

Code of Practice

for Bushfire Management on Public Land

2012



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Ministers' foreword

Bushfires are a natural part of the Victorian landscape and will remain part of our summers. The risk of bushfires cannot be eliminated, but their impacts can be reduced by effective planning and bushfire management.

Victoria has experienced the devastating impacts of bushfires on human life, communities, infrastructure and the environment. Bushfires, however, can have impacts on the natural environment, which has adapted to fire over thousands of years. The two primary objectives for bushfire management in this Code of Practice for Bushfire Management on Public Land (the Code) recognises the dual impact that fire can have.

The 2009 Victorian Bushfires Royal Commission recommended changes to the Code of Practice for Fire Management on Public Land (2006). In response, this Code now sets clear objectives; underpinned by risk analysis and the protection of life as the highest priority. This Code also supports delivery of an expanded planned burning program.

This Code commits fire agencies on public land to reduce the risk of bushfires to human life. This Code recognises the role of fuel management to reduce bushfire risk over broad areas.

By clearly articulating the objectives for bushfire management on public land and outlining strategies and actions to achieve these objectives, this Code provides a strong foundation for land and bushfire management.

Risk-based planning, where human life is afforded the highest priority, is a fundamental part of this Code.

The government is committed to monitoring, evaluating and reporting the efficiency of bushfire management actions and the effectiveness of strategies in achieving the two primary objectives for bushfire management on public land.

**The Hon Peter Ryan,
Minister for Bushfire Response**



**The Hon Ryan Smith,
Minister for Environment and
Climate Change**





Contents

Ministers' foreword	i
Introduction	1
Occupational health and safety obligations	3
The context for bushfire management on public land	4
Principles for bushfire management on public land	5
1. Risk-based bushfire management and planning	6
Overview	6
Outcomes	7
Strategies	7
Actions	7
2. Prevention	12
Overview	12
Outcome	12
Strategy	12
Actions	12
3. Preparedness	14
Overview	14
Outcomes	14
Strategies	15
Actions	15
4. Fuel management including planned burning	17
Overview	17
Outcomes	17
Strategies	18
Actions	18
5. Response	22
Overview	22
Outcome	22
Strategies	23
Actions	23

6. Recovery	26
Overview	26
Outcomes	26
Strategies	27
Actions	27
7. Monitoring, evaluation and reporting	29
Overview	29
Outcomes	29
Strategies	29
Actions	30
Definitions	33
Index	35

Introduction

Background

- 1 This is a Code of Practice for the purposes of section 31(1) of the *Conservation Forests and Lands Act 1987*.
- 2 This Code of Practice replaces the Code of Practice for Fire Management on Public Land (Revision 1) 2006.

Purpose of the Code

- 3 The purpose of this Code is to:
 - Support the Department of Sustainability and Environment (the Department) to meet its legislative responsibilities.
 - Set the objectives for bushfire management on public land, and strategies and actions across the prevention, preparedness, fuel management (including planned burning), response and recovery spectrum to achieve those objectives.
 - Provide a risk analysis framework that assists the Department to effectively and efficiently achieve bushfire management objectives.
 - Establish a monitoring, evaluation and reporting framework for bushfire management.
 - Outline actions which will be undertaken during prevention, preparedness, fuel management, response and recovery.

Primary objectives for bushfire management on public land in Victoria

- 4 There are two primary objectives for bushfire management on public land:
 - To minimise the impact of major¹ bushfires on human life, communities, essential and community infrastructure, industries, the economy and the environment. Human life will be afforded priority over all other considerations.
 - To maintain or improve the resilience of natural ecosystems and their ability to deliver services such as biodiversity, water, carbon storage and forest products.

1. The term "major" is used in the *Fire Services Commissioner Act 2010*. A small number of major bushfires have caused the greatest loss. Effort will be focused on reducing the impact of these events.

- 5 To achieve these objectives, the Department will:
 - Implement the bushfire management strategies in this Code.
 - Plan and undertake the bushfire management actions in each section of this Code.
 - Monitor, evaluate and report on progress towards delivering outcomes.
- 6 This Code is not intended to create any legal rights or give rise to any cause of action.
- 7 This Code is divided into seven major sections:
 - Risk-based Bushfire Management and Planning
 - Prevention
 - Preparedness
 - Fuel management (including planned burning)
 - Response
 - Recovery
 - Monitoring, Evaluation and Reporting.

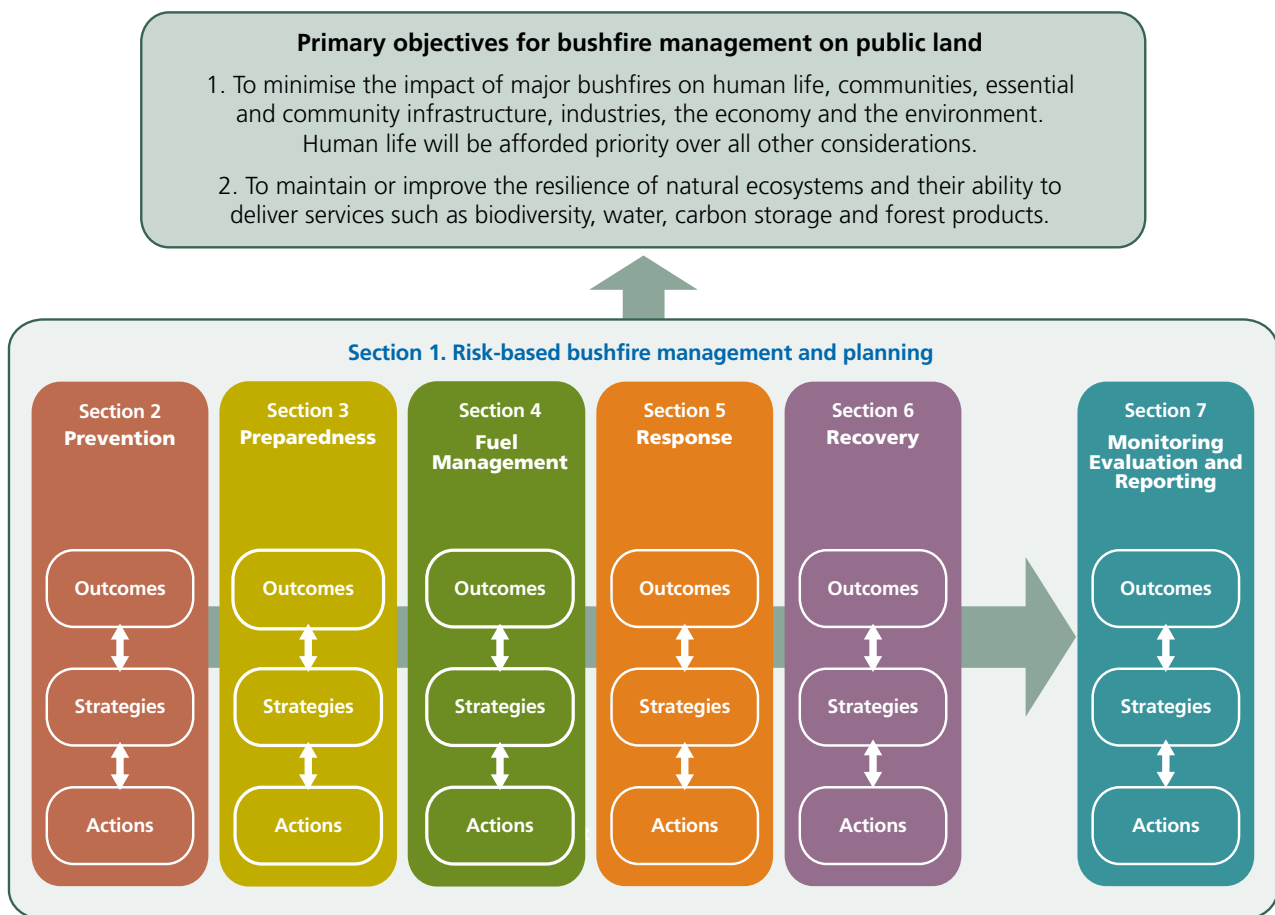


Figure 1. Structure of the Code

Scope of the Code

- 8 This Code outlines **what** the Department will consider or do on public land to achieve bushfire management outcomes and objectives. This Code does not prescribe the operational detail for **how** the Department will achieve these goals. This detail will be specified in bushfire management manuals and guidelines, which will be publicly available and consistent with this Code.

