



**DEBRIEF OUTCOMES
SIGNIFICANT VICTORIAN FIRES
DECEMBER 2005 AND JANUARY 2006**

**DEBRIEF OUTCOMES
SIGNIFICANT FIRES IN VICTORIA
DECEMBER 2005 AND JANUARY 2006**

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12 July 2006

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Dear Sirs,

Attached is my review of the debrief outcomes related to the significant fires that Victoria experienced from late December 2005 to late January 2006.

Observing good practice, the Country Fire Authority and Department of Sustainability and Environment conducted a series of debriefs to identify those areas requiring strengthening in their joint approach to rural fire management, following these fires. The debrief processes also focused on those areas where effective initiatives and procedures may translate to other parts of the State.

In accord with the terms of reference I have made no specific recommendations but have identified issues that emerged during the debrief process as matters of state significance. The issues include those where there is an opportunity to either build on existing achievements or where a perceived need was identified during debriefing to strengthen current processes and systems.

In presenting this review, I wish to highlight that the matters raised during debriefs as matters for improvement are not solutions in themselves, rather they are an identification of the matters that debrief participants believe can be improved by modification to existing systems and processes. It is important to acknowledge that these views are the collective opinions of many, very experienced Victorian fire managers, who have considered how fire management might be improved. Any changes that flow from these matters can only occur subsequent to careful analyses of that which currently exists. Naturally, no changes ought to be contemplated unless there is some comfort that such changes will not only be compatible across the whole spectrum of rural fire and emergency management agencies but that they will also generate demonstrable benefits for the State and its residents.

As the author* of this report, I was jointly retained by the Country Fire Authority and the Department of Sustainability and Environment, Victoria to undertake an independent compilation of the outcomes of the debrief processes. Whilst the contents of the report are constituted largely by the key issues that were identified by debrief participants, it is cogent to comment upon the validity of the process employed.

Too frequently, major emergencies are complemented by public enquiries with little opportunity for self analysis by the combat and support agencies. A strong focus initially goes to meeting the demands of the inquiry, limiting opportunity for productive internal analyses.

Whilst one must acknowledge that external inquiries can have a beneficial role when independent views can bring fresh perspectives, if such inquiries follow in close proximity to each other, there is a serious risk of “inquiry fatigue” whereby agencies necessarily devote their effort to responding to the demands of the inquiry rather than turning their minds to how to improve their systems and processes. It is not always the case that the inquirers have appropriate terms of reference, nor do they or their key advisors necessarily understand the complexities of the matter into which they are inquiring sufficiently well to understand the appropriate avenues to explore. The end result is that an inappropriate inquiry can easily arrive at a position whereby it makes untenable recommendations.

In the case of the December 2005 and January 2006 fires debriefs, the debrief process can withstand any scrutiny in terms of its robustness, transparency and inclusivity. No person or agency was excluded from attendance and there was an unfettered ability for any organisation associated with the incidents to attend and express their views. No better example of this occurred than at the Horsham Complex debrief where approximately 40 representatives were invited, about 60 indicated an intention to attend, but on the day in excess of 100 representatives from the full array of involved organizations participated.

The “Terms of Reference” precludes any operational analyses of the fires but I believe it is appropriate that I offer some comment about the manner in which the Country Fire Authority and Department of Sustainability and Environment integrate their activities, and how that integration has changed with time. Since the early 1970s I have had many occasions to interact with and to observe how these two organisations operated together. During my initial association with the CFA and the various predecessors to DSE, it was apparent that the agencies pursued quite different objectives, generally operating independently of each other. Whilst they came together during times of severe fire load and operated together for the public good, the CFA was principally a rural fire service and the forerunners to DSE were principally land management agencies, albeit holding significant forest fire management responsibilities on public lands. Cultural differences and attitudes militated against frank and open interchanges and effective interagency coordination during major incidents.

This arrangement was generally replicated across Australia and was not a situation unique to Victoria. As is the case with other States and Territories within Australia, Victoria maintained a separate rural fire authority and separate public land management agencies, and continues to do so. Within the last several decades Victorian fire managers gave much stronger recognition to the cultural and organisational barriers that existed between the agencies. They began progressively implementing processes, including the introduction of what is now a nationally adopted incident management system, to ensure that seamless and systematic integration between agencies, with no regard for jurisdictional boundaries, could occur, in order to provide the best possible service to communities. That position of sound integration has now been achieved and has enjoyed a rapid acceleration in recent years. Achievement of it could not have occurred without firstly, acceptance by the agencies of the need for it, secondly, willing implementation of it by key personnel from the respective organisations and thirdly adequate funding. Much stronger integration and enhanced performance is indicative of the return on investment of government funding to emergency agencies. Whilst not specifically examined in this debrief process, substantial increases in funding followed the 2002/03 Alpine Fires, flowing from recommendations arising from the Victoria Bush Fire Inquiry.

The role of the many key people involved in causing these changes is worthy of acknowledgement.

The final matter upon which I wish to make a specific comment concerns community engagement. From a technical fire perspective Victoria has the most adverse geographical location within Australia. Weather affecting Victoria has the greatest reach across the hot, dry interior of the continent.

The impact of periodic extreme fire weather is amplified by the “corner effect” as cold fronts round the eastern boundary of Victoria and violent southerly changes stream northwards, sometimes governed by stationary high pressure cells in the Tasman. The combined effect is to place Victoria into one of the acknowledged most fire dangerous parts of the globe. From a community perspective, this physical and meteorological arrangement has historically manifested itself in severe fire seasons through substantial loss of life, sometimes involving many fatalities, heavy loss of assets and extensive areas subjected to intense fire.

It is now recognised globally that effective rural fire management must be founded on a strong partnership between the combat agencies and the communities they strive to protect. Victoria has been a national leader in this arena, introducing Community Fireguard following the Ash Wednesday fires in 1983, but substantially building upon and improving that program ever since.

The 2005/06 campaign saw the emergence of the next phase of community engagement in the form of direct and regular contact with threatened communities either through the Victorian Bushfire Information Line, access to internet websites maintained by CFA and DSE or directly by Incident Management Teams, in a bid to keep residents as aware as possible about fire movement, behaviour and potential threats. Much of the direct engagement occurred between ignition and when fires rapidly went out of control with arrival of adverse weather. While it was essential for communities to have access to this type of information, and will be so in future, it is critical that communities and individual residents continue to observe good community protection principles, making provision for their own fire management plans and not rely solely upon information provided to them by the VBIL, fire agency websites or Incident Management Teams during the run of future incidents.

Yours sincerely

Ross Smith
12 July 2006

*Ross Smith is a professional forester with extensive rural fire management experience. He worked in forestry in New South Wales between 1963 and 1994. His field work was principally in exotic plantations areas in the Central West Slopes and South West Slopes until 1983, when he transferred to the Forestry Commission Fire Management Branch. He held the positions of Deputy Fire Management Officer and later, Manager of Audit and Review and Chief Forest Inspector. He worked closely with rural fire brigades in his field career and later forged strong links with the Rural Fire Service, representing the Forestry Commission in several inter-agency coordination groups.

In 1994 he transferred to the NSW Rural Fire Service as Manager of Planning and Research and was subsequently appointed as Assistant Commissioner. During the latter part of his career he worked extensively on forest and rural fire projects in Asia, SE Asia, Europe and North America, representing the NSW Rural Fire Service, prior to retirement in 2002. He remains active in rural fire management and continues to work professionally, both offshore and in Australia.

In 2002 he was awarded the Australian Fire Service Medal for services to forest and rural fire management.

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1 Preface

Between late December 2005 and late January 2006, Victoria experienced severe thunderstorm activity and associated lightning, causing multiple fires across the state. As a consequence of these fires, but principally major fires occurring in late December 2005 and from mid January 2006, a joint debriefing process was undertaken by the Country Fire Authority (“CFA”) and the Department of Sustainability and Environment (“DSE”), to identify those matters impacting on Victoria’s ability to manage high fire loads under severe fire weather conditions. A key component of the process was to identify those matters that operated well and those where improvements can be made.

A series of upwardly cascading debriefs was initiated, from crew/unit level through to state-level Emergency Coordination Centre debriefs. Significant elements of the process included debriefs conducted by five major fire complex or Incident Management Teams (“IMT”), the Victorian Bushfire Information Line (“VBIL”), the State Aircraft Unit (“SAU”), the South West Communications Group and many other local, district and regional groups.

DSE and CFA recognised a need to independently analyse the outcomes from the major fire debriefs and jointly commissioned this report. The Terms of Reference commissioning the report is appended as Attachment 2 (sec. 7.2). (Note that whilst the TOR referenced January 2006 fires, the opportunity was taken during debriefs to consider three significant incidents that occurred in December 2005, being the Griffin Track, Rocky Den and Deep Lead fires)

The purpose of the report is to focus on the key matters that were raised during the debriefing process, specifically those that have impact on Victoria’s ability to better manage future events. The report is intended to capture opportunities identified for adoption or suggestions for strengthening of critical processes, at whole of state level, that arose during the debrief process. It is important to highlight two matters concerned with the preparation of this report:

1. Quite specifically, is not an operational analysis of the suppression and management effort mounted by fire management agencies, or of the emergency response and coordination of the many supporting agencies and personnel. Operational matters are reported if raised as an issue during debriefs. In that context, this document is not a performance review.
2. Comments, opinions and attitudes expressed herein, whilst reflecting the views of the persons or organisations represented during the debrief process, and who were involved in preparedness, response, and recovery activities may not necessarily represent the views of Victorian State Government Agencies. For the purposes of probity and accuracy in recording debrief outcomes, no value judgements were made about any issues other than recognising them as significant matters that may warrant further attention.

Every separate item raised or discussed during debriefs or noted on data collection documents is not addressed within this report. Records of each debrief were prepared by the convenors and during the debrief process, matters recorded in some debriefs were identified for resolution at local level, regional level or state level. This report is primarily concerned with those matters impacting, or potentially impacting, at whole of state level. The non-inclusion or discussion of matters that impact at local or regional levels diminishes neither their importance to specific local or regional areas, nor their importance to the people who raised them as issues. It is incumbent upon the joint fire agencies and emergency response and coordination bodies to ensure that appropriate attention is afforded all issues raised, not only those that have a state-wide impact.

2 Executive Summary

The debriefing process instituted by CFA and DSE, following severe fire activity in December 2005 and January 2006, has identified matters that impact favourably on Victoria's ability to manage high fire loads with improved community safety under severe fire weather conditions.

In terms of inter-agency coordination, better integration and closer cooperation between CFA and DSE in comparison to recent years was a notable outcome. Many observers, including representatives of communities affected by the fires, expressed the view that the fire services had operated more closely than previously and expressed some surprise at the noticeable increase in cooperation since 2003.

Community engagement occurred at levels never previously attained. The impact of pre fire interaction and direct community engagement during fire suppression activities is recognised as a major contributor to holding community asset losses to lower levels than experienced fire management personnel expected, given the adversity of weather conditions from late December 2005 to late January 2006.

The Victorian Bushfire Information Line, a joint CFA and DSE initiative arising from the 2002/03 bushfires, was unequivocally embraced by the community and media outlets as a means of keeping affected communities informed with timely information about current and likely fire threats and impacts. Usage of this service by the community far exceeded expectations and has highlighted two opportunities to further strengthen community engagement:

- A need to review and consider upgrading the capacity of the VBIL; and
- A need to better educate the public, the media and emergency response organisations about the role and capacity of the service.

Direct interaction with communities was also achieved through regular contact by dedicated information units and fire managers from Incident Management Teams, to brief communities about particular fire circumstances in their vicinity. Overall, more than 15 000 people were briefed in this fashion. At the Heywood Complex, CFA brigades interacted one on one with local communities at the beginning of fire activity to strengthen community preparation.

Post fire recovery was also noted as an area exhibiting substantial improvements since 2003. Both fire agencies became actively involved in recovery processes early in the campaign and in many areas, recovery agencies were deliberately included within Incident Control Centre early in the campaign, thus enabling recovery processes to begin whilst fire suppression was active. The success in those areas where recovery was instituted simultaneously with suppression, points to a clear need to ensure that recovery agencies become an automatic component within Incident Control Centres at future events.

A number of areas were identified where improvements ought to be achieved. Many of these impact directly at local and regional level and are not considered in this report. The key issues identified at state level, being matters about which some consideration by the fire agencies, the wider emergency services organisations, and recovery agencies is warranted, include:

- Incident Command and control
- Fire Agency Coordination
- Emergency Management Arrangements
- Management of non-combatants on the fireground.
- Use of Information Technology
- Victorian Bushfire Information Line
- Communications Planning
- Response and Recovery/Rehabilitation
- Naming of fires
- Sustainability of information flow

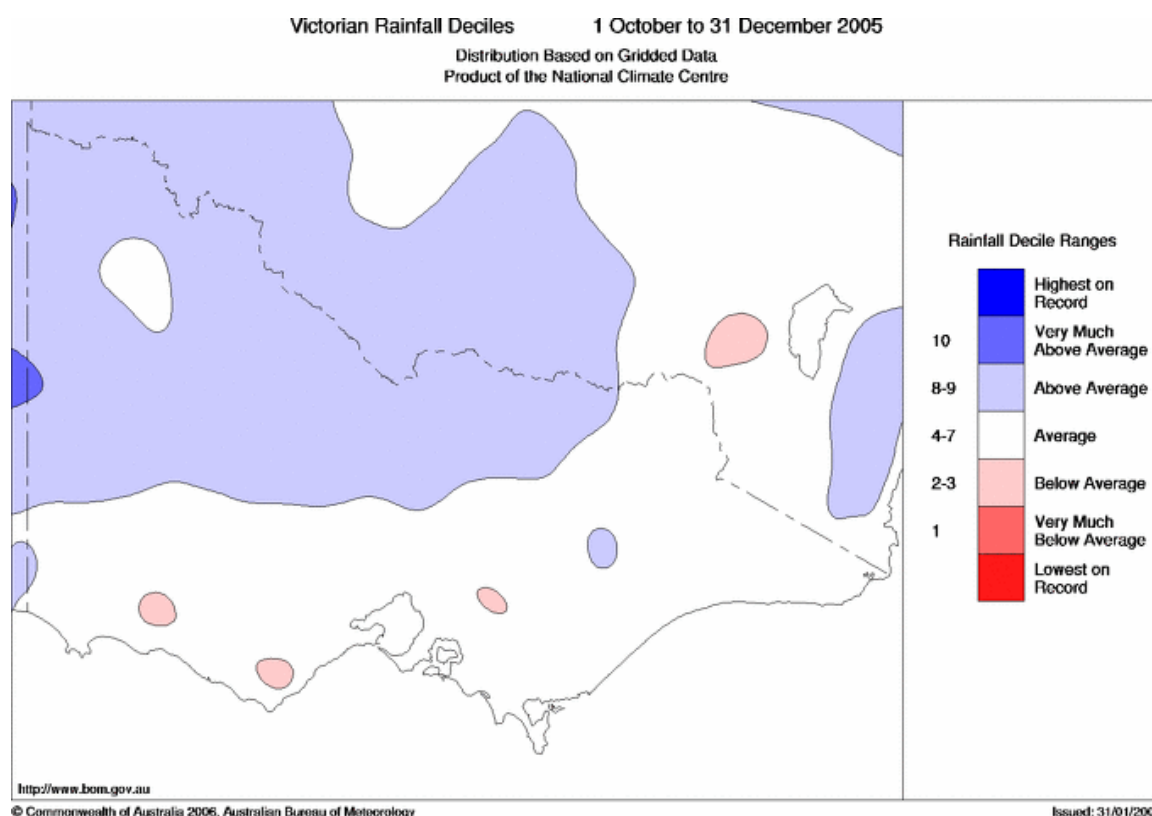
3 Description of Event

3.1 Long term rainfall

Although no short term rainfall deficit was apparent during December 2005 - January, 2006, there was a very deep underlying dryness stemming from a substantial 3 year rainfall deficit across parts of Victoria. The rainfall chart for the 6 months to the end of December (Figure 1) indicates that most of Victoria had experienced average or above average rainfall with only three small pockets of below average rainfall during that period.

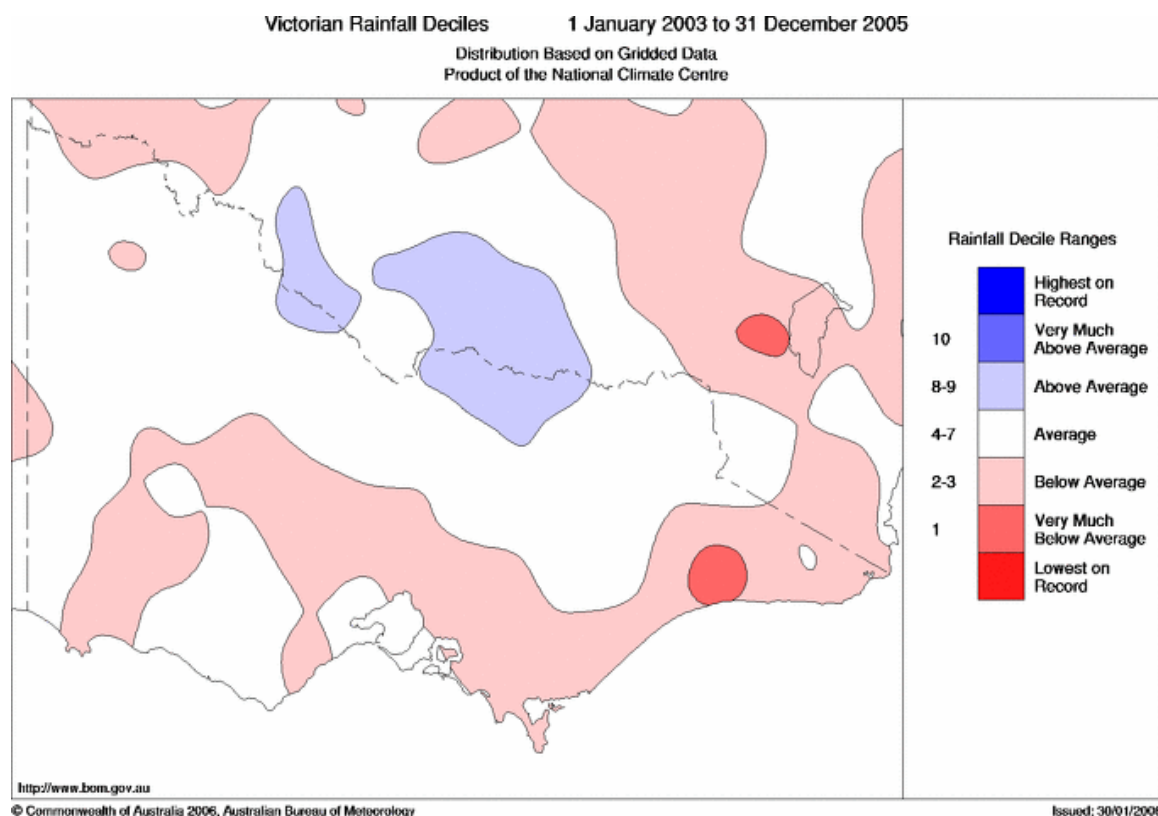
According to anecdotal sources, the long term rainfall deficit may be much deeper than illustrated in Bureau of Meteorology charts below. In some areas, e.g. SW Victoria, DSE records suggest the period of below average rainfall extended to 9 years with most lakes, reservoirs, creeks and rivers either dry or almost dry.

Figure 1 Rainfall deciles three months to 31 December 2005



The corresponding chart for the 3 year period to the end of December 2005 (Figure 2) indicates quite a different picture, highlighting a serious moisture deficit. In the three years to December 2005, extensive areas in the southern half of the state experienced below average rainfall, one substantial pocket in Gippsland, generally between Lakes Entrance and Orbost, recorded very much below average rainfall and there were only two areas – to the east of Echuca and between Echuca and Swan Hill - where rainfall registrations during that period exceeded the average.

Figure 2 Rainfall deciles three years to 31 December 2005



3.2 Synoptic Situation during late December 2005 and January 2006

Weather conditions during late December 2005 and January 2006 followed a classic cycle of extreme fire weather conditions recurring at intervals of about one week. On 24 December 2005 a high pressure ridge moved into Victoria and continued to move in an easterly direction until 27 December 2005 where it became centred in the Tasman Sea. A cold front followed overnight and brought cooler conditions.

The next high pressure ridge moved into Victoria behind the front but weakened quickly. On 29 December 2005, another high-pressure centre developed in the Tasman and by the next day this high brought warm northerly winds over Victoria. On 31 December 2005, a trough moved into southwest Victoria bringing variable wind conditions and extreme forest fire danger in the west. This trough moved across Victoria and cleared the State by 2 January 2006.

Extreme fire weather occurred during this period, when the forest fire danger index (“FFDI”) exceeded the nominal “worst possible” on the McArthur scale, foreshadowed later events.

At Horsham on 31 December 2005, weather at 1641 hours was:

- Temperature: 42.9°C;
- RH: 10%; and
- Wind: NNW average 65 km/hr (gusting to 74km/hr).

The resultant FFDI was calculated as 162 on the McArthur scale.

As January 2006 unfolded, Victoria continued to experience adverse fire weather, underpinned by persistent and long term dryness, and associated with generally warm and highly unstable atmospheric conditions stemming from active tropical weather systems.

A high-pressure ridge dominated until 9 January 2006 when it moved into the Tasman bringing northerly winds once again over Victoria. Another trough entered the State from the west and continued to move through Victoria, exiting the State by 11 January 2006, followed by another high-pressure ridge in the west. On 12 January 2006 a front passed through the south and another new ridge quickly formed behind it.

This high-pressure ridge dominated Victoria's weather until 15 January 2006 when an inland trough from New South Wales entered Victoria and lingered in the North East until 19 January 2006. The high-pressure ridge became centred in the Tasman from 20 January 2006 bringing hot northerly winds and Very High to Extreme fire danger over much of Victoria. These conditions continued until late on 22 January 2006 when the next change brought milder temperatures and reduced wind speeds. A ridge of high pressure which developed in the Bight behind the front began to cross Victoria on 23 January 2006, becoming centred in the Tasman on 26 January 2006, and again bringing hot northerly winds and Extreme fire weather to Victoria. On the afternoon of 26 January 2006, conditions eased with a SW change accompanied by showers and thunderstorms. This trough moved further into the State and lingered in central Victoria until 30 January 2006. Although temperatures remained warm in this period high humidity prevailed, easing the fire situation.

