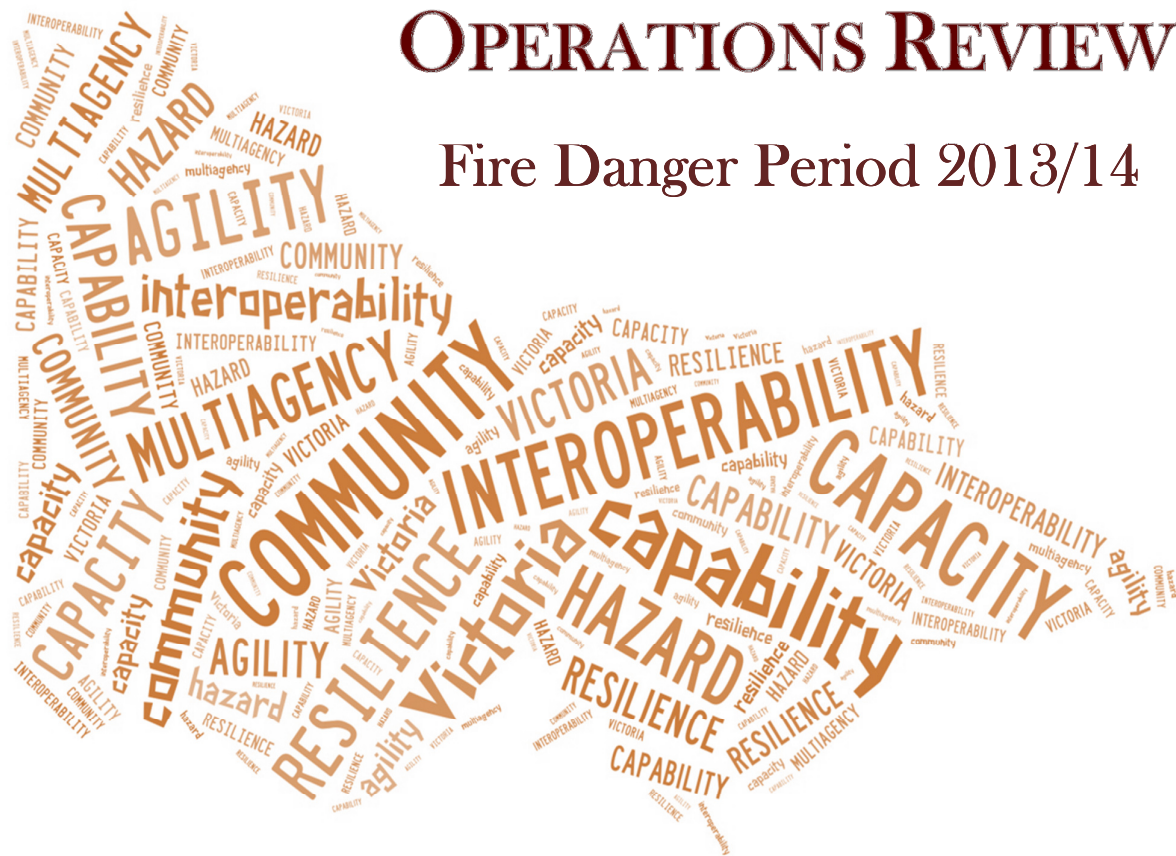




# POST SEASON OPERATIONS REVIEW

Fire Danger Period 2013/14



## **Acknowledgements**

The State Review Team representing Emergency Management Victoria, Country Fire Authority, Department of Environment and Primary Industries, Metropolitan Fire Brigade, Victoria Police and Victoria State Emergency Service wish to acknowledge our people and emergency management partners for participating in the operational review of the 2013/14 Fire Danger Period. Your willingness to provide observations, feedback and insights are critical to our continuous improvement as fire agencies and as the emergency management sector for the benefit of all Victorians.

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## Section One - Introduction

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# Abbreviations

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AIG	Aerial Intelligence Gathering
AV	Ambulance Victoria
BRCIM	Bushfire Royal Commission Implementation Monitor
CFA	Country Fire Authority
CRC	Cooperative Research Centre
DEPI	Department of Environment and Primary Industries
DH	Department of Health
DHS	Department of Human Services
EMC	Emergency Management Commissioner
EMV	Emergency Management Victoria
EMLO	Emergency Management Liaison Officer
FDI	Fire Danger Index or Indices
FDP	Fire Danger Period
FWW	Fire Weather Warning
ICC	Incident Control Centre
IEMT	Incident Emergency Management Team
IILU	Interstate International Liaison Unit
IMT	Incident Management Team
MECC	Municipal Emergency Coordination Centre
MERC	Municipal Emergency Response Coordinator
MERO	Municipal Emergency Response Officer
MFB	Metropolitan Fire Brigade
NEO	Networked Emergency Organisation
OHS	Occupational Health and Safety
OSOM	One Source One Message
PDD	Pre Determined Dispatch
RCC	Regional Control Centre
RCT	Regional Control Team
REMT	Regional Emergency Management Team
SCC	State Control Centre
SCT	State Control Team
SEMT	State Emergency Management Team
SOP	Standard Operating Procedure
SRRS	State Resource Request System
TFB	Total Fire Ban
TMP	Traffic Management Point
VBRC	Victorian Bushfire Royal Commission
VICSES	Victoria State Emergency Service

## Foreword

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Victoria has experienced another significant and protracted fire season throughout the 2013/14 Fire Danger Period (FDP). While the outlook for the season did not show trends towards wetter or drier than average conditions over the summer months, temperatures across the state were very much above average and broke records for extended periods of heat.

The season commenced relatively early with Victoria providing support to New South Wales in October 2013.

Heat wave conditions and heat health incidents, a number of significant and campaign fires in addition to lightning-strike fires, fast moving grassfires in urban-rural interface areas, and the scale and complexity of a mine fire all presented diverse challenges to communities and emergency management agencies alike.



The management of these incidents required the ongoing involvement and tireless dedication by volunteer and career staff at all levels from Victoria's emergency management agencies, in addition to our interstate and international colleagues.

The impacts of the fires this season were far-reaching, affecting many community members and communities. Peri-urban communities, rural farms, public land areas, tourist areas, critical infrastructure; a cross section of each bear the effects of the season. Sadly, one person also lost their life.

For the first time since the introduction of the evacuation arrangements after the 2009 Black Saturday bushfires, a formal evacuation order was issued to the community of Halls Gap.

As a sector we continue to collaboratively review our operations to ensure we identify and capture key learnings which inform a range of programs aimed at improving all aspects of emergency management, and enhancing the preparedness, response and resilience of our communities.

This well-established activity is a fundamental component of the continuous improvement cycle and will remain so as we move into Victoria's new emergency management arrangements.

Whether in the community or away from home, on the front-line or in a management or support role, I commend and thank all emergency management personnel for their tireless efforts and hard work throughout the season. Finally, on behalf of the fire agencies and emergency management partners, I wish to recognise the invaluable support of families, friends, employers, and the community at large.

A handwritten signature in blue ink, appearing to read 'Craig Lapsley', written in a cursive style.

**Craig Lapsley PSM**

**Emergency Management Commissioner, Victoria**

# Executive Summary

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Victoria again experienced a significant fire season in 2013/14 reaffirming its status as one of the most bushfire prone areas in the world. Predicted to be an “average” to “above average” season in some parts of the state, by November grass and bush across Victoria were at risk of fire as fuel curing followed an established drying trend commencing in the state’s north west and extending east and south through the coming months. In January 2014 Victoria and much of southern Australia, experienced very hot and dry conditions resulting in 13 days of declared heatwave. This period ensured all grass and bushland was ready for fires which were intense, fast moving, and ran through the night impacting on most parts of the state. Again this year many fires occurred late in the day and spread rapidly under conditions of mild temperatures and light winds, often from the south.

Firefighters from Country Fire Authority (CFA); Department of Environment and Primary Industries and their Networked Emergency Management partners consisting of Parks Victoria, VicForests and Melbourne Water (DEPI/NEO); and the Metropolitan Fire Brigade (MFB) responded to more than 4,600 bush and grass fires over a five month period. Total Fire Bans were declared in all or parts of the state on 17 days between 7 November 2013 and 11 March 2014. Fire services from New South Wales, South Australia, Queensland and New Zealand provided support through existing mutual aid arrangements and during the escalation of several bushfires.

A band of lightning which crossed most of the state in mid January started a significant number of fires including those which became campaign fires in the Mallee and East Gippsland some of which burnt for 70 days testing not just the fire services but also the rural communities they were threatening.

Peri-urban areas on Melbourne’s fringe were again this year affected by large fires. The most significant started at Mickleham, almost immediately impacting on residential areas before spreading north as far as Kilmore, consuming over 22,000 hectares of pasture and crop and destroying 18 homes and thousands of head of stock. Other affected areas were just south of Gisborne razing five homes, Warrandyte where three homes were destroyed, communities at Dromana, Lara and within the Metropolitan Fire District at Keilor. This impact again illustrated the variation in community understanding of the risks, needs and preparedness for living in the urban/rural interface.

A fire in the Hazelwood Open Cut mine near Morwell, in the Latrobe Valley, presented additional challenges for fire and emergency services as this blaze burned for 43 days. Involving fire and emergency management personnel from Victoria, New South Wales, Australian Capital Territory, Queensland, South Australia and Tasmania the magnitude and impact of the fire on the community of Morwell was on a scale not seen before.

Tragically, this season again bought home how dangerous bushfire can be with a community member losing their life near Halls Gap. Between December and April more than 463,000 hectares of public and private land was burnt and a total of 80 residences destroyed. Livestock losses exceeded 21,000 head, almost 3,000 kilometres of fencing was destroyed, more than 8,000 tonnes of hay and grain storage and in excess of 22,000 hectares of pasture, crop and plantation were affected by fire. In excess of 300,000 hectares of public land (mainly bush and forests in the Mallee and East Gippsland) were consumed throughout the Fire Danger Period (FDP).

