

Forests (Fire Protection) Regulations 2014

Regulatory Impact Statement



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Forests (Fire Protection) Regulations 2014

Regulatory Impact Statement

In accordance with the *Victorian Guide to Regulation*, the Victorian Government seeks to ensure that proposed regulations are well-targeted, effective and appropriate, and impose the lowest possible burden on Victorian businesses and the community.

The Regulatory Impact Statement (RIS) process involves an assessment of regulatory proposals and allows members of the community to comment on proposed regulations before they are finalised. Such public input provides valuable information and perspectives, and improves the overall quality of regulations.

The Forests (Fire Protection) Regulations 2014 (the proposed Regulations) remake the Forests (Fire Protection) Regulations 2004 (the current Regulations). A copy of the proposed Regulations is provided as an attachment to this RIS.

Public comments and submissions are now invited on the proposed Regulations. All submissions will be treated as public documents and will be made available to other parties upon request. Written comments and submissions should be forwarded by no later than **5:00pm, 27 April 2014** to:

Policy and Legislation, Fire and Emergency Management Division

Department of Environment and Primary Industries

PO Box 500

East Melbourne VIC 8002

or email: ffp.regulations@depi.vic.gov.au

This Regulatory Impact Statement was prepared for the Department of Environment and Primary Industries by Regulatory Impact Solutions Pty Ltd.

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Abbreviations

| | |
|---------------------------------|--|
| AIC | Australian Institute of Criminology |
| CFA | Country Fire Authority |
| DEPI | Department of Environment and Primary Industries |
| FPA | Fire Protected Area |
| ISOU | Infringements System Oversight Unit, Department of Justice |
| LGA | Local Government Areas |
| Minister | Minister for the Environment and Climate Change |
| MCA | Multi-criteria Analysis |
| MHF | Major Hazard Facilities |
| NCC | National Competition Council |
| NCP | National Competition Policy |
| PV | Present Value |
| Premier's Guidelines | <i>Subordinate Legislation Act 1994 Guidelines</i> |
| RFA | Regulated Fire Area. section 66A(2) of the Act define 'regulated fire area' as any State forest, protected public land or national park. |
| RIS | Regulatory Impact Statement |
| the Act | <i>Forests Act 1958</i> |
| the Code | <i>Code of Practice for Bushfire Management on Public Land 2012</i> |
| the current Regulations | Forests (Fire Protection) Regulations 2004 |
| the proposed Regulations | Forests (Fire Protection) Regulations 2014 |
| VBRC | Victorian Bushfire Royal Commission |
| VPS | Victorian Public Service |

Summary

Purpose of a RIS

In Victoria the *Subordinate Legislation Act 1994* requires that new or remade regulatory proposals that impose a 'significant economic or social burden on a sector of the public' be formally assessed in a Regulatory Impact Statement (RIS) to ensure that the costs of the regulatory proposal are outweighed by the benefits, and that the proposal is superior to alternative approaches. The burden imposed by the proposed Regulations is significant enough to require assessment in a RIS.

A RIS formally assesses regulatory proposals against the requirements in the *Subordinate Legislation Act 1994* and the *Victorian Guide to Regulation*.¹ The assessment framework of this RIS examines the problem to be addressed, specifies the desired objectives, identifies viable options to achieve the objectives, and assesses the costs and benefits of the options. The RIS also identifies the preferred option and describes its effect, and undertakes a competition assessment. Finally, it considers implementation and enforcement issues and documents the consultation undertaken.

The proposed Regulations

The Department of Environment and Primary Industries (DEPI) administers the *Forests Act 1958* (the Act) and its regulations. The Forests (Fire Protection) Regulations restrict activities that could lead to fire on public land, in particular the lighting of campfires, use of engines, and activities of sawmills and other operators. The Regulations generally apply to land within national parks, State forests and on protected public land. They can also apply to certain parts of private land that border these areas. The Regulations apply in the prohibited period. In national parks, State forests and on protected public land, the prohibited period is all year round, while in certain areas of private land bordering these regions the prohibited period is declared by the Secretary to the DEPI.

The proposed Regulations are in most respects similar to the current Regulations. DEPI, however, proposes to make a number of changes to the Regulations to improve their operation. These include:

- making a number of the offences contained in the Regulations infringement offences;
- removing the Schedule to the current Regulations in order to treat these areas in a manner consistent with the rest of the State;
- removing regulations relating to fires in temporary structures, since fires in a temporary structure are also 'in the open air' as a result of the need to provide ventilation for exhaust gases and smoke from the fire; and
- redrafting the Regulations, consistent with Office of the Chief Parliamentary Counsel guidelines.

Victoria's forests system and its management

There are 8.3 million hectares of forest in Victoria, covering 36 per cent of the State. This includes 7.8 million hectares of native forest, which accounts for 95 per cent of the total forest area, and 441,000 hectares of plantations. Some 85 per cent of Victoria's native forest is on public land, with 3.5 million hectares formally protected in conservation reserves and 3.2 million hectares located in State forests. Eucalypt forest types account for 93 per cent of Victoria's total native forest area. Eucalypt forests are highly flammable and can present a fire hazard.

The Secretary to DEPI is responsible for ensuring that forests are controlled and managed in accordance with the Act. There is also a general requirement under the *Forests Act 1958* to protect Victorian forests from fire and prevent such fires.² The fire protected area (FPA) consists of the 'regulated fire area' (RFA), which covers State forests, national parks and protected public land and a 1.5 km strip of land around the RFA, commonly known as the 'the marginal mile'. In certain places the 'marginal mile' has been excised and fire management responsibilities allocated to the Country Fire Authority (CFA).

¹ Department of Treasury and Finance 2011, *Victorian Guide to Regulation incorporating: Guidelines made under the Subordinate Legislation Act 1994*, 2.1 ed, August 2011, Melbourne

² Sections 61A to 72 of the *Forests Act 1958*

Nature and extent of the problem

Victorians live in a fire-prone environment dictated by the climate of wet winters (which creates fuel) and hot dry summers. In fact, Victoria is one of the most bushfire prone areas in the world.³ Evidence of damage from fire has been well-documented. Two detailed DEPI studies provide a cost estimate of five bushfire events in Victoria and review of the evidence of economic, social and environmental impacts from bushfires. The fires examined destroyed and damaged privately and publicly owned property and infrastructure, State forests and national parks, and livestock and wildlife. These five severe bushfire events alone are estimated to have cost Victoria over \$10 billion.

More generally, bushfires are capable of causing widespread economic, social and environmental impacts, including long-term issues.⁴ Economic losses were associated with direct impacts (e.g. loss of infrastructure and equipment) and indirect impacts (e.g. business disruption). Social impacts include fatalities and injuries, health problems or the loss of cultural heritage assets. Environmental impacts related to the natural environment, such as damage to soil, water, air, flora and fauna.

While periodic fire is essential to biodiversity health in Victoria, fire frequency beyond 'tolerable fire intervals' can result in serious negative impacts on the environment. Unintended fire ignitions caused by human activity in certain areas are likely to cause such environmental damage.

Each year fires result from human activities in Victoria's forests. The current Regulations seek to manage a range of human activities that pose a high risk of causing bushfires in forests. These activities range from recreation undertaken by private individuals (e.g. barbecues, camp fires) to businesses conducting commercial activities (e.g. sawmills, bee farming, cutting firewood). While there are a range of regulatory and non-regulatory arrangements in place, the main 'residual problems' the proposal seeks to address are as follows:

- risks from campfires and barbecues are not well understood, leading to unsafe practices, which is a particular issue given high usage rates;
- some activities from sawmills and other operations are inherently risky owing to the machinery and processes used; and
- there are insufficient incentives to modify behaviour towards fires, due to inflexible enforcement tools.

Objectives

The Victorian Government's primary objective is to protect State forests, national parks and protected public land from damage by fire.⁵ By managing human behaviour involving fire in and around Victorian forests, the government seeks to:

- protect the safety of Victorians;
- prevent loss of private and public property;
- prevent loss or damage of biodiversity and park ecosystems;
- protect water supply catchment areas; and
- ensure that commercial activities are conducted in a safe manner.

Options to achieve the objectives

Three broad regulatory options were considered to address particular problems. As such, alternatives to the current Regulations⁶ were considered:

- Graduated penalties to reflect the seriousness of offence (Option 1.A);
- Performance-based standards for lighting fires (Option 2.A);
- Best-practice guidelines for campers and recreational users (2.B);
- Safety case regulation of sawmills and other operations (Option 3.A); and

³ State of Victoria, 2012, *Code of Practice for Bushfire Management on Public Land*, DSE, East Melbourne, p. 4

⁴ Department of Sustainability and Environment, 2010, *A literature review on the economic, social and environmental impacts of severe bushfires in south-eastern Australia*, report no. 87, Melbourne, p. v

⁵ It is worth noting that a declaration of a day of total fire ban is managed under the *Country Fire Authority Act 1958* and is not subject to the proposed Regulations.

⁶ Options 1.B, 2.C and 3.C consider the proposed Regulations.

- Best-practice guidelines for sawmills and other operations (Option 3.B).

Option 1.A: Flexible penalties for high risk, high probability activities

'Responsive regulation' has become a popular enforcement stance adopted by regulators. This is based on the theory that interaction between regulatees and inspectors requires a system that allows flexibility, while maintaining enforceability with a formal framework. Typically this suggests a hierarchy of enforcement tools ranging from warnings for minor infractions to criminal sanctions for major breaches. Responsive regulation suggests a greater range of enforcement tools could ensure cost-effective monitoring and community satisfaction. Option 1.A examines the ability to issue infringement notices in the Regulations for certain offences. Currently, the Regulations only provide for prosecutions (i.e. a court appearance), making no provision for issuing penalty infringement notices.

Option 2.A: Performance-based regulations for campfires and barbeques

The regulations dealing with campfires and barbeques are somewhat prescriptive; for example, a campfire in the open air must be in a properly constructed fireplace or in a trench at least 30 centimetres deep, and must not exceed more than one square metre, while the ground and airspace from the perimeter of the fire must be clear of flammable material for a distance of 3 metres. This raises the question of whether it is more appropriate to establish the prescriptive thresholds contained in the campfire and barbeque regulations, or a more flexible performance-based approach. To minimise any uncertainty around compliance, the government could issue guidance notes outlining safe camp fire and barbeque practices. Option 2.A examines the current prescriptive approach and assesses it against a performance-based approach.

Option 2.B: Best-practice guidelines for campfires and barbeques

Best-practice guidelines (or codes of conduct) could be introduced to advise campers and other recreational users of 'best-practice' fire safety in the Victorian setting. Best-practice guidelines (self-regulation) refer to the benchmark actions or procedures that are generally acceptable within the peer group and the wider society. Self-regulation usually implies that members of a group have accepted mutual obligations. These obligations are often described in a code or standards. Education campaigns are most suitable when the problem of non-compliance results from misinformation, or a lack of information. This may be the case with campers and other recreational users. As a stand-alone alternative, the guidelines developed under this option would be more detailed and have different content compared to any such supplementary information prepared for performance-based regulation.

Option 3.A: Safety case regulations for sawmills and other operations

Safety case regulation represents a shift away from prescriptive, input-oriented regulations to a more performance-based outcomes focus. The safety case requires each business to set out the adequacy of the site's safety management system by specifying prevention measures and strategies for reducing the effects of a major incident if one does occur. It can only be prepared following a full examination of a site's activities, to identify all hazards and potential major incidents, and to determine the necessary control measures. The 'safety case' is submitted to the regulator for approval.

Option 3.A would entail sawmills and other operations preparing a 'safety case' tailored towards fire protection. While sawmills and other operations do not pose the inherent risks of major hazard facilities (MHFs), they do operate in an environment where fires can have catastrophic consequences. Such safety cases under this option could involve negotiations between DEPI, WorkSafe and emergency services. This option would take the form of a scaled-down version of safety case regulation, given that such arrangements usually take into account a broader range of operational risks. Since the preparation of safety cases places the onus on business and can be expensive, the government could issue industry-specific guidelines to assist their preparation and help lower costs for business.

Option 3.B: Best-practice guidelines for sawmills and other operations

Best-practice guidelines could be developed for sawmills and other operators. As a stand-alone alternative, the guidelines developed under this option would be more detailed and have different content compared to any such guidelines prepared under the safety case regulatory option. An example of such guidelines are the *Fatigue Management Guidelines for the Forestry Industry* prepared by WorkSafe Victoria.⁷ Such guidelines can help operators identify and treat risks, and set up processes and procedure to monitor and evaluate these risks.

⁷ See WorkSafe, *Fatigue Management Guidelines for the Forestry Industry*, http://www.vicforests.com.au/files/tyuwxkunez/fatigue_management_forestry.pdf

Cost and benefits of Options

Flexible penalties for high risk, high probability activities

Assessment in this RIS suggests that the use of graduated enforcement tools (Option 1.A) is a superior approach to the current Regulations (Option 1.B). Introducing appropriate infringement penalties in the Regulations will enhance enforcement flexibility and will thereby improve the effectiveness of the Regulations. The infringement penalty system has a number of advantages over prosecution offences, which are usually heard in court. Such advantages include:

- the balancing of fairness (lower fine levels, convenience of payment);
- consistency of approach with compliance and system efficiency (reduced administration costs, no need to appear in court, no conviction); and
- the provision of a rapid and certain response for lower level offences, appropriate to the infringements. Deterrence is dependent on people being aware they are likely to be detected offending and that, being detected, they will face a penalty. This should be dealt with through less severe penalties and improved public awareness of rights and responsibilities.

While the preferred option proposes the introduction of a number of infringement penalties into the proposed Regulations, restrictions contained in the Act mean that not all offences dealt with by the proposed Regulations can be prescribed as infringement penalties.

Performance-based regulations for campfires and barbecues

With respect to Option 2, regulations may take the form of prescriptive rules that focus on the inputs, processes and procedures of a particular activity. One of the main advantages of prescriptive regulation is that it provides certainty and clarity. By setting out requirements in detail, it provides standardised solutions and facilitates straightforward enforcement.

Alternatively, performance-based standards specify desired outcomes or objectives, but not the means by which these outcomes/objectives have to be met. The main advantages that performance-based standards have over prescriptive regulation is the greater flexibility afforded to regulated parties to achieve desired outcomes, and their ability to be used in situations where circumstances may change over time.

Nevertheless, they do have some disadvantages. For example, the greater flexibility and freedom offered by performance-based regulations (often cited as a problem for those being regulated) can lead to uncertainty over whether their actions satisfy the standards set by the Regulations. The fundamental problem with this alternative is that regulatee and enforcement decisions would lack specificity and could be open to dispute. Performance-based standards may generate uncertainty because circumstances resulting in prosecutions may have a degree of subjectivity. This in turn may increase government enforcement costs because the interpretation of such standards may be challenged or determined in the court/tribunal system. (However, published guidance notes should remove a lot of the uncertainty). Establishing feasible performance-based standards would also be difficult. For these reasons, prescriptive rules stipulated for campfires and barbecues are considered best suited because they remove uncertainty, and compliance is not difficult or costly.

Option 2.B examines the possibility of addressing bushfire risk arising from campfires and barbecues by introducing best-practice guidelines (cast as voluntary codes). The guidelines could be introduced to advise campers and other recreational users of 'best-practice' camp and barbecue fire safety in the Victorian setting. While detailed and comprehensive guidance notes would be an improvement over the base case, this RIS finds that there is justification for further intervention to meet government objectives. Again, best-practice guidelines may be relatively effective in addressing simple information gaps, but may have little effect on reducing aberrant behaviour.

Safety case regulations for sawmills and other operations

Option 3.A examines safety case regulation. Safety case regulation, while effective, is costly for operators. It involves detailed audits of risks, and examination and documentation of procedures and processes, as well as planning, reporting and periodic updating. It is typically required for facilities with a high inherent risk such as oil refineries, chemical manufacturing sites, or gas-processing plants. Risk experts and engineering consultants may be needed to prepare safety cases, and this can be costly.

Under option 3.B, best-practice guidelines could be developed for specific operations or activities such as sawmills, bee farming, quarrying, welding and grinding, etc. Such guidelines could help operators identify and treat fire risks. In terms of effectiveness, this option represents an improvement over the base case. Businesses motivated to treat risks are likely to follow such guidelines, and the information contained in such guidelines would bring update procedures and practices to the business. The major problem with this option is that it is not compulsory and some businesses may take 'short cuts' because they do not fully appreciate the risks of their actions.

The proposed Regulations outline an approach whereby an authorised officer inspects the site and may, by notice in writing issued to the person in charge of a sawmill or other operation, specify firefighting equipment to hold and store, or

require certain other measures (e.g. clearing of areas of flammable material). In line with responsive and performance-based regulation, the operator is free to 'solve' their particular fire protection problem. Up to this point, the situation essentially involves self-regulation. The operator is motivated to prevent fire in order to protect the value of their business assets. In cases where the authorised officer considers that these standards have not been met, that officer may issue a notice in writing, mandating that the operator must acquire certain equipment or undertake clearing. DEPI, however, issues few written notices. To date, negotiated compliance arrangements have effectively achieved outcomes supporting the government's objectives.

The current arrangements are relatively inexpensive to comply with. Most operators 'voluntarily' adopt fire protection measures. Therefore, the current arrangements avoid the need for each business to prepare detailed plans and reports. It is also worth noting that regulation (and its associated costs) needs to be proportionate to the risks it seeks to address. DEPI recognizes that it does not currently have a centralised system for capturing detailed information about the costs imposed through the current Regulations. In order to better monitor and administer the proposed Regulations DEPI will collate a summary of 'notices' issued under the Regulations on a quarterly basis.

To inform the analysis, a Multi-Criteria Analysis (MCA) assessment was conducted of the options. These results are summarised in Table 1 below. The preferred design options, with the relatively higher weighted score, have been included in the proposed Regulations. The assessment methodology is described in the *Victorian Guide to Regulation*.⁸ The weightings and assigned scores require an element of judgement, and are therefore, in part, determined subjectively. Stakeholders are alerted to this and directed to section 4, which provides an explanation of the weightings and assigned scores.

Table 1: Summary of MCA assessment scores

| Options | Weighted Score* |
|--|-----------------|
| Option 1: Graduated penalties | |
| Option 1.A – Graduated enforcement tools | 15.00 |
| Option 1.B – Current Regulations | 8.75 |
| Option 2: Performance-based standards for camp fires, etc (individuals) | |
| Option 2.A – Performance-based standards | 10.00 |
| Option 2.B – Best-practice guidelines | 7.50 |
| Option 2.C – Proposed Regulations (prescriptive regulations) | 15.00 |
| Option 3: Safety case regulation and guidelines (business) | |
| Option 3.A – Safety case regulation | 2.50 |
| Option 3.B – Best-practice guidelines | 2.50 |
| Option 3.C – Negotiated compliance (proposed Regulations) | 7.50 |

* Bold score indicates preferred option.

Preferred option

The proposed Regulations, incorporating the design options above, scored the highest MCA assessment rating, and represent the preferred approach. The costs for forest users and government associated with the preferred approach are summarised in Table 2 below.

Table 2: Regulatory and government costs of the proposed Regulations, 10-years (Present Value)

| Description of Regulation | Cost Value | Cost (\$) |
|---|------------------------|--------------------|
| Application of authority, notice in writing | Administrative | 35,899 |
| Equipment requirements | Substantive compliance | 775,973 |
| Government costs | Government | 6,709,863 |
| Total | | \$7,521,735 |

The total quantifiable costs to users of parks plus the government costs associated with the proposed Regulations are approximately **\$904, 000** per annum, or \$7.5 million (PV) over a 10 year period. Of these costs, only the application and equipment costs, of \$811,872, (11 per cent) are directly borne by forest and park users, while around 89 per cent of costs are implicitly borne by the broader community, by funding government enforcement costs.

There are also non-quantifiable costs in the proposal, many of which relate to conduct or behaviour. The costs associated with ensuring safe behaviour in forests are considered minimal because the vast majority of individuals and

⁸ DTF 2011, *ibid.*, p. 85

businesses do not engage in aberrant or illegal behaviour. **Attachment F** provides a qualitative assessment of these costs. Further data was not readily available concerning the costs of complying with written notices (i.e. substantive compliance costs associated with purchasing firefighting equipment).

The benefits of the proposed Regulations are counterfactual in nature – that is, the benefits arise from fire events that do not occur. Thus, the primary benefits relate to avoided costs. As noted in this RIS, bushfires are capable of causing significant economic, social and environmental impacts, including long-lasting impacts. Every year, there are fires caused by escaped campfires, barbeques and other activities that the Regulations seek to manage.

Bushfires over the past 10 years have resulted in considerable costs to the community. Small fires can cost tens of thousands of dollars to manage, while larger fires can result in losses measured in the millions. Catastrophic fire events, which occur every few decades, are costed in the billions of dollars. The general magnitude of these costs suggests that the savings of fire protection are likely to be substantial, well exceeding the costs of the proposed Regulations.

An alternative to the proposed Regulations would be to prohibit all campfires, barbeques and commercial activities that may result in ignitions. However, this is not the preferred option due to the detriments to both individuals and businesses. By managing the risks of fire escapes and ignitions through the proposed Regulations, campers and businesses are able to enjoy the benefits of fire. For individuals, these include cooking, warmth, and participating in the camping experience, while businesses are able to saw timber, collect honey or engage in other economic activities. Prohibition of these undertakings would impact upon many rural and regional operators, particularly small business.

Given that costs have been calculated at approximately \$904,000 per annum, or \$7.5 million (PV) over a 10-year period (PV), a Break-even Analysis can be used to measure the reasonableness of benefits outweighing regulatory costs.

For example, the value the community places on healthy forests (based on a Willingness to Pay (WTP) study) may be estimated. The valuation of non-use values of Victoria public land was attempted in a 2007 study: *Non-use Values of Victorian Public Land: Case Studies of River Red Gum and East Gippsland Forests*.⁹ The study illustrated that Victorians placed a gross value benefit of \$6.5 million per annum of improving the health of 500 hectares of river red gum.¹⁰ While these finding should be viewed cautiously, as an illustrative benchmark it shows that if the proposed Regulations prevent the damage of about 70 hectares of forest, the benefits of the proposal will outweigh the costs. Based on currently available data, DEPI estimates that an approximate average of 304.2 hectares per annum were burned by activities addressed by the Regulations between 2004 and 2013. This RIS submits that it is reasonable to assume that such benefits (through avoided costs) over the life of the Regulations will be attained.

Groups affected

Groups affected by the options identified above include forest visitors and campers; users of stationary engines, such as generators or pumps; persons using chainsaws, welders, grinders, or gas cutting equipment; sawmills and other operations (i.e. mining, quarrying, brick making, eucalyptus oil distilling, or charcoal burning) and bee farmers. Owners of property in the 'marginal mile' are also affected.

Competition Assessment

The burdens placed on business affected by the proposed Regulations are considered small and as such, do not restrict competition in the broader market. The proposed Regulations are considered to meet the 'competition test' as set out in the *Victorian Guide to Regulation*.

Implementation

Given that the proposed Regulations closely resemble requirements that have been in place for 10 years, it is not expected that the proposed Regulations will raise any implementation issues or cause unintended consequences.