Application

- 9 Under the *Forests Act 1958*, the Secretary will have regard to any relevant Code of Practice, in applying and using fire in a State forest or national park, or on protected public land.
- 10 This Code applies to bushfire prevention, preparedness, fuel management (including planned burning), response and recovery activities undertaken by agencies on public land in Victoria.
- 11 Departmental and other agency staff will meet their obligations under this Code through assigned levels of delegation, funding, resourcing, training, agreements and planning as provided in the Department's table of delegations, Departmental and other relevant instructions and partnership agreements.

Governance

- 12 Unless otherwise stated, the Department administers the implementation of this Code including:
 - compliance with this Code
 - achieving this Code's objectives.

Review of the Code

- 13 This Code will expire ten years from its approval. This Code will be reviewed prior to its expiry.
- 14 This Code may be reviewed at any other time to take account of changes in legislation, policy, information and significant change in bushfire management.
- 15 The process for review is the same as for the development of this Code and is outlined in the *Conservation, Forests and Lands Act 1987*.

Occupational health and safety obligations

- 16 The safety of all personnel is critical. Occupation health and safety legislation imposes a duty on employers to ensure, so far as is reasonably practicable, that an employer, provide and maintain a working environment that is safe and without risks to health for its workers.

Welfare of emergency management personnel

- 17 The Department will, to the extent practicable and in accordance with relevant procedural guidelines, provide emergency management personnel with sufficient time to rest to relieve fatigue and stress from their involvement in bushfire management.

The context for bushfire management on public land

Bushfires and the environment

- 18 Bushfires are a natural part of the Australian environment. South east Australia, including Victoria, is one of the most bushfire-prone areas in the world.
- 19 Natural ignition (lightning) and indigenous burning practices have shaped ecosystems over tens of thousands of years. Many species are reliant on bushfire to regenerate and maintain their health. Conversely, some ecosystems and species are fire sensitive and can be adversely affected by inappropriate fire.
- 20 Bushfire risk has increased with human settlement and development. Throughout the latter part of the twentieth century, successful suppression efforts kept most bushfires to a small size, removing much of the natural fire from the landscape, resulting in unnatural fuel hazard. Planned burning is the key process to introduce fire back into the environment to reduce such hazard. This not only helps to reduce the severity and intensity of bushfires, but also plays an important role in achieving multiple land management objectives such as improving ecological health.
- 21 In the first decade of the twenty-first century, following a decade of drought, the number and severity of bushfires increased significantly. Major bushfires included two in excess of one million hectares and the tragic Black Saturday fires of February 2009 which resulted in the loss of 173 lives and the destruction of more than 2,000 homes.
- 22 Climate change projections point to a higher frequency of extreme events including floods, droughts and bushfires.

The impact of bushfires

- 23 Bushfires threaten many facets of our lives including: human life, community infrastructure (for example transmission of electricity), property, cultural heritage, industries, the environment and the quality and yield of water catchments. Local economies are also dependent on the bush for industries such as timber harvesting, tourism and apiary.
- 24 The natural forest carbon cycle is a balanced system over long periods of time, with fire releasing carbon into the atmosphere and forest regeneration and growth capturing carbon. High intensity bushfires can create an imbalance in this carbon cycle by releasing large volumes of carbon into the atmosphere and requiring a longer re-growth period to restore the carbon balance.

Principles for bushfire management on public land

- 25 The following principles will guide all of the Department's bushfire management activities:

Protection of human life as the highest priority

- 26 The protection of human life (emergency services personnel and the community) will be given priority over all other obligations in bushfire management.

Ecosystem resilience

- 27 Fire will be used deliberately in the landscape to meet legislative obligations and land management objectives, which promote ecological resilience and facilitate ecosystem services at a landscape level.

Learning to live with bushfires – community involvement in bushfire management

- 28 Bushfires are inevitable and cannot always be prevented. Community involvement and action is an integral component of bushfire management and sets the foundation for the Department's role in the implementation of a multi-tenure, multi- agency bushfire management approach.

Consistency of purpose and clarity of command and control

- 29 Successful bushfire risk mitigation relies on consistency of purpose and clarity of command and control for all bushfire response actions, irrespective of organisational structures.

Bushfire management undertaken at landscape scale

- 30 Victoria has a great diversity of environments, land uses and built assets. Because of this, goals for bushfire management vary across different localities. There will be clearly articulated landscape-level objectives, which encourage fire agencies to work together to achieve the objectives of this Code.

Decisions based on risk analysis

- 31 Bushfire risk cannot be eliminated. Decisions about bushfire management will be based on risk analysis and will be transparent. Integrated risk analysis requires the Department to be part of a multi-tenure, multi-agency bushfire management approach.

Integration of learning and knowledge

- 32 Analysis of fire events is based on operational and scientific evidence, and experience and local knowledge. The intent will be integration of all forms of knowledge and information about fire history, with analysis at the local and landscape levels. Learning and knowledge will be used as part of an adaptive management approach to bushfire management.

Shared responsibility

- 33 Bushfire mitigation and management is a shared responsibility between the community, industries, land and fire agencies and governments – where individual action and responsibility will be integrated. An integrated and interoperable approach is the best way to minimise bushfire risks to lives, property and the environment.

Risk-based bushfire management and planning

Section 1

Overview

- 34 In Victoria, a small number of bushfires have caused great losses of human life and property. The Department will plan and implement strategies and actions to reduce the impact of these types of events. Strategies and actions to reduce the impacts of bushfires will be supported by monitoring, evaluation and reporting.
- 35 This section of the Code outlines the Department's risk analysis framework for bushfire management in Victoria. The framework is consistent with the Australian/New Zealand Standard for risk management ISO 31000.
- 36 The ISO Standard defines risk as the "effect of uncertainty on objectives". The primary bushfire management objectives defined in this Code are:
- To minimise the impact of major bushfires on human life, communities, essential and community infrastructure, industries, the economy and the environment. Human life will be afforded priority over all other considerations.
 - To maintain or improve the resilience of natural ecosystems and their ability to deliver services such as biodiversity, water, carbon storage and forest products.
- 37 In this Code, risk management means measures taken to reduce the likelihood and consequence of events (or a combination of events) that can negatively impact on these objectives. Significant risks to these objectives include unnaturally high fuel hazard, increasing population density at the urban/rural interface and inappropriate fire regimes.
- 38 Risk management strategies and actions will have positive and negative impacts on the objectives in this Code, so trade-offs will be required at times.
- 39 Under the *Forests Act 1958*, the Secretary is responsible for the immediate prevention and suppression of fire, and for the planned prevention of fire on public land.
- 40 Bushfire management planning is the process used to devise bushfire management strategies and actions. Bushfire management planning will clearly describe the expected impacts of strategies and actions.