The provision of timely, tailored and relevant warnings and information continued to be key focus of this fire season consistent with the strategic control priorities. Incident Controllers issued a total 3,644 Warnings and Advice messages and held 39 community meetings throughout the state during fires. The Victorian Bushfire Information Line received more than 50,141 calls. This is the second busiest season on record after 2008/09. Evacuation arrangements introduced following the 2009 Black Saturday fires were truly tested this year with the evacuation of several communities by emergency services during the Grampians fire in January 2014.

Victoria was also again called on to support our interstate counterparts in October 2013 when New South Wales experienced significant fires.

As part of fire and emergency agencies continuous improvement program an operational review was completed for the FDP, the primary purpose of which, was to identify and validate existing operational policy, processes and practices applied during this period and identify opportunities for continuous improvement associated specifically with the management of bushfire.

A range of debriefing and observation collection activities designed to capture observations from our people operating at every level of fire, and with the collaborative input of our emergency management partners, were utilised and coordinated by the State Review Team representing the Fire Services Commissioner, CFA, DEPI, MFB, Victoria Police and VICSES.

In excess of 1,200 individual observations from agency personnel were collected. Not every one of these individual issues appears in this report as it focuses on an aggregated picture of key issues. Many others have been identified at local and Regional level and will be the subject of actions at these levels.

The information collected through this review process reinforces that significant improvements in a range of key areas associated with the management of bushfire have been and continue to be made in Victoria.

This review has also identified a number of opportunities for further improvement and in many cases activities have commenced to address these issues ahead of the 2014/15 FDP through targeted projects, briefings or exercises. Those not specifically addressed have been analysed and assigned to responsible parties for future consideration to build on the knowledge gained through the review process. The key improvement themes relate to evacuation, traffic management points, transfer of control between Incident Control Centres (ICCs) and resource management. It also identified a number of themes which require ongoing consolidation of existing arrangements particularly related to integrated initial attack and fireground transfer of control.

This review has been a collaborative activity involving the Victorian fire services and emergency management partners and it is appropriate to recognise everyone in these agencies involved in coordinating and participating in the review as the information gained through this activity is critical to the ongoing enhancement of fire and emergency management arrangements in Victoria which benefits the sector and importantly our community.

The State Review Team recognises a Board of Inquiry was established by the State Government to review the Hazelwood Open Cut Mine fire. It is acknowledged there may be recommendations made by the Board that may be adopted by the State that will need to be implemented to improve performance and service delivery.

Another important initiative from the 2013/14 FDP review process has been the development of case studies. These learning tools are focussed on a number of recurring themes including Evacuation, Transfer of Control and bushfires in the urban-rural interface areas. The content of the case studies has been drawn from specific individuals on aspects of particular fires to highlight operational practice, key decision points, considerations, managing risks, options and key learnings.

It is acknowledged that there were many individuals involved in the response to the fires featured in the case studies, however in order to provide the most cohesive story, key individuals were canvassed to reflect on and provide key learnings that can be shared across the sector.

The following table summarises the key issues and actions identified during the review.

Issue	Comment	Action
<b>Safety</b>		
Safety and Welfare.	Deliberate focus on safety during a long and busy season. Safety messaging issued state-wide was important.	Continuously focus, at all levels, on the safety of emergency services personnel and community members before, during and after incidents. Include in preseason preparedness activities. Review deployment and record management of incident personnel to ensure accurate record keeping.
Fatigue Management.	Increased attention on fatigue across all agencies. Specific agency fatigue policies and procedures makes joint resource management challenging.	Consider reviewing multi-agency fatigue management to improve state-wide alignment and consistency.
Travel to and from incidents.	Travel distances often long when moving personnel across the state.	Consider reviewing multi-agency fatigue management and incorporate travelling into these to improve state-wide alignment and consistency.
OHS reporting and reviews.	Increased use of reporting methods this season ensuring issues could be addressed and trends analysed. Limited multi-agency review of incidents does not promote learning or sharing across the sector.	Reinforce the requirement to report near misses, accidents and incidents with all personnel, at every opportunity. To be communicated as part of 2014/15 pre-season activities.
<b>Community Engagement</b>		
Public Information personnel	The extended nature of operations this year was identified as an impact on existing Public Information personnel and highlights the need to continually develop capacity and capability within the state	Continued and ongoing focus of emergency management agencies to enhance existing capacity and capability for Public Information Section resourcing.
Messaging	Over messaging to the community when there are no changes to the content – particularly when a fire is controlled.  Multiple messages provided to the same community for different fires with different threat levels.  Continue to progress messaging application to fast moving grassfires – take shelter/move to the other side of the road.	Warnings and Capability Working Group to review these issues and develop initiatives prior to 2014/15 FDP
Systems	Pursue a capacity to spatially display existing warnings and advice messaging.	Warnings and Capability Working Group to review these issues and develop initiatives prior to 2014/15 FDP
Education	Continued need to reinforce within the community the meaning of warnings and how these should influence the application of their Bushfire Plan – if one is needed – in urbanised areas.	Warnings and Capability Working Group to review these to ensure a continued community education focus prior to 2014/15 FDP which addresses these observations.
Media Information	Media information issued at state level needs to address different weather or fire conditions across the state.	To be incorporated in agency media training prior to 2104/15 FDP.



Evacuation		
Evacuation	The practical application during the 2013/14 FDP of evacuation arrangements developed following the Victorian Bushfire Royal Commission presents the opportunity to review these arrangements. This will ensure the information, from the fires where this means of providing protection of life was applied, can be utilised to validate existing arrangements and ensure any necessary amendments can be implemented.	Victoria Police lead a multiagency review of learnings from the fires where evacuation was recommended throughout the 2013/14 FDP with the focus on enhancing from this information the existing evacuation arrangements prior to the 2014/15 FDP..
	The Grampians – Northern Complex fire and subsequent evacuation of Halls Gap, Dadswells Bridge and surrounding communities in January 2014 presents an opportunity to develop materials for the Victorian Emergency Management sector to learn from this experience.	State Review Team to develop and communicate materials suitable for the Victorian Emergency Management sector which incorporate the learnings from the Grampians – Northern Complex evacuations.
	This aspect of emergency management requires continued reinforcement within agencies and the community.	Principles of evacuation will continue to be reinforced for the 2014/15 FDP through briefings, exercises and scenarios. Evacuation will again be addressed in the Preseason Update and guidance in provided in the Fire Agencies Handbook.
Predictive Services		
Provision and distribution of predictive products.	Products well received and contributed to situation awareness.	Continue to support predictive services functionality and the capability and capacity of the Fire Behaviour Analyst role.
Phoenix modelling dissemination.	Relevant prediction could be overlooked in the volume of emails distributed.	Identify prediction by including region, district, locality and incident name in the email subject line.
Interpretation and application of products.	Further training and awareness in understanding and application of weather and predictive products across all agencies.	Continue to provide training and awareness sessions to personnel on location and use of products.
Fire Danger Indices.	Instances where FDIs were thought to be under- or overestimated affecting readiness arrangements.	Consider targeted review of FDIs in SOP J2.03.
Integrated Initial Attack		
Integrated Initial Attack	Application continues to improve but opportunities for this to be enhanced in some parts of the state remains. While previously adopted as an exercising and briefing topic this should continue to be applied in this manner at tactical level amongst agencies.	Continued focus by agencies in exercising and briefing in the lead up to 2014/15 FDP to ensure these arrangements are fully understood and applied during joint operations.
	Communications prior to and during incidents, including the application/use of early integrated communications plans. Individual personnel knowledge and experience, local relationships between agency personnel.	The application of integrated initial attack principles requires a continued focus and reinforced through briefings, Preseason Update, exercises and scenarios at particularly local level prior to the 2014/15 FDP.

	Differing agency doctrine on where the initial Incident Controller is located. Differing initial firefighting strategies (direct v indirect)	The enhancement of local relationships and understanding of each agencies capacity, capabilities, knowledge and tactics remains the responsibility of State, Regional and local agency people to develop and enhance.
<b>Transfer of Control</b>		
Embedding Transfer of Control	<p>Understanding of the principles and process continues to improve through briefings, exercises and practical application.</p> <p>Recognising the cues to transfer control, timeliness of transfer, clear communication of key incident issues, and the shadowing of incidents by ICCs before Transfer of Control contributed to effectiveness.</p>	The application of Command & Control and in particular Transfer of Control is agreed between fire agencies in Victoria. The application of Transfer of Control will continue to be a focus and reinforced through briefings, Pre Season Update, exercises and scenarios at regional and local level prior to the 2014/15 FDP.
Challenges to Transfer of Control	<p>Transfer of Control on lower fire risk days when no ICC in place. Transfer of control at rapidly developing grassfires. Improving communication between fireground, ICCs and agency Command and Control personnel.</p> <p>Understanding and adoption of the Division Command role and responsibilities post Transfer of Control. Suitability of initial fireground IC to perform Division Command role following Transfer of Control.</p> <p>Guidance and understanding on the principles, triggers and process identified in addition to the continued maintenance of Transfer of Control as a priority area for improvement.</p>	<p>The application of Command and Control and in particular Transfer of Control is agreed between fire agencies in Victoria. The application of Transfer of Control will continue to be a focus and reinforced through briefings, Pre Season Update, exercises and scenarios at regional and local level prior to the 2014/15 FDP.</p> <p>Transfer of Control triggers, principles, etc is documented in the Fire Agency Handbook.</p>
Transfer of control between ICCs	Transfer of control between Kangaroo Ground and Seymour ICCs during the Mickleham-Kilmore fire demonstrated this to be a new initiative for this type of dynamic incident	From the learnings captured during a review of this transfer of control the opportunity exists to develop appropriate guidance for future events and incorporate ICC transfer of control into pre-season activities prior to the 2014/15 FDP
<b>Interoperability</b>		
Systems	Multiple systems that are not connected are still in use. Inefficient and increases the workload of personnel.	Multi-agency work required immediately to develop one platform for all hazard incident management and reporting. This will be achieved through introduction of VINE.
Information flow	Continues to improve every season.	Continue to build, reinforce and practice multi-agency incident management through pre-season activities and exercising.

