature, relative humidity, forecast
	<input type="checkbox"/>	<b>Topography:</b> Aspect, slope, terrain, chimney effects, barriers to fire spread
	<input type="checkbox"/>	<b>Fuels:</b> Fuel type, fuel burning, fuels ahead
Safe Work Factors	<input type="checkbox"/>	<b>Fire Behaviour:</b> ROS, flame heights, potential for alignment of wind, slope, aspect, and fuels, fire behaviour prediction, difficulty of control
	<input type="checkbox"/>	<b>Personal Safety:</b> Protective gear, heat (metabolic, radiant), smoke, practice LACES*
	<input type="checkbox"/>	<b>Safe Work:</b> Hand tools, power tools, machinery, unburnt fuel, uphill of fire
	<input type="checkbox"/>	<b>Communications:</b> Call signs, radio frequencies, Incident Control Point
Welfare Factors	<input type="checkbox"/>	<b>Machinery:</b> Working distance from machinery / power tools, hearing protection
	<input type="checkbox"/>	<b>Aircraft:</b> Safe distances, approach vectors, loading, embarking, disembarking,
	<input type="checkbox"/>	<b>Personnel:</b> Rest periods, drinking water availability, fluid intake, food, changeovers, fitness levels, lookouts, first aid

*Continued on next page*

## Implementation – IAP task allocation and briefing, Continued

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2. **Direct the suppression operation in a safe and effective manner**  
Select basic containment and suppression methods, either alone or in combination in accordance with fire authority requirements:
  - Direct attack
  - Indirect attack

Good leadership and management practices ensure high performance in meeting goals and objectives

Direct the suppression resources to gain control of the fire with as little damage to the area as possible.
3. **Keep abreast of changing conditions that will affect safety and suppression effectiveness. Monitor:**
  - Weather and environmental factors to anticipate changes in fire behaviour.  
Request spot weather forecasts as needed
  - Fireline construction / containment progress
  - Condition/status of various resources assigned to your sector
4. **Adjust fire priorities and suppression action as needed to meet changing conditions**  
Base adjustments in tactics and deployment on current and anticipated conditions. Be prepared to be flexible. Base priorities on:
  - Potential threats to life, and property
  - Fire control standards
  - Total suppression job to be done
5. **Make provisions for an extended period of suppression operations**  
If the fire cannot be controlled during the current work period, you, as a fireline manager need to consider future resource requirements as part of your input to the IAP.

### Remember

**Always brief your Crew Leaders to ensure:**

- that your sector tactical plan is implemented
- that tasks are assigned to carry that out
- that you ask for feedback from your Crew Leaders to enable you to carry out your role effectively

**Complete Exercise 9 in the Workbook.**

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## Implementation - Operational Control and Containment

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**Remember that vegetation fire fighting is a perimeter exercise i.e. the first stage of controlling a fire is when its perimeter is secured. This enables you to more accurately predict resource requirements.**

### Key knowledge requirements

As a fireline manager you need a sound understanding of:

- Fire behaviour prediction (especially perimeter length and rate of perimeter growth)
- Fireline construction (fire edge suppression) rates by specific equipment
- Lead times for arrival of resources and becoming operational

Remember this definition:

Fireline	<i>That portion of the fire perimeter upon which resources are deployed and are actively engaged in fire suppression action.</i>
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Be aware that in the early stages of a fire, you require resources both to contain the fire perimeter and to secure it. Resourcing needs to allow for both perimeter growth and fire containment, otherwise the fireline may be breached by the fire.

- eg Only one crew may be required to construct the fireline (i.e. suppress the fire edge), but that fire edge may require an additional crew to secure it.

**Complete Exercises 10 + 11 in the Workbook.**

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## Implementation - Contingency Planning

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**Planning for likely contingencies is part of a fireline manager's responsibilities. This includes being able to recognise when a fire is not likely to be contained within a reasonable time frame.**

### Contingency Planning

In the event that a fire is not likely to be contained within a reasonable period of time (same day), planning for ongoing fire suppression operations involves input from the fireline manager as he/she continues to manage that sector of the fire until relieved.