Evaluation

DEPI does not anticipate that the proposed Regulations will require a formal review once they are in place following assessment through the RIS process. This is because they largely remake the current Regulations, which have been in operation for 10 years, and similar regulations have been in place for over 20 years. However, it became apparent during the preparation of this RIS that certain data were not readily available or were not captured in a consolidated format. In order to better monitor and administer the proposed Regulations, DEPI will:

- keep written records of 'authorities' and 'notices' issued under the Regulations, and
- collate a summary of these records on a quarterly basis.

More broadly, DEPI will monitor the proposed Regulations closely and, should any issues with their operation arise, these will be rectified.

⁹ URS Australia, 2007, *Non-use Values of Victorian Public Land: Case Studies of River Red Gum and East Gippsland Forests*, viewed 17 December 2013, http://www.veac.vic.gov.au/documents/URS_CM_report_Executive_Summary.pdf

¹⁰ *ibid.*, n.p. This hypothetical example was used in the study to illustrate these key stages, involving the setting aside of part of a River Red Gum forest as a nature conservation reserve rather than production forest. Consultation with bio-physical scientists and forest managers yield predictions that the change in land use will cause (over the next 20 years) approximately: 500 more hectares of healthy River Red Gum forests, 10 additional breeding pairs of parrots, 5 per cent more of pre European numbers of Cod, and two more camping sites with facilities.

Conclusion

This RIS concludes that:

- the benefits to society of the proposed Regulations exceed the costs;
- the net benefits of the proposed Regulations are greater than those associated with any practicable alternatives; and
- the proposed Regulations do not impose restrictions on competition.

Public consultation

The prime function of the RIS process is to help members of the public comment on proposed regulations before they are finalised. Public input, which draws on practical experience, can provide valuable information and perspectives, and thus improve the overall quality of the regulations. The proposed Regulations are being circulated to key stakeholders.

While the proposed Regulations largely remake the current Regulations, during the preparation of this RIS it became apparent that some data were not readily available, while detailed consultation with a range of sawmills and other operators provided only limited feedback on technical matters. Another problem with regulations which have been in place for some time is that regulatees may become 'comfortable' with processes, and better alternatives may be overlooked. To address this, the RIS also asks stakeholders to step back and consider different ways to minimise risks of fire on public land while minimising compliance burdens for stakeholders.

DEPI welcomes and encourages feedback on the proposal. While in no way limiting comments, stakeholders may wish to comment on the following discussion points:

Discussion Point 1: Can the process of applying for an authority be streamlined or simplified?

Discussion Point 2: To what extent are sawmills' and other operators' fire protection measures included in Safety Management Plans, and what are market incentives, such as insurance requirements, that would help to mitigate the risks?

Discussion Point 3: Operators may wish to provide advice on whether the equipment standards established by the Regulations represent best-practice.

Discussion Point 4: The proposed Regulations deal with a general prohibition on lighting fires on public land unless certain conditions are met. They also deal with regulations for a narrow range of specific activities. DEPI would be interested in hearing from stakeholders on any alternative options that could achieve the government's objectives while minimising costs to individuals and business.

Discussion Point 5: The proposed Regulations contain a number of thresholds in relation to safe distances from fire. For example:

- a campfire must be in a properly constructed fireplace or in a trench at least **30 centimetres** deep, and must not exceed more than **1 square metre**, while the ground and airspace from the perimeter of the fire must be clear of flammable material for a distance of **3 metres** (regulation 9);
- a campfire or barbeque using liquid fuel, gaseous fuel or chemical solid fuel in the open air must have clear ground and airspace within a distance of **1.5 metres** of flammable material (regulation 10);
- there are minimum distances for clearance of flammable material from bee smokers of **1.5 metres** (regulation 12), stationary engines of **1.5 metres** (regulation 16), and welders etc of **3 metres** (regulation 18); and
- an authorised officer may, by notice in writing, specify a distance of up to **40 metres** that needs to be cleared of flammable material surrounding a sawmill or other operation (regulation 19).

Stakeholders are invited to comment on the appropriateness of these thresholds.

Discussion Point 6: Operators may wish to provide advice as to the cost of complying with the current Regulations.

Discussion Point 7: The proposal to remove the schedule from the current Regulations aims to treat the areas listed in the Schedule in a way consistent with the rest of the State. Will any issues arise from the schedule's removal?

Discussion Point 8: Does the proposal inconvenience or impose unreasonable limitations on the rights of inconvenience forest users?

Discussion Point 9: Are there any practical difficulties associated with the proposed Regulations?

Discussion Point 10: Will any unintended consequences arise from the proposed Regulations?

Discussion Point 11: Are knapsacks still widely used, or should the Regulations also provide for other fire suppression technologies?

Discussion Point 12: Are the times and months prescribed in the proposed r. 23 in relation to the use of safety fuses, fuse lighters or splitting guns appropriate?

1. What is the problem to be addressed?

Key points:

- There are 6.75 million hectares of native forest in Victoria on public land. The nature of the forests (predominantly eucalypt) and climatic conditions make Victoria one of the most bushfire prone areas in the world.
- Bushfires impose economic, social and environmental costs on the Victorian community.
- Government intervention in the management of forests can be justified both on grounds of market failure and to manage risks for the community (in this case, fire prevention).
- There is a general requirement under the *Forests Act 1958* for the Secretary to DEPI to prevent and protect Victorian forests from fire.

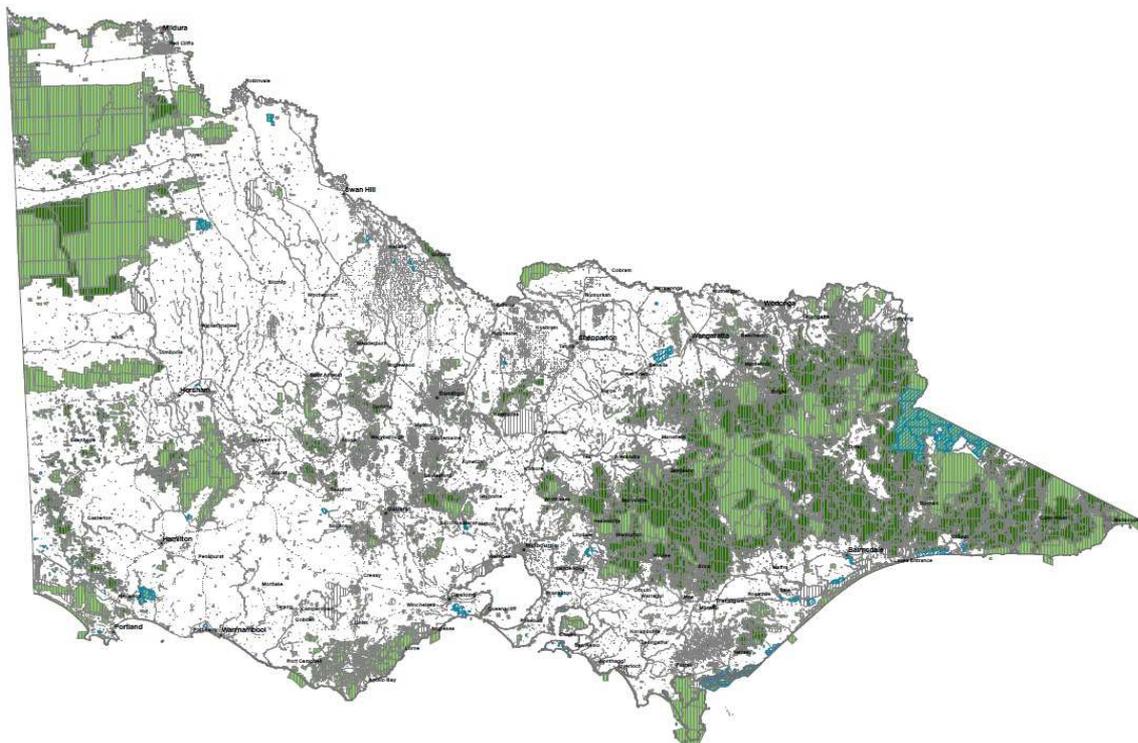
The risk of non-intervention is that the incidence and severity of bushfires on public land will increase, along with attendant economic, social and environmental costs. These costs range from tens of thousands of dollars for small fires to millions for larger fire.

1.1 Background

1.1.1 Victoria's forests

There are 8.3 million hectares of forest in Victoria covering 36 per cent of the State. This includes 7.8 million hectares of native forest, which accounts for 95 per cent of the total forest area, and 441,000 hectares of plantations. Some 85 per cent of Victoria's native forest is on public land, with 3.5 million hectares formally protected in conservation reserves and 3.2 million hectares located in State forests. Eucalypt forest types account for 93 per cent of Victoria's total native forest area. The most common eucalypt forest types are eucalypt medium open, Mallee woodland, eucalypt tall open, and eucalypt medium woodland. Eucalypt forests are highly flammable and in certain conditions can present a fire hazard.

Figure 1, below, shows the extent of forest areas in Victoria covered by the current Regulations.



Victorian forests protect and provide a number of important values. These encompass the *natural values* of protecting and conserving the natural environment, the *social* and *cultural values* of conserving cultural heritage, providing opportunities to enjoy and understand Victoria's environment, and providing *economic value*.

A key natural value provided by forests is the protection of Victoria's biodiversity. Forests include a diverse range of ecosystems and bioregions, a significant proportion of Victoria's native flora, fauna and other vegetation (including those which are threatened) and significant geological features. Some 37 species of amphibians, 117 species of reptiles, 272 birds, 87 mammals and 2,853 vascular plants rely on forest habitats for all or part of their life cycle.

A further set of natural values provided and protected by forests are termed 'ecosystem services'. These services are the vital inputs for community well-being that ecosystems provide. Ecosystem services include high quality air, clean water, pollination, pest insect control, healthy soil and the prevention of soil erosion. A total of 2.9 million hectares of native forest are managed for water supply in Victoria. The majority of this is in State forest and nature conservation reserves.

Social and cultural values of forests include the preservation and protection of the physical cultural heritage and connection to country of indigenous peoples and traditional owners, as well as the preservation and protection of physical cultural sites which post-date European settlement. Victoria's forests contain over 8,300 Aboriginal Cultural Heritage Places listed on the Victorian Aboriginal Heritage Register. For non-indigenous cultural heritage sites, there are 390 sites recognised at the State level, 3,439 sites recognised at the local/regional level, and 639 sites yet to be assessed.

While periodic fire is essential to biodiversity health in Victoria, fire frequency beyond the 'tolerable fire intervals' can result in serious negative impacts on the environment. Unintended fire ignitions caused by human activity in certain areas are likely to cause such environmental damage.

Economic activity in forests primarily relates to timber harvesting, grazing and honey production (also known as apiculture). Other minor activities include products taken from the forest, including seeds, leaves, stones, sand and gravel. Table 3 below shows the number of businesses potentially affected by the proposed Regulations. Sawmill operators and other operations must hold a forest produce¹¹ licence under the Act. Conditions may be placed on such licences and leases.

Timber harvested from native forests is used for a number of purposes, including house construction, fencing materials and fibre for paper. Quality timber from Victoria's native forests is highly prized by furniture makers and for hardwood flooring in houses. Woodchips are a by-product of timber harvesting in native forests and are sought both locally and internationally for use in high quality paper products. Between 2001-02 and 2005-06, the annual value of wood production from State forests in eastern Victoria increased from \$137 million to \$147 million. In 2005-06, the value of log production from State forest was equivalent to 0.1 per cent of Victoria's Gross State Product. Data are only currently available for eastern Victoria. However, this accounts for over 90 per cent of the total timber production in Victoria.

Honey is another important commercial product supported by state forests. Each year, about 5,100 tonnes of honey are produced in Victoria, representing 15.6 per cent of the national total. Most of that is sourced from hives in state forests.¹² In 2013, there were approximately 265 registered apiary operators operating in the fire protected area, occupying 3,216 apiary sites.¹³

Table 3: Sawmills and other operations in Fire Protected Areas

| Description | Number |
|---|--------|
| Sawmills etc | 13 |
| Apiarists | 265 |
| Extractive licences (mining, quarrying) | 102 |
| Eucalypt distillers | 4 |

Source: DEPI Forest Produce licences

¹¹ Section 3 of the *Forests Act 1958* defines 'forest produce' as all parts of trees or plants, including any parts below the ground; the products of trees or plants, whether or not those products have become separated from those trees or plants prior to being harvested and includes honey, beeswax, oil distilled from any species of eucalypt, firewood collected for domestic use, stone, gravel, limestone, lime, salt, sand, loam, clay or brick-earth, but does not include gold, silver, metals or minerals, or subject to any specific provision to the contrary, timber resources within the meaning of the *Sustainable Forests (Timber) Act 2004*.

¹² The State of Victoria, 2005, *Victoria's State of the Forest Report, Department of Sustainability and Environment*, p. 66

¹³ A recent Commonwealth Parliamentary committee report found that the honey bee industry contributes directly to between \$4 billion and \$6 billion to agricultural production nationally.

1.1.2 Forest management

DEPI manages State forests for the conservation of flora and fauna, protecting water catchments and water supply, providing timber for sustainable forestry, protecting areas and objects of archaeological and historic value, and for a wide range of recreational activities including sight-seeing, bush walking, camping, sporting activities and four wheel driving. The State forests system provides for almost 4,000 built assets at 384 visitor sites. It is estimated that 4 million people visit State forests each year.¹⁴

1.1.3 Park management

Under the Act, the Secretary to DEPI is responsible for ensuring that forests are controlled and managed in accordance with the Act. Parks Victoria was established under the *Parks Victoria Act 1998* and is responsible, through a management services agreement with DEPI, which is authorised by s.16A of the Act, to manage the forests and other areas under the Act on behalf of the Secretary.¹⁵

Parks Victoria's long term goals with respect to park management are for parks to be places in which:

- natural values and ecological processes are maintained and restored for their long-term viability;
- indigenous people's rights, aspirations and needs are acknowledged and indigenous culture is conserved and managed in partnership with traditional owners and indigenous communities;
- places and objects of significant heritage value from European settlement are conserved for current and future generations to enjoy and understand the legacy of previous generations; and
- environmentally sustainable and culturally appropriate recreational, social and economic benefits of parks are available to Victorian communities.¹⁶

In 2012, Parks Victoria was responsible for managing a portfolio of more than 27,000 assets, including 45 visitor centres, 855 toilet blocks, 516 viewing lookouts, 687 information and picnic shelters, 55 playgrounds, 15,000 kilometres of roads, 3,700 kilometres of walking trails and more than 100 sporting facilities.¹⁷ Facilities such as walking or riding tracks, picnic sites and camp grounds are provided solely for recreation or tourism. In contrast, roads and vehicular tracks are primarily managed for forest management purposes, but can also enable recreation and tourism activities. Every year, an estimated 26.7 million visits were made to forests in national parks, state parks and other parks and gardens across Victoria.

The considerable value of public infrastructure is therefore evident.

1.1.4 Protecting forests from fire

There is a general requirement under the *Forests Act 1958* to prevent and protect Victorian forests from fire.¹⁸ The Fire Protected Area (FPA) consists of the 'Regulated Fire Area' (RFA), which covers State forests, national parks and protected public land, and a 1.5 km strip of land around the RFA, commonly known as the 'the marginal mile'. In certain places, the 'marginal mile' has been excised and fire management responsibilities allocated to the Country Fire Authority (CFA).

The current Regulations also place restrictions on fires during 'prohibited periods'. The prohibited period for RFAs is the whole year, while the prohibited period for the 'marginal mile' is declared by gazettal according to section 3(2) of the Act. Such declarations vary with the fire risk for a particular season. A prohibited period may be declared for the marginal mile by the Minister for any or all of the applicable lands within 14 local government areas (LGA) and three Alpine resorts. The prohibited period may be introduced all at once, or progressively. A prohibited period may not be declared for some LGAs in a particular season, depending on fire risk.

1.2 Nature and extent of the problem

1.2.1 Damage from fire

Victorians live in a fire-prone environment dictated by the climate of wet winters (which creates fuel) and hot dry summers. In fact, Victoria is one of the most bushfire prone areas in the world.¹⁹ Evidence of damage from fire has been well-documented. Two DEPI studies, *The impacts, losses and benefits sustained from five severe bushfires in south-eastern Australia* and *A literature review on the economic, social and environmental impacts of severe bushfires in south-eastern Australia*, provide a cost estimate of five bushfire events in Victoria and a review of the evidence of economic, social and environmental impacts from bushfires.

The studies confirm that severe bushfire events can cause major economic costs. The fires destroyed and damaged privately and publicly owned property and infrastructure, State forests and national parks, and livestock and wildlife. The

¹⁴ *ibid.*, p. 30

¹⁵ DSE 2012, *ibid.*, p. 14

¹⁶ Parks Victoria 2007, *ibid.*, p. 16

¹⁷ Parks Victoria, 2012, *Parks Victoria Annual Report 2011-12*, Melbourne, p. 7

¹⁸ Sections 61A to 72 of the *Forests Act 1958*

¹⁹ State of Victoria, 2012, *Code of Practice for Bushfire Management on Public Land*, DSE, East Melbourne, p. 4

first study estimates that the net economic losses sustained by the community were as follows: Ash Wednesday – \$795 million; Alpine fires – \$2.7 billion; Grampians fires – \$407 million; Great Divide fires – \$2 billion and Black Saturday Fires – \$925 million²⁰ (the Victorian Bushfire Royal Commission later estimated the cost of this fire to be over \$4.3 billion²¹). While the incidence of past severe bushfires suggests that such events occur at least once a decade, each year hundreds of smaller and medium fires occur on public land, along with occasional major fires.

The second study concluded that severe bushfires are capable of causing widespread and long lasting economic, social and environmental impacts.²² Economic losses were associated with direct impacts (e.g. loss of infrastructure and equipment) and indirect impacts (e.g. business disruption). Social impacts include fatalities and injuries, health problems, or the loss of cultural heritage assets. Environmental impacts include damage to the soil, water, air, flora and fauna.²³

These studies examine catastrophic fires and illustrate the magnitude of costs associated with such bushfires. In that sense, they represent an upper limit of costs. Most fires caused by activities covered by the proposed Regulations are much smaller and localised. That said, costs are scalable and even relatively small fires can impose direct costs in the hundreds of thousands of dollars on the community and indirect costs on the environment.

Furthermore, the Australian Institute of Criminology (AIC) in its study of trends in deliberate vegetation fires in Australia found that “no single cause was consistently responsible for the area burned” by bushfire.²⁴ That is, large bushfires can be ignited in a number of ways, including by the types of activities managed by the draft Regulations. All large ‘campaign’ fires are small in the initial stages.

The cost of a particular bushfire is determined by a number of factors including the:

- size of the fire;
- distance of the fire from town centres, critical infrastructure and commercial operations;
- the terrain in which the fire is burning. If aircraft are required to fight the fire, the cost of suppressing the fire will be higher; and
- the time it takes to control the fire. The costs of accommodation for fire fighters, industry disruption and so on will be greater the longer the fire burns.

Victorian Government policy for bushfire management on public land is to:

- reduce the impact of major bushfires on human life and property, and
- maintain or improve the resilience of natural ecosystems.

While some fires are started by natural events, including lightning strikes, or by criminal acts such as arson, a large number of fires result from human activities. The current Regulations seek to manage a range of non-criminal human activities that pose a high risk of uncontrolled fires in forests. These activities range from recreation undertaken by private individuals (e.g. barbecues, camp fires) to businesses conducting commercial activities (e.g. sawmills, bee farming, cutting firewood). The following section illustrates that there are real risks of fire events associated with these activities.

1.2.2 Fires and activities in forests

Unplanned fire ignitions occur annually in Victoria’s forests, with many being traced to human activity. DEPI collects information on the ignition source of bushfires which affect State forest, national park, protected public land and other fire protected areas. It is not always possible to determine the ignition source of a bushfire, so in many cases the cause of these fires is listed as ‘unknown’. Table 4 shows identified ignition sources of bushfires in Victoria between 2004 and 2013. It also shows the number of fires for which they were identified as the ignition source during that period.

²⁰ DSE, 2010, *The impacts, losses and benefits sustained from five severe bushfires in south-eastern Australia*, report no. 88, Melbourne, p. vii

²¹ 2009 Victorian Bushfires Royal Commission, Vol 1., Appendix A – estimated Costs of the fires, pp. 342–346

²² Department of Sustainability and Environment, 2010, *A literature review on the economic, social and environmental impacts of severe bushfires in south-eastern Australia*, report no. 87, Melbourne, p. v

²³ An excellent summary of these impacts of provided on pp. v–viii, *ibid*.

²⁴ Colleen Bryant, *Understanding bushfire: trends in deliberate vegetation fires in Australia*, Technical and Background Paper No 27, Australian Institute of Criminology, Canberra, 2008 p. 88

Table 4: Selected fire events and causes in Victoria, 2004–2013

| Cause of fire | Number |
|--|--------|
| Campfire/barbeques | 560 |
| Deliberate lighting (malicious) | 863 |
| Exhaust, chainsaw | 6 |
| Exhaust, other | 24 |
| Snigging, hauling | 54 |
| Waste disposal, industrial, sawmill, tip | 5 |
| Burning, vehicle, machine | 146 |

Note: These figures represent the best currently available data.

The Regulations manage each of the activities identified in Table 4. However, the regulation of the deliberate (malicious) lighting of fire is primarily regulated under section 201A of the *Crimes Act 1958*, which provides that;

Intentionally or recklessly causing a bushfire

(1) A person who—

- (a) intentionally or recklessly causes a fire; and
- (b) is reckless as to the spread of the fire to vegetation on property belonging to another—is guilty of an offence and liable to level 4 imprisonment (15 years maximum).

Snigging and hauling are not mentioned specifically in the Regulations, some activities of snigging/hauling businesses may be covered by the Regulations, for example, the use of a chain saw, vehicle or other non-stationary engine (regulation 17).

DEPI compliance officers collect data on suspected breaches on public land of the:

- fire prevention provisions in the *Forests Act 1958* and the Regulations; and
- the total fire ban provisions of the *Country Fire Authority Act 1958*.

Table 5 shows the number and type of suspected breaches of these pieces of legislation reported by DEPI compliance officers between 2004 and 2013. Some, although not all, of these reports would later have formed the basis of a prosecution. The table provides evidence that despite extensive information campaigns and signage, certain persons continue to undertake risky activities with fire on public land. Since 2011 there has been a substantial increase in the number of offences reported by Authorised Officers. The increase in reported offences recognises increased compliance efforts and amendments to the *Forests Act* in 2010, which empowered Authorised Officers to issue infringement notices for some campfire and barbecue related breaches.

It is also important to recognise that fires do not respect land tenure – a fire started on public land can spread to private land and *vice versa*.

Table 5: Fire-related reported breaches of the Act and Regulations on public land, 2004–2013

| Offence | Number |
|---|--------|
| Arson | 29 |
| Unattended campfire | 65 |
| Unattended campfire on day of total fire ban | 12 |
| Campfire on day of total fire ban | 23 |
| Flammable material not cleared >3m from the outer perimeter of a campfire | 28 |
| Stationary engine not cleared >1.5m of flammable material | 24 |
| Campfire > 1m ² | 9 |

| Offence | Number |
|---|--------|
| Campfire > 1m in length | 8 |
| Campfire not in 30cm pit | 9 |
| Unauthorised burn off on public land | 3 |
| Escaped private property burn off into State Forest | 1 |

Source: DEPI database, April 2013

Prosecution data for the period of the current Regulations suggests that the Regulations are breached by single time offenders. Anecdotal evidence from compliance staff in relation to campfires suggests that some people who contravene the Regulations are unaware of the requirements while others are not prepared to undertake the work required to be compliant with the Regulations, for example maintaining clear distances from campfires. In this regard, of the offences listed above, almost two-thirds relate to unattended campfires and campfires lit with insufficient clearing, not in a proper pit, or fires that were too large. While accurate data is not available concerning persons who were genuinely unaware of the requirements, on the face of it, guidelines or a focussed information campaign may assist in addressing such 'information gaps'. Such guidelines may be helpful in improving compliance where breaches relate to a lack of knowledge of the requirements, but are unlikely to be effective in cases of miscreant or aberrant behaviour. The development of such guidelines for campers and barbeque users, and for sawmills and other operations is discussed below.