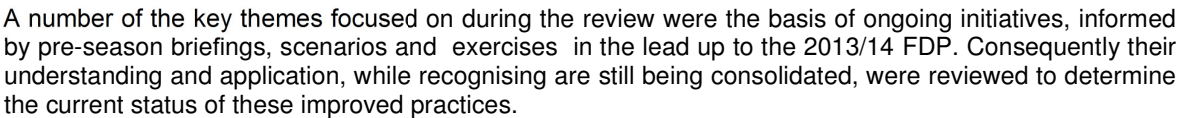
Preseason Preparedness		
Preseason briefing activities	The Pre-Season Briefing Program and Steering Committee (PSBPSC) have completed a review of the 2013/14 pre-season briefing program and have identified several improvement opportunities	The PSBPSC implement a program for the 2014/15 FDP incorporating the learnings and recommendations identified in their review
Exercising		
Exercises	Exercising is well established and should continue with a multi-agency representation	Emergency management agency personnel to be supported in the identification, development, conduct and evaluation of exercises at all levels
Preseason activities	There is an existing linkage between the post season review and preseason exercising	Continue use of a structured approach for preseason exercising initiated from information gathered during FDP reviews.
Exercise Management System	The extent of exercises conducted across the state hasn't been captured in full, leaving a potential void in our knowledge of personnel capability and proficiency, and our ability as a sector to demonstrate to the community the level of preparedness activities undertaken.	The development of an exercise management system to enable a transparent and consolidated vision of exercising at all levels across the state is currently being adopted by the Fire Service Commissioner.
Traffic Management Points		
Traffic Management Points	<p>Traffic Management Points(TMPs) again played an important role this year in safeguarding the community and emergency management personnel during fires across the state.</p> <p>Despite progress in improving arrangements related to TMPs in the past two years, personnel from emergency management agencies and importantly the community voiced ongoing concern and opportunities to improve existing arrangements.</p> <p>Key issues relating to TMP operation identified during debriefing activities and were collated into the following categories:</p> <ul style="list-style-type: none"> <li>• Pre event;</li> <li>• During Event;</li> <li>• Future Challenges; and</li> <li>• Actions.</li> </ul>	<p>The following actions were identified for implementation before the 2014/15 FDP:</p> <p>Establish a working group consisting of the State Emergency Animal Welfare Coordinator (or delegate), Victoria Police, Victorian Farmers Federation, CFA, DEPI, Vic Roads and municipal representatives. The proposed group could be formed as a working group under the Victorian Emergency Animal Welfare Committee.</p> <p>The working groups role would be to:</p> <ul style="list-style-type: none"> <li>• review and revise existing guidance material for primary producers relating to the impact of fire on access to properties;</li> <li>• review the impact of TMPs on animal welfare with a view of streamlining the arrangements to enhance the delivery of animal welfare services after a bushfire; and</li> <li>• review arrangements for how the rural community can communicate animal welfare issue more effectively to the ICC during a bushfire.</li> </ul> <p>A Road Management Working Group to be established (RMWG) consisting Victoria Police, CFA, DEPI, Vic Roads and municipal representatives. The RMWG to:</p> <ul style="list-style-type: none"> <li>• Consider and evaluate the potential for a Traffic Manager role within an ICC;</li> </ul>

		<ul style="list-style-type: none"> <li>Consider and develop potential solutions/options for use of detours, TMP placement/operation, procedures to prioritise road clearance/opening, active monitoring of ongoing need for and location of TMPs; and</li> <li>Consider methods for communicating location and status of TMPs to the community.</li> </ul> <p>Increased and improved community education and messaging before and during incidents, designed to enhance community resilience by preparing them for the potential duration of TMPs during incident. Community education relating to TMP levels, access and operation.</p> <p>Consider expanding the use of the TMP Guidelines for all emergencies.</p>
<b>Resource Management</b>		
Resource Systems	<p>The current SRRS provides for components of resource management but is restricted to requests. The subsequent management once deployed is undertaken through different agency IT platforms.</p> <p>The existing capacity of the SRRS is not well understood by some personnel outside the Resources Unit.</p>	<p>Observations and learnings from the 2013/14 FDP provided to the newly developed user group for further analysis and development of appropriate initiatives for implementation as soon as possible. It is recognised significant system changes will require development. Activities may not all be introduced prior to the 2014/15 FDP.</p> <p>The existing and future capacity of the SRRS must be communicated to Controllers and Commanders at each level of control prior to 2014/15 FDP.</p>
Processes	While existing processes exist there is a need to continually improve business rules and ensure consistency of application by agencies.	Existing processes should be reviewed, enhanced and communicated by the newly developed user group prior to 2014/15 FDP.
People	Resource Unit personnel training for new and existing personnel requires a continued focus to ensure agencies can benefit from people who utilise common processes and systems for multiagency resource management	<p>Existing training programs should be reviewed to ensure learnings from the FDP are incorporated.</p> <p>Exercising opportunities should be provided for Resource personnel during preseason activities to further develop capability and consistency amongst agencies.</p>
<b>IMT Readiness</b>		
Application of SOP J 2.03	<p>Demonstrated commitment to meeting requirements of the JSOP regarding readiness.</p> <p>Multiagency teams worked effectively, especially where the same people worked together regularly.</p> <p>Regional Controller discretion observed to be inconsistently applied.</p>	Develop guidance for Regional Controllers regarding the use of discretion regarding readiness resourcing.

Regional Control		
Regional Control	A review into regional control has been completed. This review engaged with personnel from across the state and incorporates a number of recommended actions	The State Control Team review the recommended actions included in this report
Emergency Management Teams		
Operation and understanding	<p>The general effectiveness of EMTs continues to improve through relationships, engagement, communications, and collaboration.</p> <p>Improvement opportunities identified by MAV creates the opportunity to refocus on informing emergency management sector personnel of the significant knowledge and expertise municipalities bring to EMTs at incident and regional level.</p> <p>It was also observed throughout the FDP some municipalities either lacked capacity or understanding of the need to have representation present at ICCs and RCCs and consequently presents opportunity the for emergency management agencies and MAV to review these arrangements prior to next FDP.</p>	<p>The EMT arrangements outlining the role of council on IEMTs and REMTs is reinforced through preseason activities prior to the 2014/15 FDP</p> <p>Incident Controller training material be reviewed to ensure it specifies inclusion of local government into IEMTs and REMTs.</p> <p>Incident Controllers be encouraged to utilise the local knowledge within council, particularly when local agency representation is minimal. This should be incorporated into pre-season activities prior to the 2014/15 FDP.</p> <p>Councils should be involved in incident and period debriefing activities in their area when they performed some role. This should be incorporated into pre-season activities prior to the 2014/15 FDP.</p> <p>General arrangements between MAV and emergency agencies to be discussed prior to 2014/15 FDP.</p>
IILU		
Interstate/International Liaison Unit (IILU)	<p>The IILU was extensively involved in the movement of personnel out of and into Victoria pre and during the Victorian FDP. The learning from these activities presents opportunity to further refine existing arrangements. In particular the observations of those people who provided sustained involvement in the unit leads to a number of key areas which can be concentrated on.</p> <p>In particular the following key issues have been highlighted:</p> <ul style="list-style-type: none"> <li>The nature of IILU operations has evolved into a specialist role within the SCC structure which requires a discrete skills set;</li> </ul>	<p>A review of the interstate deployments during the 2013/14 FDP again identified the successes of using people from all agencies (including MFB and VICSES).</p> <p>Key observations relate to a need to continue the evolution of this integral function with the SCC.</p> <p>The Deployment Working Group established following 2012/13 FDP, to incorporate this new knowledge into future plans to enhance the operation of the IILU.</p>

	<ul style="list-style-type: none"> <li>• The effective operation of the IILU relies on continuity of people. Those who have been involved previously but of equal importance continuity during deployments;</li> <li>• Additional personnel need to be trained in the operation of the IILU, including SCC Management support staff; and</li> <li>• The process of managing logistics associated with IILU activities is very time consuming and requires streamlining wherever possible.</li> </ul>	
<b>Aircraft Operations</b>		
Pre Determined Dispatch (PDD)	PDD arrangements in Loddon Mallee and Barwon South regions during 2013/14 were regarded as being a critical component of first attack success	The Fire and Emergency Aviation Management Group to review the potential expansion of PDD arrangements prior to 2014/15 FDP.
Aerial Intelligence Gathering (AIG)	AIG platform again demonstrated this year the benefits of this emerging technology in providing critical real-time intelligence to incident management personnel.	Emergency Management Capability Manager (EMV) to ensure agency personnel are informed of the AIG capabilities and ways to access this intelligence during incidents prior to 2014/15 FDP.
Ground crew training	Feedback gathered during the review identified the need to revisit the importance of integration of ground crews with aircraft to ensure effective fire management and safety.	The Aviation User Network to review existing guidance material for ground crews on their role when working with aircraft prior to the 2014/15 FDP.
Agency aviation personnel management	There is a need for effective management of personnel across regional boundaries to ensure the maintenance of existing capability while ensuring fatigue is managed.	The Aviation User Network develop arrangements to ensure the most effective use of personnel from across the state particularly during campaign or protracted incidents prior to the 2014/15 FDP.
<b>SCC Operations</b>		
State Control Centre (SCC) Operations	<p>Through reviewing the operation of the SCC and all activities associated with this level of control and the facility a substantial number of learnings have been identified.</p> <p>Key themes and continuous improvement initiatives will be incorporated into future business plans for appropriate work to be undertaken which identifies solutions and prioritises these for resolution.</p>	SCC Management to develop solutions for issues identified through review process and prioritise for endorsement as part of future business plans.