The synoptic situations that prevailed are illustrated in the following figures (Figures 3-6):

Figure 3 Synoptic Chart 10 am EST 31 December 2005

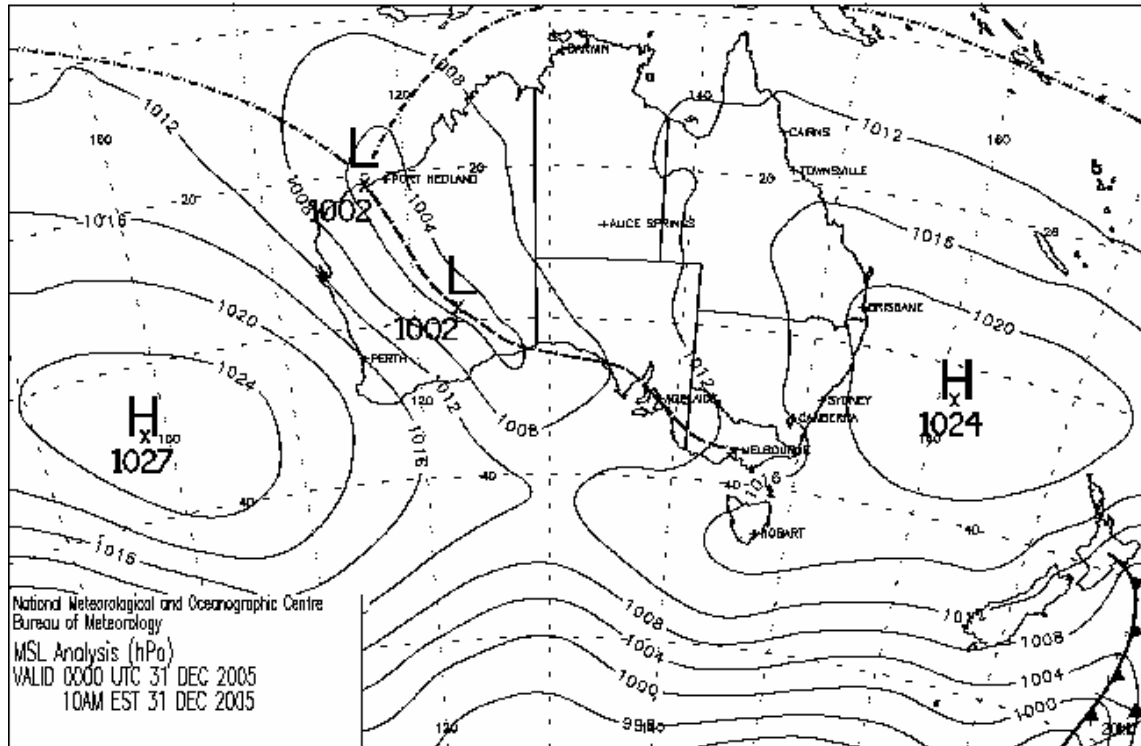


Figure 4 Synoptic Chart 10 am EST 9 January 2006

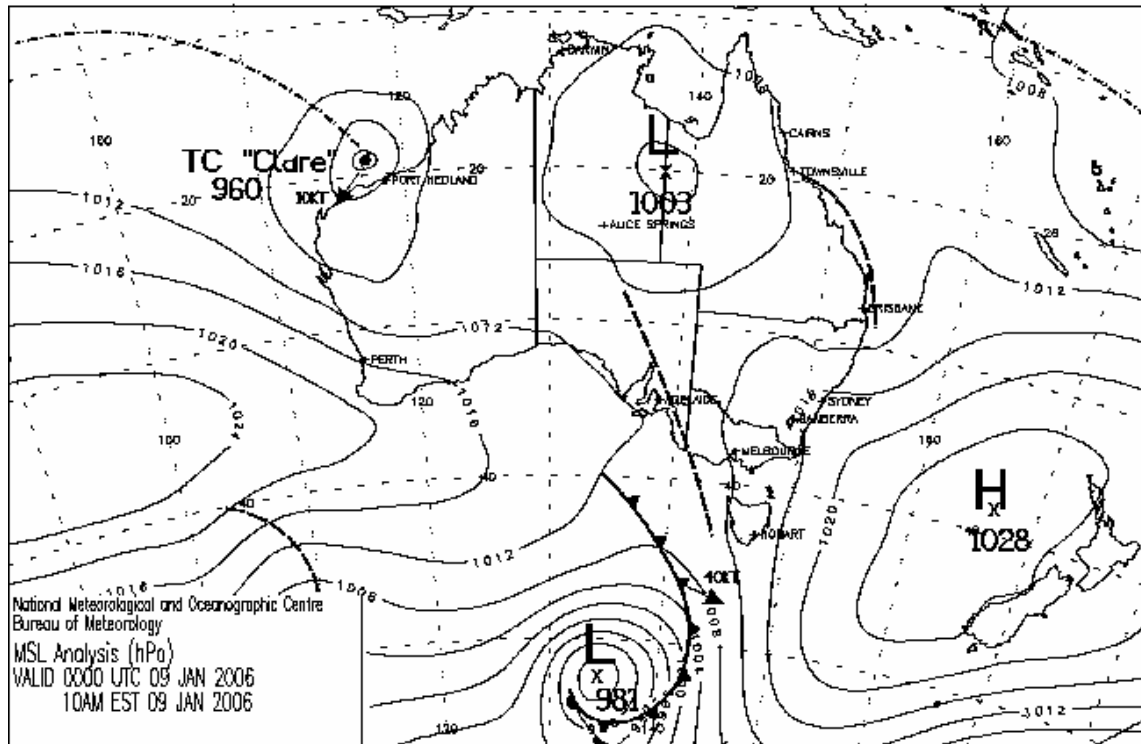


Figure 5 Synoptic chart 10 am EST 19 January 2006

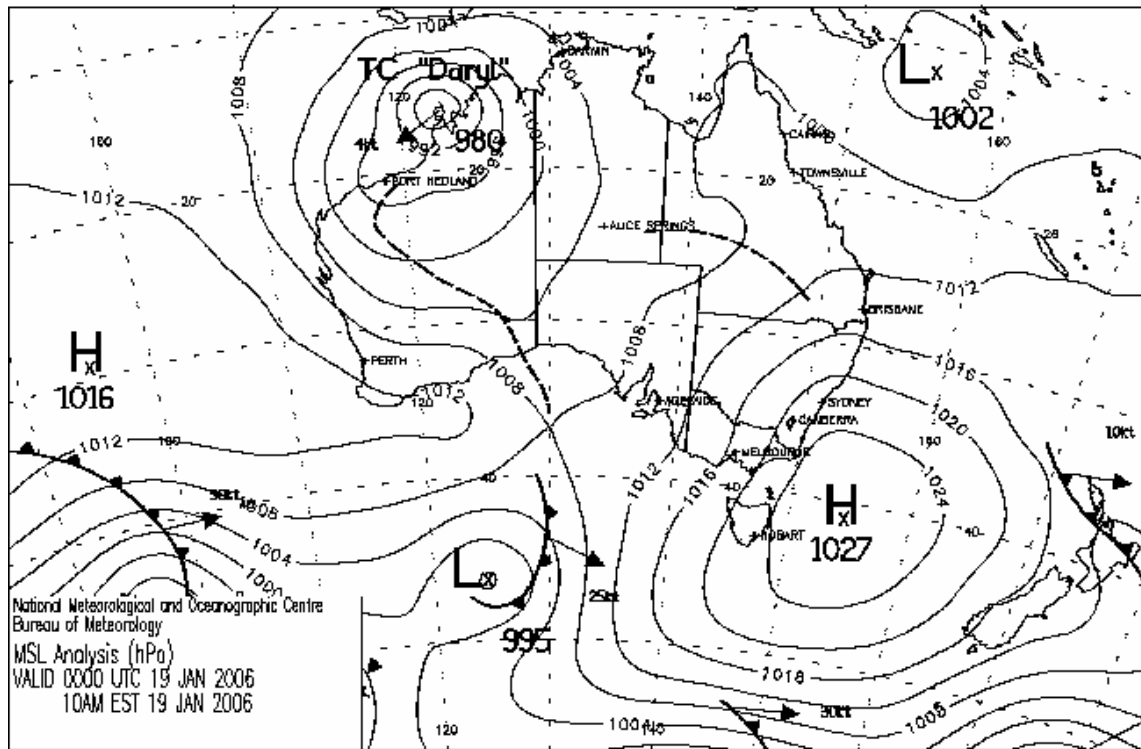
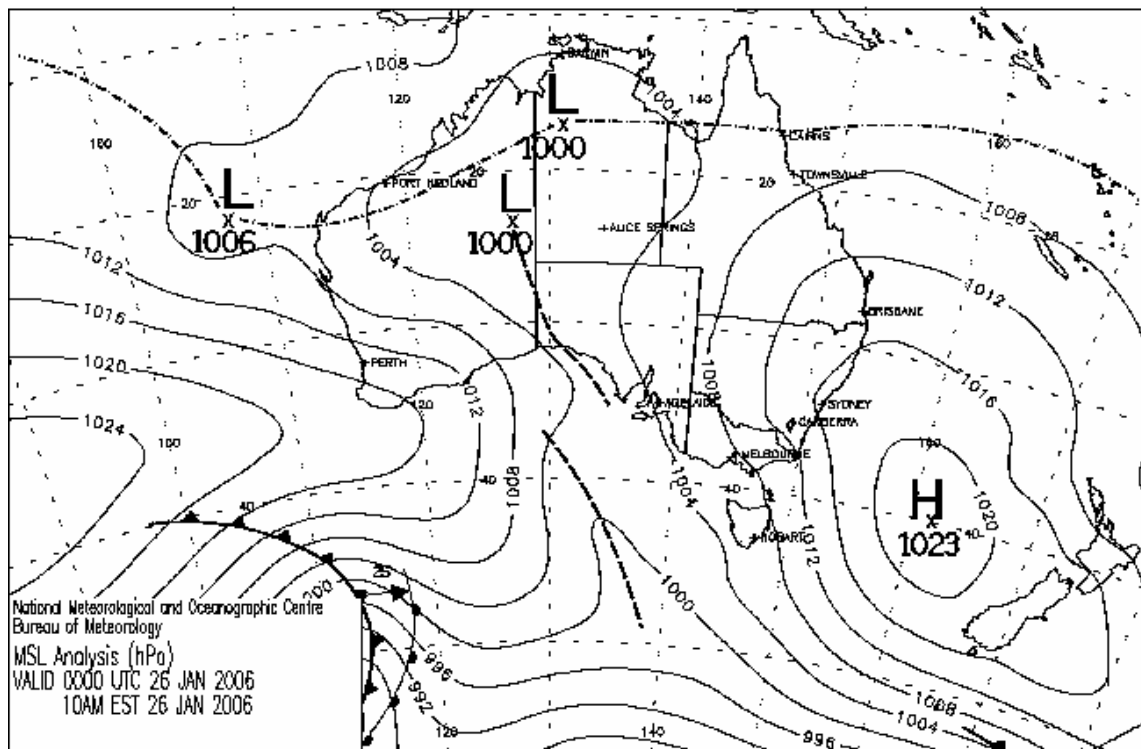


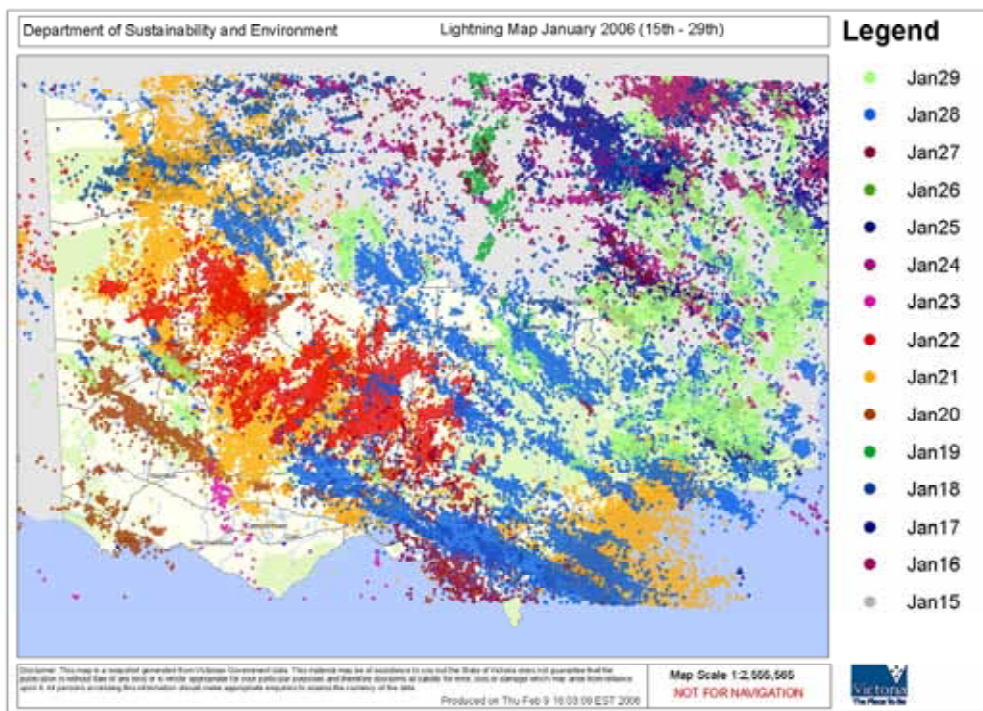
Figure 6 Synoptic Chart 10 am EST 26 January 2006



3.3 Lightning

Extensive lightning activity occurred in the week commencing 15 January 2006. Further severe lightning occurred during late January. The potential impact of lightning as a fire source can be gauged from the composite chart of lightning discharges recorded by lightning detection equipment between mid - late January 2006, (Figure 7) illustrating that almost no part of Victoria escaped impact. Fire management agencies, support agencies and communities were on a state of high alert for several successive weeks.

Figure 7 Composite Lightning Charts 15 January – 29 January 2006



3.4 Fire Starts

Due to the impact of underlying dryness on fuel moisture conditions, fuel beds exhibited high lightning receptivity and it was inevitable that fire services would experience a very high fire load. In the period between 15 and 30 January 2006 rural fire agencies recorded 1067 vegetation fires (CFA 879, DSE 188). CFA also recorded 2514 other incidents.

Twelve fires, listed in Table 1, developed into significant proportions requiring a coordinated response by the joint fire agencies and emergency response, coordination and recovery bodies.

Table 1 Major fires December 2005 - January 2006

| Date | Fire | Cause | Area (ha.) |
|----------|----------------------------------|------------|------------|
| 21/12/05 | Griffin Track | lightning | 2 |
| 27/12/05 | Rocky Den | lightning | 4 |
| 31/12/05 | Deep Lead | lightning | 7 5 |
| 19/01/06 | Seninis Track | deliberate | 15 2 |
| 19/01/06 | Troeth Road | lightning | 1 2 |
| 19/01/06 | Brands Track | lightning | 1 4 |
| 19/01/06 | Yallakar Sth | lightning | 4 1 |
| 20/01/06 | Century Track | lightning | 6 7 |
| 20/01/06 | Mt Lubra | lightning | 130 2 |
| 22/01/06 | Burgan Track (Kinglake/Glenburn) | lightning | 1 6 |
| 22/01/06 | Granite Hills | lightning | 8 |
| 22/01/06 | Melba Control (Yea/Glenburn) | lightning | 5 4 |

During the peak periods of activity, more than 6 000 people were engaged in suppression and support activities each day. Interstate assistance for suppression purposes included more than 650 firefighters from New South Wales (NSW) and Tasmania (Tas).

Community interest reached unprecedented levels. The Victorian Bushfire Information Line (“VBIL”) received 17 361 calls from people seeking information about fire related activity between 20 and 29 January 2006. More than 15 000 people from affected communities attended 102 public meetings arranged by the fire, emergency response and recovery agencies.

4 Debrief Process

State level debriefs and major fire complex debriefs were coordinated by a Debrief Project Team, jointly established by CFA and DSE, in accord with a memo jointly issued by the Chief Officer CFA and the Chief Officer, Fire and Emergency Management DSE. A copy of this memo is appended as Attachment 1 (sec. 7.1). Note that whilst this memo referred to the January 2006 fires, the opportunity was taken during the Heywood and Horsham debriefs to also review significant fires that had occurred in December 2005, and at the Seymour debrief to review operations on some other fires in the area (including the Whiteheads Creek fire of 24 December 2005 and the Tooborac fire of 8 February 2006).

The process utilized involved a tiered debriefing structure with initial debriefs held for fireground personnel, Incident Management Teams (IMTs), Regional Emergency Coordination Centres (RECCs) followed by an overarching debrief for each major fire or fire complex. The debrief process was also informed by the CFA State Emergency Coordination Centre (“SECC”) and DSE Emergency Coordination Centre (“ECC”) debriefs.

Principal debriefs were held between 7 February 2006 and 9 March 2006. The outcomes from the principal debriefs are attached as appendices in accord with Table 2.

Table 2 Principal debriefs Dec. 2005 – Jan. 2006

| Debrief | Date | Attachment No. |
|--------------------------------------|------------------------------|-----------------------|
| DSE ECC | 10 February 2006 at DSE HQ | 7.3 |
| CFA SECC | 22 February 2006 at CFA HQ | 7.4 |
| Victorian Bushfire Information Line | 6 March 2006 at DSE HQ | 7.5 |
| State Aircraft Unit | 7 February 2006 | 7.6 |
| Communications SW Group | 21 February 2006 at Ballarat | 7.7 |
| Brisbane Ranges - Century Track fire | 23 February 2006 at Norlane | 7.8 |
| Moondarra - Seninis Track fire | 2 March 2006 at Traralgon | 7.9 |
| Alexandra Complex | 3 March 2006 at Seymour | 7.10 |
| Heywood Complex | 8 March 2006 at Heywood | 7.11 |
| Horsham Complex | 9 March 2006 at Horsham | 7.12 |

Underlying debriefs at local/unit and district/regional level were held with the intent to feed into major debriefs, although at the time the major fire and fire complex debriefs were conducted, some of the underlying debriefs had not been conducted due to continuing fire loads. The debrief process was supported by a major data collection programme in which individuals were invited to record key issues of state significance on pro forma documents and forward to the Debrief Project Team for collation and analysis.

Records from all of the debriefs plus individual or group comments on the pro forma documents were provided to the Debrief Project Team.

5 Key Observations

It is not the role of this report to make firm recommendations about how or whether Victoria ought to change the way in which it transacts its fire business. Rather, the brief for this report was to identify major issues that were raised during debriefs and/or highlighted as matters that require state level consideration, resolution or adoption, and to bring them to attention of the joint agencies to consider. This exercise has provided a brief snapshot only of one fire campaign and cannot claim to fully understand and appreciate the rationale behind Victoria's fire and emergency management structure and processes.

5.1 Things that went well

Stand-out issues that emerged during the debrief process were;

- Very much stronger joint-agency relationship and integration between CFA and DSE evident in emergency situations, compared to recent years;
- New, and much higher benchmarks established in the community information and engagement field;
- Operations and impact of the VBIL;
- Deliberate processes to involve recovery and rehabilitation organisations at the beginning of the fire rather than delaying their involvement until suppression action was largely completed; and
- Enhanced understanding of the importance and need for sound awareness and training at all levels of the emergency management cornerstones, especially legislation, cross-agency arrangements and appreciation of the responsibilities and resource capabilities of all partners.

5.1.1 Inter agency collaboration

Observations about interagency collaboration were readily proffered by people and agencies external to the CFA and DSE, although there was clearly some quiet satisfaction expressed from the joint agencies that their level of integration has attained levels never previously achieved or recognised in the community. These views were expressed at each of the fire complex debriefs and noted in the ECC/SECC debriefs. It is apparent that CFA and DSE have moved much closer together than ever before. This is a major shift since 2003.

Many instances occurred where CFA officers were appointed as Incident Controllers ("IC") at DSE fires, operating from DSE Incident Control Centres ("ICC") and vice versa. There were many instances where the IC alternated between the two agencies depending on fire circumstances, best fit for the role and availability of accredited staff. This concept was almost untenable a decade ago. Significantly, community observations expressed strong satisfaction at the way in which integrated operations worked.

There have been a number of recent and far reaching inquiries that have contributed to changes:

- 1997 Dandenong Ranges Coronial inquiry;
- Linton Coronial Inquiry;
- Inquiry into the 2002-2003 Victorian Bushfires (2003);
- Auditor General Performance Audit - Fire prevention and preparedness (2003);
- COAG National Inquiry on Bushfire Mitigation and Management; and
- Federal Government House Select Committee Inquiry on 2003 Bushfires (Nairn Inquiry).

The above series of inquiries followed earlier and significant inquiries resulting from major fire activity in 1939, 1944, 1977 and 1983, all of which helped to shape the current structure and format of rural fire management in Victoria. The more recent inquiries have provided some of the catalysts to fine tune that structure and assist the implementation of positive integration processes, especially between CFA and DSE.

It is a reasonable observation to make that DSE and CFA operated as two quite independent agencies less than one decade ago. Indeed, it is not uncommon across Australia for land management agencies to manage their fire operations quite separately from dedicated rural fire agencies, with yet further separation between the land management/rural agency fire group and dedicated urban fire services. The rationale for that is to be found in their respective *raison d'être*, but it is important to understand that periodically, all agencies with a fire management capacity must operate under a common umbrella, coordinating with and assisting each other in response to major fire activity or other large scale emergencies where their respective skills and capacity must be applied in a unified and cooperative manner.

While each agency continues to preserve its unique culture, as it rightly should, it is clear they have moved progressively closer together, both at field implementation level and at state level. The Cooperative Agreement between CFA and DSE (October 2003) has demonstrated its capability to deliver joint incident management, a position that was not attainable only several years ago. This movement has partially arisen as a result of initiatives introduced by earlier reviews and inquiries but not all of the credit for the change is due to external influences. There has been significant recognition from within the fire agencies that they must work together in a partnership with each other and with the community in order to serve the community. The bulk of the impetus for the cooperative approach evident now between DSE and CFA is largely due to the initiative of staff in the two organizations. It would be unfair if there was a failure to recognise the very real impetus that the agencies themselves have provided in jointly reaching the current status of that partnership in 2006.

Many comments were proffered during the fire complex debriefs about positive changes since 2003 with some surprise expressed by communities at the extent of the change. Philosophically, DSE and CFA have probably moved as close together as they can and further improvements in their ability to operate as a coordinated joint agency unit requires fundamental analysis, by them, of how they work together, how they interact with the wider emergency management community and the compatibility of their respective support and information systems.

It is not necessarily a case that major changes are now required, but some refinement and maturity in implementation of how they conduct their fire business as a partnership.

5.1.2 Community Engagement

It is globally recognised that the role of well informed and prepared communities is paramount in reducing the potential impact of severe fire activity. Under conditions of extreme fire load, fire and emergency services can never guarantee the ability to be the sole provider of protection for communities at risk in every instance, and look to the communities and their residents to become actively involved in community self help. To obtain the best outcome, it is critical that fire and emergency services and communities work as a partnership.

Such partnerships cannot be put into effect at the eleventh hour. There must be ongoing initiatives and interaction to ensure that communities possess adequate levels of awareness that enable them to understand the nature of fire and actions that they can implement, either jointly as communities or as individual householders. While pre-fire education and awareness raising is one of the cornerstones on which effective community protection is founded by providing communities with sufficient information to make effective plans and preparations, this must be supplemented with provision of timely and accurate information to threatened communities during an event, to enable them implement the appropriate parts of their planning.