DEPI Compliance Officers have advised that fires are no more likely to escape from a 'provided fireplace' than from a fire pit constructed by a camper: a campfire is at most risk of causing a bushfire where the ground around the campfire has not been appropriately cleared. Hence, improving the number and quality of fire pits provided for park users is not considered in this RIS as an option to reduce the risk of bushfires.

In addition to these reported breaches, DEPI reports that authorised officers directed persons on numerous occasions to extinguish fires under current regulation 9. The most common reasons for such directions were inadequate clearing around campfires or barbeques, and fires being too large.

The use of mobile equipment such as chainsaws and vehicles is covered by the Regulations, which require that such engines be fitted with a spark arrestor and turbo charger or exhaust aspirated air cleaner. This type of equipment is most likely to be used on private land which falls within the fire protected area. The new exemption power will allow DEPI officers to provide exemptions from these regulations and apply any necessary conditions. DEPI would expect, however, to use the exemption power only in very limited circumstances, to allow emergency management agencies to undertake operations consistent with their responsibilities, as described in the Emergency Management Manual Victoria.

As noted above, the AIC found that the trend in deliberately lit vegetation fires was that "no single cause was consistently responsible for the area burned" by bushfire. The severity of a fire is largely dependent on the weather on the day of ignition and the weather events leading up to time of ignition, regardless of how the fire was started. Prolonged dry periods, combined with extreme high temperatures, low humidity and strong north westerly winds, can result in catastrophic fire events. Fires that start while fuel moisture levels are high and the weather is cool with low winds will generally result in fire that is more easily controlled.

1.3 Rationale for government intervention

The predominant rationale for government intervention in State forests is its characteristic as a public good. Public goods are goods that no one can be effectively excluded from consuming and increased consumption by one individual does not reduce availability to others. Economic theory explains why the free market will systematically under-provide such goods, and why collective action, typically by the government, is usually required to ensure their adequate provision and protection.²⁵

However, the specific rationale for government intervention in this case concerns risk management. The *Victorian Guide to Regulation* notes that a particular form of social regulation relates to requirements that seek to reduce or manage the risk of harm to health, safety or welfare of individuals or the community. This includes measures to promote public health and safety. In the present case, reducing the risks of loss of public and private property (including environmental values) are also relevant.

²⁵ Bishop, J. T. (ed.), 1999, *Valuing Forests: A Review of Methods and Applications in Developing Countries*, International Institute for Environment and Development, London. Prepared for the World Bank Forest Policy Implementation Review and Strategy, p. 8

Risk analysis is a valuable tool in addressing the threshold issue of whether or not governments should intervene. It can help to determine whether the risks that government intervention is intended to address are of significant magnitude compared with other risks; and the extent to which government intervention reduces the initial risk.

For example, sawmills and other operations often use machinery (e.g. equipment with internal combustion engines that produce heat or sparks) or undertake processes (e.g. snigging, disposing of sawdust, or smoking bees) that have the potential to start fires. DEPI consider that while the inherent risk of such operations remains high, compliance with the current Regulations (i.e. treatment of the risk) means that fires started from these activities are now relatively rare.

The risks and hazards associated with bushfires on public land are well-established. Fires on public land range from relatively low impact frequent events to catastrophic high impact occurrences. Likewise, the direct economic impacts range from tens of thousands of dollars for smaller fires to millions of dollars for larger fires. Extreme events, which have occurred every few decades in Victoria since European settlement, have been estimated to cost in the hundreds of millions of dollars (e.g. the Black Saturday fires in 2009 were estimated to cost \$4.3 billion²⁶).

The concept of 'externalities' may also be relevant. Externalities are costs individuals or groups cause through certain activities where those individuals do not fully bear these costs; they are borne at least partially by the broader community. For example, campers directly benefit from a campfire (cooking, warmth, and aesthetics). However, an 'escaped' campfire that results in a bushfire can impose large economic, social and environmental costs on third parties. The current fire protection regulations impose small costs on certain forest users (i.e. persons who light fires or who may cause ignitions) in order to reduce or remove the burden of larger costs from the broader community.

This RIS contends that, based on past events and likely future occurrences, there is a strong case for government intervention to manage individuals' and businesses' actions on public land, thereby reducing risks associated with fire. Without government action, there is a risk that the frequency and severity of bushfires on public land would increase, raising the attendant economic, social and environmental costs.

It is also worth noting that campers and commercial operators have 'private incentives' to avoid fire. In the case of campers and park visitors, there are health, safety and social motivations for individuals to ensure that their fires do not escape. Most fundamentally, this arises from the desire to preserve their lives and those of others, as well as a wish to avoid the social stigma associated with being responsible for damaging or destroying the environment, wildlife and public infrastructure.

Additionally, businesses are motivated to operate in a manner that avoids bushfire; their livelihood depends on the protection of their business assets and often of public forest resources. Businesses also operate under occupational health and safety legislation that imposes a duty on owners to provide a safe and healthy workplace for workers and contractors. This would include fire protection and appropriate training. A range of common law remedies may also apply to individuals and business whose actions result in the losses to others.

Finally, anecdotal evidence from DEPI and Parks Victoria enforcement officers suggests that because of the time and cost involved in mounting a prosecution, some officers will not seek to prosecute offences which represent a relatively low bushfire risk. Officers consider that this undermines the overall enforcement regime, and DEPI considers that a more flexible approach to enforcement would encourage greater compliance, while imposing a proportionate compliance response to lower-risk breaches.

1.4 Residual problem to be addressed

Residual problem

The preceding sections discuss the physical impacts and risks arising from human behaviour that may result in damage from fire. The data presented in tables 4 and 5 suggest that, despite existing regulatory and non-regulatory controls, the following problems exist:

- risks from campfires and barbecues are not well understood, leading to unsafe practices, which is a particular issue given high usage rates;
- some activities from sawmills and other operations are inherently risky, owing to the machinery and processes used; and
- there are insufficient incentives to modify behaviour towards fires, due to inflexible enforcement.

²⁶ VBRC, *ibid*, pp. 342-346

2. Objectives of government intervention

Key points:

- The Victorian Government's broad objective is to provide for the protection of State forests, national parks and protected public land from damage by fire.
- The specific objectives of government intervention are to minimise fire risks associated with human activity.
- By proscribing certain actions or activities the proposed Regulations aim to:
 - protect the safety of Victorians;
 - prevent loss of private and public property;
 - protect the environment from damaging fire; and
 - provide assurance that commercial activities are conducted in a safe manner.
- The proposed Regulations are made under sections 99 and 99A of the Act.

2.1 Government policy

The primary policy document governing fires on public land is the Victorian Government's *Code of Practice for Bushfire Management on Public Land 2012*.²⁷ The purpose of the Code is to support DEPI in meeting its legislative responsibilities, including those under the *Forests Act 1958*. The primary objectives for bushfire management on public land 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; and
- maintain or improve the resilience of natural ecosystems and their ability to deliver services such as biodiversity, water, carbon storage and forest products.²⁸

Section 2 of the Code specifically deals with fire prevention. The stated outcome and strategy is the 'reduced incidence of bushfires caused by human ignition' by implementing regulatory, enforcement and awareness strategies. The proposed Regulations form a key element of the government's regulatory and enforcement strategy.

2.2 Regulatory framework

2.2.1 Legislative framework

The *Forests Act 1958* (the Act) is the primary piece of legislation that regulates activities in forests and the harvesting of forest produce. Sections 61A to 72 of the Act deal specifically with the prevention and protection of forests from fire. Relevant sections are contained in **Attachment B**. Key elements in the Act that provide the regulatory framework include:

- 'fire protected area' (FPA), which is any land within a State forest, a national park, and land within 1.5 kilometres (unless excised pursuant to an Order) of any reserved forest or any area of unoccupied Crown land proclaimed as a protected forest, any national park, or any protected public land, or within any protected public land;
- 'protected public land' means any lands of the Crown not being within a State forest or a national park declared to be protected public land for the purposes of section 61(1) or deemed to be protected public land for the purposes of section 62(1A);
- 'prohibited period' with respect to any State forest, protected public land or national park is the whole year. With respect to any fire protected area other than a State forest, protected public land or national park, it is the period declared by the Minister; and

²⁷ State of Victoria, 2012, *Code of Practice for Bushfire Management on Public Land*, DSE, East Melbourne

²⁸ *ibid.*, p. 1

- section 99 of the Act provides that the “The Governor in Council may make regulations not inconsistent with the provisions of this Act for all or any of the following purposes, namely: section 99(31) Prescribing either generally or particularly penalties not exceeding 50 penalty units for breaches of any regulations”.

2.2.2 Current Regulations

The current Regulations are primarily a tool for managing the behaviour of forest users – individuals and businesses – in order to prevent damage of public land by fire. The current Regulations will expire on 29 June 2014. The current Regulations give operational effect to the Act by regulating or prohibiting:

- fires in the open air;
- the use of engines and equipment; and
- the activities sawmills and other operations.

The Regulations also specify the fire safety actions these businesses are required to undertake. They provide authorised officers with authority to permit individuals to conduct activities which would otherwise contravene the Regulations.

Discussion Point 1: Can the process for applying for an authority be streamlined or simplified?

The Regulations apply to the FPA during the prohibited period. The FPA includes the RFA, which is land within State forests, protected public land or national park. In the RFA, the Act defines the prohibited period as the whole year. Contraventions of the Regulations that occur within the RFA attract more severe penalties than contraventions that occur elsewhere in the FPA.

The FPA also includes land within 1.5 km of State forest, protected public land or national park. The Act allows any of this land to be excised from the fire protected area and over the past several decades this has been done in Western and Central parts of Victoria where fire prevention can be adequately managed by the CFA. At the current time the inclusion of land within 1.5 km of the regulated fire area continues to apply in 14 municipalities and three alpine resorts in the North-east and Gippsland regions.

In FPAs that are not within the RFA, the prohibited period is declared by the Minister or his delegate by notice in the Victorian Government Gazette. Generally, the prohibited period will be the time of year when the risk of bushfire ignition is higher, typically the period including the summer months and additional weeks before and after this period. In 2013, the prohibited period was declared to commence on 3 December 2013 and is expected to end on May 1 2014. By convention, these events occur at 1.00am on the specified day.

Aside from the prohibited period the current Regulations also include a Schedule that denotes particular areas of State forest and reserved forest that have specific restriction periods for campfires and solid fuel barbeques.

2.2.3 Codes of practice and educational material

Parks Victoria publishes *Park Notes* for a number of parks managed under the Act. *Park Notes* provide visitors with information about the park as well maps and information about the range of activities permitted or restricted in the park. *Park Notes* are a useful educational tool to inform park visitors about areas where fires may be lit.

DEPI also produces a series of publications, *Forests Notes*, which provide information on places to visit, minimal impact use and recreational activities in Victoria’s forests.²⁹ Minimal impact use information includes codes on bushwalking, bush camping, and 4WD touring. These codes provide general information for users of parks and State forests, and specifically information concerning lighting fires. This information is freely available on DEPI’s website.

In addition, a number of recreational and business groups publish codes of conduct, which deal with lighting fires on public land.

²⁹ DEPI, see: <http://www.depi.vic.gov.au/forestry-and-land-use/visiting-parks-and-forests/visiting-state-forests/places-to-visit>

2.3 Objectives

The Victorian Government's primary objective is to protect State forests, national parks and protected public land from damage by fire. By managing behaviour involving fire in and around Victorian parks, the government seeks to:

- protect the safety of Victorians;
- prevent loss of private and public property;
- prevent loss or damage of biodiversity and park ecosystems;
- protect water supply catchment areas; and
- ensure that commercial activities are conducted in a safe manner.

2.4 Authorising provision

The proposed Regulations are made under sections 99 and 99A of the *Forest Act 1958*. These provisions provide that the Governor in Council may make regulations not inconsistent with the provisions of this Act and for certain purposes.³⁰

³⁰ In particular, section 99 of the *Forests Act 1958* provides that regulations may be made for the following purposes:

- (13) Regulating the burning off of inflammable material and the lighting and use of fires and the use of any engine, boiler or other device or equipment which is capable, in the course of its ordinary use, of igniting a fire, within any fire protected area or any specified portion thereof;
- (13A) Providing for and regulating the giving by authorised officers of written authority to light fires in any fire protected area or any part thereof and prescribing the circumstances in which such authority may be given;
- (13B) Prescribing conditions to be specified in any written authority to light a fire and authorizing authorised officers to specify conditions therein at their discretion;
- (13C) Prohibiting the lighting or maintaining of fires in any fire protected area or any part thereof without the written authority of an authorised officer;
- (13D) The extinguishment of fires lit kindled maintained or used in a fire protected area;

In addition, section 99A(2) provides that regulations made under the Act may apply, adopt or incorporate any matter contained in any document, code, standard, rule, specification or method, formulated, issued, prescribed or published by any other person.

3. Options to achieve the objectives

Key points

- **Options in this RIS are fairly narrow, owing to restrictions in the Act and to the narrow nature of residual problems.**
- **High level non-regulatory alternatives, such as broad education campaigns or voluntary codes of practices are not considered as feasible stand-alone options.**
- **Options this RIS examines include:**
 - **Option 1: Flexible penalties for high risk, high probability activities**
 - **Option 2.A: Performance-based regulations for campfires and barbeques, supplemented by guidelines**
 - **Option 2.B: Best-practice guidelines for campers and barbeques users**
 - **Option 3.A: Safety case regulations for sawmills and other operations, and**
 - **Option 3.B: Best-practice guidelines for sawmills and other operations.**
- **As a consultation document, this RIS seeks stakeholder feedback on further alternatives to the proposed Regulations that may achieve the Government's objectives in a more efficient and effective manner.**

3.1 Regulatory and non-regulatory options

The offence provisions contained in the Regulations are established under the *Forests Act 1958*. Legislation governing the fire prevention and protection aspects of forest management has existed in various forms at least since the *State Forests Act 1876* and the Regulations made under this Act in 1877. Many of the key provisions that still exist in some form today appeared in the *Forests Act 1907*. This Act incorporated provisions which made it an offence to light or kindle, without authorisation, any fire in a reserved forest which either led to or presented a danger of forest produce being burnt or injured, and without taking all reasonable precautions to prevent the fire from spreading.

Fire prevention measures in the *Forests Act* were strengthened following the Royal Commission into the 1939 bushfires in which 71 people died and several towns were destroyed. Among other measures, Justice Stretton, who led the inquiry, recommended that:

- The use of fire in any zone during any proclaimed period in such a way as might tend to create danger should be made an offence, whether such use were by permission of the local authority, in cases where such permission might be necessary, or whether by tourists, smokers, sportsmen [including hunters and campers], or the like.
- All engines in connexion with the working of which fire is used should be fitted with spark arresters.
- All sawdust should be burned in retorts in which the material to be burned may be safely confined.

Therefore, the rationale for including certain offences in the Act, and more narrowly in the Regulations, is based on over one hundred years of practical risk assessment, judicial examination, and regulatory review.

Bushfires continue to cause widespread economic, social and environmental impacts. Government policy for bushfire management is directed at reducing bushfire risk to:

- human life, communities, essential and community infrastructure, industries, the economy and the environment, and
- the resilience of natural ecosystems.

The activities regulated continue to contribute to bushfire events on public land. DEPI's fire prevention activities are aimed at minimising the occurrence of bushfires, particularly those of human origin, occurring during periods of extreme weather conditions. Climate change projections point to a higher frequency of extreme events including floods, droughts and bushfires. In this context, it becomes increasingly important to prevent, as far as possible, the occurrence of bushfires.

3.1.1 Alternatives to subordinate legislation

The *Subordinate Legislation Act 1994* requires that regulatory and non-regulatory options be considered as part of a RIS. Further, the Premier's Guidelines provide guidance on alternative methods by which the government's objectives may be achieved. Alternatives to subordinate legislation include:

- providing better information to affected groups to raise awareness of their rights and/or obligations;
- introducing voluntary, or mandatory, codes of conduct for the activity;
- expanding the coverage of existing primary legislation;
- encouraging organisations and individuals to consider the impact of their activities on the community and environment; and
- developing efficient markets, where these would deal with the issue.

3.1.2 Feasible options

Three options were considered, including a non-regulatory alternative:

- Option 1.A – Graduated penalties to reflect the seriousness of offence;
- Option 1.B – Prosecution penalties (the current approach);
- Option 2.A – Performance-based standards for lighting fires;
- Option 2.B – Best-practice guidelines for campers and barbeque users;
- Option 3.A – Safety case regulations for sawmills and other operations; and
- Option 3.B – Best-practice guidelines for saw mills and other operators.

Option 1: flexible penalties for high risk, high probability activities

'Responsive regulation' has become a popular enforcement stance adopted by regulators. It is a theory that interaction between regulatees and inspectors requires a system that allows flexibility within a formal framework, ensuring enforceability. Typically this suggests a hierarchy of enforcement tools ranging from warnings for minor infractions to criminal sanctions for major breaches. Responsive regulation suggests a greater range of enforcement tools could contribute to cost-effective monitoring and community satisfaction.

The option is selected for analysis to address insufficient incentives for certain forest users to modify behaviour towards fires, due to inflexible enforcement. This option will examine the ability to issue infringement notices in the Regulations for certain offences. Currently the Regulations only provide for summary prosecutions (i.e. entailing a court appearance), making no provision for issuing penalty infringement notices.

Option 2.A: performance-based regulations for campfires and barbeques (supplemented with guidelines)

This option seeks to target risks from campfires and barbecues that are not well understood by members of the public, leading to unsafe practices, which are a particular issue given high usage rates.

Performance-based regulations are an option because the proposed Regulations for campfires and barbecues are relatively prescriptive – they provide a one-size fits all regulatory solution. Performance-based regulations allow the regulatee to design and adapt their actions to the circumstances (thus providing flexibility), while continuing to achieve the Government's objectives.

In practice, performance-based regulations could specify the outcome of the government objective in terms of preventing fires from escaping and causing damage from campfires and barbecues. A regulation could be framed along the lines of "a person must ensure that a lit, kindled or maintained fire does not cause any damage to flora and fauna, buildings and other structures, etc". By focussing on the outcome (i.e. fire prevention), the person responsible for the fire could be given more flexibility with respect to fires, but would need to demonstrate that their fire would be unlikely to escape. For example, a fire pit less than 30 centimetres might be permissible in certain circumstances if fire buckets, knapsacks, or extinguishers were on hand. To support performance-based regulation, DEPI could publish guidelines of barbeque and campfire safety.

It is important to note, however, that the operation of the Act may place some constraints on the flexibility of performance-based regulations. For example, section 66B of Act makes it an offence if a person does not clear an area of flammable material for 3 metres in the case of a campfire or barbeque, or 1.5 metres in the case of fires or barbecues that uses liquid fuel, gaseous fuel or chemical solid fuel. Similarly, section 66C of the Act limits the area of the campfire or barbeque to not more than one square metre in any direction.

Option 2.B: Best-practice guidelines for campers and barbeques users

Best-practice guidelines (or codes of conduct) could be introduced to advise campers and other recreational users of 'best-practice' fire safety in the Victorian setting. Best-practice guidelines (self-regulation) refer to the benchmark actions or procedures that are generally acceptable within the peer group and the wider society. Self-regulation usually implies that members of a group have accepted mutual obligations. These obligations are often described in a code or standards. Education campaigns are most suitable when the problem of non-compliance results from misinformation, or a lack of information. This may be the case with campers and other recreational users. As a stand-alone alternative, the guidelines developed under this option would be more detailed and have different content compared to any such supplementary information prepared for performance-based regulation.

Such guidelines could take into account topography, wind, vegetation, temperature, season, fuel build up, etc. For example, the guidelines may specify different requirements for a fire lit in high rainfall areas in winter compared with areas subject to high winds during summer. In addition to technical information, the guidelines could also provide information to campers and barbeque users of the impact on the environment of escaped fires; thus they would also seek to change behaviour by demonstrating the risks associated with camp and barbeque fires. Information could also be provided concerning how to light and extinguish fires properly, as well as how to construct a safe fire place. Best-practice camp fire guidelines could also include information on effective fire suppression and what to do if a campfire gets out of control. Adherence to the specifications in the guidelines could act as a defence in a court of law.

As is the case with performance-based regulations, the requirements of the Act would limit the extent to which this option would reduce the obligations of park users.

Such guidelines would support, not replace, the current Forest and Park Notes by focussing on fire prevention (i.e. a hazard focus), rather than being applied to specific activities such as camping and bushwalking. Moreover, currently, these notes are not directed towards barbeque users.

Option 2.C: Proposed Regulations – prescriptive rules

The current Regulations dealing with campfires and barbeques are prescriptive in nature. The proposed Regulations themselves principally deal with locations where a fire may be lit, clearance of ground and air space, and dimensions of the fire and fuel (i.e. fires must not be too large). Requirements differ between fires using solid fuel (e.g. wood) and liquid fuel, gaseous fuel or solid chemical fuel. As noted, these Regulations are somewhat prescriptive; for example, a campfire in the open air must be in a properly constructed fireplace or in a trench at least 30 centimetres deep, and must not exceed more than one square metre, while the ground and airspace from the perimeter of the fire must be clear of flammable material for a distance of 3 metres.

This raises the question of whether the prescriptive thresholds contained in the current campfire, and barbeque regulations (regulations 8 to 10), or a more flexible performance-based would be more appropriate. Option 2.A examines the current prescriptive approach and assesses it against a performance-based approach.

Option 3.A: Safety case regulations for sawmills and other operations (supported with safety case guidelines/industry codes)

The reason for choosing this option is that some high-risk activities from sawmills and other operations may not be undertaken with appropriate fire safety precautions.

Currently the Regulations (regulations 19–21) provide that an authorised officer may by notice in writing specify a distance of up to 40 metres surrounding a sawmill or other operations that needs to be cleared of flammable material. Similarly, an authorised officer may by notice in writing require that a person in charge of a sawmill or other operation hold and store certain firefighting apparatus, water supplies and equipment.

In 1988, a massive explosion occurred on the North Sea oil platform Piper Alpha, claiming 167 lives. Lord Cullen chaired the official Public Inquiry into the disaster and considered measures to prevent future major accidents. A key recommendation from the inquiry was to require operators/owners to submit a 'safety case' to the regulator for approval. This represented a significant shift away from prescriptive input-oriented regulations to a more performance-based outcomes focus. Within a decade, 'safe case' regulation became regarded as best-practice at major hazard facilities (MHFs) around the world.

In Victoria, WorkSafe requires that MHFs need to demonstrate their operational safety through a 'safety case', developed specifically for their unique operations and situation. The safety case explains the site's safety management system by specifying prevention measures and strategies for reducing the effects of a major incident if one does occur. It can only be prepared following a full examination of a site's activities to identify hazards and all potential major incidents, and to determine the necessary control measures.