The high level of operational readiness and response activities experienced throughout this FDP has presented ongoing opportunities to apply many new initiatives introduced after the Victorian Bushfire Royal Commission (VBRC).

The information collected through this review process supports other evidence that significant improvements in a range of key areas associated with the management of bushfire have been and continue to be made in Victoria.

This review has also identified a number of opportunities for further improvement and will inform activities to address these issues ahead of the 2014/15 FDP through targeted projects, briefings or exercises. Those issues outlined in this report are an aggregated picture of key issues. Many others identified at local and regional level are the subject of continuous improvement at these levels. Those not specifically addressed have been analysed and assigned to responsible parties for future consideration to build on the knowledge gained through the review process.

This review has been a collaborative activity involving the Victorian fire services and emergency management partners and it is appropriate to recognise everyone in these agencies involved in coordinating and participating in the review as the information gained through this activity is critical to ongoing improvement for the benefit of the Victorian community.



# BRCIM Evidence

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The Bushfire Royal Commission Implementation Monitor (BRCIM) is tasked with the responsibility of monitoring and reporting on the achievements towards meeting recommendations of the VBRC. The BRCIM Mr Neil Comrie AO, APM will provide his final report due later this year. As a consequence specific information gathered during the review of the 2013/14 FDP will form a component of evidence from the fire services to demonstrate the ongoing efficacy of the implementation of key VBRC recommendations.

The key focus of evidence provided related to the following VBRC Recommendations:

- Evacuation
- Traffic Management Points (TMPs)

In relation to evacuation, the evidence provided documented activities and actions undertaken following the 2012/13 FDP and demonstrated improvements implemented, learnings gathered during 2013/14 FDP, and proposed actions to further enhance the application of evacuation arrangements. A key component of the information provided this year was gathered from actual evacuations undertaken in the Grampians and East Gippsland fires.

In regard to TMPs, the evidence provided again related to the practical application of existing traffic management arrangements developed after the 2009 Black Saturday fires, and the progressive improvement over the past five years.

The operational application of TMPs during a number of fires throughout the 2013/14 FDP presented the opportunity to gather an extensive number of learnings which will translate into continuous improvement opportunities to be implemented by the emergency management sector.

This review report is also a component of the information provided to the BRCIM.



# Review Scope, Governance & Conduct

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## General

The scope of the review was to identify key learnings from operational activity throughout the FDP through the following:

- Implementation of the established debriefing process used in previous years to ensure capture of observations from our people operating at every level of fire and supporting agency operations during the FDP; and
- Focused reviews on a range of specific functions and incidents of interest from the FDP.

The purpose of this work is to validate existing doctrine, arrangements and incident/emergency management application and inform the continuous improvement cycle within our sector.

The outcome of these activities provides evidence which will be utilised to inform a range of activities including training, exercising and briefings in addition to doctrine, policy and procedure. The outcomes will also be utilised to inform evidence presented to the Bushfire Royal Commission Implementation Monitor (BRCIM) for his final report due later this year.

## Business as Usual

Debriefing and review activities which were considered to be business as usual activities for the FDP included:

- Overview 2013/14 – Strategic story and summation of fire activities;
- 2013/14 Post FDP Debriefing and observation collection activities;
- Hazelwood Open Cut Mine Hazmat/Fire Debriefing;
- Real Time Performance Monitoring and Strategic Emergency Management Assurance reporting; and
- State Control Centre (SCC) Operational Review.

## Specific Reviews

A number of other incidents and activities were been identified for specific review outside of the business as usual process. These were identified due to their unique nature and the scope of these reviews was targeted at more specific learnings. Information of a more general nature relating to these incidents/activities has been incorporated in the business as usual process. These specific reviews were coordinated by the State Review Team collaborating with local agency representatives and specialists to develop appropriate review reporting and other supporting materials.

These reviews included:

- Warrandyte – Fire fighting in the Urban/Rural Interface;
- Mt Ray Fire - Growth and Fire Behaviour;
- East Gippsland and Mallee Complexes – Managing priorities;
- Mickleham/Kilmore - Transfer of Control (ICC/RCC/etc);
- Resourcing – improved process and system;
- Halls Gap Experience – Evacuation Planning and Implementation;
- Cost Effectiveness and Performance Management Measure of Aviation Resources;
- Regional Control;
- Evaluation Warnings and Advice;
- Halls Gap Community Behaviour (during evacuation) Analysis; and
- Traffic Management Points.

## Interstate Partners

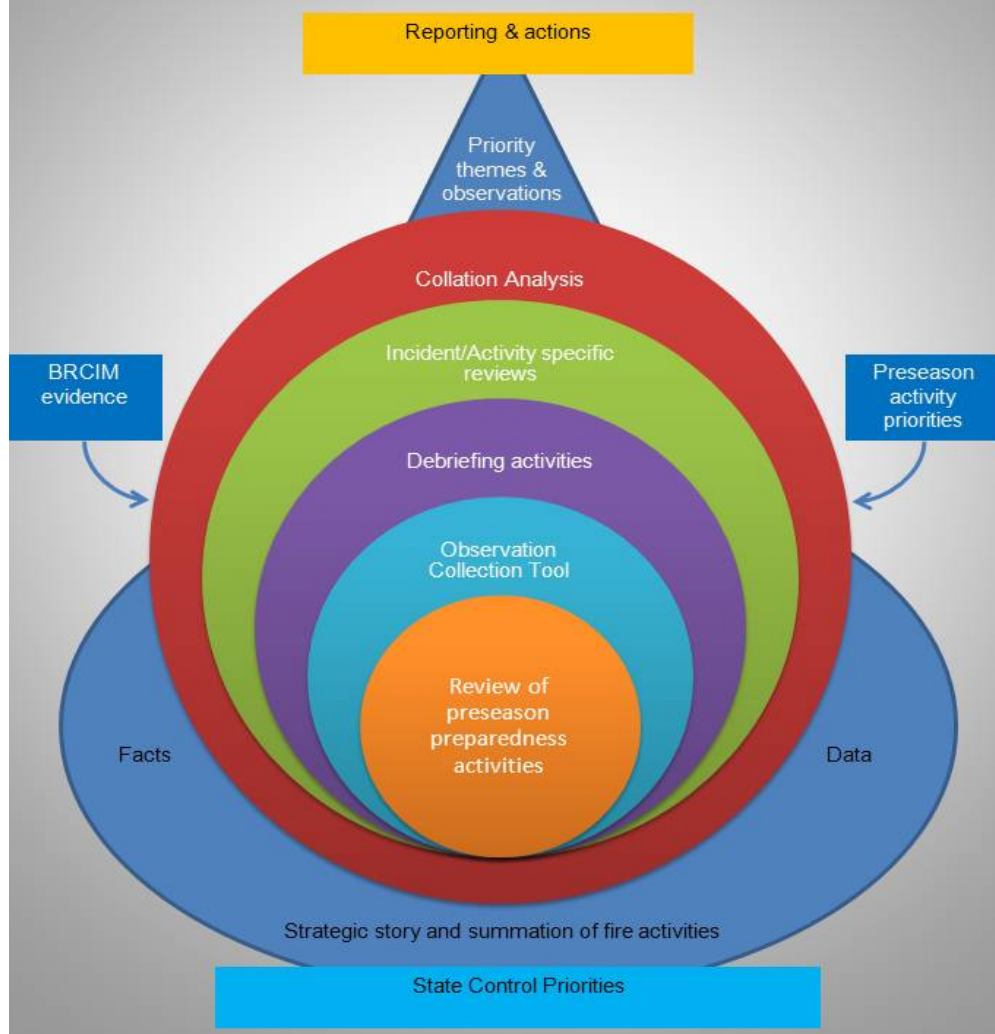
Observations and other information from our interstate fire and emergency service partners who provided support outside normal mutual aid arrangements throughout the FDP is also incorporated into the review.

## Principles

Principles for the conduct of the Post FDP Review for 2013/14 were consistent with those in previous years, being:

- The review was conducted with a “no blame” approach that focused on systems of work and addressing opportunities for improvement;
- The review was a multi-agency review (Fire Service Commissioner, CFA DEPI, MFB, Victoria Police, VICSES and emergency management partners);
- The review focused on identifying findings from the data obtained;
- The review was conducted across the state and input from all agency personnel (volunteer and career) was welcomed. Specific observations were captured from the State Control Team (SCT), State Emergency Management Team (SEMT), Regional Control Teams (RCT), Regional Emergency Management Teams (REMT), Regional Controllers, Incident Controllers, Agency Duty Officers and Incident Management Team (IMT) members;
- An online observation capture tool enabled anyone (a person who has performed a role in an IMT or initial attack) to provide observations of their experiences. This ensured people could comment on a number of specific incidents in addition to other incidents and activities throughout the FDP. The information collected through this process underwent initial analysis and sorting by the State Review Team and was then distributed to regions and others (to reduce workload impact at these levels) to further inform local review activities;
- Regions established coordinated processes to ensure that personnel at all levels were encouraged and able to provide input. This involved a combination of face to face activities with key personnel who performed incident/emergency management functions in conjunction with the online observation collection tool.
- A tiered debriefing process commencing at brigade/work centre/station/unit level feeding upwards to state level was applied;
- A common template for face to face collection of data was used to complement the online observation collection tool;
- The review considered systemic issues and did not focus on internal agency issues although these were captured during the process and will be addressed by individual agencies;
- Regions commenced the process of gathering information about the FDP immediately following the conclusion of the FDP in their respective areas;
- The review considers the views of external stakeholders including emergency management partners; and
- Information collected contributes to the continuous improvement loop.