Outcomes

- 41 Bushfire management planning is undertaken within a risk-based framework that:
- aligns with the two objectives of this Code
 - uses science and knowledge of community needs to guide bushfire management strategies and actions
 - enables performance against the objectives to be measured, evaluated and reported
 - identifies, analyses, evaluates and determines efficient and effective risk mitigation strategies and actions
 - estimates the potential and current level of impact and loss as a result of major bushfires
 - models potential and current ecological resilience across time and geographic scales
 - improves understanding of the effects of bushfire management strategies and trade-offs
 - provides for continuous improvement in Departmental capabilities, tools and systems for bushfire management.

Strategies

- 42 Identify and analyse risks to achieving objectives.
- 43 Engage with the community and interested stakeholders to build community capacity to live with bushfires and to identify assets and community needs during planning.
- 44 Plan at strategic, operational and tactical levels. Bushfire management planning will be undertaken in accordance with the risk analysis framework described in this section.
- 45 Establish supporting knowledge and adaptive management framework to promote continuous improvement in planning and management.

Actions

Risk Analysis Framework for Bushfire Management

- 46 The Department will undertake all bushfire management within this risk analysis framework.

Identify risks

- 47 Risks to achieving the two objectives in this Code will be identified, analysed and evaluated, and risk treatments identified. This will be done in accordance with legislative obligations and the Australian/New Zealand Standard for risk management ISO 31000.
- 48 Risks will be identified at a range of geographical scales (i.e. local to State level) and time scales (i.e. years to decades).

Focus on strategic objectives

- 49 Risk analysis will focus on the two objectives in this Code and on strategies and actions to achieve those objectives.
- 50 Progress towards objectives will be used to measure the efficiency of actions and the effectiveness of strategies.
- 51 When formulating and implementing strategies, other land, bushfire and emergency management objectives will be considered against their impact on the achievement of the primary objectives of this Code.

Assess impacts on objectives and compare options

- 52 Risk analysis will consider the potential impacts of bushfires and bushfire management strategies (including fire regime options) and actions on objectives.
- 53 When balancing competing objectives, the Department will:
 - Clearly and transparently communicate decisions about the trade-offs
 - Aim to mitigate the negative impact on affected objectives.
- 54 The Department will meet its statutory obligations and the primary objectives in this Code by cooperatively working to inform and be informed by bushfire planning at State, regional and local levels.
- 55 By allocating a level of significance to the categories in Figure 2 below, the Department will work with stakeholders to transparently prioritise and plan bushfire management strategies and actions to achieve the primary objectives of this Code.²
- 56 When allocating the level of significance to categories, the Department will incorporate:
 - state planning priorities and arrangements; and
 - direction from the Fire Services Commissioner (where appropriate).

		Category					
		People E.g. loss of life	Infrastructure E.g. community infrastructure failure	Public Administration E.g. inquiry leading to changes in policy and legislation	Environment E.g. permanent total loss of ecosystem function	Economy \$ E.g. financial loss	Social Setting E.g. ongoing reduced services in the community
Significance	National						
	State (major)						
	Regional (serious)						
	Municipal (important)						

Figure 2 – The PIPE\$\$ framework for objective comparison.

² Adapted from Emergency Management Australia, 2010, *National Emergency Risk Assessment Guidelines*, Commonwealth of Australia

- 57 The Department will progressively introduce broader categories and services in its assessment of community impacts, and the role of resilient ecosystems.
- 58 Risk analysis will generate scenarios to identify and compare the expected impacts of bushfire management actions and strategies on the objectives of the Code.
- 59 Areas of public land contributing to higher potential for bushfire impact on communities and essential services will be the priority for planning and action.

Bushfire management planning

- 60 Bushfire management planning will be undertaken at three levels:
- Strategic level – Strategic bushfire management plans will identify, evaluate and select strategies that are most likely to achieve the primary objectives for bushfire management.
 - Operational level – Fire operations planning will outline a forward-looking (three year +) program of works and prioritise the annual implementation of actions. Readiness and response planning will define the readiness and initial attack procedures to be adopted by the Department and its partner agencies.
 - Tactical level – Tactical planning will outline specific actions including community engagement plans, planned burns and fuelbreak or track construction and maintenance.
- 61 Understanding and considering the community interest is essential for effective bushfire management. The Department will use a range of engagement methods tailored to the needs and characteristics of stakeholders and community groups. Engagement will range from involvement at the strategic level to notification at the tactical level.
- 62 When planning, the Department will:
- Engage with the people and groups who have a stake in bushfire management. These include people who are neighbours of public land, groups whose livelihoods may be impacted by bushfires and bushfire management decisions, groups with environmental, health and recreational interests, government and other agencies. Each of these parties has different needs and may seek different outcomes from bushfire management and will be engaged accordingly.
 - Work collaboratively and cooperatively with partners to undertake engagement.
- 63 The purpose of engagement is to:
- Identify State, regional and local needs that may be affected by bushfires or bushfire management strategies and actions. Where bushfire management is likely to affect those needs negatively, the Department will seek to mitigate those effects according to priorities and available resources.
 - Bring about the best practicable bushfire planning outcomes, balancing diverse community and stakeholder needs.
 - Assist the Department to understand issues and impacts and to achieve the best practicable bushfire planning outcomes within the limits posed by the diversity of community and stakeholder needs.
 - Enhance understanding of bushfire management and improve collaboration.

Strategic planning

- 64 Strategic bushfire management planning will inform more detailed operational level planning such as municipal fire prevention planning, fire operations planning, and readiness and response planning.
- 65 The Department, will in collaboration with communities, partners and other stakeholders, aim to understand how risks to achieving the objectives apply across the whole landscape. The Department will work with other agencies to assess needs and risk, to implement and refine bushfire management strategies.
- 66 The Department will prepare strategic bushfire management plans that outline landscape and regional strategies for achieving the objectives for bushfire management in this Code. These plans will:
- Use future bushfire management scenarios and long-term looking projections (10+ years) to assess the likely costs, benefits and outcomes of current and future bushfire management strategies.
 - Describe transparently outcomes that the strategies would be expected to deliver – including levels of risk that are considered acceptable or cannot be feasibly mitigated (residual risk).
 - Enable strategy options to be re-assessed and refined quickly on the basis of trends, outcomes, major events (such as bushfires) and new knowledge.
 - Improve understanding of bushfire risk by involving relevant parties in defining needs, selecting strategies and by showing clear links between strategies, outcomes and actual achievements.
 - Integrate and inform operational planning.
- 67 Strategic bushfire management plans will:
- Be prepared in accordance with relevant procedural guidelines.
 - Assess the expected effectiveness of strategies against key performance indicators outlined in the relevant procedural guidelines.
 - Enable strategies and actions to be refined on the basis of learning and the effects of planned (e.g. planned burning) and unplanned (e.g. bushfires) events.
 - Be prepared in collaboration with managers of public and private land, community and interested stakeholders.
- 68 Strategic bushfire management planning will assess fire ecology in ways that:
- Assess the capacity to maintain flora and fauna habitats over space and time.
 - Consider risks to achieving resilience outcomes and provide options for reducing these risks.
 - Provide advice on how fire can be used for ecologically beneficial outcomes.