Community engagement prior to the fires continued the work originally initiated through the CFA Community Fireguard program, introduced after Ash Wednesday. The Century Track fire in Brisbane Ranges National Park offers a good case study. There are 7 or 8 very active Community Fireguard groups in this area. Housing losses were confined to 3 totally destroyed and 2 severely damaged. As significant as those losses are to the occupants and owners, experienced observers suggest that losses of much greater magnitude were likely, given the interaction of geography and vegetation, fire intensity and prevailing weather conditions. These observers strongly indicated that losses were restricted to the levels that occurred due in part, to very high levels of community awareness and preparation. Although not a part of this debrief process, similar benefits emerged during the Riley Rd Fire (Snake Valley - Ballarat) where effective Community Fireguard units had been set up. These successes highlight the value of community/fire service interaction and ongoing need for adequate resourcing of community engagement activities.

Very significant advances have been made in the capability to interact with communities not only before fires but during the response phase. Trained and effective Information Units are now an integral component of the community engagement process and are based in incident control centres during incidents. Their roles include collation and distribution of pertinent information to a range of outlets, including media, VBIL (via SECC/ECC) and direct to communities either during community meetings or through recognised information centres where residents could either view information sheets or collect a copy.

The very high levels of positive community interaction that were evident during these fires, attributed to early engagement with affected communities by fire management and support agencies, was a very real highlight thread common to each of the major fire complex debriefs. The community collectively displayed a massive appetite for factual and timely information.

In desperate situations, communities do not want anything other than the best and most updated analyses of emergency situations - they want to know what has happened and what is likely to happen in the immediate future. They want information that is as accurate and realistic as possible. They want the best estimate of the experts and even if the news is not favourable, they need and want to know.

Between 19 and 29 January 2006, interaction with affected communities reached unprecedented levels. In total, over 15000 people attended just over 100 public meetings that were convened by the fire and emergency agencies to inform communities about fire behaviour, current and predicted threats and actions that communities and individuals could implement to minimise risk to them and their assets.

Communities were highly appreciative of the content and quality of information with which they were provided. It became clear that rather than hearing all information from dedicated information and media units, the community welcomed inputs at community meetings from people who were closely involved in operations or planning at the IMT and provided a “face” for CFA or DSE decision makers.

5.1.3 Victorian Bushfire Information Line

An important adjunct to direct community engagement is the VBIL. This facility, a state-wide bushfire information service, was formally instituted as a means of directly engaging with and communicating bushfire information to the wider community. It was developed from interim processes established in 2002/03 to provide better information flow to communities during the 2003 Alpine fires. CFA and DSE jointly established the facility at Wendouree, near Ballarat, and continue to cooperatively manage it. When the 2005/06 fires occurred its function had been extended to incorporate general fire information and was not restricted to emergency incidents.

The VBIL provides bushfire information to the general public across a range of topics, including:

- incident updates,
- bushfire planning information for those living in bushfire risk areas,
- fire information for persons travelling to or through bushfire affected or bushfire risk areas, and
- general fire restriction (e.g. fire bans, fireworks displays, Barbecues) and prescribed burning information.

VBIL call takers provide direct information to the public using a database of Frequently Asked Questions (FAQs) that provide pre-determined responses to specific topics. During periods of high level community interest in fire activity, VBIL regularly receives information updates for specific incidents, direct from the Emergency Coordination Centres of CFA or DSE, and from the fire agencies’ external websites to update fire incident information.

The Centre also provides a 24 hour, 7 day a week automated message service available for callers to access incident, burn and bushfire safety information when the centre is not staffed.

During the major fires occurring across Victoria between 20 and 29 January 2006, the VBIL dealt with 17 361 separate requests for bushfire-related information. Of these requests, VBIL call takers dealt directly with 14 077 people individually, but were unable to answer 3284 callers.

The manner in which the services provided by VBIL were absorbed by the community far exceeded expectations, causing high abandonment rates during peak periods and an inability to promptly attend to all callers. Despite the clear success and public acceptance of the VBIL there is a need to enhance its capacity and to ensure that its function and role is clearly understood by media, communities and fire agencies, to further advance community engagement via this facility.

5.1.4 Recovery

A direct flow on from the level of community engagement by the fire services was the generally rapid injection of recovery and rehabilitation agencies into the IMTs or into the overall incident management process. Recovery agencies responded positively to their early involvement which occurred in most, but not all fires, and it was apparent that community members generally shared that view. Of particular note, the Department of Human Services actively sought involvement and accepted a far greater coordination responsibility. This had the benefit of involving Municipal Recovery Centres as well. Historic links between DPI and DSE were also of great value.

Recovery agencies observed that as a consequence of much closer ties to the community because of pre-fire community engagement practices, that both fire agencies became far more involved with recovery than at any previous time.

Although this was welcomed, some caution was sounded to ensure that fire agencies remain as fire agencies, assisting the recovery agencies with recovery and vice versa. Further dialogue between recovery agencies and the fire services is indicated to ensure that all parties understand each other's roles and expectations and to provide for formal inclusion of recovery processes into planning and emergency exercises.

5.1.5 Emergency Management

It is important to view the subject fires in the wider emergency management context. For significant levels of fire activity within the joint areas of responsibility of the Country Fire Authority and the Department of Sustainability and Environment, those two agencies will always take key roles in the emergency management and suppression activities. They must necessarily be supported by many other key participants in the emergency management arena, who will hold similar key roles during non-fire emergency events. Performances in emergency fire management can provide a clear indicator of potential performance in other circumstances and it was widely recognised that good understanding of the capabilities and capacities of other organisations and how they mesh into the emergency management picture are intrinsic elements of sound emergency management.

The standout issue for emergency management in the broader sense, was that ICS/IMT arrangements operated exceptionally well, mostly without regard to agency boundaries, and achieved the point where agency distinctions became irrelevant, the ultimate goal in any emergency operation.

This assisted seamless integration and interoperability between multiple response, coordination and recovery agencies and ensured adequate provision was made for concurrent introduction of recovery and community engagement with response. No better example of the value that can accrue from this was the result from Anakie, where DISPLAN medical representatives reported on the almost complete lack of physical trauma sustained during the event and a similar lack of post-event emotional trauma.

Clearly reinforced at most debriefs was the importance and need for sound awareness and training at all levels, from intra- and inter-agency perspectives, of the emergency management cornerstones - legislation, arrangements that apply within and between agencies and knowledge and understanding of the responsibilities and resource capabilities of other agencies.

5.2 Issues for improvement

A number of matters were identified during debriefs that warrant further consideration by fire and other emergency services management. It is important to establish that the matters discussed below are not exhaustive, nor do they represent solutions for those areas where some improvement is indicated. Rather, these topics were identified by consensus, across the range of debriefs, as areas where there may be opportunity to make beneficial systemic change or to strengthen existing processes and procedures. Any changes that subsequently occur can only derive from thorough and detailed analyses of existing systems and processes, balanced against proposed changes to ensure that any changes envisaged are achievable and will bring demonstrable benefits with them.

5.2.1 Incident Command and Control

Information transfer between ICC and fireground

Transfer of information from the ICC to the field and from the field to the ICC was not always effective. There was a consistent message from field operators that information and intelligence provided to the ICC from the fireground was often not reflected in the next IAP. Field operators at the fireline sometimes intrinsically felt that they ought to be undertaking different activities to those specified in the IAP and questioned how effective the lines of communication were. This message was not universal but sufficiently common to warrant further action.

Chain of command

There is a need to respect the operational structure and chain of command, through all levels, e.g. by ensuring that IMTs operate via the structure that is established and not bypass critical elements such as Division Command, by drawing information directly from other field sources or by duplication of effort. The concept of Divisions is one that has not been used extensively in previous fire seasons, thus training and exercising, incorporating Division functions and roles when fire complexes are established is indicated. Given the much stronger interaction between DSE and CFA, it was also recognised that in many instances, positions within IMTs are no longer agency specific and it is important for all parties to observe the chain of command, irrespective of which agency or agencies fills various roles and functions. This observation was not a consistent issue but was evident during some fires, or shift rotations and sectors and should be addressed.

Incident Action Plans

There was strong consensus across fire complex debriefs that IAPs have grown to the point where they are too big and bulky, take too long to prepare, too long to disseminate to the field, and contain inaccuracies. In the words of one senior agency representative “*IAPs have become an industry on their own and can stifle needed reactivity to changing circumstances on the fire, particularly on a developing incident.*”

Whilst the relative coordination centres at regional and state level, plus the key support agencies maintain a vital interest in IAP content, the principal role of an IAP must always be to detail proposed suppression strategies for the next shift at the fireground, i.e. it is the firefighters’ work plan and should establish the key strategic direction, but must stop short of prescribing tactics. It is critical that the information contained within it is accurate and easily assimilated by the end users.

Five key issues concerning IAPs were identified in debriefs:

1. Targets - who needs the information in the IAP and what do they use it for?
2. Timelines and timeliness – when it is prepared and disseminated
3. Content
4. Format – preparation by hard copy or electronic (relates to distribution)
5. Role of document

There was concern expressed at some debriefs that IAPs frequently fail to include feedback/intelligence from retiring Division and Sector commanders and as a consequence of ignoring intelligence, the IAP does not provide the information that firefighters on the ground need. This, allied with inaccuracies in data input to IAPs, has led to an increasing doubt among field operators about their value.

There is an agreed joint agency template for IAPs but it is not universally used. The template requires review with a view to simplification. The template should require each individual element of relevant information to be entered once only, with automatic regeneration elsewhere in the IAP if this is necessary.

A key issue identified is for CFA and DSE to revisit and refine the joint IAP template and determine an approved model and ensure that the format, content and use of the model IAP is communicated to all potential IMT members.

Resource tracking

Resource tracking was an issue raised almost at every at every debrief level. Accurate knowledge of resource numbers is critical to every facet of the operation that requires accurate knowledge of personnel numbers and location - catering, accommodation, logistics, shift changes, back-up resources availability and/or needs. Lack of interoperability between CFA and DSE resource tracking systems, related to different IT procedures and platforms, was regarded as a barrier to free trade of information.

The issue of adequate resource tracking is one that impacts across the entire spectrum of response and coordination. In addition to the issues listed it also has significant implications for fatigue management and state-wide ability to accurately monitor capacity to deal with significant and ongoing events.

Staging Areas

The critical matters relevant to Staging Areas are their location, size, management by dedicated managers, accessibility, good communications to ICC and Division/sector, helicopter access, good security and ready availability of fuel and services. Some Staging Areas, e.g. Hall's Gap, worked very well because they met all or most of these needs.

Staging Areas require a dedicated position of Staging Area Manager. In some instances other key persons in the chain of command (Sector Commanders) were required to manage Staging Areas, in addition to their fireground functions.

Staging areas must be relevant to the location of the fire. Examples were raised where crews drove long distances (2 hours) from their accommodation to a Staging Area, passing their intended work area in the process, were briefed at the Staging Area, then returned to the fire.

Staging areas should be established as soon as possible in the initial response phase.

There is a need to develop a clear understanding of the role and purpose of Staging Areas to enable development of a schedule of standard attributes. There is also a need to review potential Staging Areas and record in local plans those places that meet the agreed criteria.

5.2.2 Fire Agency Coordination

Rural fire in Victoria is managed by CFA and DSE, generally dependent upon the tenure of affected land. DSE is responsible for public lands and CFA is responsible for fires on private lands. Often, both agencies participate in suppression activities and for each fire where this occurs, operations are in accord with the Cooperative Agreement between CFA and DSE i.e. the controlling agency will be determined, an Incident Controller will be appointed, an Incident Control Centre will be identified and an Incident Management Team will be appointed.

There is a finite limit to the number of effective IMTs that Victoria can mobilise. As campaigns grow in time and size, it may become necessary to amalgamate several discrete fires into a single complex. This occurred during the 2005/06 campaign. The Alexandra Complex was initially conducted as separate fires and later amalgamated into a complex. Heywood and Horsham were conducted as complexes from the beginning of fire activity hence there was no requirement for a transition process from individually managed fires to a single complex.

The changeover from a series of individually run fires to a single complex at Alexandra generated some difficulties related to:

- Timing of changeover with respect to adequate lead time to brief all involved parties,
- Timing of changeover regarding fire suppression activity (changeover at crucial peak fire behaviour times e.g. in the middle of the day, should be avoided)
- Ensuring that all parties were adequately briefed and notified
- Adequately resourcing "new" Division Command points and "new" ICCs, particularly regarding communications and data transfer (need to install hard wired communication lines and set up times to achieve this)

- Maintaining community links and ensuring communities understood the rationale for the change
- Location and suitability of ICC and Division Command points relative to active fires

It is more than probable that Victoria in future will run campaign type fires on a fire complex basis rather than as individual fires. The ability to maintain multiple ICCs is finite and perhaps the thrust to establishing fire complexes might to be to establish them earlier rather than later, and in defined instances move directly to a fire complex without any intervening individual ICCs. This requires identification of triggers that would promote such a move.

The consequence of changing from individual ICCs to a single complex with several Division points, has significant downstream impacts on the conduct of the key ancillary services at Municipal and MERC level, including where municipality responsibility ceases, whether or not multiple MECCS are activated, and as a consequence of that whether a DECC will also activate and what the expected information flows are.

Integrated Fire Agency Coordination

During this campaign no Integrated Fire Agency Coordination (“IFAC”) centres were established. Horsham was a likely candidate for an IFAC given the spread of fire activity over several CFA regions, the involvement of both fire services and multiple Municipalities. Horsham ran with a single ICC and three MECCS were established, although a DECC was not established. In hindsight, it may have been appropriate to establish an IFAC and a DECC. Victoria Police indicated at the debrief that given similar circumstances in future they would consider establishment of a DECC.

Although provision exists for establishment of fire complexes and IFACs not all CFA and DSE personnel fully understand the processes involved. There is a need for better understanding of the triggers that operate to prompt establishment of complexes and IFACs, a need to ensure that they can be adequately resourced, understanding of the transition processes required where a complex or IFAC is not established at the outset, understanding of impact of changing from discrete fires to a complex or IFAC on associated emergency response and support organisations and training exercises.

Facilities

Issues about the suitability of centres selected as ICCs and Division Command points arose repeatedly. Not all centres were deemed adequate for their purposes, especially in terms of communications and IT infrastructure that existed or that could be readily installed. There is a need to develop a standard set of specifications for IT and communications for ICCs and Division Command points. This specification should be correlated with existing known centres to ensure that those centres identified in plans do measure up. Centres that are not suitable should either be upgraded or removed from plans and any other centres capable of meeting minimum specifications should be included.

Whatever centre is selected as an ICC needs to be able to be “converted” to ICC function within a short timeframe. Irrespective of whether it is dedicated DSE or CFA premises or other community based facility, there is a need to be able to lock down that part of the facility given over to ICC functions within no more than one hour of occupation so that the IMT can become effective immediately and enjoy exclusive use of its allocated part of the facility.

A potential step forward would be joint establishment or identification of a network of quality Level 3 Incident Control Centres that enable staff from both agencies to co-locate as potential joint full IMTs on adverse fire days, each attending to some of their normal duties until the course of the day manifests itself. Whilst there are facilities that can be used as ICCs and which are not normally occupied by either CFA or DSE, one of the keys to whether or not a facility will provide satisfactory utility as an ICC rests with them being occupied on a regular basis and the knowledge that necessary infrastructure is in place and is in working order.

5.2.3 Coordination between emergency management agencies

There are a number of separate functions in emergency management. In the case of fire, CFA and DSE comprise the combat agencies dealing with the immediacy of fire response and suppression activity. Specific recovery agencies manage recovery activity, dependent upon needs identified - human, agricultural or environmental - often with some support from the fire agencies. Coordination roles are provided by Municipal Emergency Coordination Centres, involving both the affected municipality/ies and Victoria Police. A Police Officer fills the role of Municipal Emergency Response Coordinator (“MERC”). Whilst both the Municipality and Police are likely to be routinely involved in the overall management process, the coordination function and role provided via the MECC and the MERC are critical to effective management of significant events.

Mutual understanding of the roles, responsibilities and interactions between the IC and the MERC and the ICC and MECC are fundamental to effective management. There were indications during some fire/fire complex debriefs that differing interpretations existed about these matters. The fire agencies’ understanding and expectations about the ICC/MERC roles and interactions, vis-à-vis MERC expectations and understanding about the fire agency roles and MERC roles and how the MERC and ICC should interact requires discussion and resolution.

A natural flow on from the interaction between ICC and MECC is coordination at regional level, i.e. the interrelationships between a potential DECC and fire agency Regional Emergency Coordination Centres/IFAC. There is opportunity to include the wider emergency community in decisions about moving to major fire complexes and IFACs versus individual incidents. Just as the fire agencies have finite capability to staff multiple incidents, so too do the other key players, Municipalities and Police.

A matter also raised at several debriefs was the possible co-location of MECCS/ICCs and DECCS/RECCS. There are both positive and negative impacts that might accrue from co-location.

While it may appear that co-location is attractive to reduce the number of centres involved in emergency operations, it may not be a simple task to introduce. The fire agency chain of command goes upwards from ICCs to RECCs/IFAC to State ECCs, whereas the overarching emergency coordination occurs via municipal centres, generally based on municipal boundaries. The fire agency structures do not necessarily equate to municipal boundaries at Regional Emergency Coordination Centre /IFAC level, a matter that is also compounded by non-aligned regional boundaries between CFA and DSE, hence the ability to introduce and IFAC for inter Regional and interagency coordination. It is also not necessarily the case that an ICC to manage a specific fire will be set up within the Municipality that actually contains the fire and this raises separate issues for Municipalities.

A major attraction of co-location is the ease of communication between the parties with no reliance on remote communication processes. The prospect of amalgamation would obviously reduce the need for liaison officers in each separate centre, but the influx of the total emergency management organisation into a single centre may introduce accommodation issues, given the size of the combined teams. Currently, as identified in this report, a number of designated ICCs are already not deemed satisfactory in terms of accommodation and communications facilities. To increase total staffing levels in individual centres would tax many centres beyond their limits, further reducing the availability of suitable centres.

Separation of functions allows the response component of the overall emergency management structure to focus on response and the coordination component to focus on coordination. Co-location may blur the boundaries between response and coordination, introducing role confusion and some overlap of activities.

These matters are not easy to resolve and require consideration at appropriately senior levels:

- The need for clarification and better understanding within the fire agencies of the roles and responsibilities of police occupying emergency response roles, and similarly a clarification and understanding by police of the roles and responsibilities of the fire agencies;
- Discussion and resolution about potential co-location of ICCs/MECCS and RECCs or IFAC/DECC; and
- Need for dialogue between Victoria Police, municipalities, the Department of Human Services and fire agencies is indicated to explore these issues. Necessary dialogue should occur between representatives of the various agencies who are able to make binding agreements and commitments on behalf of their agency.

5.2.4 Management of non-combatants on the fireground.

There is a need to clarify how and when non-combatants may gain entry or re-entry to firegrounds. In many instances, firegrounds are declared unsafe for non-combatants. In others, traffic control points, initiated by the fire agencies and staffed by Victoria Police, divert traffic away from the fireground and entry by some people is not permitted.

Police sometimes encounter difficulty at these traffic control points in determining who they allow to have access to the fireground. By way of example, instances occurred where privately owned equipment and some contractor plant specifically requisitioned by IMTs and responding to fires was either delayed at traffic control points or access was refused. There is a philosophical difference in attitude to privately owned plant by CFA vis-à-vis DSE that needs to be further considered. CFA acknowledges the self deployment of persons with privately owned plant who are responding to fires, catering for that eventuality in the CFA publication "Guidelines for Operating Private Equipment at Fires." DSE on the other hand prefers that private equipment not be used on the fireground.

This difference of opinion places Police Officers who are staffing traffic control points into a very difficult position as they currently have no automatic means of identifying whether a plant operator or owner ought to be regarded as a combatant or non-combatant. Police have suggested a form of identification, either a permanent authority or IMT issued authority, to enable rapid identification of authorised plant owners/operators, to allow them access to firegrounds through traffic control points.

Police officers hold substantial powers to close roads, footpaths and open space leading into emergency areas. They hold substantial powers to deny access to persons to emergency areas and they hold powers to grant or deny access to persons holding a pecuniary interest within the area covered by the emergency. Interpretation of the powers available to permit or refuse access varies between agencies and is a significant matter needs resolution. There needs to be an agreed joint position between the fire agencies and the Police Service.

Other classes of persons that can create difficulties at traffic control points regarding whether Police officers ought to grant or deny access to the fireground include off-line or non active volunteer firefighters, members of the media, representatives of key public infrastructure/utilities and representatives of recovery agencies. Media representatives, in particular, are likely to seek access to every significant fireground. Recognising the vital role that media play in attending fires and providing timely information to communities, CFA and DSE have provided joint training to nearly 800 media personnel in recent years, to ensure that media personnel attending fires hold a media accreditation pass, have the ability to make informed decisions about incident risk by using dynamic risk assessment processes and are equipped with appropriate protective clothing. Whilst the majority of media representatives abided by the access conditions established by the fire services, a number either gained access to firegrounds without necessary accreditation or failed to meet the prescribed conditions. Failure to abide by or respect the conditions established by the fire services is a serious matter and is one that must be raised with media representative groups.

All persons seeking access to firegrounds must understand that failure to meet all conditions prescribed can jeopardise not only their own safety, but equally as importantly, the safety of others.

Given the impetus in this fire campaign to institute recovery almost simultaneously with fire suppression, it is obvious that recovery agencies and many other non-combatants need and ought to have access to the fireground whilst suppression is active, under some circumstances.

There will always be periods when intense fire impact will not even allow well equipped firefighters to access parts of the fireground, hence access by anybody may be precluded under those circumstances.

There is a need for dialogue between the fire services and Victoria Police and between the fire services and representatives of other organisations, especially media and recovery agencies, that may have legitimate claims to be granted access to otherwise closed firegrounds, to ensure that all parties can clarify and understand the powers and conditions that exist, to deny or approve access to those firegrounds.

5.2.5 Use of Information Technology

The potential to utilise web based solutions to facilitate data sharing and timely information transfer was a common debrief theme, recognising that CFA and DSE operate independent and different IT platforms. It was envisaged that an overarching Emergency Services website could provide a common access point for rapid transfer of fire information between agencies and/or ICC/fireground, utilising both fixed and portable equipment.

Fire/complex debriefs wholly endorsed the concept that an Emergency Services Website with a standard operating environment enabling anyone to log on and view or download data ought to be pursued. Such a system necessitates a range of persons who hold the authority and competence to add or delete data stored on the web site and requires strict, mutually agreed business rules to access the system and effect changes.

While it is attractive to conclude that a single Emergency Services IT system should be created, progression of the concept requires very careful investigation and analysis. Investment in a single emergency internet site where agencies can easily share their latest information may be substantial. Such a system would need to be interoperable and compatible across and between Emergency Services agencies, be robust and reliable, provide easy access for end users – State and Regional coordination, IMTs, fireground - and have sufficient capacity to handle very high peak information loads during significant events. The solution may be a single system or a range of compatible systems, with provision for efficient data sharing and data warehousing, but there are many questions that require answers before embarking on either course.

