



FUEL MANAGEMENT TOPIC

FACILITATED EXPERTS' CONFERENCE, 20 FEBRUARY 2010

SUMMARY OF DISCUSSION BY PANEL

This is a summary document and not a full record of the discussion by the panel.

Context

The panel agrees that reduction in unplanned fire risk in Victoria will require a program approach. Achieving prescribed burning treatments of the order of 5 to 10% per annum will be costly, contentious, and not without residual risk. It will require a long term commitment from government. The program needs to be managed:

- Monitoring and evaluation needs to be incorporated, particularly with respect to examining possible long term environmental consequences;
- Prescribed burning guidelines need to be developed and institutionalised;
- Skills, knowledge and abilities need to be developed and retained among program administrators, managers and field level personnel;
- In-house research will be required to reach meaningful treatment scales within reasonable limits of social and environmental risk.

Although this program approach will be expensive, difficult and take time, it is better than what we have and is judged to be far better than emphasising suppression.

Project Level Objectives

1. The resolution of competing objectives (and achieving reduction in risk of harm to the values protected by those objectives) will be assisted by:
 - The governing Code containing a clear and explicit statement of the applicable objectives and their order of prioritisation.
 - The provision of a model in the Code for prioritising any conflict between competing objectives and for "optimising" competing objectives.
 - The Code containing a more integrated approach to the management of private and public land.
 - The Code providing an outcome oriented approach, rather than consisting of statements of vague principle and/or merely being a means of measuring activity rather than desired outcomes.

Risk reduction

2. A key question in this area is: “What is the acceptable level of risk posed by unplanned fire?”
 - (a) There are areas of forest in Victoria where using prescribed burning will reduce the risk of losses due to bushfires.
 - (b) Local factors in parts of Victoria mean that any answer to that question must be a statement about reduction in relative risk only. There are areas of forest in Victoria which by reason of local features (including topography, road networks, population concentration and vegetation type) will always carry a higher residual risk of loss due to bushfires.

Effectiveness

Is prescribed burning effective to reduce risk ?

3. Prescribed burning is effective to reduce the intensity of unplanned fires. “Intensity” is a feature of the reduction of heat outputs.
4. Reducing the intensity of unplanned fires assists in:
 - Improving the success of suppression efforts
 - Reducing the rate of spread, and hence the extent, of the fire
 - Reducing the risk to life and property
 - Reducing the risks to some ecological values
 - Reducing the potential propagation of firebrands including embers.
5. Prescribed burning may not be effective (or be of reduced effectiveness) in some circumstances by reason of the operation of factors such as:
 - The weather (wind, temperature, relative humidity)
 - The stability of the atmosphere
 - Moisture content of soil and fuel litter
 - Topography.
6. The size and placement of a particular prescribed burn has an impact on its effectiveness (especially in relation to the incidence of spotting) in relation to reducing the risk and severity of subsequent unplanned fires.

What is the duration of benefit (foothill forests)?

7. There is strong evidence to support the conclusion that the benefits of prescribed burning continue to be effective for up to 3 years, but this period of utility may be affected by the type of habitat and the weather conditions during subsequent unplanned fires. The evidence also shows some benefits for longer periods up to 20 years.
8. Mr Cheney would qualify the above in the following way: Saying that the benefits of prescribed burns continue to be “effective” must bear in mind the fact that 3 year old fuels will modify fire behaviour (even under Extreme or Catastrophic conditions), but that modification may not be sufficient to materially assist suppression efforts.

Should Victoria do more prescribed burning?

9. The members of the panel agree that Victoria should do more prescribed burning. Dr Clarke qualifies this statement in the following way: Such blanket statements may not be helpful. Detailed studies of habitat types and regions in Victoria is likely to reveal that some areas should be burned more, and that others should be burned less.

Should we set targets?

10. The members of the panel agree that a statewide target is useful because it provides a guide to the overall scale of prescribed burning which should be undertaken. But:
- (a) Each hectare burned pursuant to prescribed burning regime is not of equal “value”.
 - (b) The strategic location of prescribed burns affects the effectiveness of any prescribed burning regime in reducing risk.
11. At levels where at least 5% of the available public land estate is subjected to prescribed burning, this is effective to reduce risk, so long as the burning regime is implemented and distributed in a strategic way.
12. Being strategic about prescribed burning involves:
- (a) at the level below any state wide target, there is a need to assess the most appropriate prescribed burning regime for each region or habitat type;
 - (b) considering the level of burning in particular regions ; and
 - (c) the strategic placement of prescribed burns to maximise risk reduction.
13. There is no evidence at present to suggest that we should engage in a prescribed burning regime of more than 10 percent of public land. To go above 10 percent carries greater risk of adverse ecological benefits and is unlikely to result in greater reduction in risk.
14. The evidence suggests that past practice in Victoria of a prescribed burning regime of approximately 100,000 to 130,000 hectares per annum has involved doing too little prescribed burning to reduce the risk posed by large unplanned fires below an acceptable level and has equated to a low level of risk reduction.
15. Hectares burned by unplanned fire ought not to be offset against any statewide target. However, local decisions must be sensitive to recent unplanned fire in the location.

How should we implement prescribed burning regimes?

The size of prescribed burns

16. Burning areas smaller than 500 or 1,000 hectares is usually of minimal value in reducing the scale of unplanned fires.

The intensity of prescribed burns

17. Burning under too low an intensity may not achieve appreciable risk reduction. Ideally a prescribed burn should achieve a burn of 70-90% of the area being subject to a prescribed burn.

18. In addition, the treated area should be left with an overall fuel hazard of “high” or less, in accordance with the Overall Fuel Hazard Guide.

Prescribed burn regimes

19. Different habitats will require the application of different regimes of prescribed burning because rates of fuel accumulation are different for different habitats.

Monitoring and measuring effectiveness

20. Once the regime of prescribed burning is implemented, its results need to be adequately monitored and mapped. Further research which would assist greatly includes:
 - (a) Using the WA historical data and comparing it with the South Eastern Australia data, taking into account all the variables, including weather, topography, population patterns, road networks and suppression efforts.

 - (b) The introduction of a prescribed burning regime with a 5% target in the foothill forests of Victoria (ie because of their fuel types, proximity to assets and lower environmental risk). This program could take 10 years to fully implement and should then be reviewed regularly, and over the long term.

 - (c) A program of appropriate modelling should be carried out to quantify the likely levels of risk reduction that may result from varied treatment options in specific landscapes.

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