Operational planning

- 69 Each year, the Department will prepare fire operations plans. Fire operations plans will be informed by strategic bushfire management plans.
- 70 Fire operations plans will include:
- at least a three-year forward program comprising a schedule and maps for planned burning and any new preparedness works planned
 - a detailed schedule of prevention and preparedness works planned for the immediate 12-month period.

- 71 The fire operations plans will be publicly available as specified in the relevant procedural guidelines.
- 72 The Department will engage with partner agencies, stakeholders and the community about proposed fire operation plans. Engagement will include:
- inclusion of local knowledge and experience for identification of issues and needs
 - determining the type and location of fuel management on public land (e.g. planned burning).

Tactical planning

- 73 The Department will prepare tactical plans including burn plans, incident action plans and recovery plans.
- 74 Community engagement at the tactical level will focus on notification.

Documentation hierarchy for bushfire management planning on public land in Victoria

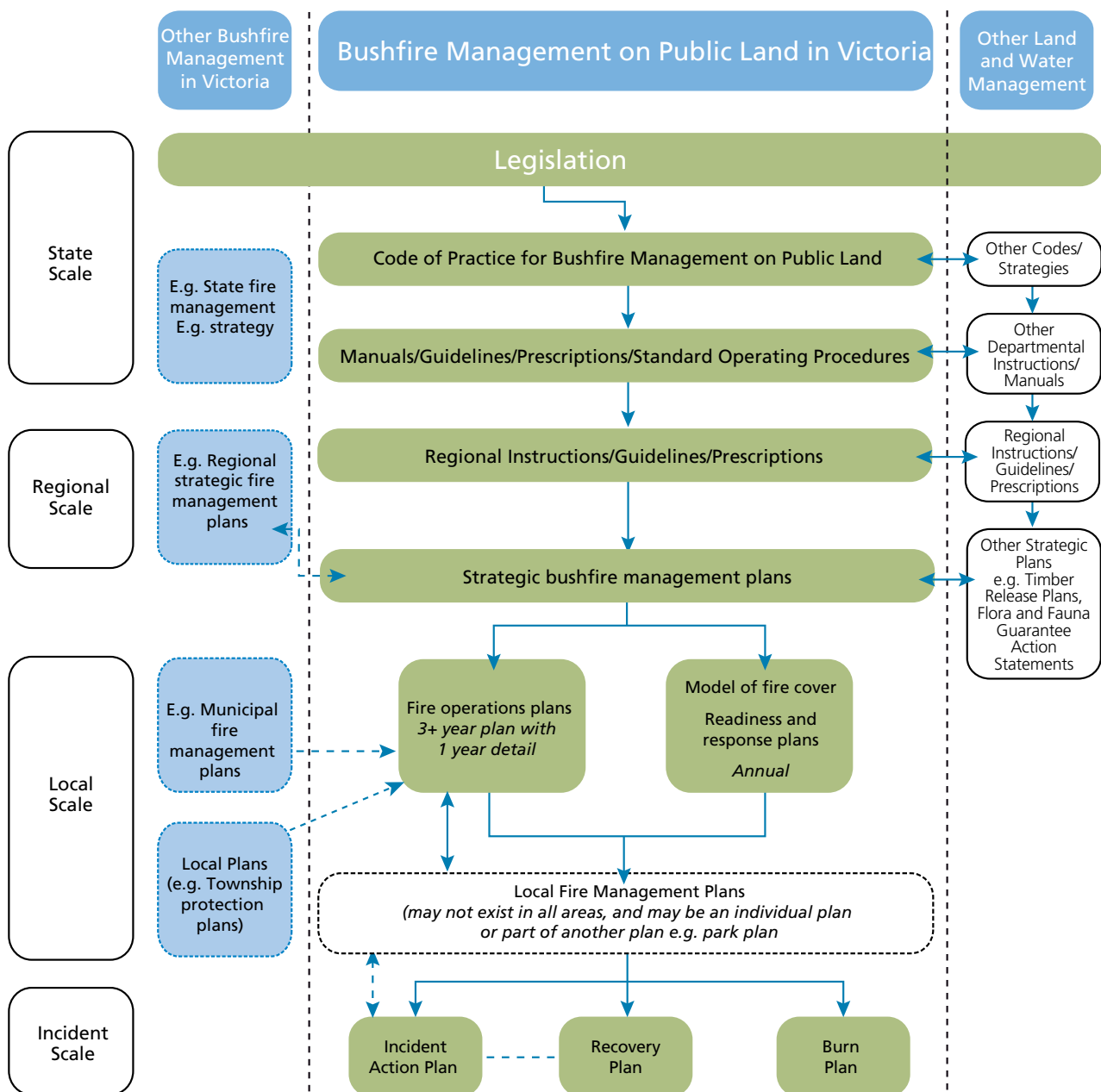


Figure 3 Bushfire management planning documentation in Victoria

Prevention

Section 2

Overview

- 75 The *Forests Act 1958* requires the Secretary to carry out proper and sufficient work in State forests, national parks and on protected public land to prevent and suppress bushfires. Prevention activities contribute to meeting this obligation.
- 76 Prevention activities aim to minimise the occurrence of bushfires, particularly those of human origin, occurring during periods of extreme weather conditions.

Outcome

- 77 Reduced incidence of bushfires caused by human ignition.

Strategy

- 78 Implement regulatory, enforcement and awareness strategies to reduce the incidence of bushfires caused by human ignition.

Actions

Regulate the use of fire

- 79 The responsible Minister under the *Forests Act 1958* regulates the use of fire within the Fire Protected Area (excluding those parts that are public land) by introducing and enforcing seasonal fire restrictions. On public land, fire restrictions apply year round. The time during which any fire restrictions apply is known as the "prohibited period".
- 80 During the prohibited period, members of the public can only use fire (other than its legal use for cooking and warmth) in accordance with a written authority issued by an Authorised Officer.

Enforcement

- 81 The Department will undertake patrols to assess compliance with fire legislation and regulations.
- 82 The Department, with other fire agencies and Victoria Police, will develop local enforcement strategies.

Awareness

- 83 The Department will support and participate in programs which:
 - Maintain public awareness of the bushfire threat, promote the importance of self protection, and encourage the legal and responsible use of fire by the community.
 - Change the behaviour of people who are most likely to cause bushfires or are suspected of causing bushfires.

Preparedness

Section 3

Overview

- 84 The *Forests Act 1958* requires the Secretary to carry out proper and sufficient work in State forests, national parks and on protected public land to prevent and suppress bushfires. Preparedness activities contribute to meeting this obligation.
- 85 Preparedness actions are undertaken in anticipation of bushfires. Effective preparedness arrangements are implemented to improve bushfire response performance. Preparedness actions will be planned and implemented in accordance with the Risk-based Bushfire Management and Planning section of this Code. Areas of greater bushfire risk will have the higher priority for action.

Outcomes

- 86 Effective and appropriate allocation of staff capabilities (e.g. roles) and resources (e.g. numbers) for bushfire management.
- 87 Effective and appropriate allocation of non-staff capabilities (e.g. equipment, plant and vehicles) and resources (e.g. quantity) for bushfire management.
- 88 Risk analysis informs capability and resource allocation according to existing and forecast risk across Victoria.
- 89 Improved interoperability with other fire and emergency management agencies.