Sustainability of Information flow

In the case of fire, relevant information must flow vertically within each fire agency organisation, laterally between the joint fire agencies, laterally within the wider emergency management family and all support agencies, laterally to media and communities and vertically to Government. Critically, information flow must pass through all obligatory points to ensure that those who need to know about a particular issue do know about it. This requires as a priority, interoperability across generic emergency services organisations with the attendant ability to have systems up and running concurrently with establishment of response and recovery operations.

This matter was further explored at a joint CFA and DSE workshop to consider some of the key matters arising out of the debrief process. It was recognised that timely, accurate information flow and the ability to sustain and repeat that flow is crucial to maintaining effective fire management operations.

This workshop reinforced the importance to ensure that when pre-determined goals are achieved, that the continuous improvement cycle does not stop and new and higher goals are established where appropriate.

5.2.6 Victorian Bushfire Information Line

The VBIL analysed its ability to effectively deal with peak call loads during sustained periods of fire activity across Victoria. Although the VBIL was clearly embraced as a public information mechanism by the community at large, its capacity to deal with peak loads that occurred was limited, and was temporarily increased during the significant fires in January 2006. It is clear that the VBIL now needs an ability to maintain its routine services but also the ability to rapidly expand its capability to handle likely call volumes when significant events occur. The VBIL debrief made a number of short, medium and long term recommendations that are included in attachment 6.3.

Several key issues emerged from the VBIL debrief and other debriefs that considered the impact of the VBIL and are discussed below:

Capacity

The VBIL needs the ability to rapidly adjust its capability to handle major spikes in caller volumes generated by extensive and significant fire occurrence and normal daily peaks in caller volumes. The ability of VBIL is tied to staffing levels on shift, but the identification of its role and function and careful management of references to the services provided by VBIL, by media and fire agencies can also assist in evening out the peaks in demand.

The key issue is that provision of a rapidly adjustable call-taking capacity to implement staged increases or decreases in call handling requires review.

Role

The role filled by the VBIL is critical to effective community engagement, but it is important that all interested parties – communities, media and fire agency representatives – understand what that role is and how the information flow to the VBIL from ICCs and ECCs occurs. The VBIL is one of the key links between ICCs and communities but its utility is governed completely by the timeliness of information that has been provided to it through the chain of command by ICCs, via the CFA and DSE State level Emergency coordination Centres.

That information flow does consume time and it likely that the VBIL will always experience a time lag in updating information in comparison to an ICC. Certainly, the VBIL will never be in a position to hold fire information that is more recent than that which is available from the relevant ICC. Consequently, any sign off by an ICC representative following a live media session or a sign off by a media presenter to “*contact the VBIL for more information*” places the VBIL into a very difficult position – it generates a huge spike in call numbers and implies the VBIL has information that has not yet been released.

A related role issue is the nomination, on live media, of functions that VBIL is not equipped to handle, such as “000” calls being placed there. Functions of the VBIL call centre and “000” call centres are completely different. The VBIL centre is not equipped with essential technology to identify “000” call sites and dispatch resources.

Key issues are:

- Dialogue with media and community information about the role of VBIL is indicated, as is adequate definition of and education about its role within the fire agencies.
- Improved timeliness in fire updates to VBIL

Incident specific messages and targeted messages

It is probable that substantial spikes in caller numbers will always occur although the extent of those spikes may be reduced by other initiatives. Overload callers are queued and have the option to access a number pre-recorded messages.

This provides an opportunity to provide callers with information about specific fires and threats and may address their concerns without the need to speak with an operator.

A number of discussions raised the question of the nature of messages that VBIL offers on its pre-recorded service, particularly the message/s played back while callers are on hold pending availability of an operator. One example quoted referred to “*the need for residents in fire affected areas to now activate their bush fire management plans*”

While it is accepted that an increasing number residents in fire prone areas have developed effective bush fire management plans, this is not universal. There are still substantial numbers of residents without bushfire management plans. Hence, advice to activate their plans is of little value to them.

A number of respondents in debriefs indicated that messages such as this might be briefly expanded to alert and advise residents who have not developed a bush fire management plan about effective actions that they can implement and their options to remain with and defend their house or to make the decision to leave early, well before the arrival of the fire.

These matters indicate a need to carefully review the content and intent of messages available to callers “on hold” and the role of the VBIL and its place in the “whole-of-state” fire management framework.

5.2.7 Communications Planning

Radio communications was commonly listed as a matter for state resolution. Many debriefs raised issues about poor communications including:

- Lack of or need for more pre-season communications planning – no default plans to build on during extended campaign;
- system overload and limited channel capacity;
- black spots with limited or no coverage;
- lack of interoperability between different agencies, including some interstate resources (NSW);
- no radio checks;
- limited technical and repair support during peak periods;
- operators with defective radio equipment remaining on the fireground;
- fixed bases not staffed at all times;
- delayed introduction of communications planners into some IMTs;
- too few communications planners in IMTs; and
- Poor or limited coverage by mobile telephone systems.

Equally, a number of debrief inputs recorded positive outcomes regarding radio communications, including;

- effective use of Field Operations Vehicles or mobile communications equipment;
- innovative solutions e.g. lifting mobile repeaters with tall cranes to significantly extend coverage into “black-spot” zones;
- good interoperability with some interstate resources (Tas);
- early introduction of communications planners into IMTs;
- steps taken to site radio technicians at staging areas for check and repair to mobile equipment; and
- Use of technical radio support from other agencies e.g. Ambulance Service to assist with field repairs.

It was generally recognised that radio communications equipment and technology available to emergency services organisations within Victoria is amongst the best that is available. There are no radio communications systems that allow multiple users to reliably communicate with each other, irrespective of their location, separation distances and existing network loads, so the effective use of existing systems relies heavily upon understanding capabilities of the systems currently in use, temporary network modifications that can be implemented to alter capacity and connectivity, user training and critically, robust and effective communications plans..

Communications includes other media apart from radio – e.g. telephone, facsimile, email and web – and appropriate incident communications planning must cover the whole spectrum of technology and the linkages necessary within each defined incident. During incidents various control points or centres are identified and established, including Incident Control Centres, Division Command Points, MECCS, DECC, IFAC and Staging Areas. To draw the maximum from existing systems requires pre-season preparatory work to develop basic communications plans that can be modified in light of needs imposed by major emergency events. Some preparatory work is also necessary if infrastructure changes, even of a temporary nature, are envisaged and there is a need for minimum standards for communication requirements into the various control points.

Sometimes unrealistic expectations are held about communications. For example, where poor or non-existent mobile telephone coverage exists, it is not simply a matter of requesting a telecommunications provider to install a temporary mobile network to service the fire area.

The matter of communications was considered in depth by a debrief of the SW Regional Communications Group, a combine of DSE Region SW and CFA Regions 4,5,6,7,15,16 and 17. The results of this debrief, in which key issues are identified and analysed, and the outcome from which is a series of recommendations for consideration at State level is an appropriate starting point.

A key issue identified during debriefs was a need for CFA and DSE to revisit communications, for which purpose the issues noted by the SW Communications Group would serve as an appropriate platform.

5.2.8 Response and Recovery/Rehabilitation

Response and recovery proceeded simultaneously during this campaign, triggered by stronger community links arising from more active engagement with communities. The older style traditional implementation of recovery depended upon fire suppression largely being achieved, or fire threat passing, before recovery agencies were asked to become involved.

DSE and CFA have differing roles in the recovery phase. As fire agencies they hold a support role to recovery agencies but DSE, in functions other than fire management, has clear recovery and rehabilitation roles. Both fire agencies, during this series of fires, were more prominent in recovery operations than previously, occasionally to the extent that other recovery agencies felt their role was being partially subsumed by the fire agencies.

There is now a need to more clearly formalise and clarify the roles and responsibilities of the fire agencies and recovery agencies to ensure that smooth transitions occur between response and recovery at all incidents. In those incidents where transition plans, to move from response to recovery or to jointly implement response and recovery, were in place, the transition was seamless. The Departments of Primary Industry and Human Services are collaborating to progress data base management in order to enhance transition to recovery.

Initiatives identified during debriefs to aid efficient recovery include:

- recovery arrangements should be documented in local level planning, including readily available contacts;
- incorporation of liaison officers from recovery agencies into ICCs from the beginning of events;
- Build stronger relationships between response and recovery agencies by inclusion recovery agencies in joint training exercises; and
- Providing recovery agencies with relevant information and data as soon as possible to assist them with planning

5.2.9 Use of SEWS

A number of observations about use of the State Emergency Warning Signal (“SEWS”) arose during debriefs. There was a general consensus that the application of SEWS needs to be more carefully controlled and managed to ensure that SEWS messages have the desired impact within threatened communities. Whenever SEWS is used, it is likely that extensive areas within Victoria might be under simultaneous fire threat and multiple SEWS messages, referred to as “SEWS overload” can lessen the impact or confuse residents in fire affected areas.

Timing of SEWS activation must take into account the lead time necessary to obtain necessary approvals for issue and release of SEWS by the media. Often, it transpired that SEWS messages were not broadcast until after the particular threats causing their issue had passed. The significance of this is paramount as residents may be preparing to self evacuate at the peak of fire threat. Consequently, SEWS messages must be initiated well before the anticipated fire impact.

Feedback from communities and support agencies also indicates that whenever a SEWS is issued, that a corresponding cancellation or follow up of the SEWS is essential, immediately following the cessation of the threat giving rise to the SEWS. Not all residents or communities necessarily understand geographic and fire behaviour impacts sufficiently to appreciate when a specific threat has ended and sometimes unnecessarily remain on a state of high alert.

Ember Alert Warnings can be issued directly from IMTs to media outlets and this was seen as a faster response and more appropriate warning technique. SEWS should be reserved for specific and special cases.

Review of the parameters under which SEWS are issued is required.

5.2.10 Naming of fires

To ensure that communication of information about a specific fire or fires accurately identifies the target fire, it is critical that a common naming system be used by all agencies, whether they are response, support or recovery agencies. It is clear that in this campaign, many fires were variously referenced by several names, both during initial phases when they were treated as discrete events or later during the event when several fires were included into a complex of fires, all managed by one IMT operating from a single ICC. This issue was raised during IMT/fire complex debriefs, the CFA SECC, DSE ECC and SAU.

Fire names serve several purposes. They must provide a unique identifier for all of the agencies involved but they should also serve to identify with geographic areas to alert the public that information being broadcast relates to the fire near to them. The public can easily become confused when a single fire is referenced by multiple names, and even more so when two different fires are referred to by the same name. So too can the combat and recovery agencies. Name changes will be inevitable from time to time, as fires expand and two or more fires merge, but they ought to be the exception rather than the norm.

The best outcome likely from the use of multiple names is confusion within the response and recovery agencies and affected communities. The worst outcome likely from use of different names for a single fire or multiple fires with an identical name could be catastrophic.

Significant levels of discussion about consistency in naming of fires points to the following needs:

- Development of a joint protocol by the fire agencies to establish how fire names will be determined, how fire names will be changed when it is essential to do so and how name changes will be effectively communicated to the full suite of emergency management agencies, support agencies and to affected communities.
- Communication of the protocol to all operational levels within CFA and DSE for implementation.
- Communication of the protocol to emergency management, recovery and support agencies

[NB: Note that the Cooperative Agreement between CFA and DSE provides that both agencies must use the agreed incident name for every multi-agency incident.]

5.2.11 Catering

Catering was discussed in practically every debrief including the major IMT/fire complex debriefs and supporting unit and crew debriefs. The nature of comments ranged across the entire spectrum. A sample of comments drawn from the debrief database indicated a slight bias towards favourable (55%) versus unfavourable comments (45%). A general observation is that whilst individual crews and some rotations or shifts experienced less than adequate catering, overall, the provision of catering services has improved dramatically. Comments from Group Officers at major fire debriefs suggested catering was “*the best ever*” and one pro forma respondent scored catering at “110%” indicating a substantial improvement in comparison to previous events.

Nonetheless, there is a need to revisit catering. Philosophically, catering is a matter that can only be addressed and implemented at provincial centres - IMT, Region or District level – in accord with protocols set at state level.

State level determines strategic issues including:

- Identification of the principal agencies who will be charged with responsibility for provision of catering services;
- Communication of that information to the field; and
- Review of capacities to deal with large and protracted events.

At local levels the need is to ensure that arrangements for catering during emergency incidents are identified and built into local plans and that pre-season preparatory work, particularly involving designated support agencies occurs. Tactical issues that need to be considered include:

- Identification and recording of local arrangements;
- Preparedness, training and interaction with key support groups;
- Pre-planning of delivery arrangements, including accessing hardware such as eskies/food containers and methods of delivery; and
- The need to recognise contingencies i.e. assess catering capacity in local area to manage long-term and extensive incidents.
- Role of individual crews and strike groups to be initially self sufficient (and this needs to be widely disseminated.)

In essence, there is a need, as one pro forma respondent succinctly put it, to “*Sort out the catering throughout the year*”

6 Other observations

6.1 Fire Records

There are three separate issues associated with fire records. They are:

- Need for a report that sets out the facts about the fire or complex;
- Debrief processes and outcomes; and
- Archiving of records

6.1.1 Fire Reports

Extensive IMT logs enabling reconstruction of each fire exist in most instances. There is no specific report setting out a brief history and the circumstances and facts about each fire or complex of fires. In every major debrief, the background data for each fire was assembled and presented during a short introductory session, to give context to the debrief. Little additional work would be necessary to utilise that work as the basis for a brief report, supplemented by the key outcomes from the debrief process.

The reporting process envisaged includes a discrete narrative by the incident controller setting out the known facts of the fire. This narrative might include the essential statistics about the event, for example:

- Date and duration;
- Critical weather;
- Area burnt by land tenure;
- Suppression and recovery resources;
- Establishment of ICC and associated Division Command points
- Establishment of coordination points and any special arrangements – (MECC, DECC, IFAC)
- Suppression strategies employed;
- Unusual attributes of fire behaviour and weather;
- Summary of losses and damage; and
- Records of associated debriefs with any recommendations for systemic change.

This does not need to be a detailed history, but a short document, up to 10 pages maximum of narrative, with any key supporting documents that deal directly with the facts that are known about the fire.

6.1.2 Debrief Process

A range of different processes was employed during this debrief program. The major fire/complex debriefs were conducted either as structured discussions or were facilitated. Most debriefs recorded the outcomes by completing the debrief pro forma documents, some prepared no debrief records other than data collection sheets as key issues were identified and several prepared comprehensive and detailed records that analysed the key discussion points and concluded with a series of recommendations for adoption at either debrief level or state level.

Definition of the key outcomes was clearly much superior in those instances where the debrief records contained both analysis and recommendations.

The following processes might be considered for future debriefs:

- they should be held in a timely manner, at the discretion of the local administration of the control authority, dependent upon continuing fire activity and availability of key IMT personnel;
- participants identify what the key issues were in their campaign;
- participants discuss and reach consensus about significant matters;
- participants determine whether issues can be addressed at debrief level or need to be referred higher up the chain of command for resolution or adoption;
- an outcome report is prepared by the debrief convenor or IC that:
 - captures key discussions;
 - identifies issues to be addressed at debrief level or state level;
 - identifies and records any actions arising for implementation at debrief level;
 - provides recommendations for consideration by the chain of command for those matters need to be referred higher up; and
- a feedback mechanism is implemented so that debrief participants know what has happened as a result of the debrief.

6.1.3 Archiving of Documents

There were instances where ICCs did not maintain a full record of all documents produced. For example, upon completion of a new IAP, the previous IAP was discarded, although most fires/complexes retained copies of all documentation. All fire related documents should be appropriately collated and archived in accord with the relevant archiving requirements and retained at least until the expiry of any statutory limitation period. Most ICCS did maintain a full record of incoming and outgoing correspondence. At the Horsham complex of fires a person was dedicated to archiving - including the copying of electronic data on to CD's for subsequent archiving. Similarly, at the Heywood complex, the MECC operated a data collection system to ensure that all documentation was captured and stored.

A significant issue for the joint fire agencies to consider is whether any changes are necessary for fire reporting, debriefing processes and archiving of records at local regional and state levels.

7 SECTION TWO - ATTACHMENTS

7.1 Attachment 1 - Joint CFA and DSE Memo initiating debrief process

MEMORANDUM



TO: Managers Fire DSE
Fire Management Officers DSE
Area Managers CFA
Operations Managers CFA

COPY TO: Assistant Chief Officers DSE
Deputy Chief Officers CFA

FROM: CFA Director Operations/Chief Officer Russell Rees
DSE Chief Officer, Fire & Emergency Management Ewan Waller

SUBJECT: **DEBRIEFING JANUARY 2006 FIRES**

DATE: **10 February 2006** **File:**

DSE and CFA will conduct a coordinated series of debriefs of the major fires that have occurred over the last few weeks. This will involve a tiered debriefing process with initial debriefs held for fireground personnel, Incident Management Teams (IMTs), Regional Emergency Co-ordination Centres (RECCs), followed by an overarching debrief for each major fire or fire complex. These will also be informed by State Emergency Coordination Centres (SECCs) and Metropolitan Fire Brigade and interstate fire agencies' debriefs. The debrief processes will be coordinated by agency State Debrief Coordinators:

DSE - Assistant Chief Officer Liam Fogarty
Tel: 03 9412 4861, Email: liam.fogarty@dse.vic.gov.au
CFA - Deputy Chief Officer Greg Esnouf
Tel: 03 9262 8551, Email: g.esnouf@cfa.vic.gov.au

Debrief Process

The debrief process is designed to enable us to review and assess our performance in preventing, preparing and responding to these fires, and to identify and capture improvements required at crew, team, district, regional, fire or complex and state levels. Information about the tiered debrief process is provided in Appendix 1.

While crew, team and local issues need to be addressed, the debrief process should focus on:

- identifying key issues that impair our ability to effectively and rapidly contain and control fires;
- identifying and assessing risks to life, property or the environment;
- systems, processes, training or technology that support these objectives.

Major Fire/Complex Debriefs

Debriefs are to be convened for each major fire or “complex” of fires as described in Table 1 below.

Table 1. Major Fire/Complex debrief arrangements.

| Location | Fire(s) | Control Agency | Convenor | Date |
|-------------------|---|----------------|--------------------------------|----------------------------|
| Heywood Complex | Rocky Den Troeths Road, Brands Track | DSE | Manager Fire Jon Sanders | TBA |
| Horsham | Deep Lead Mt Lubra Yallakar South | DSE | Manager Fire Jon Sanders | TBA |
| Brisbane Ranges | Century Track | CFA | Area Manager Paul Stacchino | 23/2 Corio Fire Station |
| Moondarra/Erica | Seninis Track | DSE | Manager Fire David Tainsh | TBA |
| Alexandra Complex | Burgan Track (Kinglake), Melba Control (Yea) | CFA | Area Manager Alan Davies | TBA |
| Euroa | Granite Hills | CFA | Area Manager Alan Davies | TBA |

There are a number of principles that should apply to the major fire/complex debrief. These are outlined in Appendix 2. Debriefs should consider the items detailed by the Debrief Agenda and Checklist (Appendix 3), and personnel attending initial and over-arching debriefs should be provided the information for debrief participants (Appendix 4).

Processing of Issues from these Debriefs

Many issues may be identified at these forums that can be addressed locally, with more strategic issues to be referred to the relevant “higher level debriefs” for each major fire or complex. The following provided guidance to assist with the outputs of the Initial series of debriefs:

- Issues that are strictly the responsibility of local management to address should be actioned and a record forwarded to CFA or DSE State Debrief Coordinators using the proforma in Appendix 5;

- Issues that are applicable to the major fire/complex debrief should be forwarded to the relevant major fire/complex convenor for inclusion in the debrief process using the proforma (Appendix 5). Where local actions have been taken that assist in addressing this issue, or possible actions are identified that could address these issues for consideration at the major debrief, these should be recorded on the proforma;
- Issues that are of a more strategic nature that cannot be resolved locally or at the major fire/complex debriefs should be recorded on the attached proforma and forwarded to the CFA or DSE State Debrief Coordinator;
- Issues that relate to operations of other agencies at a local level should be referred to those agencies or discussed via established local liaison processes, and noted as such on the proforma;
- Information from initial, over-arching and state emergency management debriefs provided on debrief proforma will be collated and analysed to provide a summary of actions that will be prioritised and actioned by the DSE and CFA jointly or independently as is required.

Independent Assessment

A summary of debrief outcomes, and assessment of how these relate to interoperability between CFA and DSE and between incident/complex, regional and state levels will be undertaken by an independent consultant who has significant experience in forest and rural fire management involving both volunteer and paid firefighters.

Emergency Response Coordinator Debriefs

The above arrangements are not designed to supersede debrief processes of the broader emergency response coordination arrangements that may be arranged by the Divisional Emergency Response Coordinator, but should act as a useful input into these processes. Please ensure that you liaise with your respective DERCs to ensure that coordination occurs between these processes.

Action Required

Your ongoing support to these important performance review and improvement processes is requested. Should you have any queries, please contact the State Debrief Coordinators as indicated above.

