



# Municipal Fire Management Planning

## RISK ENVIRONMENTS AND HAZARD EVENTS

### Background

Risk management is now embedded in most organisations involved in fire management planning. Various methods and tools are used to determine risk. These are generally benchmarked against or directly utilise *ISO 31000:2009 Risk Management - Principles and Guidelines*. The framework ensures that information about risk derived from the risk management process is adequately reported and used as a basis for decision making and accountability at all relevant organizational levels.

Risk is defined as “the chance (or likelihood) of something happening that will have an impact (or consequence) upon objectives”<sup>1</sup>.

Using a risk based approach to planning enables agencies to align risk mitigation strategies and programs (treatments) with high risk areas. Collaborative identification of priority risk areas is a firm foundation for improving coordination of services and treatments.

### Recent changes in Decision Making Support

The *Victorian Fire Risk Register* (VFRR) is a mapping application developed to assist in bushfire risk management planning. The VFRR is a systematic process that identifies assets at risk from bushfire, assesses the level of risk to assets and highlights the risk mitigation treatment currently in place, along with the responsible agencies for implementing these treatments.

The VFRR produces evidenced based information essential to bushfire management planning. The CFA maintains the VFRR and conducts reviews. VFRR informs and support fire management planning at municipal level and produces a Bushfire Risk Register and spatial map identifying assets and risk mitigation treatments. The VFRR is a living document and subject to annual review.

The *Urban Fire Risk Assessment* (UFRA) process is being developed to assist in structure fire management planning. This risk assessment process is still under development and will be trialled mid-2012. This risk assessment process will be housed within CFA.

*VicRoads Road Bushfire Risk Assessment Guideline* is a tool designed to be used by VicRoads in conjunction with other inputs and considerations within the IFMP committee framework. It is based on and informed by the CFA Roadside Fire Management Guidelines (2005). It is an important element of a suite of considerations and actions that enable Vic Roads to meet its statutory obligations under s. 43(1) of the CFA Act 1958.

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<sup>1</sup> United Nations International Strategy for Disaster Reduction 2009



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*The Electricity Safety Act 1998* was amended in 2010 to require municipal councils to “specify procedures for identification of hazard trees and procedures for notification to responsible persons” which must be included in the MFMP. MFPOs will need to liaise with the electricity distribution businesses to obtain lists of identified trees.

The Department of Sustainability and Environment (DSE) uses Phoenix Rapid fire characterization to objectively model bushfire risk and to ultimately assess effectiveness of risk reduction treatments across the landscape.

*Bushfire Management Overlay (BMO)* – is a planning control that identifies areas of significant bushfire risk where proposed developments must be referred to the relevant fire authority (CFA in the country area of Victoria) for consideration as part of the planning permit process, to ensure that development does not proceed unless the risk to life and property can be reduced to an acceptable level.

*Community Information Guides (CIGs)* are a multi-agency risk based treatment which are a key source of information for the community and an important tool to emphasise the shared responsibility between the community, fire service and local government. CIGs are a dynamic document which is developed collaboratively with at risk communities and stakeholder partners. CFA leads the multi-agency responsibility for the development, maintenance and review of CIGs.

## Risk Environments

### WHAT IS A RISK ENVIRONMENT?

The concept of Risk Environments categorise physical settings or sites that have common elements and meaning within the fire service context. Risk is defined as “the chance (or likelihood) of something happening that will have an impact (or consequence) upon objectives”.

### WHAT ARE THE RISK ENVIRONMENT CATEGORIES?

Risk environment categories can be generally grouped as Political, Social, Cultural, Environmental/Natural, Economic and Built.



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The VFRR groups assets into social, economic, environment and cultural. Each category is then broken down as below:

Asset Class	Asset Sub - Class
Human Settlement	Residential
	Other
	Special Fire Protection
Economic	Agricultural
	Commercial
	Infrastructure
	Tourist and Recreational
	Mines
	Commercial Forrest
	Drinking Water Catchment
Environmental	Locally Important
	Endangered
	Vulnerable
Cultural Heritage	Aboriginal Significance
	Non Indigenous
	Other
TREATMENTS	

## Hazard Events

### WHAT IS A HAZARD EVENT?

A hazard is a source of potential harm or a situation with the potential to cause loss<sup>i</sup>.

A hazard event is a situation or condition, which directly impacts on the level of risk. Risk has two elements – the likelihood of something happening and the consequences if it happens. Likelihood in the fire context is the probability of a fire igniting and spreading and how often this may occur. The consequence is the outcome or impact of a fire event.

A list of hazards, commonly referred to in the risk management process within fire management planning includes:

- Bushfire
- Structure fire
- Hazardous Material (HAZMAT) Incident:

**Bushfire:** An unplanned fire. A generic term, which includes grassfire, forest fire and scrub fire<sup>ii</sup>.

**Structure fire:** Is an unplanned, uncontrolled fire inside, on, under or touching any structure that needs to be extinguished.

**Chemical/Hazardous Materials:** A HAZMAT incident is any event involving hazardous substances that may threaten life or property. HAZMAT incidents include substances that may be flammable, combustible, corrosive, poisonous, oxidising, radioactive or explosive or otherwise harmful material.



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## Mitigation Treatments

Mitigation treatments are activities which have the ability to modify the characteristics of a hazard to reduce or eliminate risk from bushfire on a particular asset. Examples of mitigation treatments are : community education and awareness programs, planned burn programs, fire prevention notices, arson prevention and detection programs, rail corridor programs, roadside management works, slashing,

Each organisation will have treatments that they deliver. There are efficiencies to be gained by collaboratively delivering treatments, in particular community education and awareness programs.

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<sup>i</sup> Standards Australia/Standards New Zealand AS/NZS 31000 – 2009 Risk Management – Principles and Guidelines

<sup>ii</sup> Australasian Fire Authorities Council (1994) Glossary of Rural Fire Terminology