Strategies

- 90 **Develop and maintain staff capabilities, resources and readiness for bushfire response according to existing and forecast bushfire risk.**
- 91 **Develop and maintain non-staff capabilities, resources and readiness for bushfire response according to existing and forecast bushfire risk.**
- 92 **Develop and implement robust and functional fire danger and risk analysis products and systems which describe existing and forecast bushfire risk across Victoria at daily, weekly and seasonal levels.**
- 93 **Develop strategies and joint partnership arrangements that assist interagency interoperability.**

Actions

Training and Occupational Health and Safety requirements

- 94 The Department will comply with statutory occupational health and safety requirements, including those relating to the training of staff in accordance with required standards.
- 95 Decisions and processes to select, train and equip staff will be based on capability, resource and readiness requirements.

Staff and non-staff capabilities

- 96 The Department will develop robust and functional bushfire risk analysis products, which describe existing and forecast bushfire risk across Victoria.
- 97 The Department will annually set and deliver the recommended staff and non-staff capabilities and resources using bushfire risk analysis products, in accordance with the relevant procedural guidelines.
- 98 The Department will develop readiness and response plans that will set the required readiness levels for staff and non-staff capabilities and resources for bushfire response. This will be in accordance with relevant procedural guidelines.
- 99 The Department will provide appropriate vehicles, plant and equipment based on capability, resource and readiness requirements. This will be in accordance with relevant procedural guidelines.

Inter-agency bushfire management

- 100 The Department will work closely with other agencies to improve inter-agency, inter-operability through effective management arrangements and partnership initiatives.
- 101 The Department will work with the Fire Services Commissioner to develop a work program setting out the projects to be undertaken or measures to be met by the Department to enhance its operational capacity and capability, to operate together with other fire services agencies in preparing for and responding to major bushfires (as defined in the *Fire Services Commissioner Act 2010*).
- 102 The Department will work with its partner agencies to deliver staff and non-staff capabilities.

Monitoring bushfire danger

- 103 The Department will monitor bushfire danger, behaviour and bushfire damage potential by measuring and modelling fuel hazard, and using a network of weather stations in partnership with the Bureau of Meteorology and the Country Fire Authority (CFA).

Detection of bushfire

- 104 The Department will identify gaps in current bushfire detection and surveillance systems and processes.
- 105 The Department will develop and utilise a range of bushfire detection and surveillance mechanisms across the State, including aerial appliances and fire towers, and maintain them to required standards.

Infrastructure

- 106 The Department will maintain a strategic road network for bushfire management activities on public land. The Department will also maintain a public road network in accordance with the road management plan.
- 107 The Department will develop and maintain aircraft support facilities which meet operational needs. This will be in accordance with relevant procedural guidelines.
- 108 The Department, in collaboration with other agencies, will develop and maintain a State-wide communication network.

Bans and closures

- 109 The Secretary has the authority to prohibit or restrict access to State forests and national parks. Information on closures will be provided to the public.

Fuel management including planned burning

Section 4

Overview

- 110 Under the *Forests Act 1958*, the Secretary may use fire for land and resource management and is responsible for carrying out proper and sufficient work in State forests, national parks and on protected public land to prevent and suppress bushfires. Fuel management activities will contribute to meeting this objective.
- 111 Planned burning is the deliberate introduction of fire into the landscape to:
- modify fuel hazard, bushfire hazard and damage potential
 - contribute to ecological objectives
 - contribute to regeneration following timber harvesting activities.
- 112 Planned burning is the most effective technique for managing fuel hazard over large areas. Other localised treatments include ploughing, mulching, herbicide application, chain rolling, grazing, mowing and slashing.
- 113 Planned burning assists bushfire suppression actions by reducing the intensity and severity of bushfires.

Outcomes

- 114 Reduced impact of major bushfires on human life, communities, essential and community infrastructure, industries, the economy and the environment. Human life will be afforded priority over all other considerations.
- 115 Resilient natural ecosystems, which can deliver services such as biodiversity, water, carbon storage and forest products.
- 116 The role of bushfire in the Victorian landscape is well understood by informed stakeholders and the broader community.

Strategies

- 117 **Reduce the fuel hazard on public land.**
- 118 **Use planned burning on public land for ecosystem resilience.**
- 119 **Inform the community about bushfire management activities.**
- 120 **Manage fuel hazard on public land with consideration for planned timber harvesting and other economic activities.**

Actions

Undertake strategic planning for fuel management including planned burning

- 121 The Department will prepare strategic bushfire management plans (see Section 1 Risk-based bushfire management) which use Fire Management Zones as a tool to implement local bushfire management objectives.

Fire Management Zones (FMZs)

- 122 FMZs are areas of public land where fire is used for specific asset, fuel and overall forest and park management objectives. Each of the four FMZs differs in its intended fuel treatment aims and associated performance measures. Although the name of the zone indicates the primary purpose for that zone, it is recognised that multiple goals can be achieved when undertaking activities in a given zone. For example, a burn undertaken primarily for land management purposes may also have asset protection results. FMZs describe fuel treatment aims (with associated performance measures) in a particular area.
- 123 The four Fire Management Zones are:
 - Asset Protection Zone
 - Bushfire Moderation Zone
 - Landscape Management Zone
 - Planned Burning Exclusion Zone.

Each of these FMZs are described in greater detail below.

Zone Placement

- 124 FMZ placement is determined through analysis conducted in the development of strategic bushfire management plans, with input from stakeholders. Considerations include: risk to human life and property and community infrastructure, practical and achievable burning outcomes, appropriate fire regimes for vegetation types, maximum overall fuel hazard ratings, topographical alignments, and bushfire behaviour.
- 125 When determining the placement of FMZs, the Department will consider Forest Management Zones as outlined in the *Code of Practice for Timber Production 2007*.

Asset Protection Zone (APZ)

- 126 Using intensive fuel treatment, the Asset Protection Zone (APZ) aims to provide the highest level of localised protection to human life and property and key community assets. The goal of fuel treatment is to reduce radiant heat and ember attack in the event of a bushfire. Fuel treatment will be carried out in the APZ through a combination of planned burning and other methods such as mowing, slashing or vegetation removal.
- 127 Achieving the objectives of this zone may have negative impacts. Where this is likely, the Department will seek to moderate the negative impact as far as practicable.

Bushfire Moderation Zone (BMZ)

- 128 This zone aims to reduce the speed and intensity of bushfires. This zone complements the APZ in that the use of planned burning in the BMZ is designed to protect nearby assets, particularly from ember spotting during a bushfire.
- 129 Where practicable, the BMZ will aim to achieve ecological outcomes by seeking to manage for ecologically desirable fire regimes, provided bushfire protection objectives can still be met. This may include using other fuel management methods.

Landscape Management Zone (LMZ)

- 130 Within this zone, planned burning will be used for three broad aims:
- bushfire protection outcomes by reducing the overall fuel and bushfire hazard in the landscape
 - ecological resilience through appropriate fire regimes
 - management of the land for particular values including forest regeneration and protection of water catchments at a landscape level.

Other fuel reduction methods will be used within this zone as appropriate.

Planned Burning Exclusion Zone (PBEZ)

- 131 This zone excludes the use of planned burning primarily in areas intolerant to fire.



Figure 4. Fire Management Zones

Environmental management during planned burning

- 132 The Department will seek to use fire in the landscape to maintain or improve the resilience of natural ecosystems and their ability to deliver services such as biodiversity, water, carbon storage and forest products.
- 133 The Department will seek to protect soil by measures which minimise damage to its physical and chemical properties or which promote stabilisation of bare earth following disturbance.
- 134 The Department will seek to protect water quantity and quality by measures that minimize the impact of bushfire management activities on the physical, chemical and biological qualities of streams and wetlands.
- 135 The Department will seek to avoid or address with effective biosecurity measures, the introduction and spread of pest plants and animals, plant diseases, insect pests and biological contaminants.