The safety case must be prepared with the full involvement of employees and their health and safety representatives from all of the different workgroups and functional areas at the site. The relevant emergency services should be consulted on emergency plan preparation.³¹ In Victoria, there is also a MOU between WorkSafe and fire services in relation to MHFs.³²

Option 3.A would entail sawmills and other operations preparing a 'safety case' tailored towards fire prevention. While neither sawmills nor other operations pose the inherent risks of MHFs, they nevertheless operate in an environment where fires can have catastrophic consequences. Such safety cases under this option could involve negotiations between DEPI, WorkSafe and emergency services.

This option would take the form of a scaled down version of safety case regulation given that such arrangements usually take into account a broader range of operational risks. For example, hazards could be identified relating to processes or activities that could result in fire. Other hazards such as environmental spills or discharges or occupational health and safety hazards would not directly be addressed in the 'fire protection' safety case. Given that such a safety case would be sharply focussed on hazards relating to fire ignition, it would therefore be much less costly than a broadly-based safety case. Under this option, a fire prevention expert could attend the business operations and develop a 'safety case' in consultation with the public authorities mentioned above.

Discussion Point 2: To what extent are sawmills' and other operators' fire protection measures included in Safety Management Plans, and what are market incentives, such as insurance requirements, that would help to mitigate the risks.

Preparation of safety-cases can be expensive, and perhaps even prohibitive for smaller operations. To assist in lowering these costs, the government could provide detailed best-practice guidelines on fire prevention for sawmills and other operations. Businesses could use such guidelines to prepare their safety-cases, which may minimise the cost of engaging a consultant or may remove the need of such services altogether.

3.B: Best-practice guidelines for campers and barbeques users

Best-practice guidelines could be developed for sawmills and other operators. As a stand-alone alternative, the guidelines developed under this option would be more detailed and have different content compared to any such guidelines prepared under the safety case regulatory option. An example of such guidelines are the *Fatigue Management Guidelines for the Forestry Industry* prepared by WorkSafe Victoria. Such guidelines can help operators identify and treat risks, and set up processes and procedure to monitor and evaluate these risks.

3.1.3 Options not considered feasible or effective

Exemptions from the Regulations

A separate option could be considered whereby broad exemptions are provided, so long as DEPI is satisfied that equivalent measures are put in place.

Such an exemption power would enable officers to authorise a person to undertake regulated activities in circumstances which otherwise breach the Regulations or to substitute the conditions provided in the Regulations with other conditions. DEPI would be most likely to use such a power to exempt operators of engines from the technical requirements of Part 3 of the proposed Regulations. For example, current regulation 18 states that a person must not "use any welding, grinding, gas cutting equipment" except in certain circumstances and where the equipment used meets certain standards (see discussion point below). Given the fire risk associated with these activities, DEPI would expect to use the exemption power only in very limited circumstances, to allow emergency management agencies to perform their duties, as described in the Emergency Management Manual Victoria.

However, broad exemptions were not considered feasible by the Department. Part 2 of the draft Regulations enables DEPI officers to give a person written authority to light a fire in a fire protected area. DEPI officers are unlikely to issue exemption notices to sawmills and other operators because of the flexibility of the notice provisions already contained in Part 4 of the Regulations.

³¹ WorkSafe Victoria website, 'What is Safety Case': <http://www.worksafe.vic.gov.au/safety-and-prevention/your-industry/major-hazard-facilities/about-the-industry/what-is-a-safety-case>

³² Memorandum of Understanding: WorkSafe Victoria, and Country Fire Authority, and Metropolitan Fire and Emergency Services Board: http://www.worksafe.vic.gov.au/__data/assets/pdf_file/0006/10599/Memorandum_of_Understanding_-_WorkSafe_and_CFA_and_MFESB.pdf

Discussion Point 3: Operators may wish to provide advice on whether the equipment standards established by the Regulations represent best-practice.

Temporary structures

Most temporary/construction work undertaken within State forest, protected public land and national park is undertaken by DEPI, Parks Victoria, VicForests or their subcontractors. Fire risks arising from temporary or construction work undertaken in the 'marginal mile' would largely be addressed by Part 3 of the draft Regulations, and therefore separate options for temporary structures were not considered.

Deemed to comply

A variation of performance-based regulation is 'deemed to comply' regulation. A 'deemed to comply' approach allows regulatees to develop their own equivalent regulatory solution, or simply to comply with the prescribed regulation. 'Deemed to comply' regulations can be useful for dealing with complex or costly regulation (e.g. building codes, energy rating, water and electrical systems); however, given the relatively straight-forward nature of fire prevention, 'deemed to comply' regulation may add unnecessary complexity and higher enforcement costs for campers, recreational users, and government.

3.1.4 Review of existing regulations

Finally, as part of the RIS process, all regulations were reviewed to examine whether they were still necessary and whether they could be improved (see **Attachment C** for a detailed list of changes).

3.2 Groups affected

Groups affected by the options identified above include forest visitors and campers; users of stationary engines, such as generators and pumps; persons using chainsaws, welding, grinding, or gas cutting equipment; sawmills and other operations (i.e. mining, quarrying, brick making, eucalyptus oil distilling, or charcoal burning) and bee farmers. Owners of property surrounding forests within the fire protected area are also affected.

Discussion Point 4: The proposed Regulations deal with a general prohibition on lighting fires on public land unless certain conditions are met. They also deal with regulations for a narrow range of specific activities. DEPI would be interested in hearing from stakeholders on any alternative options that could achieve the government's objectives while minimising costs to individuals and business.

3.3 Regulatory arrangements in other jurisdictions

Attachment H summarises the key legislation regulating activities that could lead to fire on public land. Legislative arrangements and requirements vary between jurisdictions. The table shows the main categories regulated under the proposed Regulations and if and where they are regulated in other jurisdictions.

All jurisdictions impose general prohibitions or restrictions on lighting fires in regulated areas. Most jurisdictions also impose restrictions on campfires, barbecues, fire places etc.; however these restrictions vary in their prescriptiveness. For example, South Australia's Fire and Emergency Services Regulations 2005, specify the maximum area of the fire, the amount of space that must be cleared around the fire and other requirements. In contrast, Queensland's Forestry Regulation 1998 simply states that a fireplace or barbecue cannot be used unless it is provided by the chief executive or otherwise approved for use by an authorised officer.

Restrictions on the use of engines and equipment that may cause fire are imposed in all jurisdictions; however, there are some differences in the requirements and types of engines and equipment regulated. For example, Western Australia's Bush Fires Regulations 1954 contain several separate regulations for different classes of vehicles and engines, whereas the New South Wales Forestry Regulations 2012 prohibit the use of all machines in a forestry area unless certain conditions are met. New South Wales and Tasmania have specific requirements for sawmills and other operations, but other jurisdictions appear not to provide for the limited forestry activities on public land in these jurisdictions.

It is notable also that all other Australian jurisdictions have offences in relation to activities that could lead to fire on public land that can be dealt with through infringement notices (or equivalent).

The Victorian requirements are not considered more onerous compared to other jurisdictions, particularly when considered that Victoria is significantly more bushfire prone than Northern and Western states, and that forestry and commercial activities are carried out in Victoria to a greater extent than other jurisdictions.

4. Costs and benefits of the options

4.1 Base case

The 'base case' describes the regulatory position that would exist in the absence of the proposed Regulations. The base case of 'doing nothing' is not, strictly speaking, an alternative, given that the Government has identified a problem that needs to be addressed. It is necessary to establish this position in order to make a considered assessment of the incremental costs and benefits of the viable options.

In terms of establishing the base case, in the event the current Regulations are not remade, the Act would continue to apply. The Act contains a number of provisions that restrict activities that could cause fire on public land. For example, Restrictions about lighting etc. fires in certain areas (section 63), Offences to leave certain campfires or barbecues unattended (section 66A), Offences relating to having clear areas around certain campfires or barbecues (section 66B), Offences relating to campfires or barbecues above a certain size (section 66C), and Duty to prevent spread of fire etc (section 67).

- The Forests (Domestic Firewood) Regulations 2012 and the Crown Land (Domestic Firewood) Regulations 2012 may also restrict the operating of heavy machinery in a firewood collection area in State forest during a firewood collection season. The *Sustainable Forests (Timber) Act 2004* and the Sustainable Forests (Timber Harvesting) Regulations 2006 also place restrictions on the operation of machines in areas marked for reservation.
- Some sawmills have 'utilisation procedures' incorporated into VicForest contracts, others have Safety Management Plans that include fire prevention and fighting. More generally, workplaces have a duty of care to provide a safe work environment. This may include fire prevention measures.
- *Forest Notes*, *Park Notes* and relevant management plans would continue to be in place. These instruments provide useful guidance and are widely used by recreational groups; however, typically, persons undertaking aberrant or antisocial behaviour are either unaware of such codes or do not pay attention to these. In some areas, there is also roadside or park signage.
- More broadly, even in the absence of any regulatory controls as part of business best-practice, many businesses would 'voluntarily' undertake fire prevention and firefighting activities – not least because such equipment and procedures helps protect valuable business assets.

4.2 Methodology

4.2.1 Assessment of costs

The *Subordinate Legislation Act 1994* requires, *inter alia*, a RIS to assess the costs and benefits of proposed regulations. This legislation also requires that a RIS identify practicable alternatives to the proposed regulations and assess their costs and benefits as compared to the proposed regulations. The RIS is not required to identify alternatives which are not feasible or practicable.

4.2.2 Discounted cash flow

Every effort was made to identify and quantify the costs and benefits imposed by the proposed Regulations. As far as possible, likely costs were identified and a Present Value (PV) of the costs was calculated. A discount rate of 3.5 per cent was used over a 10 year period (i.e. the life of regulations in Victoria). This allows future costs and benefits to be examined in terms of today's dollar value.

4.2.3 Multi-criteria Analysis

Multi-criteria Analysis (MCA) is presented in this RIS as an alternative assessment tool to complement the quantitative analysis. The MCA approach is described in the Victorian Guide to Regulation.³³ It represents a convenient way of comparing a range of alternative options. The technique requires judgements about how proposals will contribute to a series of criteria chosen to reflect the benefits and costs associated with the proposals. A qualitative score is assigned, depending on the impact of the proposal on each of the criterion weightings, and an overall score can be derived by

³³ DTF 2011, *ibid.*, p. 85

multiplying the score assigned to each measure by its weighting and summing the result. If a number of options are being compared, then the option with the highest score would represent the preferred approach.

For the purposes of assessing the feasible options identified in this RIS, an MCA assessment tool was used. In terms of scores, an assigned score of zero (0) represents the base case. A positive score means the option performs better than the base case against that criterion (the higher the score, the better the option is compared with the base case). A negative score means the option results in inferior outcomes to the base case against that criterion (the lower the score the worse is its performance against the base case). Scores are assigned between -100 to +100.

Two criteria relating to the costs and benefits were chosen and weightings selected (see Table 6). They broadly reflect the Government's objectives and weighting priorities regarding the management of forests.

Table 6: Multi-criteria Analysis Criteria

| Criterion | Description of criterion | Weighting |
|---|--|-----------|
| Effective prevention of fire in Victoria's forests. | This criterion seeks to measure how effective options are at: <ul style="list-style-type: none"> • protecting the safety of Victorians • preventing loss of private and public property • preventing loss of or damage to biodiversity and park ecosystems • protecting water supply catchment areas, and • ensuring that commercial activities are conducted in a safe manner. | 50 |
| Cost | This criterion seeks to measure costs incurred by forest visitors and other operations in complying with the regulations. | 50 |

4.2.4 Decision Rule

Given the difficulty in measuring costs and benefits associated with forests, this RIS uses a number of methodologies to inform its assessment of viable options.

The present value discounted cash-flow technique is used to measure the likely costs associated with administrative obligations. However many substantive compliance costs proved difficult to quantify in monetary terms. The MCA assessment tool is intended to complement the assessment of the costs and benefits of the viable options. As noted above, the option with the highest score represents the preferred approach. Overall, the option with the highest MCA score is preferred to the alternatives.

In terms of benefits, a counterfactual position of fire prevented and thus costs avoided is mentioned. While this position is impossible to assess accurately, an examination of the likely benefits using Break-even Analysis (BEA) (measured in units, e.g. value of forests) can be used to form a judgement about the likely benefits of the proposal.

4.3 Costs and benefits of options

In this section, the nature and incidence of the costs and benefits associated with the viable options are analysed. The costs and benefits are analysed in comparison with the base case. The relative costs and benefits of each option are assessed against the objectives identified in Part 2.3.

4.3.1 Option 1.A – flexible penalties for high risk, high probability activities

As illustrated in Table 5, offences involving campfires continue to occur annually. Comparatively, prosecutions in relation to sawmills or other operations are relatively infrequent. The risk of unattended campfires was recently underscored by the devastating bushfires in Tasmania, following which a man was charged for leaving a campfire unattended and starting a 10,000 hectare blaze.³⁴ Campfires and barbeques pose relatively high risks and there is a high probability that they will cause bushfires in the future. The current Regulations impose fines of 50 penalty units for such offences.³⁵ The high level of these penalty units reflect the potential risks and consequences associated with bushfires. There were 14 prosecutions between 2004 and 2013.

Section 63 of the Forests Act establishes that any person who, in or in relation to the lighting, kindling, maintaining, or extinguishing of any fire in the open air, fails to comply with any relevant regulations, shall be liable to a penalty of not more than 50 penalty units or to imprisonment for a term of not more than one year, or both penalty and imprisonment. The *Victorian Guide to Regulation* states that it is inappropriate to provide infringement penalties for offences which carry imprisonment. Sections 66A, 66B and 66C of the Act, which apply penalties of up to 100 penalty units, or a maximum penalty infringement notice of three penalty units, provide flexibility for offences related to campfires in the regulated fire area.

However, neither the Act nor the current Regulations provide for issuing penalty infringement notices for offences relating to the use of stationary engines, non-stationary engines and welding, grinding, soldering or gas cutting equipment. To improve compliance, the Regulations could include a range of infringement penalties for these offences, set at, for example, 4 penalty units.

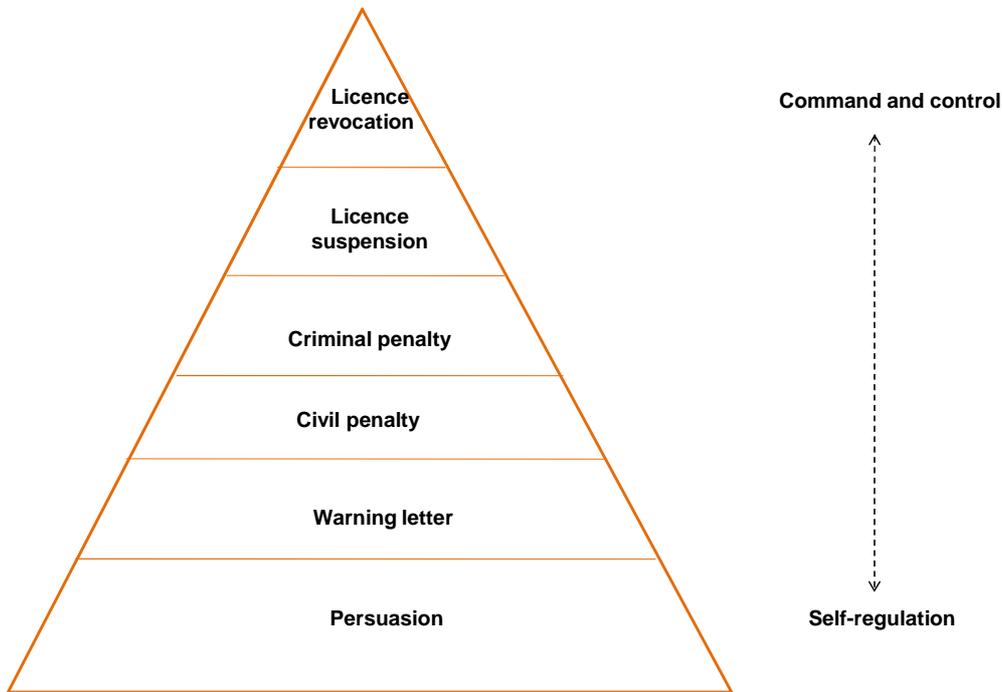
Responsive regulation suggests a greater range of enforcement tools could contribute to cost-effective monitoring and community satisfaction. An important element of responsive regulation is the establishment of an enforcement hierarchy as illustrated in figure 2 below.

The most distinctive elements of responsive regulation can be depicted as a regulatory pyramid. This approach recognises that a single regulatory mechanism is seldom sufficient as the weaknesses of one mechanism must be complemented by the strengths of another. The regulator begins at the base of the pyramid with persuasion, and there must be capacity for escalation if persuasion fails.

³⁴ ABC News Website, 'Tas man to be charged over unattended campfire' viewed 27 February 2013: <http://www.abc.net.au/news/2013-01-07/tas-man-to-be-charged-over-unattended-campfire/4455780>

³⁵ The *Subordinate Legislation Act 1994 Guidelines* (the Premier's Guidelines) recommend that penalties contained in regulations be no greater than 20 penalty units (i.e. \$2,887.20). Penalties greater than 20 penalty units should be contained in legislation. Paragraph 43 of the Premier's Guidelines (in Appendix E of the Victorian Guide to Regulation).

Figure 2: A regulatory pyramid of sanctions



Source: Ayres and Braithwaite (1992) in Safety and Quality Council

The pyramid implies that self-regulation (i.e. compliance with regulations) and command and control are complementary strategies so long as they are ordered, with self-regulation at the base, followed by escalation to command and control strategies.³⁶

The idea of responsive regulation is that the regulator can escalate or de-escalate enforcement activities according to the regulatee's response. Given that current Regulations only provide for penalty offences, some enforcement activities may not occur at the margin because of the lack of flexibility in penalties (e.g. an enforcement officer may be unwilling to prosecute a person for a relatively minor offence).

At the commencement of the review of the current Regulations, DEPI sought advice from staff about how compliance with the Regulations could be improved. DEPI's Compliance Support Group advised that a number of offences under the Regulations would be best enforced through infringement notices. These offences included those which relate to campfires, and stationary and non-stationary engines. Section 63(1)(aa) of the *Forests Act 1958* makes it an offence to fail to comply with any relevant regulations 'in relation to the lighting, kindling, maintaining or extinguishing of any fire in the open air'. This is an offence which carries a penalty of not more than 100 penalty units or/and imprisonment for a term of not more than two years. The *Attorney-General's Guidelines to the Infringements Act 2006* states that indictable offences should not generally be infringement offences. Draft regulations 16, 17 and 18 (see **Attachment G**) meet the Attorney General's guidelines for infringement offences whereas the balance of the Regulations clearly do not.

An MCA was undertaken to assess this alternative. This alternative scores relatively highly because the range of enforcement tools is expanded. Consequently a score of 35 is assigned to this criterion. The criterion relating to cost is assigned a score of -5. Costs of issuing an infringement notice consist of an authorised officer's time and DEPI processes costs, estimated to be not greater than \$50 per infringement. Penalty infringements are relatively cost-effective and possess the flexibility that penalty offences alone do not possess. It is worth noting that while the quantum of cost might increase (owing to a greater number of infringement notices issues), the cost per enforcement transaction is likely to be lower. It is expected that increased enforcement will result in achieving the government's objectives more effectively. This results in a net score of **+15.0** as shown in Table 7 below.

³⁶ SQC, op cit., p. 45

Table 7: Option 1.A – flexible penalties for high risk, high probability activities

| Criteria | Weighting | Assigned Score | Weighted Score |
|-------------------------------|-------------|----------------|----------------|
| Effective prevention of fires | 50 | 35 | 17.50 |
| Cost | 50 | -5 | -2.50 |
| Total | 100% | | +15.0 |

Option 1.B: Current Regulations – prosecution-based system

An MCA of the current Regulations was also conducted to allow a comparison with this alternative. In terms of effectiveness, this option scores slightly less than the alternative owing to the lower deterrent; nevertheless past experience shows that this option is an effective compliance tool. A score of 25 is assigned to this criterion. This option, however, is more costly per offence because infringement notices generally avoid resource intensive court prosecutions.³⁷ Prosecution costs range from approximately \$200 per day to more than \$1,500 per day if the case is contested. A score of -7.5 is therefore assigned to the cost criterion. Taken together, this results in a score of **+8.75** as shown in Table 8, below.

Table 8: Option 1.B – Multi-criteria Analysis assessment of the current enforcement arrangements

| Criteria | Weighting | Assigned Score | Weighted Score |
|-------------------------------|-------------|----------------|----------------|
| Effective prevention of fires | 50 | 25 | 12.50 |
| Cost | 50 | -7.5 | -3.75 |
| Total | 100% | | +8.75 |

The MCA of the options suggests that Option 1.A is a superior approach compared to the current Regulations. This option, of course, does not prevent DEPI from pursuing other approaches to complement this proposal. For example, non-regulatory approaches such as increased signage and number of enforcement officers in locations where these infringements regularly occur (particular in cases where breaches arise from ignorance rather than intent) may also contribute to the government’s objectives. It is also noted that serious criminal sanctions already exist for malicious lighting of bushfire (e.g. ‘bushfires arson’), which can attract penalties of up to 25 years imprisonment.

The infringement penalty system as provided for in the *Infringements Act 2006* may have a number of advantages compared with prosecution offences, which are usually heard in court. Such advantages include the balancing of: fairness (lower fine levels, convenience of payment), consistency of approach with compliance and system efficiency (reduced administration costs, no need to appear in court, no conviction); the provision of a rapid and certain response for lower level offences appropriate for infringements, with deterrence dependent on people being aware they are likely to be detected offending, and dealing with infringements through less severe penalties, and improved public awareness of rights and responsibilities. The provision for regular review of the infringements system is important.³⁸

4.3.2 Option 2.A – performance-based regulations for campfires and barbecues³⁹

Regulation may take the form of prescriptive rules, which focus on the inputs, processes and procedures of a particular activity. One of the main advantages of prescriptive regulation is that it provides certainty and clarity. By setting out requirements in detail, it provides standardised solutions and facilitates straight-forward enforcement.

³⁷ The cost of a prosecution will vary according to a number of factors, principally the length of time the matter continues, the number of witnesses and the remoteness of the court. If the prosecution is resolved immediately, the costs consist largely of travel costs (around \$150 per day) and accommodation costs (approximately \$200 per day) for the officer/s representing the Department. For a contested hearing, there are likely to be additional costs in briefing external counsel (approx. \$1,500 per day). There is also a cost to officers being absent from their regular work activities in order to attend contested hearings as a witness. The cost of issuing an infringement notice consists of the time it would take to process and issue the notice itself.

³⁸ Attorney-General’s Guidelines to the Infringements Act 2006, p. 2: https://assets.justice.vic.gov.au/justice/resources/4e7dbc7f-e835-4dc1-89ca-d7632fb3adc4/infringementsact2006_attorneygeneralguidelines.pdf

³⁹ Infringements will not apply to campfire and barbecue offences. Section 63(1)(aa) of the *Forests Act 1958* makes it an offence to fail to comply with any relevant regulations ‘in relation to the lighting, kindling, maintaining or extinguishing of any fire in the open air’. This is an offence which carries a penalty of not more than 100 penalty units or/and imprisonment for a term of not more than two years. The *Attorney-General’s Guidelines to the Infringements Act 2006* states that indictable offences should not generally be infringement offences. Infringement notices, however, can be issued for campfire and barbecue offences under S66A(1), 66B(1), 66B(2) and 66C(1) of the *Forests Act*, although not under the Regulations.