# 2013/14 FDP Information Gathering



FDP Information Gathering

## Continuous Improvement Loop



Continuous Improvement Loop



## Responsibility

The RCT was assigned responsibility of regional level reviews and was conducted in a coordinated manner ensuring engagement between RCT member agencies and REMT representatives.

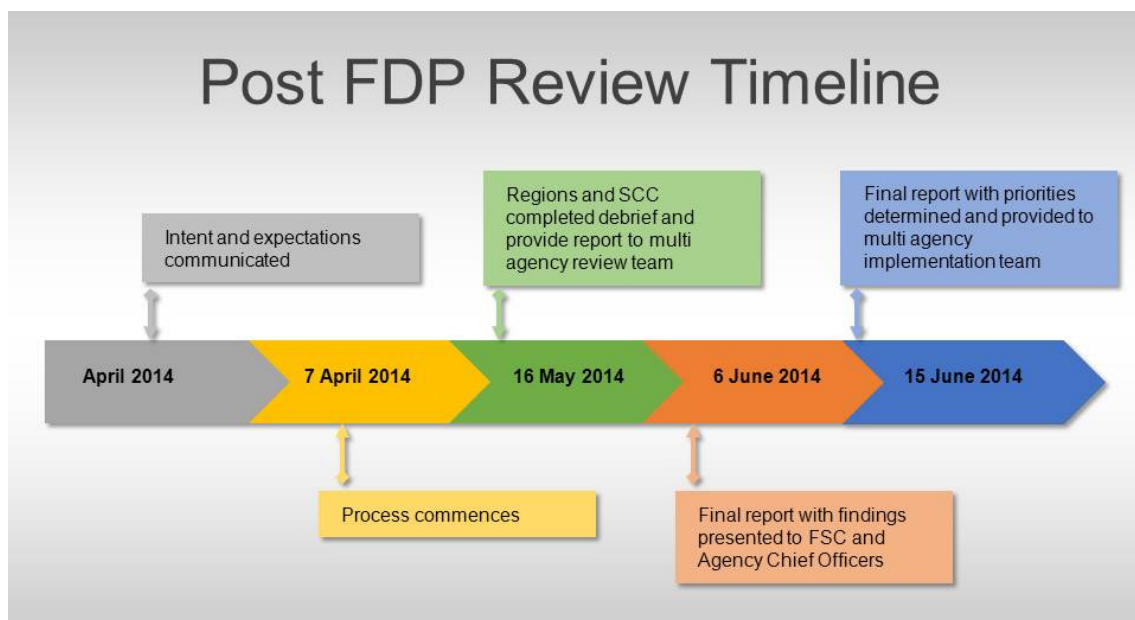
While this was a collaborative effort between emergency management agency's it was led jointly by the CFA Regional Commander and the DEPI Project Leader - Emergency Management to ensure an effective and coordinated activity.

Consideration was given by the RCT of including key emergency management partners (for example Ambulance Victoria and Department of Health) who provided sustained support during the FDP in this group's discussion in addition to the REMT review.

The RCT was responsible for providing any observations and data from their respective region to the State Review Team so key issues from the field were collated across the state for inclusion at state level debriefing and review where appropriate.

## Timing

The following diagram outlines the time frame for the 2013/14 FDP review activities:



Post FDP Review Timeline

## Outcomes

The review is aimed to improve performance and is forward looking. Outcomes of this year's review process include:

- A consolidated report for endorsement by the SCT;
- Information which will inform evidence provided to the BRCIM for his final report;
- Information which will inform validation of existing arrangements and inform continuous improvement initiatives;
- Learning materials including detailed reports on key fires of interest, case studies, audio visual presentations, workshops and presentations;
- Updating training program content and development;
- Informing future exercising activities; and
- Development of the 2014/15 preseason briefings and other preparedness activities.



## Review Methodology

Reviews were conducted using the cold tiered debrief process focusing on the following key questions:

1. What was planned (see list of themes below)?
2. What really happened?
  - Things that went according to plan
  - Things that did not go according to plan
3. Why did this happen?
  - Analyse the root cause for the outcome
4. What can we do next time?
  - What were the successes?
  - What can we improve next time?

The “no blame” review principle was reaffirmed with all participants to ensure and everyone was encouraged to present all issues.

To assist in the collection of information a common debrief template was developed and distributed.

## Themes

The 2013/14 review focused on a range of key themes, several of which are listed below. In addition all participants were encouraged to identify any other issues encountered during the FDP. These themes were intended to gather information for the development and execution of continuous improvement initiatives. A statement of “What was planned” was provided for each topic as a conversation starter. The themes and starting questions are outlined below:

### 1. Safety

“Operations were undertaken with a priority on the safety of firefighting and emergency management personnel and the community. This included application of arrangements relating to fatigue management, identification and treatment of hazards on the fireground, reporting of incidents, etc.”

### 2. Community Engagement

“Community engagement activities before, during and after incidents was undertaken effectively and utilised methods and tools including, social media, One Source One Message (OSOM), Emergency Alert, community meetings, Victorian Bushfire Information Line (VBIL) etc., to disseminate critical information and advice.”

### 3. Evacuation

“Arrangements for evacuation (procedures, triggers and processes) during bushfire were well understood.”

### 4. Predictive Services and Products

“Predictive models and mapping of fire risk tools were utilised effectively.”

“Predictive services and products were easily accessible.”

### 5. Integrated Initial Attack

“First responding crews had a clear understanding of the procedures and operational priorities when they arrived on scene and during initial attack on the fire.”

“During initial attack activities, crews from various agencies worked together in an integrated way.”

## 6. Transfer of Control

“The concept of Division Command was clearly understood and applied.”

“The transfer of control from the fireground to an ICC was achieved effectively? *(If this was not practically applied is this concept clearly understood?)*.”

## 7. Interoperability

“The progressive standardisation of operating systems and information and communications technologies since 2009 is achieving greater efficiency and interoperability between fire agencies. Examples of where this is benefiting/limiting operations are.....”

## 8. Preseason Preparedness Activities

“Preseason training, exercising and briefings adequately prepared me for operational activities throughout the FDP.”

## 9. Other key observations and findings

### Online Observation Collection

To enable a wider collection of observations and learnings from people involved in all levels of incident and emergency management throughout the FDP a specific multiagency online observation collection tool was established and introduced this year. This was one of the key learnings and actions undertaken by the State Review Team following the 2012/13 review.

All personnel from any level within fire agencies and emergency management partner agencies were encouraged to provide their observations regardless of whether these had already been provided through face to face debriefing. Most importantly this system permitted those people who were unable to attend or be involved in any other way to voice their observations.

The information collected from this tool was collated at a central location and distributed to regions to inform their review activities. This process was intended to reduce additional expectations and workload on agencies at a time when a range of other competing activities were already underway.

This tool was also intended to eliminate the need for individual regions to independently develop similar information collection processes and tools, which has been the case in previous years.

The information provided to regions is intended to inform both local initiatives in addition to State based activities and initiatives.

### Governance and support

Governance of the Post FDP Review was undertaken by the State Review Team, the representatives of which provided support and guidance on the governance and conduct of review activities at all levels.

The State Review Team consists of representation from the following agencies:

- EMV
- CFA
- DEPI
- MFB
- Victoria Police
- VICSES

# Participation

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Through input during debriefs, online responses and other review activities, people from the following agencies and organisations provided observations, feedback and insights into the 2013/14 fire season.

- Ambulance Victoria
- Australian Defence Force
- Australian Energy Market Operator
- Bureau of Meteorology
- CFA
- Department of Business and Industry
- Department of Education and Early Childhood Development
- Department of Environment and Primary Industries
- Department of Health
- Department of Human Services
- Department of Justice
- Department of Premier and Cabinet
- Department of Transport
- Emergency Services Telecommunication Authority
- Environment Protection Authority
- Emergency Management Victoria
- Melbourne Water
- Metropolitan Fire Brigade
- Municipal Association of Victoria
- Municipalities
- Office of the Emergency Services Commissioner
- Parks Victoria
- Power and water companies
- Public Transport Victoria
- Red Cross
- Vic Forests
- Vic Roads
- Victoria Police
- Victoria State Emergency Service
- Tourism and commerce operators



## Section Two – Season Overview

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# Season Overview

## Seasonal Bushfire Outlook 2013/14

In September 2013 the Bushfire Cooperative Research Centre (Bushfire CRC) released the *Southern Australia Seasonal Bushfire Outlook 2013-14*<sup>1</sup>. It indicated the following prognosis for the 2013/14 FDP:

*"Large areas of southern Australia, especially along the east and west coasts extending inland, face above normal fire potential for the 2013-2014 fire season, despite the extensive fires in some parts of the country over the last 12 months. However, the area most at risk does not extend right across the country, as was seen in 2012-2013. The above normal forecast is due to abundant grass growth across inland Australia, due to above average rainfall since May 2013. These conditions, coupled with above average temperatures across the country since January 2013, have resulted in a build up of fuel in grasslands. These higher temperatures have also seen forests begin to dry out. Elsewhere across southern Australia, the fire potential is considered to be normal for 2013-2014, but normal fire conditions can still produce fast running fires."*