Undertake operational planning for fuel management including planned burning

Burn plans

- 136 Planned burning will be undertaken in accordance with an approved burn plan. This is a plan prepared according to relevant procedural guidelines.
- 137 The approved burn plan will include the following:
 - clearly stated land management and burn objectives with regard to percentage cover and residual fuel hazard and/or ecological outcomes as appropriate
 - burn size
 - FMZ and associated specification that applies to the burn area
 - specific prescriptions to reduce impacts on values where appropriate (as identified through forest management plans and through strategic bushfire management plans)
 - the achievement of the burn aims will be monitored and reported in accordance with the monitoring, evaluation and reporting section of this Code.

Notifications

- 138 To assist businesses and people affected by planned burning manage their day-to-day activities, the Department will aim to provide relevant, useful and timely planned burning information. This will include, but not be limited to, information about the location and timing of planned burns on public land.
- 139 Prior to the commencement of a planned burn on public land, the Burns Controller will seek to notify the affected neighbours and interested or affected stakeholders.

Private assets within/adjoining burn area (e.g. bees/stock)

- 140 The Burns Controller will seek to notify the owners (where identifiable) of private property/assets such as machinery, beehives, stock or harvested forest produce contained within or adjoining the burn area and will request that such assets be removed to assist with protection where practicable, or that the owners have appropriate risk mitigation measures in place.

Private property adjoining the burn area

- 141 The Department may work with property owners, the CFA and local councils to extend a planned burn on public land to land dealt with by those agencies if it would improve overall bushfire management outcomes.

Linking areas burnt by bushfires

- 142 The Department may take opportunities to conduct planned burning to link areas burnt by bushfire to other strategic fuel management areas in localities not initially identified in the fire operations plan.

Authorisation

- 143 Only the Secretary or its delegate is authorised to use fire on public land. Only the Secretary or its delegate may authorise the ignition of a planned burn. Approval to ignite a planned burn will occur via the approval process outlined in the relevant procedural guidelines; this will include obtaining the required consents. The planned burn will be carried out under the direction of an approved Burn Officer In Charge.

Smoke management

- 144 The Department will work with other agencies and industry as necessary to:
- Support research into the effects and impacts of smoke.
 - Develop and periodically review and improve policies and guidelines covering smoke management.
 - Time planned burns to reduce risk of smoke impacts.
- 145 Where appropriate, smoke modelling will be used to identify direction of smoke from planned burns. This will be considered as part of the planning framework when undertaking the planned burn. Information about potential smoke impacts, where available, will be included in communications to the community and key stakeholders.

Burn escapes

- 146 The Department will take prompt and safe action to assess and manage a burn escape. A burn is considered to have escaped when it moves beyond the area designated in the burn plan. The burn plan may include designated contingency areas. A burn within a contingency area will not be deemed to have escaped.
- 147 The Department will treat the escape as a bushfire in accordance with relevant procedural guidelines.
- 148 Burn escapes may be investigated by the Department in accordance with relevant procedural guidelines.

Directing owners adjoining public land to reduce fuel hazard

- 149 In accordance with the *Forests Act 1958*, Authorised Officers may (working through local planning processes), where appropriate and in writing, direct owners/occupiers of land abutting public land to remove or modify fuels or other fire hazards.

Response

Section 5

Overview

- 150 Under the *Forests Act 1958*, the Secretary must carry out proper and sufficient work for the immediate prevention and suppression of bushfires in State forests, national parks and protected public land. Response activities contribute to meeting this obligation.
- 151 Under the *Emergency Management Manual Victoria* (which is prepared in accordance with the *Emergency Management Act 1986*), the Secretary is the control agency for bushfires in its area of jurisdiction and may be supported by other agencies in certain circumstances. The Department on occasion may provide limited support to other agencies for bushfires on private land.
- 152 Under the *Emergency Management Act 1986*, the Fire Services Commissioner may take overall control of response activities in relation to a fire, if the Fire Services Commissioner considers the fire has become, or reasonably believes it has the potential to become a major fire, as defined in the *Fire Services Commissioner Act 2010*. When responding to bushfires on public land, State control priorities set by the Fire Services Commissioner will guide planning and operational decisions made by command and control staff.
- 153 This section outlines activities that will be undertaken by the Department in the event of a bushfire. It includes responsibilities and considerations of the Incident Controller during suppression and the emergency stabilisation and initial recovery phase of the bushfire.

Outcome

- 154 Bushfires are suppressed and managed to reduce the risk to human life, communities, essential and community infrastructure, industries, the economy and the environment. The protection of human life will be assigned priority over all other considerations.

Strategies

- 155 **Respond to bushfires on or threatening its area of jurisdiction (i.e. public land as defined in this Code) in a safe, efficient and appropriately planned manner.**
- 156 **In collaboration with other fire agencies, work towards developing and maintaining a messaging system capable of delivering advice and warnings to communities.**
- 157 **Identify and mitigate risks to and on public land and to properties adjoining public land.**
- 158 **Rehabilitate bushfire suppression works following a bushfire.**

Actions

Priority of bushfire response actions

- 159 The Secretary may, at its discretion, prioritise response activities and the allocation of resources to bushfire response over other Departmental activities.

Incident coordination arrangements

- 160 The Department will comply with inter-agency coordination arrangements in accordance with:
 - relevant legislation
 - Emergency Management Manual of Victoria (including State Emergency Response Plan)
 - State command and control arrangements
 - reciprocal and interoperability arrangements
 - standards, operating procedures, and relevant guidance from the Fire Services Commissioner.

Incident management

- 161 Incident management will be carried out by the Department in accordance with the Australasian Inter-service Incident Management System (or its successor).

Strategies will be determined in accordance with State control priorities

- 162 When responding to bushfires on public land, the Department will:
 - Develop and implement tactics to bring the bushfire under control, with the protection of human life as the highest priority.
 - Allocate resources to the bushfire commensurate with bushfire risk.
 - Manage the response efficiently and effectively, seeking to minimise environmental damage (in accordance with paragraphs 133–135).
- 163 Upon detection of a bushfire the Secretary, the Chief Fire Officer or their delegate will:

Prepare an incident action plan
- 164 The decision and process to prepare an incident action plan will be conducted in accordance with relevant procedural guidelines.
- 165 The incident action plan will prioritise the protection of human life (including safety of emergency services personnel) over all other fire suppression considerations.

Inform the community

- 166 The Department will provide information about bushfire management activities on public land. This will include, but not be limited to, information about location of fires on public land.
- 167 The Department will issue advice and warnings if the Secretary considers it to be necessary for the purposes of protecting life and property to assist potentially affected communities make decisions, or if the Fire Services Commissioner has delegated this task to the Secretary.
- 168 The decision and process to issue warnings and/or advice will be conducted in accordance with relevant legislation and procedural guidelines.

Consider whether to recommend evacuation to threatened communities

- 169 Where appropriate, recommend evacuation to threatened communities, with co-ordination by Victoria Police.
- 170 The decision and process to recommend evacuation will be conducted in accordance with relevant procedural guidelines.

Local knowledge

- 171 The Department will involve, as far as practicable, people who can contribute local knowledge in planning response actions.