Ewan Waller
Chief Officer –
Fire & Emergency Management
DSE

Russell Rees
Director Operations/Chief Officer
CFA

Appendix 1. Outline for tiered debrief process.

| Type | Who | What | Where | Responsible | Issues |
|--|--|---|---|--|--|
| Initial Debriefs | | | | | |
| Fireground Personnel (Strike Teams, Brigades & Groups, Work Centres). | Personnel involved in staffing/supporting control or coordination. | Crew, team and local activities, but also overall running of fire(s) including organisation and direction given, practicability of tasks, and support, welfare and safety issues. | Where convenient for team members. | Relevant team leader or officer. | Local issues dealt with at scene. Major fire/complex and regional or state issues relating to key decisions, systems, processes or training referred to relevant Major Fire/Complex debrief. |
| Functional Teams | Some functional teams (eg information, community engagement) <i>may</i> wish to hold debriefs that inform relevant debriefs. | Operations of team, and linkages with relevant fire control or coordination activities, and/or stakeholders (eg media or community). | Where convenient for team members. | Nominated by senior control/coordination centre officer. | Team issues dealt with at scene. Major fire/complex and coordination issues relating to key decisions, systems, processes referred to relevant debrief. |
| MFB and Interstate Resources | MFB and interstate personnel. | Deployment, support, and running of individual fire(s), including organisation and direction given, practicability of tasks, welfare and safety issues. | Where convenient for agency. | State Debrief Coordinators. | Team issues dealt with at scene. Major fire/complex and regional or state issues relating to key decisions, systems, processes referred to relevant Coordination Centre and/or Major Fire/Complex debrief. |
| Joint Regional Incident Management Teams | Personnel in joint regional IMTs that were deployed to fire(s). | Identification and management of fire and safety risks, adequacy of objectives, strategies and resources, competence of resources, and regional and state wide support. | Where convenient for team members, including home region. | Joint Regional IMT Coordinators. | Team issues dealt with by team. Major fire/complex and regional or state issues referred to relevant debrief and to State Debrief Co-ordinators. |
| State and Regional Coordination Centres | Personnel involved in coordination centre activities. | Ability to collate and communicate information, assess and manage regional/state wide risks, ensures cooperation, and support for fire activities. | At relevant centre. | RECC CFA Ops Manager & DSE Managers Fire. SECC CFA Manager HQ Ops & DSE Manager Emergency Coordination. | Local issues dealt with by DSE and CFA RECC and SECC managers. Major fire/complex issues and regional or state issues referred to Major fire complex debrief and to State Debrief Coordinators. |
| Over-arching Fire Debrief | | | | | |
| Major Fire/Complex | Key personnel involved in managing Major Fire/Complex including IMT representatives, liaison officers, regional officers. Limit to 40 people (approx). | Identification and management of fire and safety risks, adequacy of objectives, strategies and resources, and regional and state support. | At relevant centre. | See Table | Local issues dealt with by DSE and CFA managers. Major fire/complex and regional or state issues referred to State Debrief Coordinators. |

| | | | | | |
|--------------------|--|--|-----|-----------------------------|---|
| State Level | | | | | |
| State Level | Relevant partnership working group and state operations personnel. | Issues relating to state level emergency management. | TBA | CFA and DSE Chief Officers. | Priorities and responsibilities assessed and incorporated into business planning. |

Appendix 2 – Major Fire/Complex Debrief Guidelines

The following guidelines are to be considered when convening the major fire/complex debriefs:

1. The primary responsibility to convene the major fire/complex debrief lies with the Control Agency identified in Table 2, in consultation with the other agency.
2. The responsible officer is to appoint a suitable debrief chair or facilitator and provide a venue.
3. Numbers attending major debriefs should be limited to 40 where practicable.
4. The date of the planned debrief needs to be endorsed by the respective agency State Debrief Coordinator (Liam Fogarty or Greg Esnouf) to allow coordinated attendance of personnel, and should preferably be held in the period 27/2/2006 until 10/3/2006.
5. A proforma debrief agenda has been prepared with a comprehensive list of topics (Appendix 3). The debrief should assess the effectiveness of specific recent key initiatives, eg Safety Advisor, SMEACS, Red Flag Warnings, Communications Planning, Staging Area Management, Fatigue Management, Information Flow to community. In addition, special consideration needs to be given to some strategic issues that clearly require further attention, including catering, ICC location and functionality, IT interfaces between agencies, firefighter accommodation, and communications.
6. All participants should be provided with a copy of Information for Debrief Participants (Appendix 4) prior to the commencement of the debrief.
7. Key Incident Management personnel from all key participating IMTs (day and night) are to be invited to attend, as well as representatives from key support agencies. (Some support may be available from DSE and CFA SECCs to identify IMT personnel allocated to each fire if necessary – this should be requested through the respective agency State Debrief Coordinator).
8. Convenors of the major fire/complex debriefs are to arrange for any feedback received from the initial debriefs of Fireground personnel, Incident Management Teams, RECCs/SECCs or MFB/Interstate Agencies to be collated and summarised prior to the debrief, and distributed to participants. It is recommended that the feedback be categorised into the key groupings described in Appendix 3.
9. All outcomes of the debrief should be collected on the debrief proforma (Appendix 1) and forwarded to the State Debrief Coordinator electronically.

Appendix 3 – Debrief Agenda and Checklist.

1) Prevention/Preparedness:

- Fuel management;
- Community Preparedness;
- Adequacy of fire prevention/fire protection planning (Shire Fire prevention);
- Legislation (Permits, regulations);
- Agency Preparedness – resources, readiness, communications- Local CFA/DSE Interaction; and
- Equipment.

2) Response – Initial Attack

- a) Circumstances leading up to the incident;
- Notification;
- Initial strategies and tactics:
 - i) Key Issues at time;
 - ii) Options analysis and agreed strategies;
 - iii) Review of progress and planning during fire development.
- Deployment:
 - i) Adequacy of briefings and maps;
 - ii) Effectiveness of strategies and tactics.
- Resources:
 - i) Build up and deployment;
 - ii) Resources from other agencies;
 - iii) Private resources;
 - iv) Adequacy to achieve initial attack objectives.

3) Response – Ongoing Incident Control

- a) Incident control:
 - i) Controlling authority (DSE/CFA) (Formal Changeover) (Transfer of Control);
 - ii) Structure and roles activated;
 - iii) Information flow within IMT;
 - iv) Communications breakdowns in Chain of Command;
 - v) Management of Incident management team (meetings, etc);
 - vi) Location of the Incident Control Centre/Operations Points/other facilities.
- Safety
 - i) Firefighter – was safety adequately considered in strategy development and tasking;
 - ii) Public;
 - iii) OHS incidents.
- Incident Action Planning:
 - i) Key Issues at time;
 - ii) Options analysis and agreed strategies;
 - iii) Review of progress and planning during fire development;
 - iv) Prediction – Scenario Planning;
 - v) Adequacy of plan, mapping.
- Planning:
 - i) Situation (points to consider):
 - Adequacy of information provided from the fireground and aerial reconnaissance;
 - Adequacy of fire behaviour predictions and risk assessments;
 - Mapping, weather, fire behaviour, technology;

- ii) Resources (points to consider):
 - Adequacy of personnel to achieve IAP;
 - Personnel, appliances, plant, relief, resource tracking;
- iii) Management Support (points to consider):
 - Office support, control centre layout;
 - Documentation;
 - System (ie Information systems interoperability);
- iv) Information (Information flow and interaction with community):
 - Management of media;
 - Community Information & Community Information Unit;
- v) Technical specialists:
 - Information Technology;
 - Communications Planning;
- *Logistics:*
 - i) Supply:
 - Facilities;
 - Accommodation;
 - Catering.
 - ii) Ground support:
 - Mechanical;
 - Food and water.
 - iii) Communications Support:
 - Communication plan;
 - Go To/command frequencies, telephone exchange, cellular.
 - iv) Medical Support:
 - Medical plan;
 - Critical incident stress.
 - v) Finance.
- *Operations:*
 - i) Chain of command;
 - ii) Sectorisation, forward control points, assembly areas, staging areas;
 - iii) Tactics:
 - Methods of suppression, water supply;
 - Effectiveness of fire suppression, structure protection, strategies.
 - iv) Welfare of personnel;
 - v) Shift changeover;
 - vi) Briefings;
 - vii) Air operations:
 - Effectiveness;
 - Use of Emergency Warning Devices;
 - Staging Areas;
 - Heavy Equipment/Plant (including private equipment);
 - Fatigue Management;
 - Asset Protection.

4) Response - Emergency Management Coordination and liaison

- a) *Regional and State Coordination:*
 - i) Adequacy of support and strategic direction;
 - ii) Information flows;
 - iii) Adherence to chain of command.
- *Liaison and coordination with Emergency Management Agencies, other combat agencies, support agencies and other organisations.*

5) Recovery

- a) *Transition/Changeover from Response to Recovery;*
 - *Recovery/rehabilitation issues;*
 - *Wildlife Rescue Teams.*

OTHER RELEVANT ISSUES – CFA, Agencies, Brigades, Group, DSE.

Appendix 4– Information for Debrief Participants.

Purpose

- Issues raised in these forums will provide an important input into the CFA and DSE Organisational Recovery process. The debrief should identify:
 - a. “Things that went well”; and
 - b. “Issues that need improvement”.
- Debriefs should also allow participants to understand other aspects of the incident of which they were unfamiliar, or to place their role and experiences in the incident into context.
- In addition, many personnel also use the debrief process to increase or validate their knowledge of how to respond to future incidents.

Scope

- The debrief should consider all aspects of operational response that relate to the participants, including deployment and ongoing provision of support at the home location, not just at the incident.

Identification of issues

- Debriefs should focus on key issues that are of high potential impact, rather than minor issues of limited consequence. To assist this, all issues identified should be assessed in a risk management context.
- All issues that have the broad support of the participants involved in the debrief are to be listed on the Issues proforma.
- Local actions that have been or are to be taken are to be noted.
- Issues that require consideration at another level (eg major fire complex debrief) are to be referred to the appropriate convenor for further consideration.

Conduct of Debrief

- Free and frank discussion is encouraged to assist in the consideration of performance and the identification of issues that need addressing.
- It is very important to note that the debrief is NOT intended to lay blame or criticise individual performance.
- Everyone who attends a debrief should feel free to contribute; however it is important to work as a team. No-one should criticise any other participant, nor inhibit the expression of a view by another individual.
- Individuals may express opinions during these discussions that are not necessarily debated or validated during subsequent discussions. These opinions do not necessarily reflect the consensus view of the debrief participants, nor do they necessarily represent an official CFA or DSE view on the issue.

Appendix 5 - 2005/06 Fire Debrief Proforma.

| | |
|---|--|
| <p>Debrief Details</p> <p>.....Location.....Date.....</p> <p>..</p> <p>Submitted by: Name: Location:Phone number:</p> | <p>Please forward to: Convenor of relevant Major Fire Complex Debrief(s) (Refer Table 2)</p> <p>Copy to – Fire.Debrief@dse.vic.gov.au</p> <p>Queries DSE - Mark Woodman Tel: 03 9412 4777</p> <p>CFA - Greg Esnouf Tel: 03 9262 8551</p> |
|---|--|

| Topic Refer Debrief Agenda and Checklist Appendix 3 | Fire/Complex Where the issue occurred | Describe issue or situation that existed | Explain why it went well <ul style="list-style-type: none"> • What factors made the situation successful? • What particular aspects led you to regard it as going well? • Are there lessons that can be applied to other incidents? | Contact for further info |
|---|---|--|--|-----------------------------|
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Appendix 5 - 2005/06 Fire Debrief Proforma.

| <p>Topic Refer Debrief Agenda and Checklist Appendix 3</p> | <p>Fire/Complex Where the issue occurred</p> | <p>Describe issue or situation that existed</p> | <p>Explain why it went well</p> <ul style="list-style-type: none"> • What factors made the situation successful? • What particular aspects led you to regard it as going well? • Are there lessons that can be applied to other incidents? | <p>Contact for further info</p> |
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| Topic | Fire/Complex | Describe issue or situation that existed | Describe actions taken during Incident or since to improve situation | | Further Suggestions for improvement | | Contact for further info |
|---|--------------------------|--|--|-------------|--|-------------|--------------------------|
| Refer Debrief Agenda and Checklist Appendix 3 | Where the issue occurred | | Impact of actions Successful <i>Partially Successful</i> <i>No Impact</i> | S P N | Level at which action for improvement required Local Regional State | L R S | |
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| Refer Debrief Agenda and Checklist Appendix 3 | Where the issue occurred | | Impact of actions Successful <i>Partially Successful</i> <i>No Impact</i> | S P N | Level at which action for improvement required Local Regional State | L R S | |
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7.2 Attachment 2 - Terms of Reference for Debrief of January 2006 fires

Background

Victorian Fire Authorities (CFA and DSE) involved in major rural/forest fires during January 2006 intend to undertake a series of fire debriefs to capture key lessons learned. Debriefs are scheduled for the major fire complexes identified in the table below. Debriefs by each authority's Emergency Coordination Centre have been conducted. An independent consultant will be retained to attend the major fire complex debriefs, report on the matters identified and collate these issues with the key issues arising from the agency coordination centre debriefs.

Proposal

The contractor will be required to attend the following major fire/fire complex debriefs to identify key issues arising therefrom:

| Location | Fire(s) | Convenor | Date |
|-------------------|---|---------------------------------|----------------------------|
| Heywood Complex | Rocky Den Troeths Road, Brands Track | Manager Fire Jon Sanders | 08/03 Heywood |
| Horsham | Deep Lead Mt Lubra Yallakar South | Manager Fire Jon Sanders | 09/03 Horsham |
| Brisbane Ranges | Century Track | Area Manager Paul Stacchino | 23/2 Corio Fire Station |
| Moondarra/Erica | Seninis Track | Manager Fire Laurie Jeremiah | TBA |
| Alexandra Complex | Burgan Track (Kingleake), Melba Control (Yea) Granite Hills | Area Manager Alan Davies | 03/03 Seymour |

To place the individual major fire complex debriefs into context the contractor will also be required to consider relevant information arising from the CFA State Emergency Coordination Centre and DSE Emergency Coordination Centre debriefs. To achieve this, it will be necessary to review and discuss these debriefs with relevant centre managers in Melbourne. The contractor will meet the Chief Officer CFA, Chief Officer Fire and Emergency Management Division (DSE) and the Emergency Services Commissioner to discuss issues and expectations early in the debrief process.

The review of debrief outcomes from Regional Coordination Centres will be incorporated into a draft report summarising major outcomes identified during the Regional debriefs and during the agency Coordination Centre Debriefs. This draft report should focus on debrief points relating to how DSE and CFA prepared for and responded to the January 2006 Bushfires, what went well, what needs to be improved, and suggestions about how improvements may be achieved.

The draft report should identify all aspects arising from that debrief that impacted Victoria's ability to manage bushfire risks, and to rapidly and effectively respond to and control future bushfires. The draft report should identify major policy, procedural, and capacity issues grouped under the following headings:

- Prevention/Preparedness,
- Response
 - Initial Attack,
 - Ongoing Incident Control
 - Emergency Management Coordination and Liaison
- Recovery
- Other significant issues arising with focus on significant risks to firefighter, the public and their assets and the environment.

The contractor will identify priority issues and potential solutions arising for the debrief process. While the contractor may comment on priorities and interdependencies between issues raised, the contractor will not undertake separate operational reviews of any of the fires.

The Contractor will be required to brief senior managers within the CFA, DSE and Office of the Emergency Services Commissioner on major debrief issues and suggested priorities, and participate in a work shop where debrief findings are presented and priority issues discussed.

Implementation

The schedule or rates submitted by the consultant will be used. A first draft report should be submitted within 10 working days of the final Regional debrief. The draft report will be jointly reviewed by the DSE - CFA debrief project team, and may require several iterations for completion.

During preparation of the review and at its completion, the contractor agrees that all materials inspected, reviewed or produced to or by the contractor, remain as the exclusive property of the State of Victoria. The contractor undertakes to return any and all such material at the conclusion of the review and agrees that the State of Victoria retains exclusive intellectual property rights to such material.

The contractor agrees that any information produced or obtained during the course of this review process will remain strictly confidential and that the contractor will not publish or attempt to make public any information arising during the course of, or following the completion of the contract.

7.3 Attachment 3 - DSE Emergency Coordination Centre Debrief

The DSE ECC is a purpose built facility within DSE offices at Nicholson Street. In addition to fire management responsibilities on Public Lands, DSE also carries major land management roles, including conservation, forestry, water and agricultural associated matters. The ECC is designed to deal with any type of emergency that can impact on DSE activities. During the period of the December 2005/January 2006 fires, a locust control team coordinated control activities from the ECC.

The ECC conducted a debrief on its campaign fire operations on 10 February 2006 and recorded a number of issues that are relevant to the functioning and utility of the centre. The records of the debrief are in the format of the 2005/06 Fire Debrief Pro forma.

Discussions were held with the Centre management. In these discussions, the major challenge identified was a lack of formalized training for DSE staff co-opted in to assist with staffing the centre during a major campaign such as this one. There is a core body of staff who operate the centre on a routine basis and who understand their role and other roles in the centre. They are sufficient to enable the centre to function on a normal or average incident load.

When extensive campaign fire conditions prevail with multiple large going fires, staffing needs increase considerably and it is necessary to “import” staff to enable 24/7 functioning of the centre. Staff members from other functional areas in DSE do not necessarily understand fire management, or the management of other events that could be coordinated by the centre. Nor do they understand the roles expected of them by the centre. Steps are now in place to implement training programs for the positions that need to be filled and to obtain expressions of interest from staff prepared to undergo necessary training and fill positions on an “*as-needed*” basis.

The Centre also has the view that action to bring recovery agencies into the campaign fire process much earlier ought to have been taken. This view was similarly expressed at some of the fire complex debriefs. Alternatively where recovery agencies were included right up front into the IMT, joint agency actions were strongly endorsed in those instances and enabled effective recovery to proceed concurrently with suppression; e.g. at the Brisbane Ranges NP/Century Track fire at Anakie.

Resource tracking did not always enable the ECC to fully appreciate the capabilities in reserve within specific areas for initial attack to facilitate sound decisions to be made regarding whether or not to deplete an area by exporting fire crews elsewhere. Enhanced resource tracking at incident level was also a matter identified during the fire complex debriefs.

Information release occasioned by Regional/ICC/Fire Complex staff providing live radio or television briefings sometimes caught the ECC by surprise, this being the mechanism how the ECC initially learned of new and additional information.

It is now the situation across Australia that media understand that they can, and do, directly access the Incident Controller or a like senior operative directly connected with a specific fire. It is often the case that a “round-up” of ICCs will ensue and be presented live. If rapid transit of information to ECCs is critical then it is a matter that needs to be considered as to how this can best be achieved without reducing the utility of the service provided by the media in disseminating reliable and current information from ICCs direct to the community.

The issue of different fire names arose as it did in several fire debriefs. There are two connected issues. Different fire names were sometimes used by CFA and DSE and fire names were changed when multiple individual fires, each of which was already referred to by several different names, were incorporated into a major fire complex. It is more than likely that using several different names for an individual fire or completely changing the fire name mid-fire does not enhance community confidence. An apposite example occurred with the Alexandra Complex. In that instance, there were three fires oriented north/south. The most northerly was known as the Granite Hills fire, the central fire was known variously as the Melba Control, Yea, Melba or Glenburn fire and the most southerly was known variously as the Burgan Track, Glenburn (again) or Kinglake fire. After amalgamation into a single complex, the complex was known as the Alexandra complex or Melba Complex.

At best, usage of multiple different names is confusing for fire agencies, affected communities and support and recovery organisations. At worst, use of multiple fire names could lead to catastrophic outcomes. It is a matter that requires joint agency consideration.

The matter of community advice to report fires via the VBIL was raised (also raised during the VBIL debrief). The ECC debrief records that an IC went live to air and advised people to call either “000” or the VBIL for “*more information*”. “000” is not an information service and VBIL is not a fire reporting service. Clear guidelines about the functions of the VBIL vs “000” and advice to the public about when to call the VBIL are clearly required.

The ECC recognizes a need for a greater capacity to place data onto the website in a timely and accurate manner. Positive feedback was received from the Ballarat Courier about Fireweb and the DSE external website. Regarding dissemination of timely information, the use of IT based solutions was also discussed at fire debriefs and is regarded by many people as a way forward in the quest for timely and accurate information dissemination.

7.4 Attachment 4 - CFA State Emergency Coordination Centre Debrief

The CFA SECC provides strategic level coordination to CFA field operations. The SECC is located within the CFA HQ at Burwood East. CFA provides fire and emergency response for all private lands in Victoria, exclusive of Metropolitan Fire Districts.

The SECC conducted a debrief of its operations on 22 February 2006. Records of the debrief are in the format of the 2005/06 Fire Debrief Pro forma. Discussions were also held with centre management. Some of the key issues identified for attention during discussion or contained in the debrief records include:

- The SECC has staff routinely allocated to enable it function effectively when “average” fire load conditions prevail – i.e. about 30-40 small fires per day. When it is necessary to increase staffing to manage a major and ongoing event, other HQ staff are co-opted in to assist. There is a need to get buy-in from HQ staff to enable the SECC to function on a 24/7 basis. Of 300+ staff at CFA HQ, the SECC received less than 40 expressions of interest to assist;
- Training for staff not normally working in the SECC. Training in SECC roles had been undertaken pre-season but the SECC was not able to utilise all pre-trained staff;
- Difficulties in tracking information between CFA and DSE IT platforms. DSE utilises Fireweb, in which data is inserted at the DSE ECC after receipt of situation reports. CFA can capture this data but could not previously capture text strings containing DSE comment about the fire. Liaison/exchange at DSE ECC highlighted an ability to capture this data and electronically transfer into the CFA system so that a preliminary incident report can now be produced containing both CFA and DSE narrative. This highlighted the benefit of short term exchange programs where staff operate in the other agency ECC;
- Development and deployment by SECC of specialist HST (Health Support Teams) provided onsite specialist resources for health monitoring of firefighters;
- Development and deployment of TIC (Thermal Imaging Camera Teams) to incidents provided onsite specialist resources for identification of hot spots on fire edges. Thermal imaging, both from linescans and from TIC teams allowed for greater mapping accuracy on fire perimeters;
- Due to constant fire name changes it became hard to track which particular fire the data was coming from or related to;
- Need to clarify ICC/RECC/SECC Roles. Involvement of SECC in tasks that should be done by regions/ICCs;
- RECCS not updating IMS with Strike Team data. Incorrect data in IMS.
- Lack of finance staff in ICCs. Need a finance person in the ICC immediately.
- Electronic data sharing between CFA/DSE was difficult. Need to explore options for CFA GIS to gain direct access to DSE GIS information on Fireweb.

7.5 Attachment 5 - Victorian Bushfire Information Line Debrief

7.5.1 Background

The VBIL is a state-wide bushfire information service, formally instituted as an outcome from the Victorian Bushfire Inquiry (VBI) into the 2002/03 fires. It is managed jointly by CFA and DSE and is based in a DSE Customer Service (Call) Centre at Wendouree near Ballarat.

The VBIL provides bushfire information to the general public across a number of topics, including:

- incident updates,
- bushfire planning information for those living in bushfire risk areas,
- fire information for persons travelling to or through bushfire affected or bushfire risk areas,
- general fire restriction (e.g. fire bans, fireworks displays, Barbecues) and prescribed burning information.

VBIL call takers provide direct information to the public using a database of Frequently Asked Questions (FAQs) that provide pre-determined responses to specific topics. During periods of community interest fire activity staff are provided with authorised information updates for specific incidents, direct from the Emergency Coordination Centres of CFA and/or DSE, and from the fire agencies' external websites.

The centre provides a 24 hour, 7 day a week automated message service available for callers to access incident, burn and bushfire safety information when the centre is not staffed.

As an example, during the major fires occurring in mid to late January 2006, the VBIL dealt with 17 361 separate requests for bushfire information. Of those requests, VBIL call takers directly responded to 14 077 individuals. In total, 3 284 calls were not answered by an operator, representing 18.9% of all calls into the centre. What is not known is the percentage of "unanswered callers" who accessed recorded message services, were satisfied with the outcome and did not seek to speak directly to an operator.

Given the critical role played by the VBIL in disseminating information to affected communities and concerned members of the public, the outcomes of the VBIL debrief have been largely incorporated into this review.

7.5.2 VBIL - Debrief Observations

Positive outcomes

- High caller volumes clearly demonstrate the need for the VBIL service and it is now an important part of how Victorians expect to access bushfire information;
- Radio media embraced the promotion of the VBIL during extensive on air coverage of the January fires, raising the awareness of the VBIL amongst a large number of Victorians;
- Ongoing positive relationship between DSE ECC/CFA SECC and VBIL staff;
- High level of commitment of Customer Service Centre staff to provision of VBIL services during multiple significant fire events;
- Successful 24 hour operation of the VBIL for an extended period of 9 days; and
- The decision to train 20 new casual staff – on shift by Wednesday 25 January. These extra staff assisted in managing high call volumes and the 24 hr VBIL shift plan.