### The long haul

Situation reports (sitreps) need to be based on an accurate assessment of the current resources and productivity and include recommendations for future requirements.

### Consider the following:

- Evaluate the need for additional or replacement resources and make appropriate recommendations
  - Provide information for an *escaped fire situation analysis*
  - Priorities relevant to your sector for the interim period and the extended period
  - Arrange for and/or incorporate incoming resources / personnel
  - Prepare a *brief* for the in-coming personnel and ensure that you have complete and accurate records
-



# Changeover of Fireline Manager

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**Efficient changeovers require thorough planning led by the Incident Management Team. Incoming personnel need to be briefed on their role by existing personnel who then depart as soon as the replacement assumes the role. Fireline managers have a key role in this process.**

## Key points

- Changeovers are a major factor in incident management efficiency and effectiveness
  - Poor changeovers can threaten the safety of personnel
  - Relieved personnel should leave immediately their replacement has assumed their role
  - Changeovers must ensure the continuity of the control objectives
  - The most common changeover is from day to night shift and morning to day shift
  - All incident management team members have specific responsibilities to ensure effective changeovers
  - Changeover timing should be staggered
- 

**Complete Exercises 12 in the Workbook.**

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*Continued on next page*

## Changeover of Fireline Manager, Continued

### Changeover checklists

<b>Out-going Fireline Manager</b>	
<input type="checkbox"/>	Determine changeover time and location
<input type="checkbox"/>	Prepare briefing to incoming fireline manager
<input type="checkbox"/>	Advise subordinate staff re pending changes
<input type="checkbox"/>	Brief replacement
<input type="checkbox"/>	Leave sector and report to Incident Control for debrief and sign out requirements

<b>In-coming Fireline Manager</b>	
<input type="checkbox"/>	Sign in at Incident Control
<input type="checkbox"/>	Receive IMT and IAP briefing
<input type="checkbox"/>	Confirm changeover time and location
<input type="checkbox"/>	Establish contact with outgoing fireline manager
<input type="checkbox"/>	Receive sector update briefing
<input type="checkbox"/>	Advise subordinate staff
<input type="checkbox"/>	Take over command of sector

### Implications of Effective Changeovers

#### Good changeovers result in

- Control
- Good morale
- Efficiency
- Safety
- Performance
- Unity of purpose

### Achieving Efficient Changeovers

#### Some Guidelines

- Changeover timing
- Prepare
- Brief incoming
- Location
- Transportation
- Meals
- Avoid critical times
- Record

### Changeover of the Incident Management Team

#### Consider

- Incident briefing
- Briefing key personnel
- Shift cycles
- Incident Controller
- Operations Section
  - Fireline Managers
- Planning / Intell Section
- Logistics Section

# Demobilisation

## Introduction

As a fireline manager you need to think through how to demobilise resources in your assigned sector and inform Incident Control on relevant key points. Demobilisation happens at all fires however small or insignificant the incident may be and often in the past, this process just happened and was not planned or organised. It may also be a mixture of changeover and demobilisation, e.g. the NZFS handing over to a RFA and standing down.

**You are responsible for all equipment, supplies, and personnel assigned to your sector. There should be no equipment or personnel leave or enter the sector unless planned for and authorised.**

It's important to get into a routine of planning for demobilisation and follow the procedures at all incidents, irrespective of size or complexity.

**The fireline manager may have some flexibility within the sector IAP in determining release of resources. Some general guidelines to follow are:**

- Release resources by predetermined criteria and priorities
- Administrative requirements
- Performance evaluations

### **Release resources by predetermined criteria**

- Work progress
- Suppression priorities – resources may be needed elsewhere
- Travel time from fireline to assembly area
- Transportation arrangements
- Length of assignment (who goes first?)
- Employment award requirements
- Cost – most expensive resource released first
- Crew Leaders to be de-briefed before leaving

### **Administrative requirements (the paper work!)**

- Time sheets
- Equipment inspections prior to release – damage sustained etc., post-fire condition cf. arrival condition
- Accident investigations and reports – personnel and equipment
- Sign off process (“T” cards or similar)

### **Performance evaluations**

Complete, honest and accurate. Discuss with directly reporting personnel.

