Building a better understanding of bushfire risk: Australian Institute of Health and Safety submission

16 July 2021

The AIHS is the national association for the health and safety profession. With a 70+ year history, and previously known as the Safety Institute of Australia, our vision is for safe and healthy people in productive workplaces and communities. One of the ways we realise our vision is by providing a collective voice for the profession, and representing our profession through submissions like this.

We represent the broader community of some 30,000 health and safety practitioners and professionals practicing work health and safety (WHS) across Australia. We have branches in each state and territory. This submission has been led by our Policy Committee, which forms a part of the AIHS College of Fellows (CoF). As a senior network of the Institute, the CoF works to support the Institute's vision, values and strategy.

We provide the following key messages in response to the Victorian Department of Environment, Land, Water and Planning request for submission on "Building a better understanding of bushfire risk".

Key message 1: Professionalisation of the urban planning and wildfire engineering industry in the same manner as traditional building design and engineering is required to improve the safety standard of urban planning and construction at the rural urban interface.

Key message 2: Traditional fire services' bushfire suppression strategies and tactics are not suitable for landscape scale bushfires. Greater emphasis on large aerial tanker suppression and more investment in bushfire suppression research is required.

Key message 3: Bushfire event risk profiles are changing. Expecting firefighters to suppress landscape-scale wildfires to protect houses is akin to trying to stop cyclones with umbrellas. Greater research into alternative worker safety measures, such as vehicles forming protective shelters equivalent to Bushfire Attack Level - Flame Zone (BAL-FZ) ratings, is required to improve OHS for first responders on the fire ground.

Key message 4: As bushfire seasons and events increase in their duration, frequency and intensity, the impact on workers, both those involved in primary responses and interactions (e.g. emergency services, response personnel) and secondary impacts (e.g. bushfire smoke plumes, vicarious trauma, impacted essential services), will increase and broaden. Similarly, more employers in the future must be aware of bushfire risks and how bushfire events can result in increased duties owed, relating to the provision of healthy and safe workplaces, and the elimination of health and safety risks as far as reasonably practicable.

We have shaped our further responses around the online survey questions provided in the review.

Andrew Heinrichs

AIHS Policy Chair

Nathan Winter

AIHS College of Fellows Chair

1. **How we can improve community understanding around bushfire risk and fuel management?**

Invest in immersive technologies, including virtual and simulated reality, which can place community members into virtual bushfire environments, so they can 'experience' the impacts of bushfires. This may lead to different decisions related to peri-urban and regional development, and support government (state and local) decisions relating to fuel reduction initiatives.

2. **In developing a whole of sector bushfire strategy, what are the areas of bushfire management that should be considered and prioritised?**

There are many aspects to a whole of sector strategy. The strategy needs to be supported by the research and evidence, not anecdotal opinions. *Workforce capabilities*, including the controls and measures available to create healthy and safe working conditions, as far as reasonably practicable, in complex and dynamic environments, need to be prominent.

3. **How should fire agencies be responding to, mitigating and adapting to climate change?**

By reviewing current practices in light of new research, and from the position that bushfires are more severe than they have been in previous generations. This means additional and earlier resourcing of bushfire suppression efforts, and professionalisation of occupations that manage large-scale incidents, beyond the scope of current professionalisation schemes. The increased scale and complexity of these events render previous more community-led responses inadequate and insufficient.

4. **What you consider to be a realistically achievable percentage for bushfire risk reduction through fuel management and your reasoning for it?**

Achieving significant bushfire risk reduction through fuel management will be very challenging, because:

- Recent research indicates large fires that occur on elevated fire danger indices will travel through fuel-managed areas greater than 18 months old, a short period of time given Victoria's large, sparsely populated land area, and
- The positioning of fuel management activities is often inappropriate to prevent spot fires caused by embers, in terms of fuel managed areas and populated communities, meaning landscape scale bushfires can develop. Increased urbanisation and 'tree changing' will amplify this issue.

5. **What does bushfire risk mean to you?**

Bushfire risk is the combination of likelihood of a landscape scale bushfire occurring, and that bushfire event impacting communities and other receptors. Recent research suggests it is a topic that is typically poorly understood and poorly defined, in both communities and fire service agencies.

6. **To what extent do you agree with each of the following statements?**

We agree that bushfires pose a risk to all receptors listed (i.e. personal safety, property, livelihoods, the environment, and Victorian communities). Further, bushfires pose a threat to the OHS of emergency responders, including those tasked with engaging with communities in event follow-up and support, such as those working for non-government organisations (e.g. Red Cross) in either paid or voluntary capacity. To that end, we note that volunteers are owed the same protections and duties as paid workers under the Occupational Health and Safety Act (2004) and Regulations.