Areas for Improvement

- Information flow issues including lack of consistent protocols for distribution of authorised information from IMTs to ECC/SECC to VBIL and inconsistency with the format of that information across, and within agencies;
- Decision, as yet unidentified, for VBIL to receive '000' calls when that service was overloaded – clarification of protocols that such decisions must come from SECC/ECC;
- Protocols not followed consistently for 24 hr activation of VBIL and shift changes at short notice;
- Inappropriate promotion of services that the VBIL could provide (leading to heavy demands and load spikes on the service);
- The public demand for the VBIL service challenged the ability of the established staffing levels to cope with the sustained operation 24/7 with high call volumes, in particular;
 - Higher demand created high abandonment rates during peak demands on VBIL, generated by heavy promotion of VBIL on radio and at community meetings;
 - Demand exceeded supply of trained VBIL staff and utilised pool of existing casual staff. Still insufficient when call demand very heavy;

- VBIL did not always meet SLA agreement in terms of staffing. Current Level 1, 2 and 3 staffing levels were based on maximum experienced call volumes during Alpine fires of 2002-2003 but inadequate for experience of 20-29 January 2006 fires where daily call volumes far exceeded those of the Alpine fires;
- Maximum possible VBIL staffing with existing infrastructure is 34 persons (26 at Wendouree and additional 8 at Sebastopol redundancy site). This level of staffing would not have coped with the heaviest VBIL call volumes during the January 2006 fires;

Issue of other agencies such as SES, VicPolice, DHS using the VBIL for non-fire emergencies

- Impact of other promotion of VBIL services eg. a trial in Yarra Ranges and Grampians using mobile phone messaging during incidents and how best to manage such possibilities.

The VBIL debrief included a number of recommendations:

Short Term Recommendations

- Investigate procedures for updating the VBIL IVR recorded message system to allow recording of permanent bushfire safety, and incident-specific, messages, accessible when the VBIL is experiencing high call volumes during large and/or numerous significant incidents;
- Joint development of templates for provision of core incident information by regional IMTs to CFA and DSE emergency coordination centres as basis for updates to the VBIL and other authorised information recipients;
- Clarifying protocols for activating VBIL beyond normal working hours and for 24 hour activations;
- Analysing information from the joint CFA/DSE Post 2006 Wildfire Community Survey about public perceptions of information provision during January bushfires. Note implications for the VBIL and other information provision methods; and
- Need for scripting of messages by fire agency representatives when promoting VBIL services via radio, TV and newspapers.

Medium Term Recommendations

- Development of framework document investigating future direction of VBIL including its role during incidents and its role in the transition from *bushfire preparation* to *incident* to *bushfire recovery* phases; and
- CSC investigating possible change of location when contract for current location at Wendouree expires in 2008.

Long Term Recommendations

- Investigate engaging with other agencies involved in emergency management including SES, VicRoads, VicPolice, OESC and DHS to establish a single united emergency information line for Victoria that can be used to provide information to the public from all agencies involved.

7.6 Attachment 6 - State Aircraft Unit Debrief

7.6.1 Background

The State Aircraft Unit (“SAU”) is a joint CFA/DSE agency body, housed in DSE Offices at Nicholson Street, Melbourne. It comprises two parts:

- The SAU, responsible for the general and strategic procurement of aircraft and related standards and training. It focuses on over-arching strategic functions and prepares for seasonal resourcing levels and longer term requirements. The SAU manager reports to the respective operational chiefs of CFA and DSE.
- The State Air Desk (“SAD”) is the "readiness and response" function of the SAU, implementing daily preparedness, dispatch and operational safety. On any given day the SAD is headed by a duty State Aircraft Coordinator who answers directly to the State Fire/Emergency duty officers of DSE/CFA.

The SAU/SAD combine is responsible, on behalf of the joint agencies, to implement standardised procedures and systems for procurement, management and support of all aircraft operations and to ensure adequate aircraft resources are available to resource needs during the fire season. It undertakes all necessary contracting and training and ensures that “*call-when-needed*” aircraft are placed on standby as demands escalate.

Aircraft are normally requested by Incident Controllers via the State Air Desk. If required aircraft types are available, they are despatched. When specific aircraft types, eg Type 1 (Skycranes) are in heavy demand, competing priorities are determined by the Chief Officers for CFA/DSE.

The SAU/SAD operates under clearly defined instruction from DSE/CFA that identifies an order of priority for aircraft utilisation as:

- Life;
- Property (housing);
- Water catchments; and
- Major infrastructure and Public Assets

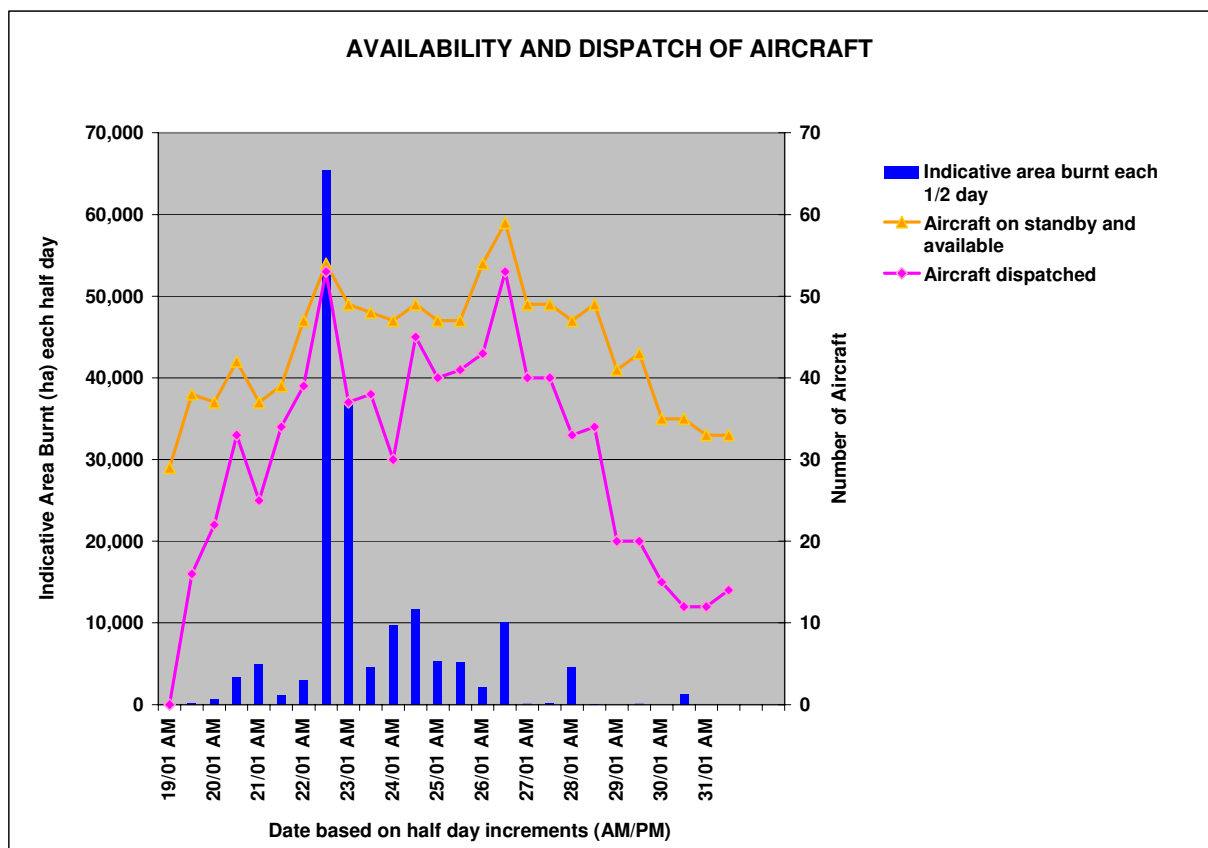
7.6.2 Operational Aspects

During the progress of the December 2005/January 2006 fire campaign the SAD responded to regional requests for aircraft support, principally for aerial attack. Although most requests were satisfied, there were approximately 10 requests for aircraft from Incident Controllers that the SAD was unable to satisfy.

Some Type 1 aircraft were subsequently relocated from areas to which they had earlier been allocated, by direction of Chiefs/Deputy Chief Officers. These relocations were based on risk and threat assessment principles and aircraft placed into locations with perceived greater needs than their originally allocated area. During a campaign of this severity, the stage is quickly reached whereby most movements of the higher capability and larger capacity aircraft (Type 1) are by direction, rather than by request. The SAD does not determine these priorities – they are agreed on an inter-agency basis at Chief/Deputy Chief level, on a case by case basis, and are directly related to the availability of specific aircraft types.

As the campaign developed, the SAU ramped up the availability of aircraft, where this was possible. This is illustrated in Figure 8 below, demonstrating the rapid build-up of “ready” aircraft and a similar decline in readiness as soon as conditions ameliorated.

Figure 8 Availability and dispatch of aircraft 19-31 January 2006



Excludes passenger carriage aircraft (PAX) and other "call when needed" aircraft NOT placed on standby or dispatched. Source SAU.

7.6.3 Issues Raised in Debrief

- Re-deployment of aircraft

Some confusion occurred with Regions failing to understand the significance of “holding” suppression aircraft that are not being usefully deployed instead of immediately releasing units when their tasking is complete. There is increasing accountability in this matter with the SAU ability to monitor usage and location via remote tracking.

- Transport Aircraft

SAU perceives a need to tighten procedures for engagement of transport aircraft as distinct from suppression aircraft.

- Communication flow

Communications between DSE/CFA and the SAU/SAD were good and facilitated efficient operations.

- Linescanning

There is a lack of understanding of linescanning within planning units at ICC level regarding linescanning capability and timing. Windows of opportunity for linescans are from approximately 1400-2000 hours daily, depending on storm activity. The SAU proposes to prepare a briefing note about the processes involved in the planning of scans by IMTs, capabilities of the scanner and the electronic request process that needs to be followed.

- Location of SAU/SAD

Location within DSE offices provided strong “in-house” support and a high level of situational awareness for personnel within the SAD. Some discussion has occurred about relocating it to an independent location. Although the SAD could operate independently, situation awareness would, in the SAU opinion, be severely diminished. It is accepted that whilst the two ECCs in CFA and DSE generally operate independently, there is excellent communication between them enabling a very solid whole-of-state perspective to be provided for aircraft and it is critical to site the SAU/SAD in close proximity to an ECC to ensure that a sound support network is maintained.

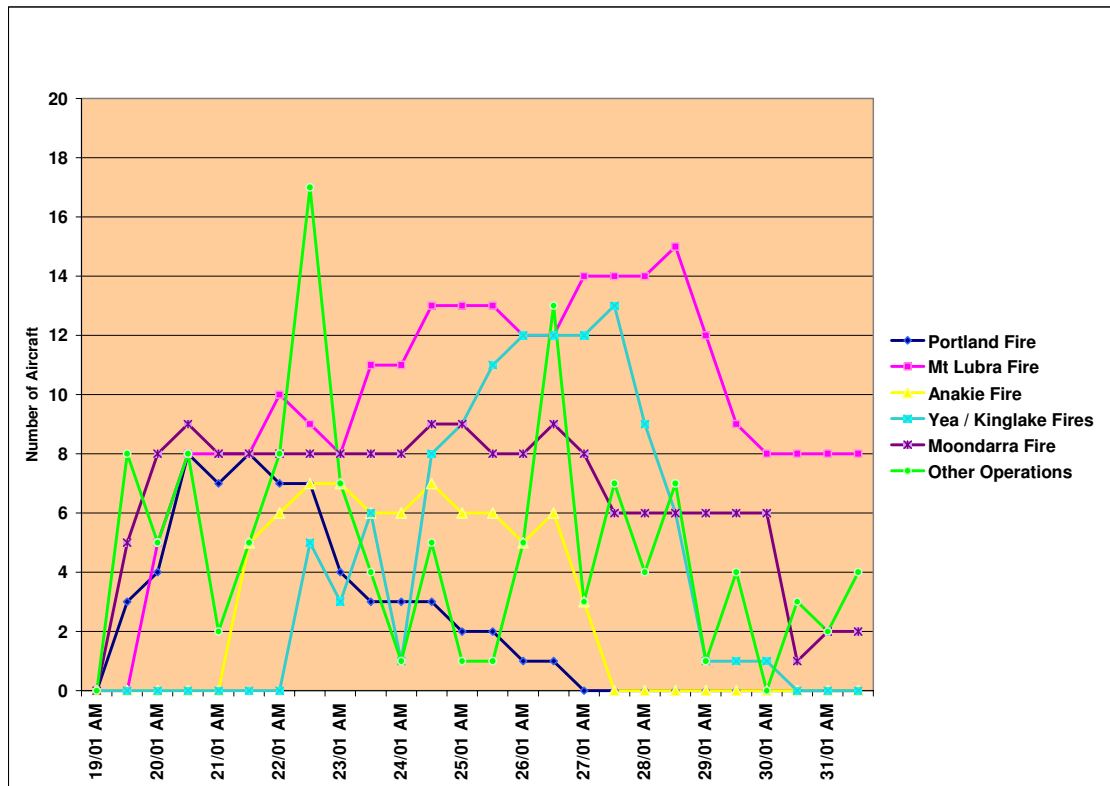
- Standards of Call when Needed Aircraft

Not all resources precisely matched the specification sought in terms of pre-season agreements. For example, the SAU may contact an operator for a specific aircraft size or type and upon arrival it transpired the pilot held different qualifications or accreditation to those contained in the original agreement. To address this, the SAU proposes that more detailed checks, both pre-season checks and ramp checks be instituted to ensure high standards are maintained. Procedures are in place to address this matter.

- Field management of aircraft

- Instances occurred when ICs requested aircraft but apparently were either not aware of or did not appreciate the need for specific field management personnel such as aircraft officers, airbase managers and aerial attack supervisors. Due to safety issues and logistics associated with operation of aircraft, it is essential to have appropriate and adequate support and management personnel in place. These roles cannot be filled as an adjunct to other IMT roles but must be allocated full-time when aircraft are used.
- Figure 9 (below) illustrates the allocation of aircraft on a fire by fire and day by day basis. It is easy to appreciate the safety implications alone of a sizeable fleet operating in a relatively confined air space continuously for several weeks. The Mt Lubra fire operated at least 8 aircraft daily between 20 January 2006 and 30 January 2006, reaching peaks of 12-16 for 5 days straight. Similarly, the Seninis Track (Moondarra) fire operated at least 8 aircraft daily between 20 January 2006 and 27 January 2006.
- The SAU had undertaken twelve or thirteen pre-season briefing sessions to raise awareness in field managers (ICs) of the necessity for appropriate aircraft management and support but was disappointed that heavy reliance was placed upon the SAD to identify and provide aircraft management personnel in as much as 40-50% of cases. Whilst the SAU/SAD attempted to assist ICs in this regard, it is not the responsibility of SAU to source aircraft field management personnel – this is an IMT role. It is now important that the two agencies agree on appropriate aircraft management protocols, including how and where site specific aircraft management personnel ought to be sourced in future operations.

Figure 9 Dispatch of aircraft by fire complex 19 - 31 January 2006



Source: SAU Debrief

7.7 Attachment 7 - Communications SW Group Debrief

7.7.1 Background

This group comprises inter-agency representation from DSE, CFA, VicPolice, Telstra and the Bureau of Emergency Services Telecommunications (BEST). It covers the south western area of Victoria and includes DSE Region SW and CFA Regions 4, 5, 6, 7, 15, 16 and 17. Although it does not cover the whole state it is a significant group, dealing with communications in the more difficult parts of Victoria and the issues it deals with are representative of state issues.

The debrief was conducted on 21 February 2006 and analysed issues arising from Mt Lubra, Rocky Den, Brands Track, Troeth Road, Deep Lead and Century Track fires.

7.7.2 Debrief outcomes

Debrief outcomes are comprehensively recorded in the record of the debrief, including recommendations for those areas that can be built on and those areas where advances and improvements are indicated. The outcomes listed below summarise the issues identified.

Positive outcomes

- Mobile radio repeaters demonstrated their suitability and value;
- Communications personnel start using 'role' logs during incidents;
- Efficient access provided to secure sites using 'key safes';
- Most Incident Control Centres had adequate floor space and computer access for Communications Planners;
- RAV radio technicians assisted fire agencies during incidents;
- The availability and prior training in the use of well considered "default communications plans" were a major asset;
- The use of mobile cranes to lift radio repeaters to heights up to 50 metres in areas of poor radio coverage was widely seen as a good practice which may be effective elsewhere in the state; and
- The use of the radio 'check' system proved effective in several situations where channel use was approaching saturation.

Areas for improvement

- Appliances without radio communications
 - The plantation company (Timbercorp) is not a registered Forest Industry Brigade with the CFA. Hence company personnel and appliances working at the Rocky Den fire did not have compatible radio systems with DSE and CFA;
- Communications Planners not activated at early enough stage of incident, or during all shifts

- DSE Suppression Manual (section 4.9.1) requires a communications planner to be appointed for all potential Level 2 and 3 incidents;
- There were instances at the Deep Lead fire where Communications Planners were appointed to the day shift, but none appointed to the night shift.
- Poor radio discipline
 - need to maintain a listening watch at all times to ensure contact is maintained;
 - Use of 'closed' (two party) trunk radio system for daily non-emergency operations which changes to 'open' (multi-party) system during emergencies requires efficient messaging and brevity.
- Command Channel radio coverage of many areas was poor:
 - The fixed network does not have 100% coverage of the south west. Supplementary mobile repeaters, (cranes) are required to improve coverage;
 - The separate CFA and DSE repeater networks can't be linked together in order to provide wider command channel coverage;
 - It is currently not possible to link more than a small number of repeaters together (generally two) in order to provide wider area command channel coverage;
 - Saturation of command channel usage was significantly affected by non-operational usage.
- Management of key telecommunications sites was found to be inadequate and there is a need to better manage several aspects:
 - Understanding who manages the site;
 - Knowing where access keys are located;
 - Improved off-site monitoring systems for power status & potential power failure;
 - Understanding anticipated duration of back-up battery;
 - Whether back up generators automatically start or require manual activation is required;
 - Improved management of on-site fire protection measures (eg vegetation clearing) is needed; and
 - Telstra personnel are not permitted to enter fire zones.
- Poor crew discipline in relation to reported radio defects and faults:
 - Failure of operators with defective radio equipment to leave the fireground;
 - Failure of operators to meet technicians at appointed times and places for repairs; and

- Incidents that run for several days inevitably result in a large number of radio faults. Where appliances are parked in a car-park or staging area during the rest shift, this allows technicians to undertake inspections and conduct preventative maintenance in an efficient fashion.
- Lack of adequate phone lines at some Incident Control Centres:
 - Need to clarify and understand the arrangements and corporate procedures (fire agencies and telcos) necessary to increase telephone line availability at short notice.

7.8 Attachment 8 - Century Track Fire Debrief

The debrief for this fire was held at Corio Fire Station, Norlane, on 23 February 2006. A wide cross section of representatives from agencies involved in suppression and recovery attended.

7.8.1 Responsibility

This was initially a DSE fire but was managed by CFA from the time it was accorded Level 2 status as DSE had no Level 2/3 accredited controllers available locally. The IC fluctuated between CFA and DSE personnel depending on availability of level 2 and 3 Incident Controllers.

7.8.2 Fire History

The Century Track fire originated within the Brisbane Ranges National Park, impacting into the township of Anakie. Two points of origin occurred. The first fire, controlled on 21 January 2005 was confirmed as lightning. Fire investigation of the second fire suggests lightning was also the probable cause, although a spot fire from the initial fire is a possibility.

The fires probably ignited on 20 January 2006 when two lightning discharges were observed between 1640 and 1700 hours. Some smoke was initially observed but rain showers occurred at 1700 hours and no further smoke was observed up until the Anakie lookout tower closed at approximately 2000 hours.

On Saturday, 21 January 2006, smoke was observed at 1030 hours by the Anakie lookout observer. DSE crews attended and a request was made for CFA support. The first fire was under control by 1228 hours.

7.8.3 Initial Control of the second fire.

A second fire was discovered by a reconnaissance aircraft and also reported by Anakie lookout at approximately 1424 hours on 21 January 2006, about 800 metres south east of the original fire. Weather at that time was: Temperature: 35.9, RH: 30%, Wind: NW 30 gusts to 50 km/h. These conditions generated a FFDR of Very High.

The second fire was contained and the perimeter completely tracked by 0250 hours on Sunday 22 January 2006. Area burnt was 130 hectares and work continued on control lines and blacking out.

7.8.4 Breakaway of the second fire

Adverse weather conditions occurred on 22 January 2006 and the fire broke containment lines at 1151 hours. The fire headed south easterly towards the Geelong-Ballan Road. Weather at 1200 hours was: Temp: 37.4, RH: 26%, Wind: NNW 43 - 61 km/h, FFDR Very High – Extreme. A State Emergency Warning Signal (“SEWS”) was issued at 1445 hours. The fire had crossed DeMotts Road at approximately 1510 hours.

By 1500 hours weather had deteriorated further, with Extreme fire danger rating prevailing, viz: Temp 40.3°C, RH 22%, Wind NNW 48 - 77 km/h, FFDR Extreme.

The fire reached the outskirts of Anakie by 1525 hours. A south-easterly wind change occurred at 1630 hours, directing the fire in a NW direction. Weather conditions improved slightly: Temp 35.6, RH: 33%, Wind SE 22 - 32 km/h and FFDR High.

The change passed through the fireground and the wind swung back to a westerly at 1930 hours, pushing the fire towards Staughton – Vale. The fire progress was halted overnight and control lines were established around the perimeter. Despite forecast extreme fire conditions on the following Wednesday and Thursday, 25 and 26 January 2006, the fire was held within these control lines.

7.8.5 Fire Statistics

Area Burnt 6 708 hectares, comprising Brisbane Ranges National Park 2893 hectares, Barwon Water 1 129 hectares and private property 2586 ha. Perimeter was 63 kilometres.

7.8.6 Preliminary Estimate of Losses

- Houses, 3 totally destroyed, 2 declared uninhabitable
- Hall (1)
- Woolsheds (3)
- Other significant buildings (28)
- Fencing 159.6 km
- Stock: Sheep (858), Beef cattle (25), Poultry (5)
- Feed: Square Bales 8324, Grain 30 tonnes, Pasture 5 hectares
- Crops: 86 hectares
- Vehicles 13

7.8.7 Debrief Outcomes

Planning and predictions for extreme fire weather days were undertaken to a level not previously done at this location. Although additional firefighters requested could not be supplied, all available resources were strategically placed in preparation for an extreme weather forecast for Thursday 26 January 2006. This action was successful in restricting the fire to existing control lines.

Pre incident planning had been undertaken and when this plan was consulted, controllers found they were almost exactly enacting the plan. The debrief attributed this to joint training exercises involving DSE/CFA and some scenario planning undertaken by CFA brigades addressing pre-positioning of specific suppression resources and the need to stop fire reaching certain areas near the Anakie township. Municipal plans were also in place.

Interagency liaison was seamless to the community and control switched several times between DSE/CFA in accord with prior plans and the DSE-CFA Cooperative Agreement that sets out the principles for determining which agency will be the controlling agency. Much of the success for this integration was attributed to good relationships between key personnel, allied with the levels of planning and off season exercising.