Performance-based standards specify desired outcomes or objectives, but not the means by which these outcomes/objectives have to be met. The main advantages that performance-based standards have over prescriptive regulation are the greater flexibility afforded to regulated parties in achieving the desired outcomes, and their ability to be used in situations where circumstances may change over time. Nevertheless, they do have some disadvantages. For example, the greater flexibility and freedom offered by performance-based regulations is often cited as a problem for those being regulated, as it can lead to uncertainty as to whether the actions they undertake are sufficient to satisfy the standards set by the regulations.

In the case of the proposed Regulations, performance-based standards could be formulated. A standard or principle could be developed to deal with campfires and barbeques (e.g. vegetation, wind, ground moisture, etc. may vary, requiring greater or lesser distances of clearance or size of fire). Such standards or principles could be supported by a guidance material to ensure clarity.

Such guidelines could be used to set down criteria that may reduce the subjective element of performance-based standards by establishing benchmarks by which to measure performance. For example, such a code could provide guidance concerning gradients, wind, vegetation, fire behaviour or appropriate distances from flammable material.

The fundamental problem with this alternative is regulatee and enforcement decisions would lack specificity and could be open to dispute, although this could be reduced if reliance on the guidelines could be used as a defence in court. That said, given constraints in the Act, establishing feasible performance-based standards would be difficult. For this reason, prescriptive regulations are best suited to campfire and barbeques, where compliance is not difficult and probability of uncertainty not high.

In turn, performance-based standards may generate uncertainty because circumstances giving rise to prosecutions may have a degree of subjectivity. This in turn may increase government enforcement costs because the interpretation of such standards may be challenged or determined in the court/tribunal system.

An MCA analysis of performance-based regulation was undertaken. As discussed above, performance-based standards can be effective when supported by guidelines; however, the degree of subjectivity may create difficulty in achieving compliance. The key problem associated with performance-based standards is that there may be uncertainty regarding what is required. Government enforcement may not be easy in borderline cases, and this may result in difficulties in enforcing the standards. This criterion, nevertheless, could provide useful freedom and flexibility and a score of 35 is assigned. DEPI considers that the specific requirements of the Regulations represent the best (least costly) way of mitigating bushfire risk from these sources and it is, therefore, not likely that park users would be able to adopt less costly measures under the performance-based approach. Coupled with the fact that performance-based standards would be more expensive to administer for the reasons noted above, DEPI believes this operation would be more expensive than both the base case and the proposed Regulations. Consequently a score of -15 is assigned to this criterion. Overall, this alternative receives a score of +10.0, as shown in Table 9.

Table 9: Option 2.A – Multi-criteria Analysis Assessment of the performance-based regulations for campfires and barbeques

| Criteria | Weighting | Assigned Score | Weighted Score |
|-------------------------------|-------------|----------------|----------------|
| Effective prevention of fires | 50 | 35 | 17.50 |
| Cost | 50 | -15 | -7.50 |
| Total | 100% | | +10.0 |

Option 2.B: Best-practice guidelines for campers and barbeque users (supplemented with an education campaign)

Best-practice guidelines (cast as voluntary codes) could be introduced to advise campers and other recreational users of 'best-practice' camp and barbeque fire safety in the Victorian setting. These would differ in detail and content compared to any such guidance material developed to support performance-based regulations. Selection of this non-regulatory option is designed to address the problem of parks users who may not fully appreciate the risks associated with their activities and fire. This option would provide detailed guidance and suggested best-practice safety processes for particular user groups, such guidance on how to prepare a safe camp fire trench or barbeque fire. Adherence to such guidelines may provide a common law defence against negligent actions. The guidelines would go beyond the current *Forest Notes* and *Parks Notes* and would be accompanied by a communication strategy, which could include website

information, a fire safety smartphone app, radio advertisements during the fire season, print media articles, and brochures distributed from camping and barbeque stores.

While detailed and comprehensive guidance notes would be an improvement over the base case, this RIS finds that there is justification for further intervention to meet government objectives. Again, best-practice guidelines may be relatively effective in addressing simple information gaps, but may have little effect on reducing aberrant behaviour.

However, the major disadvantage associated with voluntary codes is the absence of a mechanism to ensure compliance and enforcement. Moreover, self-regulation is typically suitable for cases where the problem to be addressed is a low-risk event, or event of low impact.⁴⁰ This RIS argues that the risks are not low in the case of bushfire. Such risks may be categorised as having a medium probability but attended by potentially catastrophic consequences. In addition, self-regulation is more effective where non-compliance can be observed and negative impacts are imposed on a person's reputation. This makes self-regulation unsuitable where many actions are mostly unobservable, such as in Victoria's parks and forests because they cover such a large area.

An MCA assessment of best-practice guidelines compared with the current approach of managing the problems by statutory rules was undertaken. In terms of effectiveness, voluntary guidelines would represent an improvement over the base case. This is because many of the campfire and barbeque fire breaches are likely to derive from lack of knowledge rather than deliberate intent. However, given the absence of coercive powers compliance incentives are likely to be less than those under a statutory rule regime. Compliance rates may decrease over time as some users learn that there are no consequences for lighting 'unsafe' fires. Consequently a score of 20 is assigned to the effectiveness criterion. Broad effectiveness, however, has been demonstrated using statutory rules to encourage compliance.

In terms of cost, best-practice guidelines supported by a communications strategy in this RIS is assumed to cost the government \$1 million over a 10-year period. This cost estimate is drawn from the actual cost of a previous campaign - the Get on Board campaign for life jackets - which DEPI deemed would be of a similar magnitude to that required for a fire prevention campaign.

Accordingly, a score of -5 is assigned to the cost criterion with respect to the guidelines alternative. Taken together, the MCA score for the best-practice guidelines option is **+7.5**.

Table 10: Option 2.B – Best-practice Guidelines (campfires, barbeques, etc)

| Criteria | Weighting | Assigned Score | Weighted Score |
|-------------------------------|-------------|----------------|----------------|
| Effective prevention of fires | 50 | 20 | 10.0 |
| Cost | 50 | -5 | -2.5 |
| Total | 100% | | +7.5 |

Option 2.C: Proposed Regulations – prescriptive rules

The proposed Regulations provide enforcement officers with clarity and certainty, although by way of a 'one size fits all' approach. Given that the Regulations have demonstrated their effectiveness in the past, a score of 40 is assigned to this criterion. As noted in relation to option 2.A, DEPI does not believe that the flexibility afforded by the performance-based option would lead to park users adopting measures less costly than those prescribed in the Regulations. Rather, the regulatory approach would help reduce enforcement costs relative to option 2.A by providing a greater level of certainty. Thus, although this option is more costly than is the base case, DEPI believes it is less costly than the performance-based approach, and so a score of – 10 is assigned the cost criterion.

As shown in Table 11, this results in a net score of **+15.0**, making the prescriptive approach a superior alternative than a more flexible (but less certain) performance-based approach.

⁴⁰ Department of Treasury and Finance, 2007, *ibid.*, B-1 p. 129

Table 11: Option 2.C – Multi-criteria Analysis Assessment of the proposed Regulations (regulations 9–10)

| Criteria | Weighting | Assigned Score | Weighted Score |
|-------------------------------|-------------|----------------|----------------|
| Effective prevention of fires | 50 | 40 | 20.00 |
| Cost | 50 | -10 | -5.00 |
| Total | 100% | | +15.00 |

The thresholds selected for the Regulations largely mirror the thresholds provided for the fire danger period in the *Country Fire Authority Act 1958*. The thresholds, in turn, are based on practical experience in fire prevention. This allows for regulation that is largely consistent across private land and land within the fire protected area.

Discussion Point 5: The proposed Regulations contain a number of thresholds in relation to safe distances from fire. For example:

- a campfire must be in a properly constructed fireplace or in a trench at least **30 centimetres** deep, and must not exceed more than **1 square metre**, while the ground and airspace from the perimeter of the fire must be clear of flammable material for a distance of **3 metres** (regulation 9);
- a campfire or barbeque using liquid fuel, gaseous fuel or chemical solid fuel in the open air must have clear ground and airspace within a distance of **1.5 metres** of inflammable material (regulation 10);
- there are minimum distances for clearance of flammable material in relations the bee smokers of **1.5 metres** (regulation 12), stationary engines of **1.5 metres** (regulations 16), and welders etc of 3 metres (regulation 18); and
- an authorised officer may by notice in writing specify a distance of up to **40 metres** that needs to be cleared of flammable material in respect of a sawmill or other operation (regulation 19).

Stakeholders are invited to comment on the appropriateness of these thresholds.

4.3.4 Option 3.A – Safety case regulations for sawmills and other operations

As noted above, a safety case is a written presentation of technical, management and operational information about the hazards and risks that may lead to a major incident at a facility, and the control of those hazards and risks. Under the safety case, the operator provides justification for the measures the operator has taken or will take to ensure the safe operation of the facility. By focusing attention on major incident prevention, the safety case can improve safety. The safety case may also form a part of the operator's application for a licence. Under this option, a scaled down version of the safety-case is assumed (a sawmill or quarry does not pose the inherent risks and complexity of, for example, a petroleum finery).

The safety case must demonstrate the adequacy of measures the operator will implement to control risks associated with major incidents, in this case, fire prevention. The safety case must also demonstrate that the operator's safety management system will control risks that could lead to – and arise from – a major incident. The safety case should demonstrate that the documented control systems, procedures and processes are fit for purpose and that the operator has reduced the level of risk so far as reasonably practicable. The safety case is also an operator's commitment to the methods for controlling major incident risks.

An MCA assessment was undertaken to evaluate this option. The safety case option scores 40 for effectiveness. Safety case regulation represents best practice in terms of MHF, and involves a shift away from prescriptive regulations to a more performance-based outcomes-focussed approach.

It should be noted that a safety case would not have prevented the severe fires cited above when discussing the nature of the problem. These fires are understood as having been caused by lightning strikes (the Alpine and Grampians fires), powerlines (the Ash Wednesday fires) and deliberate fires (the Tawonga Gap and Coopers Creek fires of the Great Divide fire complex).⁴¹

Safety case regulation, while effective, is costly for operators. It involves audits of risks, examination and documentation of procedures and processes, as well as planning, reporting and periodic updating. It is typically required for facilities with a high inherent risk, such as oil refineries, chemical manufacturing sites, or gas-processing plants. Risk experts and

⁴¹ DSE, 2010, *The impacts, losses and benefits sustained from five severe bushfires in south-eastern Australia*, report no. 88, Melbourne, p. 8-15

engineering consultants may be needed to prepare safety cases, and this can be costly. The costs of safety case preparation could be in the order of \$5,000 to \$15,000 per operation⁴² (whereas currently no such costs are incurred). In addition, safety case regulation usually entails incurring of substantive compliance costs. For example, the 'safety case' may require purchasing equipment, training staff, and establishing procedures and processes. While, with perfect information and decision-making, these costs would be similar to those incurred under the proposed Regulations, at the margin an operator under safety case regulation may 'over-engineer' requirements of the regulatory problem by seeking to avoid adverse regulator comment ahead of inspections.

A number of government agencies may also be involved in assessment of the safety case and this could also add to costs. However, this option includes developing of industry specific guidelines to lower these costs. Businesses could use such guidelines to prepare their safety-cases, which may minimise the cost of engaging a consultant or may obviate the need for such services altogether.

In terms of the distribution of costs, 'safety case' regulation is likely to shift costs from government to the private sector. Under the current arrangements, DEPI incurs costs when it conducts a site visit and provides instruction to sawmills or other operators. As long as the operators comply with the written notice they are deemed to comply. Under 'safety case' regulation this onus is reversed and the operator must demonstrate to the regulator that they comply, which is likely to be more costly than the current arrangements. Consequently, a score of -35 is assigned to the cost criterion. This results in a net score of +2.5 as shown in Table 12.

Table 12: Option 3.A - Safety case regulations for sawmills and other operations

| Criteria | Weighting | Assigned Score | Weighted Score |
|-------------------------------|-------------|----------------|----------------|
| Effective prevention of fires | 50 | 40 | 20.00 |
| Cost | 50 | -35 | -17.50 |
| Total | 100% | | +2.50 |

Option 3.B: Best-practice guidelines for sawmills and other operations

Best-practice guidelines could be developed for specific operations or activities such as sawmills, bee farming, quarrying, welding and grinding, etc. Such guidelines could help operators identify and treat fire risks. WorkSafe Victoria, for example, has developed a number of similar guidelines for higher risk activities (although these are designed to supplement existing statutory obligations). Guidelines play a role in lowering 'search costs' for businesses, and by drawing upon best industry practices or developments in risk management, such guidelines may provide operators within a framework to reduce fire risks.

An MCA assessment was undertaken for this option to allow a comparison against the alternatives. In terms of effectiveness, this option represents an improvement over the base case. Businesses motivated to treat risks are likely to follow such guidelines, and the information contained in such guidelines would bring update procedures and practices to the business. The major problem with this option is that it is not compulsory and some businesses may take 'short cuts' because they do not fully appreciate the risks of their actions. Accordingly, a score of 10 is assigned to the effectiveness criterion.

In terms of cost for business and government this option represents the least costly. Compliance is voluntary and government would incur costs associated with development of the guidelines and communication costs to those industries licensed to operate in forests. Consequently a score of -5 is assigned to this criterion, and taken together, this results in a net score of +2.50.

Table 13: Option 3.B - Multi-criteria Analysis Assessment of best-practice guidelines

| Criteria | Weighting | Assigned Score | Weighted Score |
|-------------------------------|-------------|----------------|----------------|
| Effective prevention of fires | 50 | 10 | 5.00 |
| Cost | 50 | -5 | -2.50 |
| Total | 100% | | +2.50 |

⁴² This range is based on similar expert reports prepared by environmental assessors.

Option 3.C: Proposed Regulations – Negotiated compliance

The proposed Regulations outline an approach whereby an authorised officer inspects a sawmill or other operation site and may, by notice in writing, issue the person in charge of the operations instructions to obtain and store certain firefighting equipment, as well as certain other matters (e.g. clearing of areas of flammable material). In line with responsive and performance-based regulation, the operator is free to 'solve' their particular fire prevention problem. Up to this point, this situation is self-regulated. The operator is motivated to prevent fire in order to protect their business assets. The inspection by an authorised officer ensures that fire prevention standards are set at an acceptable level. In cases where the authorised officer considers that these standards have not been met, then that officer may issue a notice in writing mandating that the operator must acquire certain equipment or undertake clearing. DEPI, however, issues few written notices. To date, negotiated compliance has effectively achieved the Government's objectives. Considering these matters, a score of 35 is assigned to the 'effectiveness' criterion.

This score is lower than that assigned to the safety case approach for effective prevention of fires. Safety case regulation received a high score, relative to the proposed Regulations, because it is acknowledged that safety case regulation can be very effective in treating risks. This is evidenced by the adoption of safety case regulation in many high risk, complex industrial settings. However, in the case of saw mills and other operations, it is argued that such less complex risks are encountered and safety case regulation entails additional costs over the proposed Regulations (for instance, the preparation of the safety case report – even simple reports can cost thousands of dollars). That is, while overall safety case regulation may be effective in managing risks, the costs incurred counter these benefits to a degree that makes the proposed Regulations preferable.

The current arrangements are relatively inexpensive to comply with. As mentioned, most operators 'voluntarily' adopt fire prevention measures, and few written notices are issued, but to the extent that they are then operators would also incur substantive compliance costs under this option. Therefore, the current arrangements avoid the need for detailed plans and reports. It is also worth noting that regulation (and their associated costs) needs to be proportionate to the risks it seeks to address. While the actions of a sawmill or eucalyptus distiller may cause a serious escaped fire, these operations are less inherently risky and less complex than those associated with MHFs. Consequently a score of -20 is assigned to the 'cost' criterion. Taken together, this results in a net score of **+7.5**, as shown in Table 14.

Table 14: Option 3.C - Multi-criteria Analysis Assessment of the proposed Regulations

| Criteria | Weighting | Assigned Score | Weighted Score |
|-------------------------------|-------------|----------------|----------------|
| Effective prevention of fires | 50 | 35 | 17.50 |
| Cost | 50 | -20 | -10.00 |
| Total | 100% | | +7.50 |

In actual fact, the safety case option and model of negotiated compliance are not dissimilar (although the role of regulatory parties differ). However safety case regulation is likely to remain a more expensive option than the proposed arrangements for the reasons cited above, notwithstanding the development and assistance provided by guidance notes.

DEPI recognises that it does not currently have a centralised system for capturing detailed information about the costs imposed through the current Regulations. In order to better monitor and administer the proposed Regulations DEPI will collate a summary of 'notices' issued under the Regulations on a quarterly basis.

Discussion Point 6: Operators may wish to provide advice as to the cost of complying with the current Regulations.

4.3.5 Administrative costs – Authority applications

A number of proposed Regulations impose administrative costs. These include regulations that require an application of 'authority in writing' and regulations associated with the time spent attending an inspection to obtain a 'notice in writing'. These costs have been calculated to be around \$4,300 annually, or \$36,000 (PV) over a 10-year period. Table E.1 in **Attachment E** show these costs in detail.

4.3.6 Costs not quantified

A number of the regulatory costs are identified but not quantified. This is because either reliable data are not available and/or the difficulty in attributing regulatory costs to the business-as-usual counterfactual position.

Regulation 9, for example, requires a person to dig a trench at least 30cm deep and clear surrounding flammable materials (if the fire is not lit in a 'properly constructed fire place') in order to light a solid fuel, typically wood, fire. It is not known how many park or forest users light solid fuel fires outside a 'properly constructed fire place', nor is the proportion of campers that use gas, liquid or chemical solid fuel fires, compared to wood fires known. In addition, it is unknown how many campers use existing trenches. An accurate estimate of compliance rates of this regulation is also unknown.

As a rough guide, however, it may take a person 5 minutes to dig such a trench. This implies a cost of person's time in the order of \$3.30 per fire trench. If 5,000 such trenches are dug per annum, then over a 10-year period this cost could be in the order of \$136,000.⁴³ While it is not possible to derive an accurate estimate with the available data, it is worth noting that compliance costs per activity are very low, but the total may be not inconsequential owing to the frequency of activities.

Similarly, other compliance costs proved extremely difficult to calculate, owing to an absence of data and to an attribution of costs over the business-as-usual case. This was relevant for regulation 11 (burning of sawdust and waste material of sawmill), regulation 20 (storage and maintenance of fire-fighting equipment required at sawmills), and regulation 22 (storage and disposal of waste products and by-products of sawmills). It is acknowledged that the Regulations impose some substantive compliance costs, but these are noted rather than quantified. (In any case, fewer than 15 sawmills operate on land regulated by the proposed Regulations.)

4.3.7 Government costs

The Victorian Government also incurs costs in relation to administering and enforcing the Regulations. Table E.3 in **Attachment E** discusses these costs and provides detailed calculations and assumptions. Table 15 below shows that the annual costs relating to maintaining signage and enforcement are in the order of \$6.7 million (PV) over a 10-year period, or about \$670,000 (PV) annually.⁴⁴

There may be some implementation costs in visiting DEPI regions to advise staff of the changes to the Regulations, in updating the web, and in producing fact sheets.

Enforcement costs for campfire related offences are likely to be consistent with costs incurred under the current Regulations. These consist largely of compliance officers' salary costs. Since campfire offences are often committed during the weekend and holiday periods, compliance operations frequently involve overtime payments. Enforcement officers may also be required to spend considerable time travelling and interviewing individuals suspected of having contravened the Regulations.

The costs associated with infringement notices consist largely of the time it takes an officer to issue and process the notice. The use of infringement notices should decrease the time that officers need to spend on enforcement activities by reducing the amount of time taken in the preparation of briefs for prosecution. Where a person to whom an infringement notice has been issued appeals the infringement notice, a compliance officer will be required to contribute time to the appeal process. The cost of the exemption process will consist of the initial cost in staff time in advising regional officers of the addition of the exemption clause and in developing guidance for staff to use when providing exemptions.

It is possible that the quantum of enforcement costs will increase as a result of the relatively simpler method of issuing penalties. However, individual enforcement transactions should, on average, decrease. DEPI considers that any additional costs associated with enforcement activities will be accompanied by achieving the overall regulatory objectives more effectively (for example, more penalties for non-compliers may cause those considering not complying to change their behaviour).

⁴³ See Table E.5 for indicative calculations. This estimate does not include the cost of digging implements.

⁴⁴ This is the annualised PV cost. The nominal figure is 806,803.

4.3.8 Summary of costs

Table 15: Quantifiable regulatory and government costs, 10-year period (PV)

| Criteria | Weighting | Cost (\$) |
|---|------------------------|--------------------|
| Application of authority, notice in writing | Administrative | 35,899 |
| Equipment requirements | Substantive compliance | 775,973 |
| Government costs | Government | 6,709,863 |
| Total | | \$7,521,735 |

Therefore, the total quantifiable costs to users of parks specified in the proposed Regulations and government costs associated with the proposed Regulations are approximately \$904,000 per annum, or \$7.5 million (PV) over a 10 year period.

There are also non-quantifiable costs in the proposal, many of which relate to conduct or behaviour. The costs associated with ensuring an appropriate level of safety in forests is considered minimal because the vast majority of forest users do not engage in aberrant or illegal behaviour. That is, activities undertaken by individuals, such as lighting a large fire outside fireplaces without adequate clearing, is not by today’s standards a ‘normal’ activity and would therefore not impinge upon the conduct or behaviour of the vast majority of forest users. **Attachment F** provides a qualitative assessment of these costs.

4.3.9 Benefits of the proposed Regulations

The benefits of the proposed Regulations are counterfactual in nature – that is, they arise from fire events that do not occur. Thus the primary benefits are avoided costs. Section 1.2.1 above noted that bushfires are capable of causing widespread and long-lasting economic, social and environmental impacts. Economic losses were associated with direct impacts (e.g. loss of infrastructure and equipment) and indirect impacts (e.g. business disruption). Social impacts include fatalities and injuries, health problems or the loss of cultural heritage assets. Environmental impacts related to the natural environment, such as the soil, water, air, and flora and fauna. Every year there are fires caused by escaped campfires, barbeques and other activities that the Regulations seek to manage. The broad order of magnitude of these avoided, actually incurred costs suggests that the savings for fire prevention are likely to be substantial, exceeding the costs of the proposed Regulations.

An alternative to the proposed Regulations would be to prohibit all campfires, barbeques and activities that may result in ignitions. However by managing the risks of fire escapes and ignitions through the proposed Regulations, campers and businesses are able to enjoy the benefits of fire. For individuals these include cooking, warmth, and participating in the camping experience, while businesses are enabled to saw timber, collect honey and engage in other economic activities. Prohibition of these undertakings would impact upon many rural and regional operators, particularly small business.