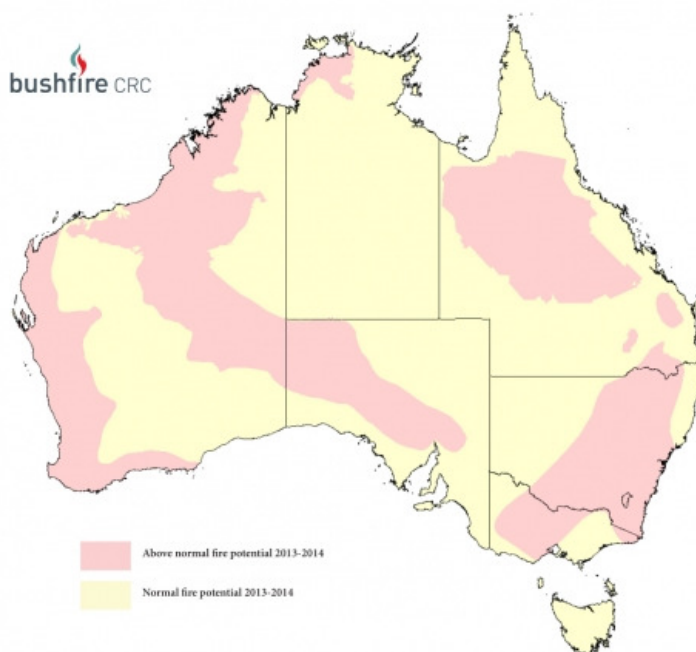
The Victorian Regional Summary included more detailed prediction:

*"Over the past 12 months, much of Victoria has experienced below average rainfall. The exception is the east, where average rainfall occurred. forests are expected to be more flammable than normal due to the lingering effect of last summer's extreme dryness and heat, with dry underlying soil profiles and more abundant dead elevated, near-surface and bark fuels in these forests."*

*Despite some chance of above average spring rains and reasonable winter rainfall, significant underlying dryness is likely to continue to be present in many western and central forests. These areas can expect above normal fire potential. Strong drying of soils and fuels has also commenced in east Gippsland, which may result in early bushfire activity if this trend continues."*

*The exception to this is in coastal parts of the south West, Mallee and West and south Gippsland, where above average rainfall has occurred in the past few months. As a result of this rain, a normal fire season is expected in these areas."*

*Current expectations are for average to above average grass growth in western Victoria and the north east of the state, based on receiving average to above average rain during spring. The timing and severity of grass fires will depend strongly on rainfall patterns throughout spring."*



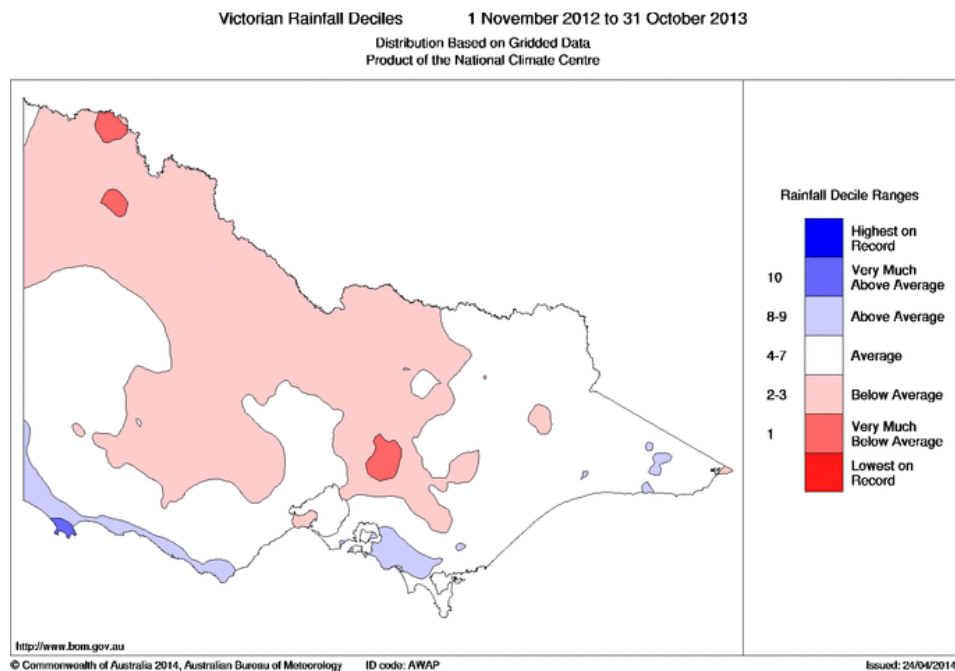
<sup>1</sup> Fire Note 116 - *Southern Australia Seasonal Bushfire Outlook 2013-14* – Bushfire CRC September 2013



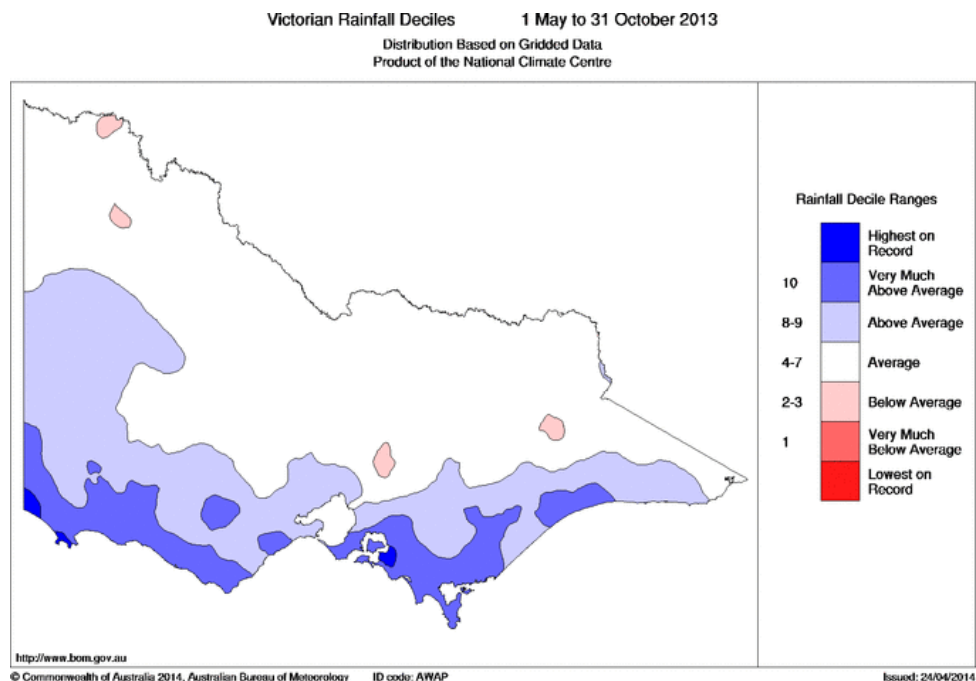
## Weather and Climate

### Antecedent Conditions

After successive La Nina years in 2010/11 and 2011/12 a return to generally average to below average rainfall was observed in the year leading up to the beginning of the 2013/14 FDP. The image below shows that rainfall over most of western and central Victoria in the 12 months to 31 October 2013 was below average while falls were closer to average in the east. Above average rainfall was restricted to the coastal fringe, mainly in the southwest.



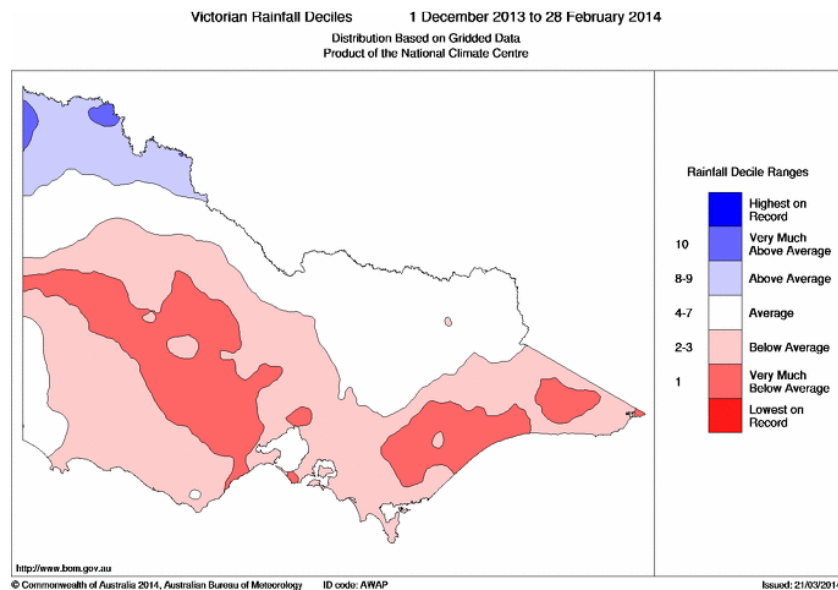
This rainfall deficit was the result of a particularly dry summer/autumn period, as evidenced by the rainfall decile chart for the six months up to the beginning of the season, which shows rainfall over inland areas was generally average through winter/spring. South of the ranges and through the Wimmera rainfall was above to very much above average in the immediate lead up to the 2013/14 FDP.