Police involvement was early, when first activated for road closures and advised of serious safety outlooks for Sunday. Police were in constant contact with DSE and CFA to obtain good information for purposes of traffic management and community warnings. Good communications assisted. A need is recognised to look more critically at the suite of emergency services agencies generally, with a view to early establishment of a Municipal Emergency Coordination Centre (“MECC”).

Recovery agencies were alerted early and accepted into IMT, commencing their actions concurrently with response activity. This had never occurred before in this location and was very highly regarded by recovery agencies who suggested early inclusion of recovery agencies into IMTs should be the norm.

Water authorities were not involved or invited early in the process, but it should have been. It was agreed that this should be discussed at Municipal/Division meetings and plans amended to provide for early response by water authorities.

Community engagement was facilitated by the existence of 7 or 8 Community Fireguard groups within Brisbane Ranges National Park and its immediate precincts. Both CFA brigades and local DSE staff have vigorously supported the program as have affected communities who acknowledged the fire risk in their immediate environs. A number of community meetings were held during the progress of the fire along with street corner meetings to ensure that threatened communities were provided with accurate and timely information.

Opinions were expressed by some participants that they had been sceptical about how effective community engagement processes might be, although there had been inclusions of this aspect in pre incident planning and exercising. They remained sceptics until it was put into practice and it became clear the process was a resounding success, to such an extent that one community meeting concluded with sustained applause.

Positive outcomes included:

- very early involvement of DHS as a recovery agency, and other recovery organisations to get information into the community;
- Police being involved in inviting residents to attend, and informing them about location and timing;
- Factual and honest appraisals being given to the community. Communities made it clear that they wanted to know the “best estimate” of the fire experts; and

- Excellent flow-on from pre-season community meetings with a high level of awareness

7.8.8 Improvement potential areas

- Lack of registration/notification procedures for self evacuees. At critical times, Police were not aware if residents had self evacuated early or whether they remained nearby, attempting to save possessions or fight fires. SEWS warnings were issued however there is a strong perception that many residents do not understand the concept. Due to the lead time to activate SEWS, the message is often broadcast across media after the crisis has passed. Instances were reported where the fire front had passed through an area 20 minutes before the SEWS warning. This can only confuse residents who may not fully understand fire and its behaviour. Additionally, because of other concurrent and severe fire activity elsewhere in Victoria, multiple SEWS were issued, creating confusion and “SEWS exhaustion”;
- Media accessing fireground without appropriate safety equipment
- Media accessing the fireground, sometimes in advance of firefighters, by disregarding safety provisions and traffic control points. These actions caused friction with media representatives who had observed the correct protocols and who subsequently “missed out” on live reports and current material.
- Media “authorising” tradespersons to access the fireground to undertake maintenance work on residents’ houses while the fireground was unsafe.
- Previous CFA members or non CFA personnel allowed onto the fireground if they had appropriate equipment (PPC or fire fighting equipment)

7.8.9 Local Issues

Salvation Army/Red Cross: Red Cross raised the matter of Red Cross being the primary provider of catering services. CFA acknowledged this but indicated that attempts to contact Geelong Red Cross were unsuccessful so contact was made with the Salvation Army.

Municipalities: Mostly their role was recovery and almost no response. There has been a gradual shift from Council owned plant to hired plant/contractors. The former Municipal role to supply heavy plant is no longer one of their dominant roles.

Department of Human Services (“DHS”): Identified a need to network more closely with CFA and DSE both of whom become far more involved in early recovery processes than previously.

Barwon Water: No major issues other than the desire to be incorporated into the IMT as early as possible.

DSE Melbourne: Acknowledged the strong inter-agency relationships existing in this locality. This was critical to the success of the operation. There did seem to be a disconnect between DSE involvement versus municipal involvement after the ICC was disbanded. This has been addressed.

Telstra: Advance notification regarding installing additional lines into the operations centre after it was moved would have aided Telstra (Note: the issues generally surrounding moving control centres when several fires are amalgamated or where a control centre is moved for other reasons were raised in other debriefs with a clear indication that a reasonable lead time is critical to ensure a smooth changeover)

Ambulance: No major issues

Medical: Pre planning was critical. The incident was concluded with virtually no major health issues. In this event, Response Health was conducted concurrently with Recovery Health and it worked really well. There are no instances of post event traumatic stress appearing as yet, and this is attributed to very effective community engagement and helping communities to know what was happening or likely to happen.

Police: Generally no problems with Police roadblocks because of accurate monitoring and information about fire location and direction of spread. On-site Police Officers need to make a decision regarding allowing people back in through a road closure (pecuniary interest provisions vs public safety). Alternate routes or turn around points suitable for vehicles up to B-Double sizes must be provided otherwise traffic build up can rapidly clog behind the closure point.

There is a question of identifying “legitimate” entrants to the fireground, such as contractors hired by the IMT, private plant owners who may legitimately respond under CFA guidelines, media representatives and former or inactive CFA members with appropriate training and equipment.

7.9 Attachment 9 – Moondarra / Seninis Track Fire Debrief

7.9.1 Fire History

The Seninis Track fire was a DSE controlled fire, primarily on DSE managed land with some intrusion into private property. The fire was reported at 1145 hours on 19 January 2006 by Mt Tajil tower. Suspected cause was deliberate ignition as no lightning had occurred in the area for more than one week. Crews dispatched to the fire location observed and reported two columns of smoke at 1155 hours.

By 1215 hours helicopter support was requested and approved. It was initially thought the fire was about one half hectare but by the time air attack arrived at 1315 hours, it was verified as much larger, head fire flames being 5-10 metres in height and far too intense for aerial attack. An indirect strategy was chosen and additional resources acquired to assist with this strategy. The strategy held until approximately 1800 hours when serious spotting activity breached control lines. The fire moved about 10 km on Sunday 21 January 2006 and made a second run on Thursday 26 January under extreme conditions, slowing when conditions abated.

A major threat from this fire was the potential to impact onto key assets immediately south of the fire, including open cut coal mines and the associated risk of igniting coal seams.

Although little impact occurred on private land, community interest in this event remained high due to the potential for the fire to affect private assets.

7.9.2 Area burnt

| | |
|--|---------------|
| • Education area | 77 |
| • Freehold | 916 |
| • Plantation (private forests) | 495 |
| • Regional and State Park | 6 551 |
| • State Forest | 6 881 |
| • Utilities and Survey (Electricity and gas) | 41 |
| • Water Production (reserves and buffers) | <u>235</u> |
| • Total area burnt (hectares) | 15 196 |

7.9.3 Debrief outcomes

The debrief was facilitated. Attendees numbered about 25 and comprised mostly CFA and DSE personnel.

Positive outcomes

- The set up of the IMT at Erica with joint CFA/DSE staffing. Joint IMT was established early and well resourced with excellent teamwork and integration at management level. IMT changeovers occurred at 0800 and 2000 hours; Field Crews changed at 0700 and 1900 hours, allowing adequate overlap time and information flow.
- ICC at Traralgon was functional, however further work is required to include CFA infrastructure to use CFA IT equipment and applications.
- Real time information was available and could be overlaid to very high quality mapping. This enabled crews to understand precisely the intended area of work. Quality of maps distributed in the early stages of the fire was poor but significantly improved as the duration of the fire extended. Identification from thermal imaging equipment was great, because aerial was not available
- Community Engagement
 - Highlights were very early activation of community engagement and the level at which it operated. There were 31 separate community based meetings, in 7 different locations, during the run of the fire. One of the most remarked issues by the community was having a “face” to DSE, as usually an IMT representative and a DSE representative attended each meeting. The community focus changed quickly from a negative to a positive note when IMT representatives attended meetings and were able to explain what was happening. Communities were pleased to get input from the “decision-makers”.
 - Information Unit - Great mix of skills between DSE and CFA Information Officers resulting in dynamic team working in Information Unit. Information Unit was well resourced with equipment to do the job and was supplied with quality maps that were an excellent resource for Community Briefings and Information Points set up in localities.
 - The Information Unit remained in place after immediate threat to community had passed and continued into rehabilitation and recovery until recovery was established. DSE Information Officers were able to engage with communities after the event, assist in diffusion, outrage management, collecting positive feedback, identifying local issues, assisting with loss assessments.

(NB: A post-fire paper by the Information Unit explores many of the community engagement issues and would provide the basis for a case study in community engagement issues.)

- Newborough Staging Area was established approximately midday on Friday. It was well managed and worked effectively. Willingness to cooperate despite differences between CFA & DSE protocols.
- Ground Observers were used specifically to collect field data and intelligence gathered was utilized during night shift planning. Concept was very good.
- Shift changes done well.
- Forward contingency planning done well although some time was necessary to obtain high cost equipment.

Issues identified for improvement

- Difficulties occurred in establishing a MECC. It was evident to fire agencies that a MECC would be required from the initial stages of the fire, but difficulty was experienced in getting it set up. Need to have more police involvement. They were not sure what their role was, and there were issues in set up of facilities / equipment
- Lack of understanding of processes between agencies. Lack of Interagency facilities in IMT, ie. Data lines, insufficient fax machines. DSE not available to brief first wave of Strike Teams - CFA Deputy Incident Controller undertook the task.
- Division Commanders noted important data was not included in IAP. There was information disconnect between what was planned and how it was translated to the field. Field staff were curious about what they knew they should be doing versus what the IAP said (standards of IAP). To those on the fireground, there appeared to be a breakdown of communication/transfer of information between the dayshift and nightshift IMTs, especially during the first couple of days. Many issues/priorities seemed to change dramatically between the dayshift and nightshift IMTs.
- Concerns were expressed that it took sometime on Friday 20th January to establish a Staging Area on the southern approach to the fire. When Staging Areas were initiated, they were often agency specific ie, separate DSE and CFA Staging Areas. DSE staged its resources at Rawson and CFA at Newborough Staging Area. It would be better if both agencies utilised both staging areas to save the amount of travel by Strike Team when changing over.
- No senior CFA officer representation at DSE RECC in the early stages of the fire. Although CFA had a representative from Friday afternoon it should have occurred earlier.
- Resource requisitioning process was at times unworkable between DSE RECC and CFA RECC.
 - Lack of consultation between RECCs.
 - Process very labour intensive.
 - Movement orders were unidentifiable. Need to have a specific incident number with a sequential number that is initiated by the resources unit in the IMT. This number must stay unchanged through each level of coordination so resource requests can be tracked.
 - RECCs are to react to ICC requests and not to dictate to them.
- Lack of understanding within IMT of Information Unit and Information Officer role.
 - It is not just about media. A mix of skills required depending on fire circumstance and when the transition to recovery will occur. DSE is not initiating deployment of Information Officers soon enough.
 - CFA have understandable interest in ensuring potential impacts on community are identified early and Safety and Preparedness information is quickly distributed.
 - CFA initiated deployment of Information Officers to IMT outside normal processes. (DSE Media Officer already deployed to RFCC)

- Confusion within IMT and within community about road closures, creating a lot of angst. Lack of information on closures and openings, multiple names for roads, local names for roads differing from map names, keeping Information Unit informed of road closures
- Difficulties with information exchanges and cooperation between some individuals to work as a truly integrated DSE/CFA incident management team. Causing: -
 - Lack of information flow in the IMT.
 - Potential for individuals and their agency to work in silos.
 - No involvement of CFA personnel in the development of IAPs.
- The relocation of the ICC from Rawson to Traralgon caused some confusion and a breakdown in the operations structure.
- Division Commanders were not located in a static position, which made it difficult to access them or communicate with them. Need to build the structure from the ground up. Division Commanders should operate from a static location and rely on information passed on to them from Sector Commanders.
- Public reaction to crews withdrawing to safer locations. Crew members felt the decision lacked consultation and acknowledgement by the IMT that their present locations were safe, anchor points or safety zones established where they were able to protect defendable assets. Public felt threatened because crews withdrew.

7.10 Attachment 10 - Alexandra Complex Debrief

7.10.1 Fire History

7.10.2 Initial treatment as Incidents with separate ICCs

This complex comprised three separate major fires plus several smaller fires. The initial divisions of responsibility enabled incident control arrangements that spanned both CFA and DSE infrastructure and management systems.

The three fires were oriented approximately north to south.

7.10.3 Granite Hills

The Granite Hills fire, the northernmost fire, north of the Goulburn River and south of Euroa, managed from CFA facilities at Euroa with a DSE Incident Controller. This fire commenced on 22 January 2006. Initially, 3 lightning strikes occurred and were dealt with. A short time later, a small patch of grass fire broke out. This may have been a dormant lightning strike, but also may have been spotting activity from one of the earlier fires. The cause of this fire has tentatively been ascribed as lightning. A southerly wind change to 15 km/hr was forecast for the evening of 22 January 2006 but actual wind speeds were estimated or recorded at levels of 80 km/hr. At one stage this fire was predicted to run into the Strathbogie Ranges but did not do so. Area burnt was approximately 800 hectares.

7.10.4 Melba Control

The Melba Control fire (also known as Yea or Glenburn), north of Glenburn, was initially managed from DSE facilities at Alexandra with a CFA Incident Controller. This fire commenced on 22 January 2006 from lightning. Initial rapid extension was to the south but impact of a southerly change drove the fire to the outskirts of Yea. The fire crossed and cut the Melba Highway. The fire was contained by 23 January 2006, controlled by 24 January 2006 and declared safe by 28 January 2006. Area burnt was approximately 5400 hectares.

7.10.5 Burgan track

The Burgun Track fire (also known as Kinglake or Glenburn), the southernmost fire, south of Glenburn, plus several other concurrent lightning strike fires west of Glenburn, managed from DSE facilities at Broadford with a DSE Incident Controller. This fire started on 22 January 2006, probably from lightning, rapidly extending in a southerly direction towards Kinglake.

During the early control phases of the two fires near Glenburn, they both were known by several names. The Yea or Melba Control fire ultimately became known as the Glenburn fire and the Burgun Track fire also became known as the Glenburn fire and later as the Kinglake fire.

A fourth fire occurred on 8 February 2006 at Toobarac, burning 540 hectares. This fire was made safe on 10 February 2006. Although technically not a part of the Alexandra Complex, this fire serves to reinforce the fire activity that had occurred generally within the area of the Alexandra Complex since 24 December 2005.

Tragically, during the Granite Hills fire a CFA volunteer firefighter was fatally injured. The circumstances of this fatality are the subject of separate investigations by the State Coroner and WorkCover and were not further considered during the debrief nor are they referenced elsewhere within this report.

7.10.6 Amalgamation into a single complex

In recognition of extreme fire weather that was forecast for Thursday 26 January 2006, a joint decision was taken to amalgamate the three fires into one complex, headquartered at DSE Alexandra with CFA in charge of the overall incident. At this point, the complex was renamed as the Melba Complex. By this time the Granite Hills fire required relatively minor components of resourcing, essentially being in a patrol phase with little prospects for escape. As a consequence, two key Division points were proposed for establishment. One was at Kangaroo Ground to manage the Burgun Track fire south of Glenburn and the second was at Yea to manage the Yea and Granite Hills fires.

Difficulties were experienced in transitioning from separate fires to a single complex. Control of the Burgun Track fire transferred from Broadford to Alexandra (the fire complex ICC) and a Division Command point was established at Kangaroo Ground ICC (a community centre equipped for emergency incident management) to manage the Burgun Track/Glenburn/Kinglake fire. There was some confusion as to the role of the Kangaroo Ground centre and its reporting relationships to the ICC and CFA regions. This resulted in a transition delay in which changeover to a single complex from three separate fires, each run from a separate ICC, was scheduled to occur at 0800 hours but which was not fully implemented until 1400 hours, a delay of 6 hours, with actual transition occurring at the potential daily peak of fire activity. This highlights the need for clearly defined roles and responsibilities that are understood by all parties, complemented by sound observance of respect for the chain-of-command.

The selection of Kangaroo Ground as a Division Command Point also meant that the location was remote from the ICC, well to the south of the field location of the division, with access between Kinglake and Kangaroo Ground provided by a road network that did not permit ready interchange or rapid transit between the field and the Division HQ.

An alternative Division Command point at the DSE Toolangi office was physically in a better location for this role, but was potentially threatened by the likely future path of the fire (either directly by fire or by being geographically isolated) and was thus ruled out as an option.

7.10.7 Debrief outcomes

Prevention/Preparedness

- The Kinglake fire ran into a fuel reduced area in one location and was controlled at the edge
- Municipal fire prevention plans worked satisfactorily. Maintenance works along a strategically identified road (Captains Creek) assisted control
- Work under powerlines - maintenance and track standard has slipped
- Infrastructure and facilities – there are good locations for ICCs and IMTs that work well, but there are also some in the plan that are substandard
- Data sharing between agencies and municipalities is a fundamental issue across the state that does not facilitate easy and timely data transfer
- Community planning – no house losses, general impression is that individuals have improved their fire plans as result of extensive community education and engagement
- Melba (Yea) fire stopped at regularly hazard reduced areas
- Community preparedness – CFA Community Education plans in place since 1996. Direct engagement with most communities. Positive outcome – 1 500 people attended one community meeting at Kinglake
- There is opportunity for the Bushfire CRC to assess community education and preparedness and analyse the “stay and defend or leave early” policy
- Agency preparedness – designated ICCs must be capable of fully functioning within one hour so all the necessary hardware needs to be in place. Important to assess where ICC logically should be. When the decision is taken to upgrade to a complex of fires, planning and identification of transition procedures must all be completed and notified to all parties well in advance of the transition.
- Decision to go to a complex is made at State level and is related to a finite capability to resource and sustain multiple IMTs
- Equipment (Aircraft)
 - The strategic decision to move additional Air Crane (into the complex) was brilliant.
 - Terminology was confusing: fires named differently by different agencies. Difficult for aircraft group and difficult for community to understand.
 - A major issue is that at Regional level, aircraft must be properly managed and aircraft management may sit across multiple ICCs to ensure effective use of available aircraft. Raises issue of a dedicated aircraft management unit (e.g. Airbase Manager and Air Attack Supervisors) within IMTs or Regions to manage aircraft allocated to the Region or incidents.

- Equipment (Heavy plant). Management and understanding of heavy plant by DSE is good (in early stages of Kinglake fire two field-based plant operation managers effectively utilized 9 dozers and 3 graders); management and understanding by CFA is not so good. CFA is initiating training for heavy equipment supervisors – what when how to utilise. It is important to recognise heavy equipment as a package comprising plant + operators + fuel + transport + communications.

7.10.8 Response – Ongoing Incident Control

- Changing from level 2 to 3 and back to 2 – is a Local issue
- Mapping
 - Excellent for pre- briefing of strike teams.
 - Deterioration of high quality colour maps by photocopying or fax
- Strategy and tactics – local issue that division information fed into ICC not reflected in IAP. Issue of expert local knowledge not used. Contra view expressed that input was considered but was rejected NB no debrief held for that specific incident yet
- Changeover – transition. Positive outcome so we should build on it. Had discussed beforehand and did pre planning. Key is pre- planning and pre-notification. Expectation that if the ICC moves into a DSE office or a CFA office that within one hour able to lock down a part of that office purely for ICC purposes with pre-determined hardware in place. Action for Region.
- Communications - communications was poor at times, both the hardware and observance of chain of command. Air Attack Supervisor (AAS) unable to talk to anyone – if communications plans are in place, there must be discipline to monitor appropriate channels. Division Commanders bypassed Sectors to obtain information direct from fireground.
- Media – generally well handled. Some incorrect information provided by public about centres being evacuated or under ember attack. SEWS – a bit too much. Need to look at timely updates to VBIL (and Police) if there is a significant shift in message going out.
- Location of ICC/Operations points/other facilities – Glenburn went well, good staging areas that are identified should be included in plan. Sector commander should not be required to manage Sector, staging area and operations point;
- Safety issues – question of exclusion of persons at control points. Authorised people (hired plant contractors) need to identify themselves. Media excluded unless holding accreditation or authority (from IC?). Police interpretation of the Emergency Management Act is that persons with pecuniary interest may pass through traffic control points to enter or re-enter an active fireground.
- Planning – struggled early with 2 planners. When the move to a complex is undertaken there is a need to bolster staffing for multiple fires. Remote sensing (linescan, FLIR) results were excellent. Planners must request linescans as they are not automatically scheduled.
- Operations: WorkCover focus on how long people remain on duty at the fireground. Lengthy shift deployment, return to station and drive home. Question of shift length needs a State direction (NB: there is a Fatigue Management Guideline dealing directly with this subject)

- Catering – Police: need to know what you want, where, when and how it will be delivered. Red Cross fantastic job
- Briefing: every person expects and is entitled to a briefing. Some briefings not up to standard. SMEAC format worked well for briefing departing crews to ICC.
- Air operations: Due to lightning activity in rough topography, often aerial means were the only way to attack some fires. Support from SAU Air desk was fabulous – always managed to find an aircraft somewhere
- Staging Areas: during first few days of Melba fire staging areas and shift changeovers uncoordinated. Need more concentration on tracking resources – inexorably tied to fatigue management, staging area management, accommodation, catering and changeover planning. Staging area manager needs to stand back with an overview role.

7.10.9 Coordination

- Police: MECC in Murrundindi worked very well. Operated full time and whatever was requested was delivered. Not had formal debrief yet. From MERC perspective the response provided by municipalities was good
- CFA perspective that information flow at state level was satisfactory. Discussions held on 26 January 2006 regarding transition processes to fire complexes in lieu of individual fires. Decision to recall second Air Crane from Grampians was a difficult call but founded on risk management and potential threats. Request for resources to go elsewhere impacted ability to maintain integrity because of gearing up to mount two additional IMTs
- Recovery/Rehabilitation:
 - Environment - some control lines and tracks had significant risk of erosion (post fire, some landholders expressed willingness to sacrifice 200 ha more in lieu of difficult tracks). Need to be more aware of post fire consequences of track making.
 - Human – DHS and Municipal Recovery Manager were active at the time fires were still at a critical stage in the initial response phase. Previously criticised for not getting in early enough
- Interstate: very good at response and blacking out. Excellent T-card system. Question with communications compatibility
- Portable weather station: Utility of information provided was unequivocally successful in respect of IMT planning
- Communications: although there are always difficulties, probably have the best technology available and it is a matter of ensuring best use is made of the technology.

7.11 Attachment 11 - Heywood Complex Debrief

7.11.1 Background

Three major fires occurred from lightning. They were the Rocky Den, Troeth Road and Brands Track fires.

7.11.2 Rocky Den

Fire started on 27 December 2005 from a lightning strike on public land, was contained by 28 December 2005 and under control by 2 January 2006

Total area burnt was 455 hectares. The fire area was mostly public land with some privately owned Blue Gum plantation burnt.

DSE, CFA and Timbercorp resources attended during peak period and included:

- 11 tankers;
- 9 Slip-ons; and
- 5 dozers

7.11.3 Troeth Road

The fire started on 19 January 2006. Cause was a lightning strike on private property. The fire was managed under joint agency control as part of Heywood Complex. It was contained by 23rd January 2006 and under control by 27 January 2006.

Total area burnt was 1294 ha and losses included 4 outbuildings. Resource commitments included:

- 114 personnel
- 18 tankers
- 3 slip-ons
- 1 dozer & several graders
- 8 aircraft (Allocated to complex)

7.11.4 Brands Track

This started on 19 Jan 2006 from a lightning strike, on private property, spreading into Mt Eccles National Park. The fire was managed under joint agency control as part of the Heywood complex. It was contained by 21 January 2006 and under control by 23 January 2006.