7. **Do you think bushfire risk has changed in the past one to five years for the important values listed below?**

Bushfire risk is no longer just an issue for people in 'the bush', regional Victoria or Melbourne's outer suburbs. The 2019-20 fires demonstrate that the impacts from bushfires now affect all Victorian employers and workers, with bushfire smoke reaching many parts of the state. To this end, bushfire risk has increased for all stakeholders (i.e. households, communities, regions, livelihoods and assets, the environment, and Victoria), as well as Victorian employers and workers.

Given the increase in frequency, duration and intensity of bushfire seasons and events, there is also greater risk to the psychological health and safety of workers, both those involved in emergency response, and secondary impacts associated with smoke impacts and vicarious trauma. These psychosocial impacts can be distributed via media and other communication channels, with harrowing visual imagery dominating news feeds of workers and the broader community.

8. **In 2018/19, communities told us that these were important values. How important is it to you to have bushfire risk information for each of these values (listed in survey)?**

As the peak body for OHS professionals, we wish to draw attention to the risks and impacts to worker health and safety, of which human health and wellbeing are components. It is *very important* that bushfire risk information is provided in real-time, through user-centred media, communications and platforms, in order for stakeholders to make timely and effective decisions. Employers and their workers are important stakeholders, as the secondary effects of bushfire events spread beyond the immediate fire locations.

9. **How effective do you think the following actions are in reducing the risk of bushfire?**

Each of the five listed actions (1) planned burning to reduce fuel levels, 2) non-burn treatment to reduce fuel levels (e.g. slashing, mechanical), 3) strengthen local government planning controls, 4) community engagement and partnerships, and 5) community education programs) are important parts of a multi-faceted approach to mitigating bushfire risks to each of the seven listed values. Employers and their workers must be factored into each of these actions.

For example, community education programs may be tailored to target specific organisation or industry workforces. These actions may become important measures, both preventative (e.g. pre-bushfire event) and reactive (e.g. post-bushfire event), for employers to use to meet their OHS duties to their workers and other stakeholders.

10. **To what extent do you think the following people are responsible for managing bushfire risk on your property?**

All four groups listed (1) individuals, 2) communities, 3) fire and land management agencies, and 4) local councils) bear responsibilities for managing bushfire risks to property. A fifth group, employers, bears consideration, given the duties they owe to workers and other stakeholders under the Occupational Health and Safety Act (2004).

11. **In managing bushfire risk, how important are each of the following outcomes to you?**

Each of the seven outcomes listed are very important, for the following reasons:

- Communities are safer from bushfires and reduced impacts to health, economy and liveability:

- o Safe and healthy communities are vital to the overall wellbeing of our society. Safe and healthy communities are intrinsically linked to, and not an alternative to, Victoria's economic prosperity and liveability.
- Bushfire management supports healthy environment:
  - o The recent bushfire events led to widespread loss of flora and fauna. These losses were not only devastating in their own right, but had significant impact on workers' psychological health, and on industry productivity.
- Land and bushfire management supports self-determination of Traditional Owners and Aboriginal Victorians:
  - o Traditional Owners and Aboriginal Victorians possess a rich history of knowledge and connection with their land. It would be an enormous mistake to not avail the broader community of this knowledge.
- Fire agencies, communities and industry share responsibility for managing bushfire risk:
  - o Fire agencies must execute operational components of a society-wide response.
  - o Any government measure or initiative is unlikely to succeed without community support.
  - o It is vital that industry, including employers, peak bodies and workers, share responsibility for managing bushfire risk.
- Roles and responsibilities of fire agencies and community are clearly defined and understood:
  - o Inter- and intra-government coordination is vital to meet these complex, large scale challenges.
- Agencies make evidence-based decisions backed by strong data and analytics:
  - o Bushfires have become an emotive topic, with many sections of the community developing a range of views, driven by various agendas. It is therefore critical that the experts, led by academic and other credible organisations, are engaged to provide and inform data- and evidence-driven responses.
- Communities have the skills and knowledge to manage bushfire safely and effectively
  - o These challenges are large and complex. Without united and strong action, the outcomes outlined above are unlikely to be achieved.

12. Are there any outcomes that are important to you, that are missing from this list?

It is very important that Victorian workers are provided healthy and safe workplaces. This includes frontline responders and other emergency agency workgroups, as well as workers that experience secondary impacts such as bushfire smoke and vicarious trauma.

Further, it is very important that Victorian employers, or those organisations with workers based in Victoria, and other duty holders are supported by the relevant agencies to provide their workers and other relevant stakeholders with healthy and safe workplaces. This means duty holders using as many of the 'tools in the shed' available to mitigate the OHS risks associated with bushfire events.

13. Thinking about Victoria's efforts to reduce bushfire risk, to what extent do you think climate change is impacting their effectiveness?

As an evidence-based, Australian profession with origins in science and engineering, the AIHS thinks that climate change is having an extreme effect on Victoria's efforts to reduce bushfire risk. This is borne out by

bushfire seasons and events increasing in duration, frequency and intensity. In particular, increased atmospheric temperatures, combined with more extreme weather events, are making the role of emergency agencies and first responders more difficult.

Acknowledgements