5. Assessment of competition impacts

Key points:

- **The activities covered by the proposed Regulations primarily relate to managing actions and behaviours of individuals (such as campers), and as such, these do not restrict competition in the market for goods and services.**
- **Although the proposed Regulation affect operations, barriers to compliance are generally low and as such do not restrict competition.**
- **The proposed Regulations are considered to meet the ‘competition test’ as set out in the Victorian Guide to Regulation.**

5.1 The competition test

At the Council of Australian Governments meeting in April 1995 (reaffirmed in April 2007), all Australian governments agreed to implement the National Competition Policy (NCP). As part of the *Competition Principles Agreement*, all governments, including Victoria, agreed to review legislation containing restrictions on competition under the guiding principle that legislation (including acts, enactments, ordinances or regulations) should not restrict competition unless it can be demonstrated that:

- (a) the benefits of the restriction to the community as a whole outweigh the costs, and
- (b) the objectives of the regulation can only be achieved by restricting competition.

The *Victorian Guide to Regulation* adopts these fundamental principles and states that a legislative measure is likely to have an impact on competition if any of the following questions can be answered in the affirmative:

- is the proposed measure likely to affect the market structure of the affected sector(s), i.e. will it reduce the number of participants in the market, or increase the size of incumbent firms?
- will it be more difficult for new firms or individuals to enter the industry after the imposition of the proposed measure?
- will the costs/benefits associated with the proposed measure affect some firms or individuals substantially more than others (e.g. small firms, part-time participants in occupations, etc)?
- will the proposed measure restrict the ability of businesses to choose the price, quality, range or location of their products?
- will the proposed measure lead to higher ongoing costs for new entrants that existing firms do not have to meet?
- is the ability or incentive to innovate or develop new products or services likely to be affected by the proposed measure?

5.2 Competition assessment

The activities managed by the proposed Regulations broadly cover two groups: individuals undertaking recreational pursuits and businesses engaging in harvesting forest products as well as primary producers operating on land close to forests. The first group includes people holding barbeques, campers, bushwalkers, holiday-makers and others who light fires in Victorian forests. These are individuals who voluntarily pursue recreational activities, and as such does not comprise a market for goods and services for the purposes of the competition test. Nevertheless, it is noted that compliance with these regulation by individuals is easy and imposes negligible costs (in fact non-compliance represents dangerous or aberrant behaviour).

With respect to business, most of the restrictions on the market are imposed by other legislations and regulations. For example, in 2003 the National Competition Council (NCC) reported on its assessment of state and territory regulation of their forests.⁴⁵ The NCC noted that all governments have legislation providing for the management of publicly-owned

⁴⁵ National Competition Council, 2003, *Assessment of governments' progress in implementing the National Competition Policy and related reforms: Volume two – Legislation review and reform*, AusInfo, Canberra, p. 1.94

forests available for the production of timber and other commodities, and that this legislation generally provides for designating public land as State forest, vesting management and control of State forests in a government agency, and prohibiting certain unauthorised activities in State forests and issuing various rights to access State forests and/or extract resources from them. The NCC determined that legislation of this nature was a low priority for the National Competition Policy (NCP) review of forestry legislation, thus implying that any restriction on competition was minimal and appropriate.⁴⁶

The proposed Regulations do not restrict these market activities as such, but relate to a relatively narrow risk management aspect (akin to occupational, health and safety). Consultation confirmed that the proposed Regulations were easy to comply with and did not impose significant cost barriers, emphasising that the provision of fire fighter equipment or clearing vegetation was 'good business practice' as ultimately such compliance involves protecting their own business assets.

Taking these factors into account, this RIS concludes that the proposed Regulations do not restrict competition.

⁴⁶ *ibid*, p. 1.93

6. The preferred option

Key points:

- **The proposed Regulations seek to manage a range of human activities that pose risks of uncontrolled fires in forests. These controls impose compliance costs on forest users.**
- **The quantifiable costs identified in this RIS of the preferred option are in the order of \$904,000 per annum or around \$7.5 million (PV) over a 10-year period.**
- **The proposed Regulations incorporate the preferred design options identified in the RIS. These options were assessed as being the most effective in terms of achieving the government's objectives while taking costs into account.**
- **In the main, the proposed Regulations are easy to comply with and impose only minor costs.**
- **The proposed Regulations support, and are consistent with, Victorian Government policy and the Act.**
- **The benefits of the proposed Regulations arise from fire events that do not occur. Thus, the primary benefits relate to avoided costs. This suggests that even if just one moderately sized fire is prevented in a ten year period as a result of the Regulations, then their benefits will outweigh the costs.**

Each year, without exception, escaped fires in Victoria's forests result from human activities. Victoria is one of the most bushfire prone areas in the world. Bushfires are capable of causing widespread and long-lasting economic, social and environmental impacts. Economic losses were associated with direct impacts (e.g. loss of infrastructure and equipment) and indirect impacts (e.g. business disruption). Social impacts include fatalities and injuries, health problems or the loss of cultural heritage assets. Environmental impacts related to the natural environment, such as the soil, water, air, flora and fauna.

The proposed Regulations seek to manage a range of human activities that pose a high risk of causing uncontrolled fires in forests. These activities range from recreation undertaken by private individuals (e.g. barbeques, camp fires) to businesses conducting commercial activities (e.g. sawmills, bee farming, cutting firewood).

Given the relatively specific range of matters dealt with by the proposed Regulations, alternatives were considered:

- Option 1 – Graduated penalties to reflect the seriousness of offence;
- Option 2 – Performance-based standards for lighting fires; and
- Option 3 – Safety case regulatory of sawmills and other operations.

An MCA assessment was conducted for these regulatory alternatives. These are summarised in Table 16 below. The preferred options, with the relatively higher weighted score, have been included in the proposed Regulations.

Table 16: Summary of MCA assessment scores

| Options | Weighted Score* |
|--|-----------------|
| Option 1: Graduated penalties | |
| Option 1.A – Graduated enforcement tools | 15.00 |
| Option 1.B – Current Regulations | 8.75 |
| Option 2: Performance-based standards for camp fires, etc (individuals) | |
| Option 2.A – Performance-based standards | 10.00 |
| Option 2.B – Best-practice guidelines | 7.50 |
| Option 2.C – Proposed Regulations (prescriptive regulations) | 15.00 |
| Option 3: Safety case regulation and guidelines (business) | |
| Option 3.A – Safety case regulation | 2.50 |
| Option 3.B – Best-practice guidelines | 2.50 |
| Option 3.C – Negotiated compliance (proposed Regulations) | 7.50 |

* Bold score indicates preferred option.

In addition to these options, as noted above, the proposed Regulations were streamlined and simplified during this RIS process, and informed by practical experience and stakeholder feedback. Key changes include:

- making a number of the offences contained in the Regulations infringement offences (Option 1.A).
- removing the Schedule to the current Regulations in order to treat these areas in a manner consistent with the rest of the State. Schedule 1 in the current Regulations deals with certain areas for which the period of fire restriction differs from the rest of the state. Upon review, no strong rationale could be established to differentiate these areas from the rest of the state. Consultation with authorised officers also confirmed that there were no strong reasons for the different period of restrictions in the schedules.

Further, the Schedule regulates the period of restriction, or ‘prohibited period’, in which the Regulations will apply, for five small areas of State forest in Victoria. The prohibited period for the rest of Victoria is set by the Secretary, DEPI. In general, the prohibited period set by the Secretary begins later in the year, and finishes earlier than the period identified in the Schedule. DEPI’s view is that the prohibited period for the state should be set according to anticipated fire weather and conditions, rather than prescribed dates.

- redrafting the Regulations, consistent with Office of the Chief Parliamentary Council guidelines.

Discussion Point 7: The proposal to remove the schedules from the current Regulations aim to treat the areas listed in the Schedule in a way consistent with the rest of the State. Will any issues arise from the schedule’s removal?

The costs for forest users and government of the preferred approach are summarised in Table 17 below.

Table 17: Quantifiable regulatory and government costs, 10-year period (PV)

| Description of Regulation | Cost type | Cost (\$) |
|---|------------------------|--------------------|
| Application of authority, notice in writing | Administrative | 35,899 |
| Equipment requirements | Substantive compliance | 775,973 |
| Government costs | Government | 6,709,863 |
| Total | | \$7,521,735 |

Given that costs have been calculated at approximately \$904,000 per annum, or \$7.5 million (PV) over a 10-year period, a Break-even Analysis can be used to measure the likelihood of benefits being achieved and outweighing regulatory costs.

It is important to note that fires commencing in the land targeted by the Regulations can cause both loss of human life and damage to natural ecological systems. For this reason, the Code of Practice for Bushfire Management on Public Land establishes two primary objectives for managing bushfires on public land in Victoria: to minimise the impact of major bushfire on human life, communities, essential and community infrastructure, industries, the economy and the

environment (human life will be afforded priority over all other considerations); and to maintain or improve the resilience of natural ecosystems and their ability to deliver services such as biodiversity, water, carbon storage and forest products.

The valuation of non-use values of Victoria public land was attempted in a 2007 study of *Non-use Values of Victorian Public Land: Case Studies of River Red Gum and East Gippsland Forests*.⁴⁷ The study illustrated that Victorians placed a gross value benefit of \$6.5 million per annum of improving the health of 500 hectares of river red gum.⁴⁸ While these findings should be viewed cautiously, as an illustrative benchmark shows that if the proposed Regulations prevent damage to about 70 hectares of forest per annum then the benefits of the proposal will outweigh the costs. Based on currently available data, DEPI estimates that between 2004 and 2013, an approximate average of 304.2 hectares per annum was burned because of activities addressed by the Regulations. This RIS submits that it is reasonable to assume that such benefits (through avoided costs) will be attained.

Further, beekeeping is highly dependent on access to public land. Between 70 to 80 per cent of honey production in Victoria is derived from Eucalyptus species that grow mostly on public land. Beekeeping in Victoria is conservatively valued in the hundreds of millions of dollars each year, producing honey and vital pollination services for agriculture and horticulture.⁴⁹ Therefore, a regulatory regime that manages risks and permits the apicultural industry to operate on public land is likely to provide an economic benefit. This benefit is noted, rather than directly attributed to the proposed Regulations.

Given that bushfires impose such significant costs on the Victorian community and environment, all options identified in this RIS are likely to deliver a net benefit. The analysis in this RIS supports the revised Regulations, which incorporate the design features assessed as preferred in the MCA assessment above. A detailed outline of the proposed Regulations is set out in **Attachment A**.

Finally, modern regulatory theory suggests that using a range of regulatory tools and responses to address particular issues may be more effective than a single regulatory tool. While not considered superior as stand-alone options the educational material or guidelines, signage, and codes of practice are considered complementary strategies to the proposed Regulations. In this regard, guidelines could provide very useful information to supplement other approaches, and potentially allow for more flexible responses to address safety issues — such as by suggesting additional voluntary precautions in certain conditions (for example, in windy conditions, leave a 5-metre clearance, rather than the minimum 3 metres), or providing advice about what to do if a campfire gets out of control.

Continuing current levels of public information and education and leaving the various Codes of Practice to operate as 'soft law' parallel to the proposed Regulations may be the most appropriate, and effective, way of incorporating these strategies into the overall regulatory regime.

This RIS concludes that:

- the benefits to society of the proposed Regulations exceed the costs;
- the net benefits of the proposed Regulations are greater than those associated with any practicable alternatives; and
- the proposed Regulations do not impose restrictions on competition.

Discussion Point 8: Does the proposal inconvenience or impose unreasonable limitations on the rights of forest users?

Discussion Point 9: Are there any practical difficulties associated with the proposed Regulations?

Discussion Point 10: Will any unintended consequences arise from the proposed Regulations?

⁴⁷ URS Australia, 2007, *Non-use Values of Victorian Public Land: Case Studies of River Red Gum and East Gippsland Forests*, viewed 17 December 2013, http://www.veac.vic.gov.au/documents/URS_CM_report_Executive_Summary.pdf

⁴⁸ *ibid.*, n.p. This hypothetical example was used in the study to illustrate key stages, involving the setting aside of part of a River Red Gum forest as a nature conservation reserve rather than production forest. Consultation with bio-physical scientists and forest managers yield predictions that the change in land use will cause (over the next 20 years) approximately: 500 more hectares of healthy River Red Gum forests, 10 additional breeding pairs of parrots, 5 per cent more of pre European numbers of Cod, and two more camping sites with facilities.

⁴⁹ DEPI, Beekeeping on public land, viewed 1/11/13, <http://www.depi.vic.gov.au/agriculture-and-food/livestock/honey-bees>

7. Implementation and enforcement issues

Key points:

- Overall compliance with the proposed Regulations is expected to be high (particularly in areas where actions are observable). However, the large spatial area occupied by Victorian forests makes non-compliant behaviour difficult to manage.
- DEPI and Parks Victoria enforcement officers are responsible for monitoring and enforcing the proposed Regulations.
- A range of infringement penalties aims to ensure flexible and proportionate compliance.
- Given that the proposed Regulations are similar to the current arrangements, no implementation or transitional issues are expected.

7.1 Monitoring and enforcement

Parks Victoria Authorised Officers enforce these Regulations on land that is managed under the *National Parks Act 1975* (predominantly, in this case, national park land). DEPI Authorised Officers enforce the Regulations in State forest, protected public land and in the FPA outside the regulated fire area. There are currently 394 DEPI Authorised Officers, along with 329 Authorised Parks Victoria officers, making a total of 723 field staff. Victoria Police may also assist in ensuring compliance.

Enforcement is conducted through a combination of regular patrols by field based staff to co-ordinate compliance efforts. Authorised Officers are appointed under section 83 of the *Conservation Forests and Land Act 1987*.

7.2 Penalties

The current Regulations contain 12 regulations that attract penalties of 50 penalty units. This is equivalent to \$7,218. A further six regulations in the current Regulations draw upon penalties contained in the Act. This penalty structure will not provide flexibility or responsive enforcement and compliance.

As assessed in the options section, a range of infringement penalties will be introduced in the proposed Regulations. The three infringement penalties in the proposed Regulations seek to improve enforcement and provide government agencies with the flexibility to proportionally penalise persons for minor offences. They are used to address the effect of minor law breaking with minimum recourse to the formal criminal justice system.

Penalty infringements aim to improve flexibility of compliance by seeking to impose a proportional response on non-compliant persons. The proposed Regulations prescribe 12 offences set at 50 penalty units.⁵⁰ **Attachment G** sets out the proposed penalties.

The penalties in the proposed Regulations have been developed in consultation with the Infringements System Oversight Unit (ISOU) in the Department of Justice.

7.3 Implementation

The current Regulations have operated for 10 years and stakeholders are familiar with them. Given that the proposed Regulations are substantially similar to the current arrangements, no implementation or transitional issues are expected to arise.

⁵⁰ Under the *Monetary Units Amendment Act 2012* the Treasurer has set a penalty unit rate from 1 July 2013 to 30 June 2014 at \$144.36.

8. Evaluation

The *Subordinate Legislation Act 1994* revokes statutory rules following 10 years of operation. This allows the government to examine whether there is still a problem that requires government intervention, and to take account of any changes or developments since the regulation was implemented. When regulations are remade, the government assesses whether the objectives of the regulation are being met, whether practical experience suggests ways in which they can be improved, or whether a different regulatory approach is warranted. As part of this process, some changes have been incorporated in the proposed regulations. Final development of the regulations is informed by public input through the RIS process.

DEPI does not anticipate that the proposed Regulations will require a formal review following assessment through the RIS process. This is because they largely remake the current Regulations, which have been in operation for 10 years, with similar regulations having been in place for over 20 years. However, it became apparent during the preparation of this RIS that certain data were not readily available. In order to better monitor and administer the proposed Regulations DEPI will:

- keep written records of 'authorities' and 'notices' issued under the Regulations, and
- collate a summary of these records on a quarterly basis.

Any additional activities and costs that this may entail will be absorbed within the current duties of field officers and within current budgets.

DEPI will monitor the proposed Regulations closely and, should any issues arise concerning their operation, these will be rectified.

9. Consultation

A range of internal and external stakeholders were consulted during the preparation of this RIS. All stakeholders were supportive of the proposed Regulations and business noted that compliance and understanding of the requirements were generally good.

DEPI officers in the Fire Division, Compliance Support Group and VicForests were consulted to clarify technical aspects of the Regulations and to assess the Regulations' operational effectiveness over the past 10 years.

Advice concerning the costings in relation to sawmills was provided by several DEPI Direct Fire Managers, who are responsible for annual inspections of sites.

The Victorian Apiarists' Association and VFF Beekeepers were consulted. Overall, these groups considered that the Regulations were not onerous, easy to comply with, and there was good knowledge of the requirements within the industry. One point was raised in relation to the prescription of knapsacks. It was considered that the definition should be expanded to include pressurised water packs/water extinguishers, which apparently many apiarists now use instead of knapsacks.

Discussion Point 11: Are knapsacks still widely used or should the Regulations also provide for other fire suppression technologies?

A quarry operator was consulted concerning the firefighting equipment and clearing requirements. The operator confirmed that the Regulations are working effectively and that it is relatively easy to comply with them.

The Infringements System Oversight Unit (ISOU), Department of Justice was consulted. Along with DEPI Legal, the ISOU provided advice concerning the proposed levels of the new range of penalty infringement notices.

This RIS represents another step in the consultation process and DEPI welcomes comments or suggestions about the nature, extent, and likely impacts of the proposed Regulations, and any variations that may improve the overall quality of the proposal.

The *Subordinate Legislation Act 1994* requires that the public be given at least 28 days to provide comments or submissions regarding the proposed Regulations. Taking into account feedback received during the preparation of this RIS, along with minimal changes proposed in the regulation, the consultation period of 28 days is considered adequate. Accordingly, written comments are required by no later than **5.00pm, 27 April 2014**.

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11. Attachments

Attachment A – Overview of proposed Regulations

Proposed Forests (Fire Protection) Regulations 2014

The proposed Forests (Fire Protection) Regulations 2014 are primarily concerned with managing human behaviours and activities which may negatively impact on a forest's environmental values and/or visitor safety and amenity. The following section provides an overview of the proposed Regulations:

Proposed Regulations

Part 1 — Preliminary

Regulation 1 sets out the objectives of the Regulations, which are to provide for the protection of State forests, national parks and protected public land from damage by fire.

Regulation 2 provides the authority under which the Regulations are made. These Regulations are made under sections 99 and 99A of the *Forests Act 1958*.

Regulation 3 provides the date the proposed Regulations come into operation which is 28 June 2014.

Regulation 4 revokes the current Regulations and associated Amendments.

Regulation 5 contains definitions for the purpose of interpreting the Regulations. Definitions include 'adequate water supply', 'operation', 'properly constructed fireplace', 'smoker', and 'the Act'. Australian/New Zealand Standards abbreviations for equipment are also listed.

Regulation 6 provides for the application of the Regulations. The Regulations do not permit the lighting, kindling, maintaining or use of a fire (a) in an area which is subject to a notice under section 64 of the Act prohibiting the use of a fire in the open air; or (b) in an area which is subject to a declaration of a day or partial day of total fire ban under the *Country Fire Authority Act 1958*; or (c) in an area in which fires generally or fires of that type are prohibited under the *National Parks Act 1975*; or (d) in contravention of any other Act.

Regulation 7 provides authorised officers with the power to grant an exemption, by notice in writing, from any requirements of Parts 3 and 4.

An exemption under subregulation 1 must specify the period for which the exemption applies and may specify in an exemption any reasonable conditions that the authorised officer considers appropriate. An authorised officer may revoke an exemption. A revocation must be in writing.

The exemption power will enable officers to authorise a person to undertake regulated activities in circumstances which would otherwise breach the Regulations. DEPI is most likely to use such a power to exempt operators of engines from the technical requirements of Part 3 of the proposed Regulations. For example, current regulation 18 states that a person must not "use any welding, grinding, gas cutting or soldering equipment in a fire protected area during the prohibited period in the open air" except in certain conditions, including where, if there is no adequate water supply, there is one working "knapsack spray pump with a tank capacity of not less than 9 litres which is fully charged with water". Most people using welding, grinding, gas cutting or soldering equipment would be able to meet these prescriptions.

DEPI, however, wishes to have the power to issue exemptions to emergency management agencies, who might not otherwise be able to conduct emergency management activities. The exemption would only be issued to emergency management agencies who were acting in fulfilment of their responsibilities as described in the Emergency Management Manual Victoria.

It is intended that any exemption operate as a substitute requirement (e.g. fire extinguishers in place of 9 litre knapsacks) in order to provide flexibility when needed but still maintain a pre-determined level of protection.

Part 2 — Fires, Campfires and Barbeques in the Open Air

Regulation 8 provides the circumstances in which a written authority is required to light a fire in the open air in a fire protected area. Specifically, this regulation provides that for the purposes of section 63(1)(a) of the Act, a person must have the written authority of an authorised officer, given under regulation 13, to light a fire in the open air in any State forest, protected public land or national park at any time during the prohibited period, except in circumstances set out in regulations 9, 10, 11 and 12. And for the purposes of section 63(2)(a) of the Act, a person must have the written authority of an authorised officer, given under regulation 13, to light a fire in the open air in any fire protected area, not

being a State forest, protected public land or national park at any time during the prohibited period, except in circumstances set out in regulations 9, 10, 11 and 12.

Regulation 9 provides that the written authority of an authorised officer is not required for a campfire or barbeque using solid fuel if the fire is lit (a) in a properly constructed fireplace; or (b) in a trench at least 30 centimetres deep.

The written authority of an authorised officer is not required for a campfire or barbeque that uses solid fuel in a fire protected area, not being State forest, protected public land or national park, during the prohibited period if (a) the ground and airspace within a distance of 3 metres from the outer perimeter and uppermost point of the fire are clear of flammable material; and (b) the area of the campfire or barbeque is not more than one square metre; and (c) all dimensions of any piece of the solid fuel that is being used in the campfire or barbeque are not more than one metre.

Regulation 10 deals with campfires or barbeques using liquid fuel, gaseous fuel or chemical solid fuel. The written authority of an authorised officer is not required for a campfire or barbeque that uses liquid fuel, gaseous fuel or chemical solid fuel if (a) the fire is contained in an appliance designed and commercially manufactured to use that fuel; and (b) the appliance when alight is stable.

The written authority of an authorised officer is not required for a campfire or barbeque using liquid fuel, gaseous fuel or chemical solid fuel in the open air in a fire protected area, not being State forest, protected public land or national park, if the ground and airspace within a distance of 1.5 metres of the appliance are clear of inflammable material.

Regulation 11 provides that a written authority is not required in connection with the operations of a sawmill, for the purpose of burning inflammable material if the fire is effectively contained in a pit or structure.

An authorised officer may, by a notice in writing issued to a person in charge of a sawmill, specify the dimensions and specifications of any pit or structure used to burn inflammable material.

A fire is effectively contained in a pit or structure if the dimensions and specifications of a pit or structure comply with any notice issued by an authorised officer.

Regulation 12 provides that the written authorisation of an authorised officer is not required for a fire within a smoker in connection with the operations of a bee farming operation, for the purpose of extracting honey or relocating bees if the person in charge of the bee farming operation (a) uses the smoker on an area of ground which is clear of all inflammable material for a distance of 1.5 metres; and (b) places the smoker in a fireproof receptacle when not in use; and (c) if the weather conditions in the area are such that there is a danger of the spread of fire, and the operator has available for immediate use at least (i) one knapsack spray pump with a tank capacity of not less than 9 litres which is fully charged with water, is in proper working order and complies with AS 1687–1991; and (ii) one rakehoe or similar implement capable of removing grass, shrubs, vegetation and other inflammable material from the area of the fire.