Total area burnt was 1 469 hectares

A feature of both the Troeth Road and Brands Track fires was the significant geological constraint created by lava flow and “stony rise” formations in timbered lands, severely limiting the use of track making plant. At the Brand Track fire, control lines were established at the junction of the public land and private land which effectively demarcates the boundary of the “stony rise” formations.

7.11.5 Outcomes of Debrief

Pre incident planning: Because of the focus on lightning activity, preparations were at a higher level than normal and it was anticipated fires would emerge the following day, 20 January 2006. 19 January 2006 was not a Code Red day so an IMT was not performed and its formation required some time to organize. Due to lightning activity, fire bombing capacity was increased to provide additional time beyond normal close down. This prevented one fire on 19 January 2006 from developing to a significant extent.

It is a local issue to review how and when an IMT is formed

Notification: Notifications to Police and other agencies occurred very early regarding the potential for fires to develop.

Initial strategies: Included brigades interacting one on one with local community to ensure community preparation. Because of the difficulties in suppression in the “stony rises” areas, early work was done on identifying suitable control lines outside the limits of these difficult geological formations.

Private Equipment: Users caused some difficulties at Police traffic control points regarding their access to the fireground. There are two issues to address at State level:

1. how do police know whether such persons are authorised to enter the fireground, and
2. the question of self-deployment by persons volunteering their plant and equipment, in accord with CFA Guidelines for Operating Private Equipment at Fires. CFA recognises self deployment by private equipment owners whereas DSE is generally keen to avoid self deployment

IMT: Joint arrangements worked relatively effectively, but need some focus on how to get more locals into the IMT. (High level of transition from CFA Group control changing up to IMT level, whereas DSE start at level 2)

Resources: Police (MERC) raised two coordination issues. Firstly the need to confirm by fax or email details of major resources requested for accounting purposes and secondly the need for components of the IMT to follow due process in obtaining supply and not by pass the MECC.

Forest Industry Brigades: These should be part of the system. Timbercorp is keen to participate. (State level meetings are in progress to address this issue).

Incident Control: Accept that broadly, the Cooperative Agreement between CFA and DSE (October 2003) is capable of developing a good joint team.

This ability that was not available several years ago. The real dilemma is providing a suitable centre from which the IMT can operate.

Police: Question of how much you lose by having MECCs set up in different locations. This does have implications for Councils.

DSE: A lot of exercising with ICC and MECCS. Pleasing in that time to see the improvement in integration between DSE and CFA. One of the biggest challenges is to integrate activities at ICC with activities at MECC. Separation does involve issues with information sharing between ICC and MECC. It is a challenge for next 4-5 years.

CFA: The biggest leap forward is how we positively impact and improve information flow. Stand apart information flow is the biggest issue. Potential IT and web-based solutions need to be explored.

Emergency Service Liaison officers have developed a local training program (Police, MECC and fire agencies) and this has alleviated issues arising from separate locations of MECC/ICC

The question of ICC/MECC location and interaction is a state issue

Safety: Radio communications debrief raised the question of poor radio coverage right through the southwest of Victoria. Police raised the need for a “go to” channel to bypass routine policing channels.

Fatigue Management: There is a need for alternate means of transporting firefighters after long shifts, other than self driving, due to fatigue constraints.

Community: Very good, extremely positive feedback was obtained from public meetings. Police reported that feedback generally indicated that communities felt the “safest” they ever had during fires, because of information provided pre-fire and during the fires.

Incident Action Planning: Not quite right in terms of size, content and role. IAPs are becoming very bulky, difficult to copy and to move around. From Police perspectives, mapping was a key issue for the MECC. There is need to explore opportunities to load directly onto websites. This was trialled towards the end of the firefight by uploading onto the CFA intranet and the result demonstrated that it can be done. It is too early to confirm as a routine tool but trials are encouraging.

Some IAPs were too prescriptive and attempted to identify everything that needed to be done. They ought to be a strategic document that allows firefighters at the fireground to do what they do best, i.e. the IAP sets out the strategy (determined by the IC) but the tactics to implement are the province of fireground personnel (determined by Division and Sector Commanders).

Separation between DSE and CFA systems (IT platforms and procedures) doesn't help.

Planning: Suffered from lack of information flow at Troeth Road, related to transfer of control. Resource tracking is not compatible between DSE/CFA. Critical for RECC to understand resources numbers and location for catering (Note: adequate knowledge about resources translates to many other facets that depend on effective tracking of personnel – location, numbers, catering, accommodation, fatigue management and changeovers)

Management Support: Need IT specialists in the system. Documentation – logs, DVDs, storage and archiving of records - system not standardized. MERO – it is important to allocate staff to document decisions. MECC had a pigeonhole system to capture all paper information coming into centre and this was subsequently stored in boxes.

SES – ICC did not provide work space for SES liaison – strongly in support of new ICC

Response Planning: Pre-season media meetings and expectation issues of great value in passing information to public. Significant time periods occurred when media programmed credible information to public from Emergency Services. Good flow of information from ICC. Information flow from Information Unit was first class. Local Community expressed surprise that it observed CFA/DSE and other agencies working well together. Local media felt sometimes overlooked because of attention given to national media – important to service local media as well as national, as sometimes local media provides coverage where national does not.

Use of SEWS: Police perspective is that after a SEWS message is activated, it is important that a corresponding cancellation of the alert is broadcast. Some residents, lacking understanding of fire behaviour, remain on alert, even though the specific part of the emergency generating a SEWS alert has passed.

Media: ICC needs a media “face”

Logistics: Catering generally worked well, although some issues existed with moving staging area, and by the time catering caught up, fire units were there already. No resources to cater onto fire lines but satisfactory at staging areas. SES raised the question of a lack of qualified food handlers. It was agreed to workshop these issues locally. Group officer perspective was that logistics/catering were the best ever.

Refuelling: Task forces arriving from remote locations need to be advised where to refuel prior to reaching staging area. Better to refuel at last major town than at staging area. [Task forces should initially be self sufficient upon arrival at the fireground.]

Staging Areas: Bessiebelle staging area was moved to Tyrendarra. This had two impacts. Firstly the impact on some fire crews was that they travelled past the fire to the SA for briefing, prior to returning to the fire.

Secondly, community members near the original SA were concerned that fire was about to impact on them because the fire services were packing up and leaving. This highlights the need for careful communication to communities concerning the rationale for moving the SA somewhere else. Staging areas require a dedicated manager whose sole role is to manage the SA.

Communications support: Establishment of additional telephone lines takes up to 6 hours. Most government agencies use Optus as primary carrier but Telstra were willing to provide additional lines. Question of timing – takes as long as 6 hours, (also goes to issue of planning when to make changeover between several ICCs to a single integrated fire complex)

Fixed communications installations may not cover as much as 30% of area – need ability to rapidly install mobile repeaters to improve coverage and transmission load. Police do have mobile air-borne repeater. Radio procedures impact on air time availability – direct and concise usage is required. These issues emerged at most of the underlying debriefs and requires significant discussion at Regional level.

Operations: Chain of command – difficulty in getting information into IMT from key field personnel (Sector/Division Commanders)

Tactics – learnt much about peat fire (relay pumping for several km, use of thermal imaging equipment)

Briefings – generally very good. Need to watch that crews don't travel a long way to briefing then return to near their start point for duty

Air operations - changing aircraft capacity (increasing) has reduced utility of some airstrips.

Emergency Management Coordination and Liaison: Regional and State: Consider concept of Emergency Services Website for posting of information including IAPs. Generally very satisfied with timing and quality of information from ICC and MERC– important to have good liaison in ICC as IC not always available

Liaison Other Agencies: DHS and Municipal role very important early, lot of work done prior in establishing good relationships. Positive outcomes from MECC perspective of exercises between MECC/CFA reflected in this campaign. Traffic management closure issues did not arise due to good coverage of CFA/DSE media releases, but important to advise media when roads closed by fire have been re-opened to general traffic.

Prevention Preparedness: Fuel Management: Need to recognize “Stony Rise” land crosses all tenures and plan to pick up fires at edges of stones. This may need permanent tracks and Municipal involvement. It is a local issue.

Community: Some community members initiated actions resulting from meetings in November-January before fires. These activities assisted in saving houses.

Pre- planning: Did not pull out the plans because there was sufficient local knowledge but plans would have been useful for imported IMT. DSE believes that pre planning stimulated activity during the fire event.

Agency Preparedness: strong positive comment (community feedback) about community surprise that CFA/DSE worked well together.

Recovery

- MERO involved very early. There should be no transition between response and recovery, both should start simultaneously;
- Regarding farm animal recovery, DPI Veterinary services usually do not respond on the first day of the fire;
- Issue of CFA maps no longer containing property owners name and address hindering response by veterinary services. This goes to the question of privacy issues and is outside CFA scope to resolve;
- Community meetings directly after fire were positive but there is need to clearly define purpose and objectives. Also critical to ensure that the correct agency runs them. State issue for consideration.

Other Issues

- Interstate strike teams – communications compatibility and integration into local system
- Community impact of moving ICC, Operation Centre or Staging Areas – This is a matter that needs careful media and community advice with rational explanation why the move is necessary, else the local community surrounding the centre being replaced feels unsafe and threatened.

Closing

Highlights were:

- much stronger partnership between CFA./DSE
- training and commitment to emergency management by people involved at MECCs
- community information and briefings were well beyond community expectations
- DHS (and supporting recovery organisations) involvement early was very important
- Media – should get some feedback from local and state level
- Regular exercises each year

7.12 Attachment 12 - Horsham Complex Debrief

7.12.1 Background

Up to 9 March 2006, 41 fires had been recorded for the 2005/06 fire season within the Horsham Fire District. Of these, four were of significance and were the subject of the debrief:

1. Griffin Track (21 December 2005) DSE
2. Deep Lead (31 December 2005) CFA
3. Yallakar Sth (19 January 2006) DSE
4. Mt Lubra (20 January 2006) DSE

In essence, the Griffin Track and Deep Lead fires were separate incidents and the Horsham Complex IMT managed the Yallakar Sth and Mt Lubra fires.

Griffin Track

This fire was first reported at 1314 hrs on 21 December 2005. Ignition occurred 17km NNE Dunkeld and cause was lightning. FFDI was 31 (VH) on 21 December 2005, increasing to 71 (Ext) on 23 December 2005

Peak Resources:

- CFA: 45 personnel (including 18 IMT members), 5 Tankers
- DSE: 170 personnel, 45 4WD slip on units, 3 tankers, 4 bulldozers,
- Aircraft: 5 helicopters & 4 fixed wing bombers

Losses: 222 ha of Grampians National Park (fire wholly contained the Park). This fire was subsequently subsumed by the Mt Lubra fire.

Three joint Public Information Meetings were held with affected communities during this fire

Deep Lead

This fire was detected at 1644hours on 31 December 2005 by the Big Hill Tower. Ignition occurred on private property, 13km NW Stawell. Cause was lightning. Weather conditions at Horsham at 1641 hours at 42.9°C, RH 10%, Wind NNW 65 km, generating a FFDI of 162 (Extreme) on 31 December 2005.

Peak suppression resources:

- CFA: 450 personnel, 90 Tankers (including Pumpers);
- DSE: 175 personnel, 32 4WD slip on units, 7 tankers, 5 bulldozers; and
- Aircraft: 6 helicopters & 4 fixed wing bombers.

Losses:

- 11 houses;

- 68 other buildings;
- 298 km fencing;
- 1871 sheep and
- 6 954 sq. hay bales

Area Burnt: 7 523 hectares.

Joint Public Meetings were held with affected communities

Yallakar Sth

This incident comprised two separate fires caused by lightning, the first at 2200 hours on 19 January 2006 and the second at 1634 hours 20 January 2006. The fires merged at 0600 hours on 21 January 2006. Origin of the fires was approximately 18km east of Edenhope (Yallakar State Forest).

Peak Resources:

- CFA: 105 personnel, 25 Tankers; and
- DSE: 35 personnel, 12 4WD slip on units, 2 tankers, 3 bulldozers

Losses

- 40km fencing;
- 375 sheep; and
- 950 large round hay bales

Area Burnt: 4 172ha

Mt Lubra

The Mt Lubra fire started about 14km south of Halls Gap. Cause was lightning at approximately 2300 hours on 19 January 2006. Initial reports commenced at 0745 hours on 20 January 2006, the first being from the CFA at Mirranatwa. At the time of the first sighting of the fire it was approximately 12 hectares in extent.

The fire site is depicted in photographs at Section 7.12.3. Photograph 1 illustrates the point of origin and the nature of the terrain. Photograph 2 also illustrates the area of origin, retardant lines applied during initial attack, the nature of the topography and access.

This fire tragically resulted in fatal injuries to two civilian motorists. The circumstances of the fatalities are subject to separate investigation and coronial processes and were not considered during the debrief.

Peak Resources:

- CFA: 550 personnel, 110 Tankers
- DSE: 300 personnel, 50 4WD slip on units, 3 tankers, 17 bulldozers
- Other: 190 from NSW RFS / P&WS / State Forests & Tasmanian Fire Service
- Aircraft: 9 helicopters & 6 fixed wing bombers

Losses:

- 2 fatalities;
- 40 houses and 72 other buildings;
- 62 600 sheep, 160 cattle and 2 600 beehives;
- 36 000ha pasture; 10 250 tonnes hay and 1 900km fencing burnt; and
- Numerous facilities and infrastructure within Grampians National Park.

Area Burnt: 130 231hectares.

Many Public Information meetings were held with affected communities.

7.12.2 Debrief Process and Outcomes

Due to the number of attendees (100+) this debrief was facilitated by using 15 x 7 person groups. Initially each group discussed the incident and determined significant positive and negative issues associated with:

Readiness Issues

Incident control

Planning

Inter-agency Coordination

Operations

Logistics

Recovery and Rehabilitation

Regional and State Coordination

Other issues

Each group recorded key points under each of the topics listed above, but may have recorded several points of either positive or negative nature on debrief pro formas. Each group then briefly stated their highest ranked issue under each of the above headings. (NB most of the discussion at this stage focussed on matters with potential for improvement)

Further analysis of the above process by the debrief team identified 10 major topics that were common themes identified by the separate groups. Specific topics were allocated to pre determined groups of people to work through issues and report back. The following is a précis of the discussions and issues recorded. Many issues recorded by individual groups were not discussed in open forum, but were recorded in the debrief pro forma documentation and presenters briefly touched upon only the key matters they recorded.

1 Incident Action Plans

Five important issues were identified:

- Who needs the information in the IAP and what do they use it for?
 - Education necessary for support agencies on role of IAP

- Role for informing local communities
- Timelines
 - A set of timelines needs to be established early in the incident and adhered to
 - Need to consider preparation of the plan relevant to its distribution eg if the Division commander is 2 hours travel by road, must be completed in time to reach the Division
- Content
 - should exclude irrelevant information.
 - IAP is essentially the fireground work plan for the next shift. Must include feedback from retiring field personnel i.e. the latest on-ground intelligence
- Format
 - Maybe need IT support to help transfer IAP documents, relevant to needs of end users. Maybe transfers can occur electronically or via hard copy
- Role of document
 - Need to tighten the role of the document, targeting only to the likely end-users (and hence reduce the size)

General conclusions about IAPs were:

- They were universally too large;
- They contained too much irrelevant information;
- They consistently arrived too late to field users;
- They either had poor quality maps or none at all. (Colour mapping capability is now high, but a good map, photocopied, faxed or photo-reduced, loses much clarity and definition); and
- They did not follow the agreed template. (There has been a lot of work done on development of IAPs and an agreed format/template exists but not everybody uses it). There is a need to revisit the IAP template, agree on any changes, lock it in and ensure that all IMT members use only the approved version.

2 ICC/Div Command/ Fireground

Key issue is information transfer and download. Strategic location of communications links and proximity of information/infrastructure to the fireground can assist, i.e. the location of the Division Command Points is important to facilitate effective interaction and communication between the field and Division Command.

ICC – field interaction could be improved. Strong perception from field that information/intelligence goes into ICC from Fireground but sometimes no evidence in IAP that it has been listened to and factored into new plans.

Important to respect the Chain of command – IMT should obtain information through Division Command rather than via sectors or crews.

Chain of command also relates to effective inter-agency relationships – the positions or roles occupied by individuals in the IMT are paramount. The parent agency of each individual is not important in the context of an IMT but it is the role that is filled by those

individuals that are paramount and it is incumbent on each individual to respect the chain of command within the IMT.

3 ICC/RECC/SECC Roles and Information flow

Provisions exist for the establishment of Integrated Fire Agency Coordination (IFAC), in accord with the schedule attached to the Cooperative Agreement between CFA and DSE. The provisions can be invoked whenever multiple regions are directly involved in response activity. Typically, one (or two) DSE regions might be directly involved with several (three or four) CFA regions in fire activity involving one or more IMTs. The reporting lines can become cumbersome due to a multiplicity of RECCs or RFCs so provision exists to create an IFAC between IMT/s and SECC/ECC. IMTs continue to communicate laterally with MERCs, the IFAC communicates laterally with the DERC and RECC/RFC. One of the roles of the IFAC is to remove any need for an IMT to report to several regional centres.

In the case of the Horsham complex an IFAC was not established. Whilst information flow was generally satisfactory, RECCs sometimes didn't get adequate and timely information. CFA Regions 5, 17 and 17 were involved directly in the Horsham complex as was DSE Region SW. The main issue identified was the need for a consistent coordination arrangement whenever multi regional fires occur

Suggestions for improvement:

- Better understanding of the implications of setting up IFACs;
- Exercising between agencies and regions at IFAC level;
- Regular teleconferences when an IFAC is set up;
- Development of emergency service extranet site to enable rapid sharing/transfer of information; and
- Ensure that the collective agencies can adequately resource IFAC/S once established.

4 IMT/MECC/DERC Roles and Information Flow

- Police liaison in IMT was implemented and was effective
- Police information officers in IMT were implemented and were effective
- Should be a coordination officer linked to Logistics in IMT to feedback to MECC
- As soon as two or more MECCs are established in future, a DECC will be established

5 Readiness of IMTs

Some consideration needs to be given to "pre-forming" IMTs whenever conditions are conducive to ignition and spread of fire that may be beyond the capability of a single agency utilising locally available resources.

- Should be a phased scale up i.e. don't wait for fires to happen but notify potential IMT members and undertake some planning as soon as a Level 3 day is declared;
- Should be utilising scenario planning and training to ensure that trained, accredited and competent IMT members are available;
- Introduction of mentoring program;
- Development of (annual?) Fire Conference concept to include discussion about IMTs on future conference agendas; and

- Early involvement of other agency representatives and operators with local knowledge is critical

6 Staging Areas (“SA”) – location, size, function

- Halls Gap worked well as a Staging Area. This was due to local facilities, accessibility, good communications, helicopter access, security and ready availability of fuel and services that all contributed to the success of this SA;
- Need to develop a schedule of standard requirements and specifications for staging areas, including access to fuel and security:
- Need to identify locations of potential SAs and record them in plans. To achieve this requires a clear understanding of the role and purpose of a staging area.
- Staging Areas require a dedicated position of Staging Area Manager.

7 Management of plant and outside Contractors

- Outside contractors advise that fire agencies don’t manage them well. This issue is also identified when accounts arrive and the question is posed: “*Who was managing them?*”
- need to ensure that contractors have appropriate training, PPE and are adequately logged in to the resources tracking system (T-cards)
- DSE use their own plant or pre-identified contractors, CFA goes through the MECC so there is a question as to who/how they are accredited. Need a better system to track accreditation.

8 Use of Information Technology

- Need a common access point for fire information.
- Propose an Emergency Services Website with a standard operating environment enabling anyone to log on and authorised persons to alter data stored on the site;
- Should have fixed IT equipment at ICC level and portable equipment at fireground and air base level

9 Radio Communications Planning

- Effective communications planning relates to pre-season planning. There should be default plans in place that can be escalated to larger events.
- There should be a process to assist with dealing with faults and unforeseen matters
- Communications planners should be part of the IMT.
- There is a need to identify and train Communications planners.
- State-wide there should be minimum communication standards and requirements for ICCs and MECCs and other key facilities (e.g. a MECC with no power back up goes off line in a power failure.
- Communications should not focus solely on radio, but include telephone, fax , email, web
- The SW is identified as having significant poor to nil coverage areas. Consider more and innovative use of mobile repeaters (large cranes or aircraft).
- Need to recognise that limited channel capacity exists and there is a requirement to “ramp-up” capacity ratings during major and extended events.

10 Rehabilitation/Recovery

Achieve understanding and knowledge of recovery arrangements across all agencies

- Liaison officers from organisations including DHS and Red Cross should be included at ICCs from the beginning of events
- Arrangements to be documented at local level planning and include readily available contacts.

Build stronger relationships between response and recovery agencies.

- Include recovery agencies in joint training exercises and practices

Recovery agencies require information as soon as possible to assist with planning
DPI and DHS are collaborating to progress data base management.

7.12.3 Photographs of Mt Lubra Fire area

Photograph 1



Source: CFA

Photograph 2



Source: CFA

8 Glossary of Acronyms and Abbreviations

| | |
|--------|--|
| 24/7 | Full time operation - 24 hours per day, 7 days per week |
| BEST | Bureau of Emergency Services Telecommunications |
| CFA | Country Fire Authority |
| CSC | Customer Support Centre |
| DCP | Divisional Command Point |
| DECC | District Emergency Coordination Centre |
| DHS | Department of Human Services |
| DPI | Department of Primary Industry |
| DSE | Department of Sustainability and Environment |
| ECC | Emergency Coordination Centre (DSE) |
| FAQ | Frequently Asked Question(s) |
| (F)FDI | (Forest) Fire Danger Index (a value nominally between zero and 100) |
| (F)FDR | (Forest) Fire Danger Rating |
| FLIR | Forward Looking Infra Red |
| GIS | Geographic Information System |
| HST | Health Support team/s |
| IAP | Incident Action Plan |
| IC | Incident Controller |
| ICC | Incident Control Centre |
| IFAC | Integrated Fire Agency Coordination |
| IMS | Information Management System |
| IMT | Incident Management Team |
| IT | Information Technology |
| IVR | Integrated Voice Response |
| MECC | Municipal Emergency Coordination Centre |
| MERC | Municipal Emergency Coordination Centre |
| MERO | Municipal Emergency Response Officer |
| NP | National Park |
| NSW | New South Wales |
| OESC | Office of the Emergency Services Commissioner |
| RECC | Regional Emergency Coordination Centre |
| SA | Staging Area |
| SAD | State Air Desk |
| SAU | State Aircraft Unit |
| SECC | State Emergency Coordination Centre (CFA) |
| SES | State Emergency Service |
| SEWS | State Emergency Warning Signal |
| Tas | Tasmania |
| TIC | Thermal Imaging Camera |
| TOR | Terms of reference |
| VBI | Victorian Bushfire Inquiry |
| VBIL | Victorian Bushfire Information Line |