Bushfire investigation

- 172 The Department will investigate the origin and cause of bushfires on public land. If necessary, the Department may involve other agencies including Victoria Police and the CFA when investigating the origin and cause of bushfires.
- 173 The process to undertake an investigation will be conducted in accordance with relevant procedural guidelines.

Emergency stabilisation and initial recovery phase

- 174 The Incident Controller is responsible for managing the response to bushfire on public land, until the public land management entity resumes day-to-day management. The Incident Controller will initiate bushfire response actions, emergency stabilisation and initial recovery actions. The land management entity will resume day-to-day management responsibilities by agreement with the Incident Controller.
- 175 Where appropriate, the Incident Management Team (IMT) will remain active during the emergency stabilisation and initial recovery phase to support emergency services personnel and manage fatigue.
- 176 The transition from response to emergency stabilisation and initial recovery will commence as soon as practicable and after the risk to human life has been minimised. Emergency stabilisation and initial recovery includes:
- identifying, assessing and treating emerging risks to human life, property, natural and cultural values
 - identifying risks to public land values (including natural and cultural values) and properties adjoining public land are and addressed
 - rehabilitating damage caused by suppression works
 - commencing emergency stabilisation activities
 - understanding loss and damage to public land.

Recovery planning

- 177 This process will form part of the Incident Controller's handover to the public land management entity and will detail works completed to date around safety, rehabilitation of fire suppression activities and risk to public land values and adjoining land.

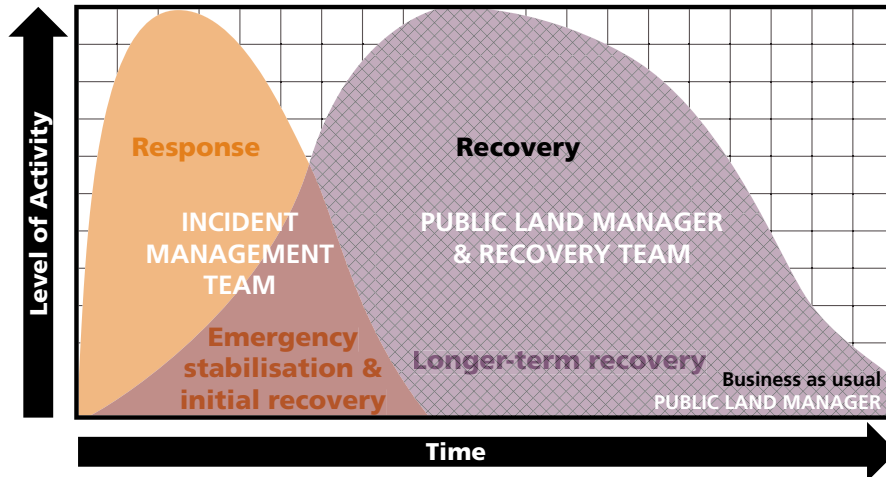


Figure 5. Phases of recovery

Debriefing

- 178 At the end of each bushfire season, the Department will conduct a debriefing which may include an assessment of:
- an investigation of safety issues which emerged during the season
 - the level of resources utilised
 - damage to assets or values from bushfires
 - strengths and weaknesses and opportunities for improvement.
- 179 Information from this debrief will be used to improve subsequent bushfire management actions and strategies.
- 180 At the end of each bushfire and planned burn, the Department will conduct an after action review covering:
- tactics
 - performance
 - cost control
 - resource use
 - safety.

Recovery

Section 6

Overview

- 181 The Department is responsible for recovery of public land and will support the coordinating agency at the State and regional level in accordance with the *Emergency Management Act 1986*. The Department will also work in collaboration with municipal councils who have recovery responsibilities at a local level.
- 182 If requested, the Department may contribute to broader community recovery managed by other government agencies.
- 183 Recovery of public land may be integrated with recovery activities on private land as appropriate, acknowledging that legislation and incident-specific initiatives will direct recovery activities.
- 184 Facilitating recovery and re-establishing safe access to public land supports regional communities return to normal function.
- 185 The bushfire recovery phase on public land follows the emergency stabilisation and initial recovery phase (see Response) and is the responsibility of the public land management entity and is specific to longer-term recovery activities.
- 186 Relevant procedural guidelines provide the specific instruction in relation to these activities.

Outcomes

- 187 Risks to human life, communities, essential and community infrastructure, industries, the economy and the environment are mitigated following the damage caused by bushfire.
- 188 Fire-impacted communities are supported by re-establishing safe access to public land impacted by bushfire.

Strategies

- 189 **Protect human life, property, natural and cultural values by stabilising public land, repairing damage and treating impacts that have resulted from bushfires.**
- 190 **Treat risks in priority order to re-establish access to public land in a timely manner to support fire impacted communities' return to normal daily life.**

Actions

Responsibilities and phases during recovery

- 191 There are two main bushfire recovery phases specific to bushfires on public land:

Emergency Stabilisation and Initial Recovery (see 'Response')

- 192 During this phase, the Incident Controller is responsible for ensuring that the tasks listed in paragraph 176 are undertaken.

Longer-term Recovery

- 193 This phase commences after the public land management entity has agreed with the Incident Controller to resume day-to-day management responsibilities.

- 194 During this phase, the public land management entity will work towards:
- continuing public land stabilisation activities
 - continuing risk treatment in priority order
 - managing loss and damage to public land
 - identifying, assessing and treating any further risks (including risks to natural and cultural values) not identified or mitigated in the emergency stabilisation phase
 - acting upon any opportunities that have emerged as a result of the bushfire (e.g. weed removal works)
 - undertaking works that facilitate access to public land and the recovery of natural, cultural and built assets.

- 195 The transition of public land management responsibilities from response to recovery to business-as-usual supports the return to normal daily life for communities impacted by bushfires. This transition includes the following:
- The public land management entity resumes responsibility for public land impacted by bushfire once the IMT has been disbanded.
 - The recovery phase ends when a recovery plan is implemented and identified key risks are mitigated and access to public land is restored (as appropriate).
 - Business-as-usual land management responsibilities will include the management of the residual risk.

Recovery Plans

- 196 Recovery plans identify workforce planning requirements to stabilise public land and set priorities to treat key risks to protect life, property, public land and support bushfire-impacted communities safe access to public land.
- 197 The decision and process to prepare a recovery plan will be conducted in accordance with relevant procedural guidelines.

Monitoring, evaluation and reporting

Section 7

Overview

198 The performance of bushfire management actions will be monitored, evaluated and reported to assess how well actions are achieving desired strategies, and, in particular, how the strategies are achieving the two primary objectives for bushfire management on public land. These actions will be modified if needed to improve the extent to which they achieve the desired strategies and objectives. This adaptive management approach is a key method for improving bushfire management.

Outcomes

- 199 Continual learning and shared understanding of bushfires and bushfire management and their effects at a landscape scale.
- 200 Improved bushfire management strategies and actions.
- 201 Transparent implementation of bushfire management strategies and actions on public land.

Strategies

- 202 Undertake bushfire management to agreed standards, compliance against which is monitored, evaluated and reported.
- 203 Report in a manner that meets public accountability objectives.
- 204 Use the learnings from monitoring and evaluation to improve bushfire management and decision making.
- 205 Use the learnings from science, monitoring and evaluation to test and refine scientific and other models that support decision making.
- 206 Make the results of bushfire management strategies and actions and their impact on outcomes and objectives accessible.
- 207 Build the capacity of fire agency staff and interested parties to interpret the results of monitoring and evaluation in the context of bushfire management actions, strategies and objectives.