## Outlook for the Season and Resultant Conditions

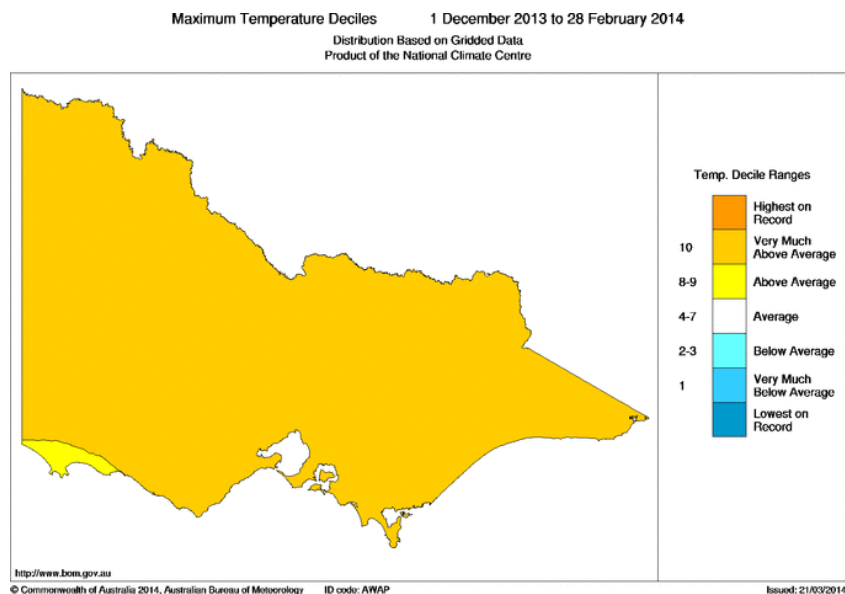
At the end of spring the tropical Pacific remained in an ENSO-neutral state and was forecast to continue through summer. The Seasonal Climate Outlook therefore showed no strong signal towards wetter or drier than average conditions over the summer months across much of south eastern Australia. The outlook was similar for maximum temperatures with odds only very slightly in favour of above average conditions across Victoria.

Rainfall across the summer months was below to very much below average across western and southern Victoria, with the exception of the far northwest due largely to a single rain event during February 2014.



The big story of the season though was the temperatures. The maximum temperature deciles map for summer shows that temperatures were very much above average over essentially the entire state, and the above average conditions continued into early autumn. January 2014 was particularly warm with an extreme heat-wave affecting the State from the 13 - 17 January 2014. Numerous records were broken for extended periods of heat. Most notably, the averaged data revealed that Victoria had its hottest four-day period on record, for both maximum and daily mean temperature. In both cases these surpassed records set in 2009, while for three-day periods the 2014 heatwave ranked second behind that of 2009. These two heatwaves, both of which have occurred in the last five years, stand ahead of any others recorded on a state-wide basis. The heatwave was more notable for persistent heat than for individual extreme hot days.

It reached 45°C in Victoria on three days during the heatwave. There have now been 21 calendar days in the period from 2001-2014 when it has reached 45°C at one or more Victorian locations (1.5 days per year), compared with 13 days in the 44 years (0.3 days per year) from 1957 to 2000. This is an approximately fivefold increase in the average annual frequency of such temperatures.



## Fire Dangers, Fire Weather Warnings and Total Fire Bans

There were five days in particular where fire danger spiked at Severe to Extreme levels, all just ahead of a cold front and associated wind change:

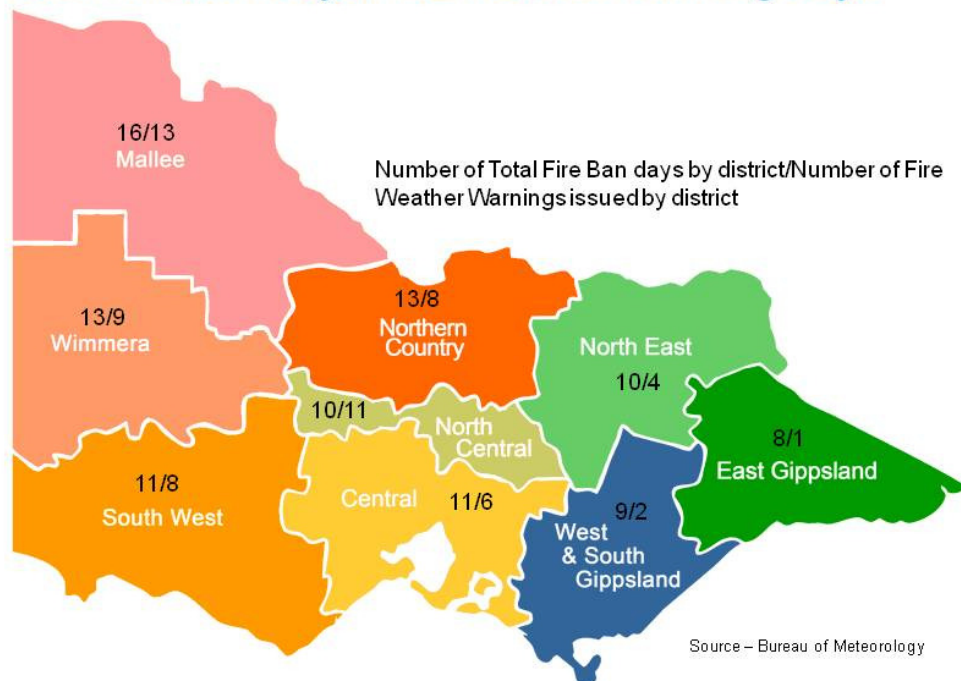
- 19 December 2013
- 28 December 2013
- 17 January 2014
- 28 January 2014
- 9 February 2014

The lack of significant winds accompanying the majority of the heat-wave in January 2014 saved Victoria from a protracted spell of Severe to Extreme fire dangers at this time. The hot, dry air returned once again from the 8 – 9 February 2014 ahead of a strong and squally wind change on the 9 February 2014, which could be described as the worst fire weather conditions since Black Saturday in 2009. The change that swept across the State on the 9 February 2014 was not accompanied by any rainfall.

Fire Weather Warnings were issued on 19 days throughout the season. Although higher than each of the past 3 seasons this is lower than each of the eight seasons prior to that, from 2002/03 to 2009/10.

Total Fire Bans (TFBs) were issued by the Bureau on behalf of the CFA for 17 days during the season, 16 of which coincided with Fire Weather Warnings (FWWs) being issued (one day when TFB was issued without a FWW, three days when FWWs were issued without a TFB). TFBs covered the whole State on seven days this season and there were a significantly greater number of days where TFBs were issued without FWWs in the east of the state compared with the west.

## Total Fire Ban Days/Fire Weather Warning Days



## Total Fire Bans

Declared Districts	Declared date & time
Mallee	07/11/2013 00:01 to 07/11/2013 23:59
Mallee	02/12/2013 00:01 to 02/12/2013 23:59
Mallee, Wimmera & Northern Country	19/12/2013 00:01 to 19/12/2013 23:59
Mallee, Northern Country & North East	20/12/2013 00:01 to 20/12/2013 23:59
Mallee, Wimmera, South West, Northern Country, North Central, Central & North East	28/12/2013 00:01 to 28/12/2013 23:59
Mallee, Wimmera and Northern Country	01/01/2014 01:00 to 01/01/2014 23:59
Mallee, Wimmera, South West, Northern Country, North Central, Central, West & South Gippsland	14/01/2014 00:01 to 14/01/2014 23:59
whole State of Victoria	15/01/2014 00:01 to 15/01/2014 23:59
whole State of Victoria	16/01/2014 00:01 to 16/01/2014 23:59
whole State of Victoria	17/01/2014 00:01 to 17/01/2014 23:59
Mallee, Wimmera, Northern Country, North East, East Gippsland, West & South Gippsland	18/01/2014 00:01 to 18/01/2014 23:59
whole State of Victoria	28/01/2014 00:01 to 28/01/2014 23:59
South West, North Central & Central	02/02/2014 00:01 to 02/02/2014 23:59
whole State of Victoria	03/02/2014 00:01 to 03/02/2014 23:59
whole State of Victoria	08/02/2014 00:01 to 09/02/2014 23:59
Mallee, Wimmera, South West & Central	11/03/2014 00:01 to 11/03/2014 23:59
<b>Total declarations - 16</b>	<b>Total days - 17</b>