- Firefighting techniques
- Production outputs
- Team work
- Safety habits
- Training needs
- Written appraisals
- Portfolio of evidence (competency assessments)

**Complete Exercise 13 in the Workbook.**

## Getting the Job Done – Monitoring

### Fireline Managers Input to Operational Planning and IAP

A fireline manager’s responsibility for ongoing monitoring does not need you to apply new skills – you’ll have seen all this information before – but the effectiveness of the IAP is dependent on you supplying accurate updated information. You have an obligation to regularly update the IAP developers on the following:

Checklist	
<b>General</b>	<input type="checkbox"/> Situation Reports (Sitreps)
	<input type="checkbox"/> • Timeliness
	<input type="checkbox"/> • Relevance
	<input type="checkbox"/> Job achievement / productivity
	<input type="checkbox"/> Personnel skills / competencies
	<input type="checkbox"/> Resource requirements
<b>Safety</b>	<input type="checkbox"/> Situational awareness
	<input type="checkbox"/> LACES
	<input type="checkbox"/> Safety information
<b>Planning</b>	<input type="checkbox"/> Specific hazards
	<input type="checkbox"/> Mitigation / elimination of hazards
	<input type="checkbox"/> Sector objectives
	<input type="checkbox"/> Tactical direction
	<input type="checkbox"/> Resource assignments and effectiveness
	<input type="checkbox"/> Support needs
<b>Progress</b>	<input type="checkbox"/> Analyse current strategies and develop limitations with the job to be accomplished.
	<input type="checkbox"/> Predicted timeframe to meet sector objectives
	<input type="checkbox"/> Natural, cultural, environmental concerns
	<input type="checkbox"/> Coordinate tactics with other organisations represented
	<input type="checkbox"/> Resource availability and limitations
	<input type="checkbox"/> Demobilisation priorities
<input type="checkbox"/> Rehabilitation needs	

**The Planning Process Does Not End  
When The Incident Is Contained!**

## Constant Review - Stages of Control

---

### Classification: Not Under Control

<b>Description</b>	The fire is not responding to any suppression action. It may be spreading either wholly or in part.
<b>Control Action</b>	Full scale assault with the resources at hand. Additional resources may have been requested and are en route.

### Classification: Being Held

<b>Description</b>	Sufficient suppression action has taken place so that the fire is not likely to spread beyond predetermined control boundaries and can be reasonably expected to hold under foreseeable conditions.
<b>Control Action</b>	Control lines being improved. Cooling down hot spots that may be a threat adjacent to lines. Control lines are firmly established around any spot fires that may have developed from the main fire.

### Classification: Under Control

<b>Description</b>	Sufficient suppression action has taken place to ensure no further spread of the fire under foreseeable conditions.
<b>Control Action</b>	Patrolling control lines, mopping up hot spots and retrieving equipment. Demobilisation of surplus resources.

### Classification: Out

<b>Description</b>	Fire extinguished.
<b>Control Action</b>	Complete Demobilisation.

### The following classifications are not control stages.

These are terms that describe the response management has in place after a fire has been reported.

### Classification: Being Investigated

<b>Description</b>	(a) A fire has been reported but it cannot be confirmed, or (b) Suppression crews are en route to the fire, or (c) The Incident Controller has failed to report the condition of the fire i.e. the fire management staff have no information concerning the fire.
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### Classification: Being Observed

<b>Description</b>	The fire is being allowed to burn. No suppression action is taking place.
<b>Control Action</b>	Periodic observations to determine size, fire behaviour characteristics, rate of spread, direction of spread, and to find out if any values are threatened and should be protected. At times, crews are on the fire but only to protect a specific value.