Regulation 13 provides authorised officers with the power to give a person written authority to light a fire in a fire protected area.

Such an authority must specify the period the authority applies. An authorised officer may specify in an authority any reasonable conditions that the authorised officer considers appropriate. An authorised officer, by notice in writing given to a person, may revoke an authority.

Regulation 14 provides that a person who has lit, kindled or maintained or is in charge of a fire, in the open air in a fire protected area during the prohibited period must, before leaving the place of the fire (a) completely extinguish the fire; or (b) ensure that a person who has the capacity and means to extinguish the fire is in charge of the fire.

Regulation 15 provides that a person who has lit, kindled, or maintained a fire, or who is in charge of a fire, in the open air in a fire protected area during the prohibited period must extinguish the fire immediately when required to do so by an authorised officer.

Part 3 – Engines and Equipment

Regulation 16 provides that a person must not use a stationary engine in a fire protected area during the prohibited period, (a) if the stationary engine is placed in an area in the open air; or (b) if the exhaust of the stationary engine discharges into the open air.

This does not apply to a person who uses a motor driven pump, generator or other stationary engine if (a) the exhaust pipe is fitted with a spark arrestor which is in proper working order and complies with AS 1019–2000; and (b) the ground and airspace within a distance of 1.5 metres from the outer perimeter and uppermost point of the stationary engine are clear of all inflammable material; and (c) in circumstances where the weather conditions in the area are such that there is a danger of the spread of fire, there is available for immediate use (i) a hose connected to an adequate water supply; or

(ii) if there is no adequate water supply, at least one knapsack spray pump with a tank capacity of not less than 9 litres which is fully charged with water, is in proper working order and that complies with AS 1687–1991; or one dry chemical fire extinguisher which is in proper working order and complies with AS/NZS 1841.1:2007 and AS/NZS 1841.5:2007.

In this regulation, 'stationary engine includes, but is not limited to, motor driven pumps and generators.

Regulation 17 provides that a person must not use a chain saw, vehicle or other non-stationary engine so that it is in contact with any crop, stubble, weeds, undergrowth or other vegetation in a fire protected area during the prohibited period.

However, this does not apply to a person who uses a non-stationary engine if (a) the engine is fitted with (i) a spark arrestor which is in proper working order and complies with AS 1019–2000; or (ii) a turbo charger or an exhaust aspirated air cleaner; and (b) in circumstances where the weather conditions in the area are such that there is a danger of the spread of fire, if there is available for immediate use (i) a hose connected to an adequate water supply; or (ii) if there is no adequate water supply, at least one knapsack spray pump with a tank capacity of not less than 9 litres which is fully charged with water, is in proper working order and that complies with AS 1687–1991; or one dry chemical fire extinguisher which is in proper working order and that complies with AS/NZS 1841.1:2007 and AS/NZS 1841.5:2007.

Regulation 18 provides that a person must not use any welding, grinding, gas cutting or soldering equipment in the open air in a fire protected area during the prohibited period.

However, this does not apply to a person who uses the appliance or equipment in the following circumstances: (a) the ground and airspace within a distance of 3 metres from the outer perimeter and uppermost point of the equipment are clear of all inflammable material; (b) a shield or guard of fire resistant material is placed or erected to prevent the emission of sparks, hot metal or slag; (c) all cut-offs, electrode stubs and other hot materials from the operation are placed directly in a fireproof receptacle; and (d) in circumstances where the weather conditions in the area are such that there is a danger of the spread of fire, there is available for immediate use (i) a hose connected to an adequate water supply; or (ii) if there is no adequate water supply, at least one knapsack spray pump with a tank capacity of not less than 9 litres which is fully charged with water, is in proper working order and which complies with AS 1687–1991; or one dry chemical fire extinguisher which is in proper working order and complies with AS/NZS 1841.1:2007 and AS/NZS 1841.5:2007.

Part 4 – Operations

Regulation 19 provides that a person in charge of an operation in a fire protected area must ensure that the outer perimeter of (a) any log dump, timber stack, timber product, waste burner, pit, winch, kiln, quarry, distillery, retort or other structure associated with the operation; or (b) any other part of the operation; is kept clear of all inflammable materials at all times.

Without limiting subregulation (1), the outer perimeter referred to in that subregulation must be maintained clear of all inflammable materials at all times to a distance specified by an authorized officer in a notice issued under subregulation (1).

An authorised officer, by notice in writing to a person in charge of an operation, may specify a distance not exceeding 40 metres to be cleared of inflammable material from that sawmill or other operation.

Regulation 20 provides that an authorised officer may, by notice in writing issued to the person in charge of a sawmill, in a fire protected area specify the fire fighting apparatus, water supplies and equipment required to be provided at the sawmill; and the places within the sawmill at which that apparatus and equipment must be stored.

A person in charge of a sawmill in a fire protected area must ensure that all firefighting apparatus, water supplies and equipment specified by an authorised officer in a notice issued under this regulation are provided at the sawmill at the places specified in the notice.

In addition, a person in charge of a sawmill in a fire protected area must ensure that all firefighting apparatus, water supplies and equipment specified in a notice issued under this regulation are available for immediate use at all times.

Further, a person in charge of a sawmill in a fire protected area must ensure that all firefighting apparatus, water supplies and related equipment specified in a notice issued under this regulation are maintained in proper working order at all times.

Regulation 21 provides that an authorised officer may, by notice in writing issued to the person in charge of an operation other than a sawmill in a fire protected area, specify the firefighting apparatus, water supplies and related equipment required to be provided at the operation, and the places within the operation at which that apparatus and equipment must be stored.

A person in charge of an operation other than a sawmill in a fire protected area must ensure that all firefighting apparatus, water supplies and equipment specified in a notice issued under this regulation is provided and stored at the operation at the places specified in the notice.

In addition, a person in charge of an operation other than a sawmill in a fire protected area must ensure that all firefighting apparatus, water supplies and related equipment specified in a notice issued under this regulation is available for immediate use at all times.

Further, the person in charge of an operation other than a sawmill in a fire protected area must ensure that all firefighting apparatus, water supplies and related equipment specified in a notice issued under subregulation (1) are maintained in proper working order at all times.

Regulation 22 provides that an authorised officer, by notice in writing issued to a person in charge of a sawmill, may specify the methods for the storage and disposal of waste and by-products of the sawmill.

A person in charge of a sawmill in a fire protected area must ensure that all inflammable materials at the sawmill are stored and disposed of in accordance with a notice issued under subregulation (1).

Regulation 23 provides that a person must not use a safety fuse, fuse lighter or splitting gun in a fire protected area before sunrise or after 9.30am on any day in January, February, March, April, November or December of any year.

Discussion Point 12: Are the times and months prescribed in the proposed regulation 23 in relation to the use of safety fuses, fuse lighters or splitting guns appropriate?

Attachment B – Regulatory framework

Extracts of key provisions of the *Forests Act 1958* and provisions from other legislation

| Section | Description |
|---------|---|
| 63 | <p>Restrictions as to lighting etc. fires in certain areas</p> <p>(1) Every person who in any State forest protected public land or national park—</p> <p>(a) in circumstances in which he is required by the Regulations to have the written authority of an authorised officer to light a fire in the open air and without being thereunto directed by an authorised officer lights kindles or maintains or knowingly or negligently causes to be lit kindled or maintained any fire in the open air without having such authority or without complying with any condition specified in the authority;</p> <p>(aa) in or in relation to the lighting kindling maintaining or extinguishing of any fire in the open air fails to comply with any relevant regulations; (b) does not observe all reasonable precautions to prevent the spread of and damage by any fire lit kindled or maintained by him or to his knowledge by his agent or employee; or</p> <p>(c) leaves any fire lit kindled or maintained by him or to his knowledge by his agent or employee or otherwise without previously taking all reasonable precautions to prevent it spreading or causing injury shall be liable to a penalty of not more than 100 penalty units or to imprisonment for a term of not more than two years or to both such penalty and imprisonment.</p> <p>(2) Every person who in any fire protected area, not being a State forest protected public land or a national park—</p> <p>(a) during the prohibited period in circumstances in which he is required by the Regulations to have the written authority of an authorised officer to light a fire in the open air and without being thereunto directed by an authorised officer lights kindles or maintains or knowingly or negligently causes to be lit kindled or maintained any fire in the open air without having such authority or without complying with any condition specified in the authority;</p> <p>(aa) at any time in or in relation to the lighting kindling maintaining or extinguishing of any fire in the open air fails to comply with any relevant regulations;</p> <p>(b) at any time does not observe all reasonable precautions to prevent the spread of and damage by any fire lit kindled or maintained by him or to his knowledge by his agent or employee; or</p> <p>(c) at any time leaves any fire lit kindled or maintained by him or to his knowledge by his agent or employee or otherwise without previously taking all reasonable precautions to prevent it spreading or causing injury—</p> <p style="padding-left: 40px;">shall be liable to a penalty of not more than 50 penalty units or to imprisonment for a term of not more than one year or to both such penalty and imprisonment.</p> <p>(3) Where any authorised officer or any member of the police force directs the owner or occupier of or person residing on and having charge and control of any private land (including any Crown land leased with an inchoate right of purchase) within 3 kilometres of the boundary of any State forest protected public land or national park—</p> <p>(a) to extinguish any fire on such land; or</p> |

| Section | Description |
|---------|--|
| | <p>(b) to take such steps as the authorised officer or member of the police force directs to extinguish such fire or prevent the same from spreading or causing injury—</p> <p>such owner occupier or person (whether or not he has been authorized or directed by an authorised officer to light kindle or maintain such fire and whether or not such fire was lit kindled or maintained in accordance with this Act or the Regulations or any other Act or any permit or direction granted or given pursuant to any other Act) shall forthwith extinguish such fire or take such steps accordingly.</p> <p>(4) Every such owner occupier or person when so directed as aforesaid—</p> <p>(a) who fails neglects or refuses to extinguish such fire forthwith or to take forthwith such steps as aforesaid; or</p> <p>(b) who purports to carry out such directions but does so in such a manner that the fire is not extinguished and breaks out or is likely to break out subsequently—</p> <p>shall be liable to a penalty of not more than 50 penalty units or to imprisonment for a term of not more than one year or to both such penalty and imprisonment.</p> |
| 66A | <p>Offence to leave certain campfires or barbeques unattended</p> <p>(1) The person in charge of a campfire or barbeque using solid fuel and that is in the open air in a regulated fire area must not—</p> <p>(a) be outside the line of sight of the campfire or barbeque; or</p> <p>(b) be more than 50 metres from the perimeter of the campfire or barbeque.</p> <p>In this section and in sections 66B and 66C, regulated fire area means any State forest, protected public land or national park.</p> |

| | |
|-----|---|
| 66B | <p>Offences as to having clear areas around certain campfires or barbeques</p> <p>(1) A person must not light, kindle or maintain a campfire or barbeque, that uses solid fuel and that is in the open air in a regulated fire area, unless the ground and airspace within a distance of 3 metres from the outer perimeter and uppermost point of the fire are clear of flammable material.</p> <p>(2) A person must not light, kindle or maintain a campfire or barbeque, that uses liquid fuel, gaseous fuel or chemical solid fuel and that is in the open air in a regulated fire area, unless the ground and airspace within a distance of 1.5 metres from the outer perimeter and uppermost point of the fire are clear of flammable material.</p> |
| 66C | <p>Offence as to campfires or barbeques above a certain size</p> <p>(1) A person must not light, kindle or maintain a campfire or barbeque, that uses solid fuel and that is in the open air in a regulated fire area, if—</p> <p>(a) the area of the campfire or barbeque is more than one square metre in any direction; or</p> <p>(b) a dimension of any piece of the solid fuel that is being used in the campfire or barbeque is more than one metre, unless the person is authorised to do so in writing by an authorised officer.</p> |
| 67 | <p>Duty to prevent spread of fire etc.</p> <p>(1) Every person who finds any fire burning in any State forest protected public land or national park or in any fire protected area during any period when there is danger of the spread of fire shall do everything that is reasonably within his power to prevent such fire from spreading and shall as soon as practicable report the existence of such fire to the nearest authorised officer or member of the police force.</p> <p>(2) When any fire is unlawfully burning on any land in any fire protected area during the prohibited period the occupier of such land shall take all reasonable measures at his own expense to extinguish such fire and shall as soon as practicable report the existence of such fire to the nearest authorised officer or member of the police force.</p> <p>(3) Every person who holds a lease licence permit or authority under this Act or is employed by any person holding any such lease licence permit or authority or is employed by the State of Victoria or who is a timber harvester shall furnish as soon as practicable to the nearest authorised officer or member of the police force any information he may possess regarding any outbreak of fire during the prohibited period in any fire protected area.</p> |

Provisions in other legislation

Part 4 of the current Regulations restricts the use of stationary engines (regulation 16), non-stationary engines (regulation 17), and welding, grinding, soldering or gas cutting equipment (regulation 18) in a fire protected area⁵¹ during the prohibited period.⁵² The penalty for any breaches under this Part is 50 penalty units.

Firewood Collection

The Forests (Domestic Firewood) Regulations 2012 and the *Crown Land (Domestic Firewood) Regulations 2012* and the authorising Acts regulate the collection of firewood on public land. The Regulations abolished the requirement for permits to collect firewood. Both sets of regulations prescribe identical offences. The offence provisions do not apply to

⁵¹ **fire protected area** means any land within a State forest, national park, protected public land, or any land within 1.5 kilometres of any reserved or protected forest, national park or public land.

⁵² **prohibited period** means the whole year (in relation to State forest, national parks or protected public land) or a period declared by the Minister (in relation to any other fire protected area).

activities that a person is licensed or authorised to do. The following provisions (regulation 7 of the Forests (Domestic Firewood) Regulations 2012) potentially overlap with the Fire Protection Regulations:

- (3) A person must not bring heavy machinery into a firewood collection area⁵³ during a firewood collection season.⁵⁴
Penalty: 20 penalty units.

A person must not operate heavy machinery⁵⁵ in a firewood collection area during a firewood collection season.
Penalty: 20 penalty units.

A person operating heavy machinery in a firewood collection area in State forest during a firewood collection season may be committing an offence under both the Fire Protection Regulations and the Domestic Firewood Regulations.

Timber Harvesting

The *Sustainable Forests (Timber) Act 2004* and the Sustainable Forests (Timber Harvesting) Regulations 2006 regulate timber harvesting activities in State forests. Breaches of the activities listed under Schedule 2 of the regulations incur demerit points, accumulation of which may lead to suspension of a timber harvesting operator's licence and a fine of 60 penalty units if the suspension is not complied with. The following provisions in Schedule 2 of the Sustainable Forests (Timber Harvesting) Regulations 2006 potentially overlap with the Fire Protection Regulations:

Item 4. Where, without the prior approval of the Secretary, the holder of a timber harvesting operator's licence operates a machine within an area marked for reservation. (4 demerit points).

Item 9. Where, without the prior approval of the Secretary, the holder of a timber harvesting operator's licence uses a machine to sweep drifts of loose mud, slush and soil from the surface of a road, vehicle route or snig track. (4 demerit points).

A licensee operating a machine within an area marked for reservation may be committing an offence under the Fire Protection Regulations *and* be liable to incur demerit points under the Timber Harvesting Regulations.

⁵³ firewood collection area means the area determined by the Secretary.

⁵⁴ firewood collection season is the period from 1 September to 30 November, and the period from 1 March to 30 June (unless varied by the Secretary).

⁵⁵ heavy machinery includes any bulldozer, crane, excavator, forwarder, hydraulic log splitter, saw bench, skidder, skid steer loader, tractor and heavy vehicle.

Attachment C – Summary of changes in Forests (Fire Protection) Regulations 2014

Summary of substantive changes between 2004 and 2014 Forests (Fire Protection) Regulations

| 2004 Regulation | 2014 Regulation | Change |
|-----------------|-----------------|--|
| 1 | 1 | No change |
| 2 | 2 | No change |
| 3 | 3 | No change |
| 4 | 4 | Previous regulations revoked <ul style="list-style-type: none"> References to Australian Standards updated Definition of commercial operation removed Definition of regulated fire area removed Definition of 'smoker' added |
| 5 | 5 | <ul style="list-style-type: none"> Definition of 'temporary structure' removed |
| 6 | 6 | No change |
| 7 | 8 | Minor changes to wording |
| | 7 | Power of authorised officers to grant exemptions from the Regulations added |
| 8 | 14 | Minor changes to wording |
| 9 | 15 | 'Police' removed (no authorising provision in the Act) |
| 10 | | Regulation removed |
| 11 | | Regulation removed |
| 12 | | Regulation removed <ul style="list-style-type: none"> Changes to wording to indicate relationship to regulation 8 |
| 13 | 9 | <ul style="list-style-type: none"> References to schedule removed |
| 14 | 10 | Changes to wording to indicate relationship to regulation 8 |
| 15 | | Regulation removed <ul style="list-style-type: none"> Subregulation 1 to be infringement |
| 16 | 16 | <ul style="list-style-type: none"> Reference to temporary structures removed |
| 17 | 17 | <ul style="list-style-type: none"> Subregulation 1 to be infringement Reference to standard updated |
| 18 | 18 | <ul style="list-style-type: none"> Subregulation 1 to be infringement Reference to standard updated |
| 19 | 19 | Minor changes to wording |
| 20 | 20 | Minor changes to wording |
| 21 | 21 | Minor changes to wording |
| 22 | 22 | Minor changes to wording |
| 23 | 11 | Changes to wording to indicate relationship to regulation 8 |
| 24 | 12 | Changes to wording to indicate relationship to regulation 8 |
| 25 | 23 | Subregulation 2 removed |
| Schedule | | Schedule removed |
| Table | | Table of Applied, Adopted or Incorporated Matter required by the Subordinate Legislation Regulations 2004 added |

Attachment D – Assumptions

Assumptions

1. Annual costs are discounted by 3.5 per cent as suggested in the *Victorian Guide to Regulation*, Appendix C, 'Choice of discount rate', p. 19.

2. As a proxy for valuing an hour of a person's time, the following formula is given:

$HR_x = (AE_x / AW_x \times AH_x)$, where:

AE_x = average weekly earnings multiplied by 52;

AW_x = number of weeks worked per annum (44 weeks);

AH_x = average weekly hours for full time workers (41 hours)

See *Victorian Guide to Regulation* (Appendix C, 'Valuing staff time', p. 15). This provides an hourly value of a person's time of **\$39.24** (i.e. \$1,361.60 x 52 divided by (44 x 41)). In the case of businesses, labour on-costs are included. The \$39.24 figure is grossed-up by a factor of 1.75 to take account of these costs (Appendix C, 'Valuing staff time', p. 14). This provides an hourly rate for businesses of **\$68.68**.

3. Enforcement costs proved difficult to estimate and posed methodological challenges. There are currently 394 enforcement officers authorised by DEPI and 329 enforcement officers authorised by Parks Victoria to enforce the Regulations. An assumed annual salary of \$55,555 (VPSG-2.27 as from 1 July 2013), which has been grossed-up by a factor of 1.75 to account for labour and corporate on-costs, was adopted. Of this salary bill, it is assumed that 2.5 per cent of authorised officers' duties involve enforcing the proposed Regulations. This estimate is based on discussions with DEPI and its authorised officers, but should be regarded as indicative. While this estimate is considered reasonable, other factors such as what proportion should be attributable to the Act (rather than the Regulations alone), and other laws and regulations that authorised officers are required to enforce, make a precise estimate difficult.
4. The calculations in relation to clearing around a sawmill are based on slasher hire at \$80 per hour x 8 hours, providing a cost of \$640 per day. It is assumed that slashing is conducted twice per year. This estimate is considered conservative given that large mills are likely to own slashing equipment and therefore the tariff would be much lower.

The calculations of substantive compliance costs (e.g. the requirement to possess equipment) raises the issue of 'incremental costs' imposed by the Regulations. It became clear during consultation that in the vast majority of cases, businesses would have acquired such equipment in any case. In fact most businesses appeared to exceed the minimum requirements. Therefore, the costings in this RIS focus on those businesses that 'but for' the Regulations would not have acquired such equipment. A potentially useful data source is the 'notices in writing' from DEPI officers to businesses. However, consolidating this data was not possible. Nevertheless, useful information was obtained from DEPI officers, sawmills, bee farmers and a quarry operator. An estimate of \$2,500 was assumed for businesses to which notices are issued. This cost may include relocating equipment, acquiring tanks or pumps, or slashers. This estimate is based on discussions with regional DEPI authorised officers in four locations and consultation with three sawmills/other operators.

The cost of \$320 for a bee farmer is based on the cost of a knapsack (\$290) and rakehoe (\$30).

Attachment E – Calculations

Cost calculations of proposed Regulations – Business Costs¹

| Table E.1 - Costs imposed by the proposed Forests (Fire Protection) Regulations 2014 | | | | | | |
|---|---------------------|-------------------|-----------------------------------|-----------|--|--------------|
| Administrative costs | | Price | | Quantity | | Cost (\$) |
| Description – Application of Written Authority | Tariff ² | Time ³ | Population ⁴ | Frequency | | |
| General Prohibition – (Regulation 8); campfires or barbeques (Regulation 10); safety fuses, etc (Regulation 23) | 39.24 | 1.0 | 75 | 1 | | 2,943 |
| <i>Description – Notice in writing</i> | | | | | | |
| Other notices in writing (Regulations 11(2), 13(1), 19(2), 20(1), 21(1), 22(1)) | 68.68 | 2.0 | 10 | 1 | | 1374 |
| Total | | | | | | 4,317 |
| Discounted (10-years) | | | | | | |
| Year | Cost (\$) | | Discounted Cost (\$) ⁵ | | | |
| 1 | 4,317 | | 4,171 | | | |
| 2 | 4,317 | | 4,030 | | | |
| 3 | 4,317 | | 3,893 | | | |
| 4 | 4,317 | | 3,762 | | | |
| 5 | 4,317 | | 3,634 | | | |
| 6 | 4,317 | | 3,512 | | | |
| 7 | 4,317 | | 3,393 | | | |
| 8 | 4,317 | | 3,278 | | | |
| 9 | 4,317 | | 3,167 | | | |

¹ Figures are subject to rounding.

² A proxy for the applicant's time has been calculated, in accordance with the *Victorian Guide to Regulation*. Tariffs for businesses include an uplift factor of 1.75 – see assumptions in Attachment D.

³ A person applies for the written authority at the local DEPI office. A DEPI authorised officer will assess the fire risk of the activity to be authorised and, if appropriate, issue an authority for a specified period (one or two days). The authority will apply conditions with which the person applying for the authority must comply. Times are approximate and have been informed by input from DEPI offices. DEPI can also provide operators with notices in writing to undertake specific tasks or in relation to prescribing equipment. It is assumed that such site visits take 2 hours of a business' time.

⁴ Data relating to General Prohibition provided by DEPI and Parks Victoria: between 50 and 100 per annum.