Actions

- 208 The Department will prepare a framework for monitoring, evaluating and reporting on its bushfire management program.
- 209 The framework will:
- Identify objectives for monitoring, evaluating and reporting on bushfire management, and explain how those objectives link with the two primary objectives for bushfire management on public land in this Code.
 - Specify key performance indicators against which the monitoring objectives will be assessed.
 - Identify key accountabilities for monitoring, evaluation and reporting.
 - Identify how the data collected through monitoring will be used to improve bushfire management strategies and actions.
 - Specify quality assurance standards (process standards) against which bushfire management actions will be evaluated to determine if they are of sufficient quality.
 - Specify quality control standards (product standards) which will require results of bushfire management actions to be of an acceptable quality.
 - Identify training and support requirements to support capacity building of staff and interested parties.

Monitoring

- 210 The Department will monitor the efficiency of bushfire management actions and the effectiveness of bushfire management strategies on the two primary objectives for bushfire management on public land:
- Minimise the impact of major bushfires on human life, communities, essential and community infrastructure, industries, the economy and the environment. Human life will be afforded priority over all other considerations.
 - Maintain or improve the resilience of natural ecosystems and their ability to deliver services such as biodiversity, water, carbon storage and forest products.
- 211 Monitoring programs will focus on areas where the results are likely to have the biggest impact on decision making. These areas include:
- the effects and effectiveness of mitigation strategies in landscapes where bushfires have the highest potential to impact on communities
 - ecosystems that are most valuable and vulnerable to the impact of major bushfires and inappropriate fire regimes.
- 212 Monitoring programs will also focus on:
- mapping the extent and severity of bushfires and planned burns
 - the effects of different burning strategies.
- 213 Monitoring will be supported by scientific research that focuses on:
- fire behaviour and hazard
 - the impacts of bushfire management actions
 - fire ecology and ecosystem resilience
 - financial, social and economic costs and benefits of various bushfire management strategies
 - developing models, indicators and methods for evaluating performance.

- 214 Monitoring will aim to promote understanding of the impacts of bushfire management actions and strategies at a range of spatial and time scales, for example from short-term local impacts to longer-term landscape impacts.
- 215 The Department will aim to inform and be informed by monitoring programs that other agencies undertake across public and private land.
- 216 The Department will undertake monitoring actions as required by other agencies.

Evaluation

- 217 Two landscape level indicators (risk of major bushfires impacting on communities and ecological resilience) set in strategic bushfire management plans will be used to evaluate the efficiency of bushfire management actions and the effectiveness of bushfire management strategies achieving the two primary objectives for bushfire management on public land.
- 218 Learnings from evaluation will be used to:
- Improve how bushfire management is used to reduce the impact of major bushfires and to maintain or improve ecological resilience.
 - Refine and test scientific and management decision support models.
 - Improve bushfire management planning, strategies and actions.
- 219 The Department will use benchmark data from other jurisdictions and industries to assist in assessing efficiency of its bushfire management program when practicable.

Reporting

- 220 The Department will report in a manner that meets public accountability objectives.
- 221 The Department will aim to continually learn from and improve its practices and acknowledges that a range of parties are interested in this. Parties include the government, the community, interest groups, other agencies and land managers. The Department will have a range of reporting mechanisms to meet their information requirements.
- 222 The Department will make publicly accessible information about:
- the performance of its bushfire management actions, and the status of achievements of strategies and objectives
 - information gained from monitoring and evaluation activities
 - how well bushfire management actions and strategies are achieving the two primary objectives for bushfire management on public land.
- 223 Information from monitoring and evaluation will be made available in ways that increases the capacity to interpret the information and apply it to their local situation.

- 224 The Department will prepare reports over various timeframes focusing on different aspects of its work:
- Action reporting will be undertaken annually and focus on the efficiency of the actions (for example the level of planned burning).
 - Strategy reporting will be undertaken at least every five years and focus on the effectiveness of bushfire management strategies to reduce risks to bushfire management objectives.
 - Objective reporting will be undertaken every ten years and focus on the achievement of identified objectives for bushfire management on public land.
- 225 The Department will provide reports as required by legislation, such as reports to the Fire Services Commissioner required under the *Fire Services Commissioner Act 2010* and the *Forests Act 1958*.

Definitions

Authorised Officer

- 226 Authorised Officer means an Authorised Officer appointed under Part 9 of the *Conservation Forests and Lands Act 1987*.

Bushfire

- 227 A general term used to describe a fire in any vegetation.

Bushfire management

- 228 All those activities undertaken to reduce bushfire hazard and impacts on communities, industries and the environment including:
- actions directed to risk management, prevention, preparedness, fuel management, response, recovery, monitoring, evaluation and reporting.
 - actions under legislation, policy, planning, community engagement, training, equipment, communications, and research.
 - the use of fire to meet land management and ecological objectives.

Department

- 229 The Victorian Department of Sustainability and Environment or its future equivalent.

Fire Protected Area

- 230 As defined under the *Forests Act 1958*, includes any land, which is –
- (a) within any public land (as defined in this Code); or
 - (b) (unless excised in accordance with the *Forests Act 1958*) within 1.5 km of –
 - i any reserved forest or area of unoccupied Crown land proclaimed as a protected forest;
 - ii any national park; or
 - iii any protected public land.
 - (c) Protected forest means all unoccupied Crown land proclaimed as such under the *Forests Act 1958* or any corresponding previous enactment, and every unused road and every water frontage as defined in the *Land Act 1958*.

Planned burning

- 231 The deliberate application of fire under specified environmental conditions to a predetermined area and at the time, intensity and rate of spread required to achieve planned resource management objectives.

Protected public land

- 232 Any lands of the Crown other than State forest or national park, declared or deemed to be protected public land under Section 62 of the *Forests Act 1958*.

Public Land

- 233 All State forest, national park and protected public land as defined under the *Forests Act 1958* (or its future equivalent).

Relevant procedural guidelines

- 234 Documents of an operational nature including Departmental guidelines, manuals, policies and procedures.

Secretary

- 235 The Secretary to the Department of Sustainability and Environment, a body corporate established under the *Conservation, Forests and Lands Act 1987*.

Other definitions

- 236 Other definitions are available in the Australasian Fire and Emergency Service Authorities Council Glossary and the Department's Fire Management Glossary.

Index

A

Authorised Officer **12, 21**

B

Bans and closures **16**

Burn escapes **21**

Burn plans **20**

C

Capability **15**

Community engagement **11**

D

Debriefing **25**

Detection of Bushfire **16**

E

Engagement **9–11**

F

Fire danger **16**

Fire Management Zones **18, 19**

Fire Protected Area **12, 33**

Fire Services Commissioner **15, 22, 23, 24, 32**

I

Incident action plan **23**

Incident coordination **23**

Incident management **23**

Incident Management Team **24**

N

Notifications **20**

O

Occupational health and safety **3, 15**

P

Planned burning **10, 11, 17–21, 32**

Primary objectives for bushfire management **1, 2, 9, 29, 32**

Protected public land **3, 12, 14, 17, 22, 33**

R

Recovery plans **11, 28**

Risk-based bushfire management planning **6–11**

Operational planning **10**

Strategic planning **10**

Tactical planning **10**

S

Smoke management **21**

Strategic bushfire management plans **9, 10, 31**

Strategic road network **16**