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## Safety Oversight - Fire Suppression Standards

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### Fire suppression activities

The fireline manager is responsible to meet particular standards on the fireground. You can ensure you meet these standards by using these questions – do your fire suppression activities answer YES to all four questions:

- Is it safe?
  - Does it follow fire management objectives?
  - Is it cost-effective?
  - Does it fulfill administrative requirements for reports and accountability?
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**Complete Exercises 14 in the Workbook.**

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# Administration

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## Introduction

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As fireline manager, you're a vital link in ensuring that key information is passed on to both the Incident Management Team and the Crew Leaders.

**It's paramount that all information provided is clear and precise.**

- Where needed, provide this key information in a written format (including the use of maps) to ensure that information is not lost and or misinterpreted
- Carry out this transfer of information in a timely manner - this ensures that notice of an event likely to occur or an action required is received in adequate time for any counter measures to be undertaken
- Pass this key information on to the person required to make it happen

**What happens when key information is not passed on in a timely manner to the person required to make it happen?**

- The chances of something being overlooked and not actioned increase dramatically - don't assume that someone else will think of it for you
  - Last minute requests increase the likelihood of that request not being actioned for the time required - don't think that your request is the only request being handled by the Incident Management Team
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## Resource Monitoring

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- It's essential that all resources involved with the incident are accounted for during the entire process of ordering, transportation, assembly area, staging area, use on the fireline and return to the provide
  - Personnel must not be involved for excessive hours - this includes ensuring that individuals have not exceeded a reasonable duration of "being awake" time prior to being involved at the incident
  - The "T card" system is a method of achieving this - fireline supervision includes being held accountable for tracking and recording of all resources during the period that they are allocated to the sector  
You can view a presentation on the use of T Cards at [www.nrfa.org.nz](http://www.nrfa.org.nz) Incident Mgmt. Forms
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## Administrative Information

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**We use administrative information to account for fireline activities which require the retention of details:**

- Maintain records of personnel present (timesheets, competency assessments etc); task books supporting Records of Prior Learning (RPL)
- Record details on any injuries and/or accidents and/or damage to equipment
- Maintain records of contracted resources and their time in use

**Requirements vary with the nature, size and complexity of the incident, but normally include:**

- |                            |  |
|----------------------------|--|
| <b>Timesheets</b>          | <ul style="list-style-type: none"><li>• Personnel</li><li>• Equipment and machinery (hours, ownership)</li></ul>   |
| <b>Accidents</b>           | <ul style="list-style-type: none"><li>• Personnel</li><li>• Equipment</li></ul>  |
| <b>Resource monitoring</b> | <ul style="list-style-type: none"><li>• Vehicles (kms, hrs)</li><li>• Aircraft (hours, loads, ownership)</li><li>• Damage details</li><li>• Fuel</li><li>• Retardant</li><li>• Suppression</li><li>• T cards</li></ul> |

For administration forms, visit [www.nrfa.org.nz](http://www.nrfa.org.nz) Incident Mgmt. Forms.

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# Post Fire Analysis

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A Post Fire Analysis provides an opportunity to evaluate the practices and procedures involved and to make recommendations for improvement when necessary. This is usually done by way of debrief.

Your role in the debrief as a fireline manager is to provide information on:

1. What went well?
2. What didn't go so well?
3. Recommendations for improvement

## Debrief

**Debriefing after the incident**

Ask yourself the following questions:

- What is a debrief?
- What is required in preparation for a debrief?
- What specific input does a Sector Supervisor have towards a debrief?
- Who should attend a debrief?
- What didn't go so well?
- Recommendations for improvements?

**Points to include in a debrief**

**Sources of information for a debrief**

- Note book recording key messages from verbal correspondence
- Map(s) of area
- Copies of your briefing notes
- Copies of your "sitreps"
- Copies of the sector assignment(s) and briefings from the IAP
- Other?

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You can find the National Debrief Guidelines<sup>4</sup> and Template on the NRFA website.

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<sup>4</sup> [www.nrfa.nz](http://www.nrfa.nz) then Publications