⁵ Annual costs are discounted by 3.5 per cent as suggested in the *Victorian Guide to Regulation*, Appendix C, 'Choice of discount rate', p. 19

Table E.1 - Costs imposed by the proposed Forests (Fire Protection) Regulations 2014

| | | |
|--------------|-------|---------------|
| 10 | 4,317 | 3,060 |
| Total | | 35,899 |

Cost calculations of proposed Regulations – Substantive compliance costs¹

Table E.2 - Costs imposed by the proposed Forests (Fire Protection) Regulations 2014

| Substantive compliance costs <i>Description</i> | Price | | Quantity | | Cost (\$) |
|---|----------------------------|--------------------------|-------------------|------------------|---------------|
| | <i>Tariff</i> ² | <i>Time</i> ³ | <i>Population</i> | <i>Frequency</i> | |
| Clearing around sawmills and other operations (Regulation 19) | 640.00 | | 15 | 2 | 19,200 |
| Clearing around beekeeping operations ⁴ (Regulation 12) | 68.68 | 1 | 800 | 1 | 54,944 |
| Fire fighting equipment at sawmills and other operations (Regulations 20, 21) | 2,500.00 | | 6 | 1 | 15,000 |
| Bee farmers (rake hoe, dry powder extinguisher, knapsack) (Regulation 12) | 320.00 | | 13 | 1 | 4,160 |
| Total | | | | | 93,304 |

Discounted (10-years)

| Year | Cost (\$) | Discounted Cost (\$) ⁵ |
|--------------|-----------|-----------------------------------|
| 1 | | 90,149 |
| 2 | | 87,100 |
| 3 | | 84,155 |
| 4 | | 81,309 |
| 5 | | 78,559 |
| 6 | | 75,903 |
| 7 | | 73,336 |
| 8 | | 70,856 |
| 9 | | 68,460 |
| 10 | | 66,145 |
| Total | | 775,973 |

¹ Figures are subject to rounding.

² This is an estimate based on consultation with DEPI officers. See assumption 4 in **Attachment D**.

³ Assumes 5 per cent of businesses receive a notice per annum. This is an extremely conservative estimate as notices are rarely issued.

⁴ Activities, time and population were informed by discussions with DEPI.

⁵ Annual costs are discounted by 3.5 per cent as suggested in the *Victorian Guide to Regulation*, Appendix C, 'Choice of discount rate', p. 19

Cost calculations of proposed Regulations – Government costs¹

Table E.3 - Costs imposed by the proposed Forests (Fire Protection) Regulations 2014

| Government costs | Price | | Cost |
|---|--------------------------|-------------------------------|----------------|
| <i>Description</i> | <i>Cost</i> ² | <i>Frequency</i> ³ | |
| Processing applications for written authority | 95.45 | 75 | 7,158 |
| Enforcement costs | 799,645 | | 799,645 |
| Total | | | 806,803 |

Discounted (10-years)

| Year | Cost (\$) | Discounted Cost (\$) ⁴ |
|--------------|-----------|-----------------------------------|
| 1 | 806,803 | 779,520 |
| 2 | 806,803 | 753,159 |
| 3 | 806,803 | 727,690 |
| 4 | 806,803 | 703,082 |
| 5 | 806,803 | 679,307 |
| 6 | 806,803 | 656,335 |
| 7 | 806,803 | 634,140 |
| 8 | 806,803 | 612,696 |
| 9 | 806,803 | 591,976 |
| 10 | 806,803 | 571,958 |
| Total | | 6,709,863 |

¹ Figures are subject to rounding.

² Enforcements costs are based on the assumption that 2.5% of authorised officers' time is attributable to the proposed Regulations (see assumptions in **Attachment D**). The cost of processing an application for written authority is \$95, which is based on an hourly VPS2 rate of \$27.27 plus overheads (multiplied by a factor of 1.75) by 2 hours per application.

³ Data provided by DEPI.

⁴ Annual costs are discounted by 3.5 per cent as suggested in the *Victorian Guide to Regulation*, Appendix C, 'Choice of discount rate', p. 19

Table E.4 - Costs imposed by the proposed Forests (Fire Protection) Regulations 2014

(Discounted 10 Year Period)

| Regulation | Type of Cost | Cost (\$) |
|----------------------------------|-------------------------------------|------------------|
| Permit applications | Administrative | 35,889 |
| Equipment requirements/standards | Substantive compliance costs | 775,973 |
| Government costs | Administrative and compliance costs | 6,709,863 |
| Total | | 7,521,735 |
| Annual Cost (PV) | | 752,174 |
| Annual Cost (Nominal) | | 904,424 |

Cost calculations of proposed Regulations – Substantive compliance costs¹

| Table E.5 - Costs imposed by the proposed Forests (Fire Protection) Regulations 2014 | | | | | | |
|--|---------------------|-------------------|-----------------------------------|-----------|--|---------------|
| Substantive compliance costs | | Price | | Quantity | | Cost (\$) |
| Description | Tarrif ² | Time ³ | Population ⁴ | Frequency | | |
| Regulation 9 – 30cm fire trench and clear airspace | 39.24 | 0.08 | 5,000 | 1 | | 16,350 |
| Total | | | | | | 16,350 |
| Discounted (10-years) | | | | | | |
| Year | Cost (\$) | | Discounted Cost (\$) ⁵ | | | |
| 1 | 16350 | | 15,797 | | | |
| 2 | 16350 | | 15,263 | | | |
| 3 | 16350 | | 14,747 | | | |
| 4 | 16350 | | 14,248 | | | |
| 5 | 16350 | | 13,766 | | | |
| 6 | 16350 | | 13,301 | | | |
| 7 | 16350 | | 12,851 | | | |
| 8 | 16350 | | 12,416 | | | |
| 9 | 16350 | | 11,997 | | | |
| 10 | 16350 | | 11,591 | | | |
| Total | | | 135,976 | | | |

¹ Figures are subject to rounding.

² A proxy for a person's time has been calculated in accordance with the *Victorian Guide to Regulation*. See assumptions in **Attachment D**

³ It is assumed that a fire trench takes 5 minutes to dig.

⁴ Data are not available on the population or frequency of such fires. This figure is presented for illustrative purposes only.

⁵ Annual costs are discounted by 3.5 per cent as suggested in the *Victorian Guide to Regulation*, Appendix C, 'Choice of discount rate', p. 19

Attachment F – Summary of substantive compliance costs

Summary of substantive compliance costs

The table below describes and makes a qualitative assessment of the substantive compliance costs associated with the proposed Regulations. Regulations 1 to 7 are machinery regulations and as such do not impose direct costs. The proposed Regulations do not impose fees and minor administrative costs are incurred in applying for 'written authorisations'.

| Proposed regulation | Description of proposed regulation | Nature of cost |
|---------------------|--|--|
| 8 | Circumstances in which a written authority is required to light a fire in the open air in a fire protected area. | This regulation requires to a person to obtain the written authority of an authorised officer to light a fire in the open air in a fire protected area during the prohibited period. There are a number of exceptions to this general prohibition. Costs are imposed upon users that wish to light a fire in a particular location but cannot do so due to the regulation. The cost of complying with this regulation is negligible, but could be regarded as an infringement upon an individual's desired behaviour. |
| 9 | Campfires or barbeques using solid fuel | <p>In an FPA area a person must not, without the written authority of an authorised officer, light or maintain a campfire or barbeque using solid fuel unless the fire is lit in a properly constructed fireplace, or in a trench at least 30 centimetres deep. In practice, solid fuel will generally be wood. Compliance with these requirements is not costly, i.e. using a constructed fireplace or simply digging a trench. However, this RIS acknowledges that this requirement imposes regulatory costs upon campers. For example, a person may take 5 to 10 minutes to dig a trench, resulting in a notional regulatory cost of between \$3.30 and \$6.60 per trench (assuming that a person's time is valued at \$39.24 per hour, Assumption 2, Attachment D). Data are not available concerning how many fires are lit, or how many trenches are dug or re-used making it too difficult to establish a reasonable estimate.</p> <p>In an FPA that is not a State forest, protected public land or national park, a person must not light or maintain a fire unless the fire has a 3 metre clearance of flammable material, the fire does not occupy an area exceeding one square metre, and the dimensions of the solid fuel used are the minimum necessary for the purpose. Compliance with these requirements is not costly, i.e. choosing an appropriate location for a fire, keeping it a safe size, and not placing unnecessary solid fuel on the fire, which may later smoulder and ignite.</p> |
| 10 | Campfires or barbeques using liquid fuel, gaseous fuel or chemical solid fuel | The lighting of campfires and barbeques using liquid fuel, gaseous fuel or chemical solid fuel in an FPA is prohibited without the written authority of an authorised officer, unless the fire is contained in an appliance designed and commercially manufactured to use that fuel and when lit the appliance is placed in a stable position. This regulation requires the use of equipment in a certain way and thereby imposes negligible costs and there are low barriers to compliance. |
| 11 | Burning of sawdust and waste material of sawmill | A person in charge of a sawmill in an FPA must not, without the written authority of an authorised officer, light or maintain a fire, or cause or permit a fire to be lit, kindled, maintained or used in the open air for the purpose of burning inflammable materials, unless the fire is effectively contained in a pit or structure. An authorised officer may, by a notice in writing issued to a person in charge of a sawmill, specify the dimensions and specifications of any pit or structure. A fire is effectively contained in a pit or structure if the dimensions and specifications of the pit or structure comply with any notice issued under this regulation. |

| Proposed regulation | Description of proposed regulation | Nature of cost |
|---------------------|--|---|
| 12 | Bee farming | <p>A person in charge of any bee farming operation in an FPA must not, without the written authority of an authorised officer, light or maintain a fire in the open air for the purpose of extracting honey or relocating bees, unless:</p> <ul style="list-style-type: none"> the person uses a smoker which is placed on an area of ground which is clear of all flammable material for a distance of 1.5 metres; and the smoker is placed in a fireproof receptacle when not in use; and in circumstances where the weather conditions in the area are such that there is a reasonable possibility of the spread of fire, there is available for immediate use at least one knapsack spray pump with a tank capacity of not less than 9 litres which is fully charged with water, is in proper working order and complies with AS 1687–1991; and one rake hoe or similar implement capable of removing grass, shrubs, vegetation and other flammable material from the area of the fire. |
| 14 | Extinguishment of fire in the open air | <p>A quantitative costing is provided for this regulation in Attachment E.</p> <p>This regulation requires a person who has lit, kindled or maintained a fire, or who is in charge of a fire, to completely extinguish the fire, or ensure that a person who has the capacity and means to extinguish the fire is in charge of the fire. The cost of complying with this is negligible.</p> |
| 15 | Fire in open air must be extinguished at direction of authorised officer | <p>This regulation requires a person who has lit, kindled, maintained or used a fire, or who has been left in charge of a fire in the open air in a fire protected area, to extinguish completely at the direction of an authorised officer. Such directions would only occur in rare circumstances. The cost of complying with this is negligible. The infrequent incidence of such directions means the overall cost of this regulation is small.</p> |
| 16 | Stationary engines | <p>A person must not use a stationary engine in a fire protected area during the prohibited period if the stationary engine is placed in an area in the open air, or in any circumstances where the exhaust discharges into the open air. However a motor driven pump, generator or other stationary engine may be used if:</p> <ul style="list-style-type: none"> the exhaust pipe is fitted with a spark arrestor which is in proper working order and which complies with AS 1019–2000; and the ground and airspace within a distance of 1.5 metres from the outer perimeter and the uppermost point of the stationary engine is clear of all inflammable material and in circumstances where the weather conditions in the area are such that there is a danger of the spread of fire, there is available for immediate use a hose connected to an adequate water supply; or if there is no adequate water supply, at least one knapsack spray pump with a tank capacity of not less than 9 litres that is fully charged with water, is in proper working order and that complies with AS 1687–1991; |

| Proposed regulation | Description of proposed regulation | Nature of cost |
|---------------------|---|---|
| | | <p>or one dry chemical fire extinguisher that is in proper working order and that complies with AS/NZS 1841.1:2007 and AS/NZS 1841.5:2007.</p> <p>There is very little or no additional cost associated with spark arrestors. It is understood that almost all generators are fitted with spark arrestors. In any case, a spark arrestor is a wire mesh that prevents sparks from leaving the exhaust system and cost around \$10 to \$15. The cost of clearing flammable material around a stationary engine is negligible. A compliant fire extinguisher costs around \$35.</p> |
| 17 | Non-stationary engines | <p>This regulation requires that a person must not use a chain-saw, vehicle or other non-stationary engine so that it is in contact with any crop, stubble, weeds, undergrowth or other vegetation in a fire protected area during the prohibited period. The prohibition does not apply if: a) the engine is fitted with a spark arrestor which is in proper working order and which complies with AS 1019–2000; or a turbo charger or an exhaust aspirated air cleaner; and in circumstances where the weather conditions in the area are such that there is a reasonable possibility of the spread of fire, there is available for immediate use a hose connected to an adequate water supply; or if there is no adequate water supply, at least one knapsack spray pump with a tank capacity of not less than 9 litres that is fully charged with water, is in proper working order and that complies with AS 1687–1991; or one dry chemical fire extinguisher that is in proper working order and that complies with AS/NZS 1841.1:2007 and AS/NZS 1841.5:2007.</p> <p>Consultation revealed that practically all chain-saws etc come fitted with spark arrestors. A compliant fire extinguisher costs around \$35.</p> |
| 18 | Welding, grinding, soldering or gas cutting equipment | <p>A person must not use any welding grinding, gas cutting or soldering equipment in a fire protected area during the prohibited period in the open air. This prohibition does not apply if:</p> <ul style="list-style-type: none"> • the ground and airspace within a distance of 3 metres from the outer perimeter and uppermost point of the equipment are clear of all inflammable material for a distance of at least 3 metres; and • a shield or guard of fire resistant material is placed or erected to prevent the emission of sparks, hot metal or slag; and • all cut-offs, electrode stubs and hot materials from the operation are placed directly in a fireproof receptacle; and • in circumstances where the weather conditions in the area are such that there is a reasonable possibility of the spread of fire, there is available for immediate use a hose connected to an adequate water supply; or if there is no adequate water supply, at least one knapsack spray pump with a tank capacity of not less than 9 litres that is fully charged with water, is in proper working order and that complies with AS 1687–1991; or (B) one dry chemical fire extinguisher that is in proper working order and that complies with AS/NZS 1841.1:2007 and AS/NZS 1841.5:2007. <p>Consultation suggests that the cost of clearing flammable material is likely to be negligible. For example, in</p> |

| Proposed regulation | Description of proposed regulation | Nature of cost |
|---------------------|---|---|
| | | cases where the clearing flammable material is required a notional cost of \$6.50 to \$13.00 could be imputed (based on time taken to clear of 10 to 15 minutes; Assumption 2, Attachment D). Guards, shields and fire proof receptacles in main are regarded as best practice and hence costs are likely to be negligible. A compliant fire extinguisher costs around \$35. |
| 19 | Clearing of area around an operation | <p>A person in charge of an operation in a fire protected area must ensure that the outer perimeter of any part of any log dump, timber stack, timber product, waste burner, pit, winch, kiln, quarry, distillery, retort or any other structure associated with the operation is maintained clear of all flammable materials at all times to a distance specified by an authorised officer in a notice. For this purpose, an authorised officer, may by notice in writing to a person in charge of a sawmill or other operation, specify a distance not exceeding 40 metres to be cleared of flammable material in respect of that sawmill or other operation.</p> <p>A quantitative costing is provided for this regulation in Attachment E.</p> |
| 20 | Fire fighting equipment required at sawmills | <p>A person in charge of a sawmill in a fire protected area must ensure that all fire fighting apparatus, water supplies and related equipment specified by an authorised officer in a notice is provided at the sawmill and stored at the places specified by the authorised officer in the notice. This equipment must be maintained in proper working order at all times and available for immediate use at all times. For the purposes of this regulation, an authorised officer may, by notice in writing issued to the person in charge of an operation, specify the fire fighting apparatus, water supplies and related equipment required to be provided at the operation; and the places within the operation at which that apparatus and equipment must be stored.</p> <p>A quantitative costing is provided for this regulation in Attachment E.</p> |
| 21 | Fire fighting equipment required at an operations that is not a sawmill | <p>A person in charge of an operation other than a sawmill in a fire protected area must ensure that all fire fighting apparatus, water supplies and equipment specified by an authorised officer in a notice is provided and stored at the operation at the places specified by the authorised officer in the notice. This equipment must be maintained in proper working order at all times and available for immediate use at all times. For the purposes of this regulation, an authorised officer may, by notice in writing issued to the person in charge of the operation, specify the fire fighting apparatus, water supplies and equipment required to be provided at the operation; and the places within the operation at which that apparatus and equipment must be stored.</p> <p>A quantitative costing is provided for this regulation in Attachment E.</p> |
| 22 | Storage and disposal of inflammable materials of sawmills | <p>A person in charge of a sawmill in a fire protected area must ensure that all inflammable materials from the sawmill are stored and disposed of in the manner specified by an authorised officer in a notice. For this purpose, an authorised officer may, by notice in writing issued to a person in charge of a sawmill, specify the methods for the storage and disposal of inflammable materials of the operation.</p> |
| 23 | Safety fuse, fuse lighters or splitting guns | <p>A person must not use a safety fuse, fuse lighter or splitting gun in a fire protected area during the months of</p> |

| Proposed regulation | Description of proposed regulation | Nature of cost |
|---------------------|------------------------------------|---|
| | | <p>November, December, January, February, March or April at any time other than between sunrise and 9.30 a.m.</p> <p>This regulation restricts, not prevents, the use of these devices to certain times of the day during the fire-prone months of the year. The cost of complying with this regulation is negligible. Consultation suggests that splitting guns have not been used for several decades, while the use of safety fuse and fuse lighters is only restricted for a short time of the year. The opportunity cost of the regulation would be the 'convenience' of using such devices after 9.30am during the fire-prone months.</p> |

Attachment G – Proposed penalties

Penalties contained in the proposed Regulations

| Regulation | Descriptions | Penalty Units | Infringement Penalty Units |
|------------|--|---------------|----------------------------|
| 16 | Stationary engines | 50 | 4 |
| 17 | Non-stationary engines | 50 | 4 |
| 18 | Welding, grinding, soldering or gas cutting equipment | 50 | 4 |
| 19 | Clearing of area around an operation | 50 | |
| 20 | Fire fighting equipment required at sawmills | 50 | |
| 21 | Fire fighting equipment required at an operation | 50 | |
| 22 | Storage and disposal of waste products and by-products of sawmills | 50 | |

Penalties contained in the Act

| Regulation | Descriptions | Penalties |
|------------|---|-------------------|
| 8 | Circumstances in which a written authority is required to light a fire in the open air in a fire protected area | See notes 1, 2 |
| 9 | Campfires and barbeques using solid fuel | See notes 1, 2, 3 |
| 10 | Campfires and barbeques using liquid fuel, gaseous fuel or chemical solid fuel | See notes 1, 2, 4 |
| 11 | Burning of sawdust and waste material of sawmill | See notes 1, 2 |
| 12 | Bee farming | See notes 1, 2 |
| 14 | Extinguishment of fire in the open air | See notes 1, 2 |
| 15 | Fire in open air must be extinguished at direction of authorised officer | See notes 1, 2 |

Notes

- Under section 63(1) of the Act, a penalty of not more than 100 penalty units, imprisonment for not more than 2 years or both may apply to a contravention of this regulation if the fire is in any State forest, protected public land or national park.
- Under section 63(2) of the Act, a penalty of not more than 50 penalty units, imprisonment for not more than 1 year or both may apply to a contravention of this regulation if the fire is in a fire protected area which is not a State forest, protected public land or a national park.
- See sections 66B(1) and 66C of the Act for further offences relating to the lighting, kindling and maintaining of campfires and barbeques using solid fuel in the open air in a regulated fire area.
- See section 66B(2) of the Act for a further offence relating to the lighting, kindling or maintenance of a campfire or barbeque using liquid fuel, gaseous fuel or chemical solid fuel in the open air in a regulated fire area.

Attachment H – Comparison of regulatory regimes across Australian jurisdictions

| Comparison of legislation regulating activities that may cause fire in parks/reserves across Australian jurisdictions | | | | | | | | | |
|---|---|---|--|----------------------------------|--|---|--|----------------------------------|--|
| | Vic | NSW | | | QLD | | SA | | Commonwealth |
| Responsible government department | Department of Environment and Primary Industries | Department of Environment and Heritage | | | Department of National Parks, Recreation, Sport and Racing | | Department of Environment, Water and Natural Resources | | Department of Environment |
| Park manager | Parks Victoria | NSW National Parks and Wildlife Service | | | Department of National Parks, Recreation, Sport and Racing | | Parks SA | | Parks Australia |
| Relevant legislation | <i>Forests Act 1958</i> | <i>Rural Fires Act 1997</i> | <i>National Parks and Wildlife Act 1974</i> | <i>Forestry Act 2012</i> | <i>Forestry Act 1959</i> | <i>Nature Conservation Act 1992</i> | <i>Fire and Emergency Services Act 2005</i> | <i>Forestry Act 1950</i> | <i>Environment Protection and Biodiversity Conservation Act 1999</i> |
| Relevant regulations/by-laws | <i>Forests (Fire Protection) Regulations 2004</i> | <i>Rural Fires Regulation 2008</i> | <i>National Parks and Wildlife Regulation 2009</i> | <i>Forestry Regulations 2012</i> | <i>Forestry Regulation 1998</i> | <i>Nature Conservation (Protected Areas Management) Regulation 2006</i> | <i>Fire and Emergency Services Regulations 2005</i> | <i>Forestry Regulations 2013</i> | <i>Environment Protection and Biodiversity Conservation Regulations 2000</i> |
| Comparison of regulated subject matter | | | | | | | | | |
| Restrictions/Prohibitions on Lighting Fires | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Campfires & Barbeques | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Engines & Equipment | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Sawmills & Other Operations | ✓ | ✓ | | ✓ | | | | | |
| Infringement Offences | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |

Comparison of legislation regulating activities that may cause fire in parks/reserves across Australian jurisdictions

| | WA | | ACT | | NT | | TAS | |
|--|------------------------------------|--|------------------------------------|---|--|--|--|--|
| Responsible government department | Department of Parks and Wildlife | | Territory and Municipal Services | | Department of Land Resource Management | | Department of Primary Industries, Parks, Water and the Environment | |
| Park manager | Department of Parks and Wildlife | | ACT Parks and Conservation Service | | Parks and Wildlife Commission | | Parks & Wildlife Service | |
| Relevant legislation | <i>Bush Fires Act 1954</i> | <i>Conservation and Land Management Act 1984</i> | <i>Emergencies Act 2004</i> | <i>Environment Protection Act 1997</i> | <i>Bushfires Act</i> | <i>Territory Parks and Wildlife Conservation Act</i> | <i>Fire Service Act 1979</i> | <i>National Parks and Reserves Management Act 2002</i> |
| Relevant regulations/by-laws | <i>Bush Fires Regulations 1954</i> | <i>Conservation and Land Management Regulations 2002</i> | <i>Emergencies Regulation 2004</i> | <i>Environment Protection Regulation 2005</i> | <i>Bushfires Regulations</i> | <i>Territory Parks and Wildlife Conservation By-Laws</i> | <i>Fire Service (Miscellaneous) Regulations 2007</i> | <i>National Parks and Reserved Land Regulations 2009</i> |

Comparison of regulated subject matter

| | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|
| Restrictions/Prohibitions on Lighting Fires | | ✓ | ✓ | ✓ | | ✓ | | ✓ | |
| Campfires & Barbeques | | ✓ | | ✓ | | | | ✓ | |
| Engines & Equipment | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Sawmills & Other Operations | | | | | | | ✓ | | |
| Infringement Offences | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ |

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