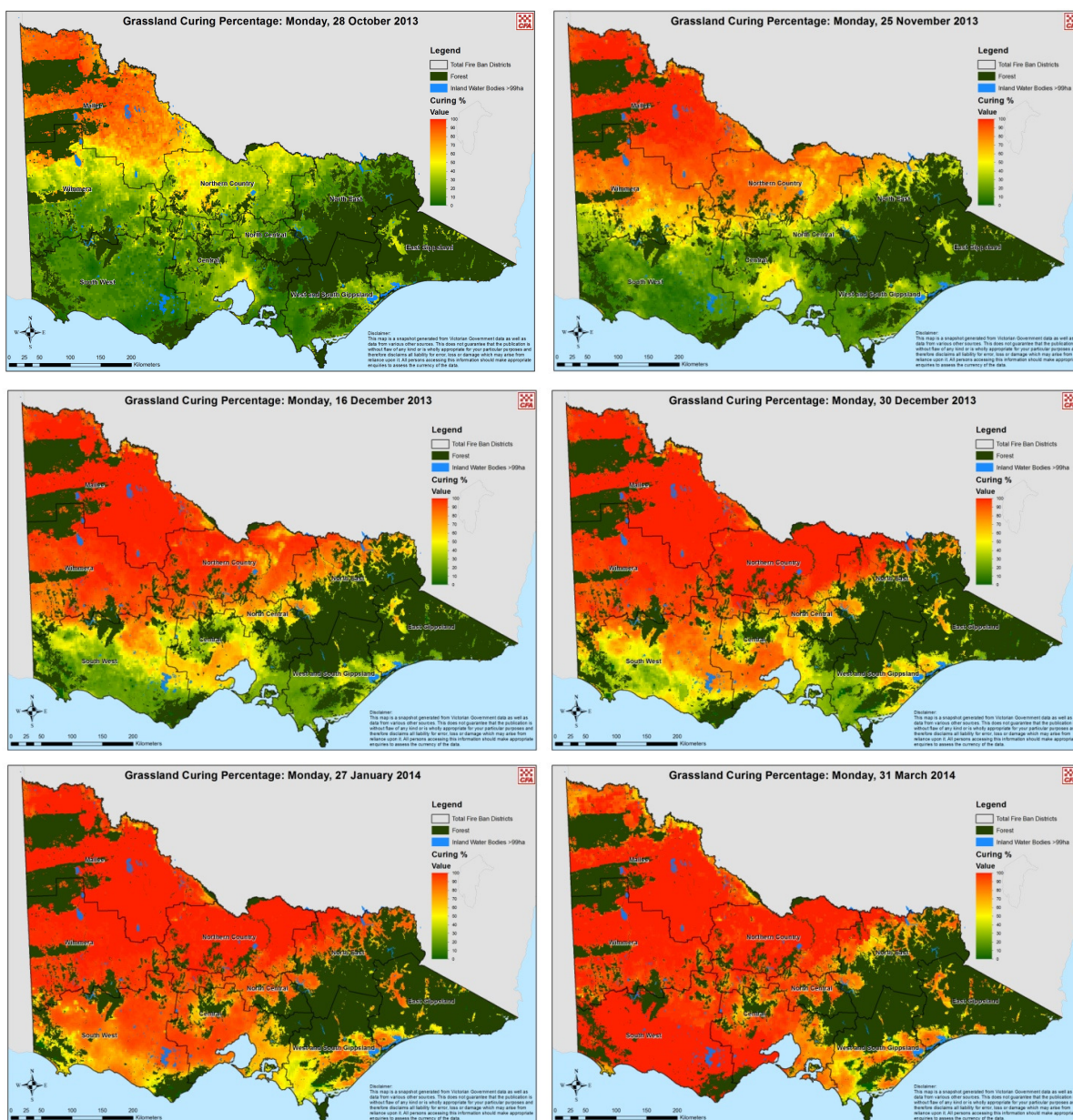
## Fuel curing/Soil moisture

The progress of fuel curing throughout Victoria followed an established drying trend commencing in the state's North West and extending east and south through the following months. Grassland curing in the state's north west, in some parts, had reached 100% by late October and this trend continued across Victoria over the next three months until most of the state had reached similar values by late January 2014.

Grassland fuel loads were considered to be average again this year returning to the levels seen before the extended drought period between the late 1990's and 2009. Significant hot and dry conditions throughout December 2013 and particularly January 2014, during which Victorian and much of Australia's south were subjected to many days of heatwave conditions, also resulted in extensive drying of fuels in forest areas.

Soil dryness, in many parts of western and central Victoria was affected by below average rainfall in the 12 months leading up to summer resulting in limited recovery from the 2012/13 FDP and contributing to early curing throughout this area. Other parts of the state experienced more average rainfall and subsequently returned to expected soil moisture values through winter and spring. The high number of hot and dry days through December 2013 and January 2014 resulted in significant reductions of remaining soil moisture.

The conditions described above meant much of the state experienced conditions which supported intense, fast moving fires which burnt under the influence of mild temperatures and often with little wind.





## Operational Activity

Victoria again experienced a significant fire season in 2013/14 reaffirming its status as one of the most bushfire prone areas in the world. Predicted to be an “average” to “above average” season in some parts of the state, by November grass and bush across Victoria were at risk of fire as fuel curing followed an established drying trend commencing in the state’s north west and extending east and south through the coming months. In January 2014 Victoria and much of southern Australia, experienced very hot and dry conditions resulting in 13 days of declared heatwave. This period ensured all grass and bushland was ready for intense fires.

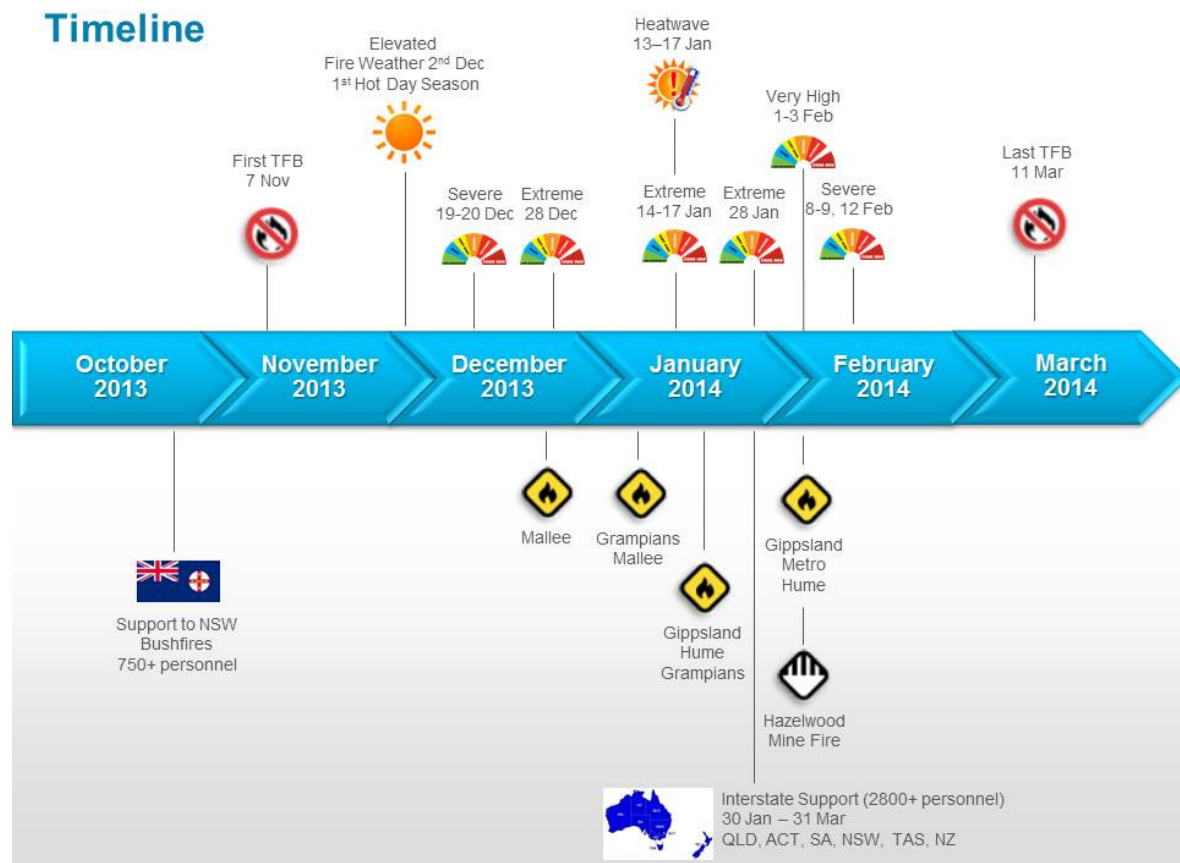
Bushfires which were intense, fast moving, and ran through the night impacted on most parts of the state. Again this year many occurred late in the day and spread rapidly under conditions of mild temperatures and light winds, often from the south.

Aggressive initial attack was a key factor to success and included the extensive use of firefighting aircraft (approximately 10,000 hours of flying time) to support ground crews. Firefighters from CFA, DEPI, NEO and MFB responded to more than 4,600 bush and grass fires over a five month period.

Total Fire Bans were declared in all or parts of the state on 17 days between 7 November 2103 and 11 March 2014.

A band of lightning which crossed most of the state in mid January 2014 started a significant number of fires including those in the Mallee and East Gippsland some of which burnt for 70 days. A disappointing reality again this year was that many fires that volunteer and career firefighters worked so hard to contain appear to have been deliberately lit.

For weeks, large campaign fires in the Mallee, Grampians and East Gippsland tested not just the fire services but also the rural communities they were threatening.



Tragically, this season again bought home how dangerous bushfire can be with a community member losing their life near Halls Gap. Between December 2013 and April 2014 more than 463,000 hectares of public and private land was burnt and a total of 80 residences destroyed. Livestock losses exceeded 21,000 head, almost 3,000 kilometres of fencing was destroyed, more than 8,000 tonnes of hay and grain storage and in excess of 22,000 hectares of pasture, crop and plantation were affected by fire. In addition

some 300,000 hectares of public land (mainly bush and forests in the Mallee and East Gippsland) were consumed throughout the FDP.

Peri-urban areas on Melbourne's fringe were again this year affected by large fires. The most significant started at Mickleham, almost immediately impacting on residential areas before spreading north as far as Kilmore consuming over 22,000 hectares of pasture and crop, destroying 18 homes and thousands of head of stock. Another, just south of Gisborne on the same day, also claimed five homes. The community of Warrandyte faced fire, for which they prepare every year; also destroying three homes in this area. Other fires also impacted on communities at Dromana, Lara and within the Metropolitan Fire District at Keilor. This impact again illustrated the variation in community understanding, preparedness and risks of living in the urban/rural interface.

A fire in the Hazelwood Open Cut Mine near Morwell, in the Latrobe Valley, presented additional challenges for fire and emergency services as this blaze burned for 43 days. Involving people from Victoria, New South Wales, Australian Capital Territory, Queensland, South Australia and Tasmania the magnitude and impact of the fire on the community of Morwell was on a scale not seen before. On 11 March 2014, the Premier of Victoria Denis Naphine, announced an independent inquiry into the circumstances of the Hazelwood Mine fire, including the emergency response and the support provided to Morwell residents and other affected communities.

The Board of Inquiry is being led by Justice Bernard Teague AO. He is joined by Professor Emeritus John Catford and Ms Sonia Petering.

Issuing timely, tailored and relevant warnings and information continued to be key focus of this fire season consistent with the strategic control priorities. Incident Controllers issued a total 3644 Warnings and Advice messages over the fire season beginning in mid November 2013. Telephone alerting was used on 79 occasions during this time compared to 61 last year. Community meetings formed a critical part of engaging with and informing the community with 39 held throughout the state during fires. The Victorian Bushfire Information Line received more than 50,141 calls. This is the second busiest season on record after 2008/09.

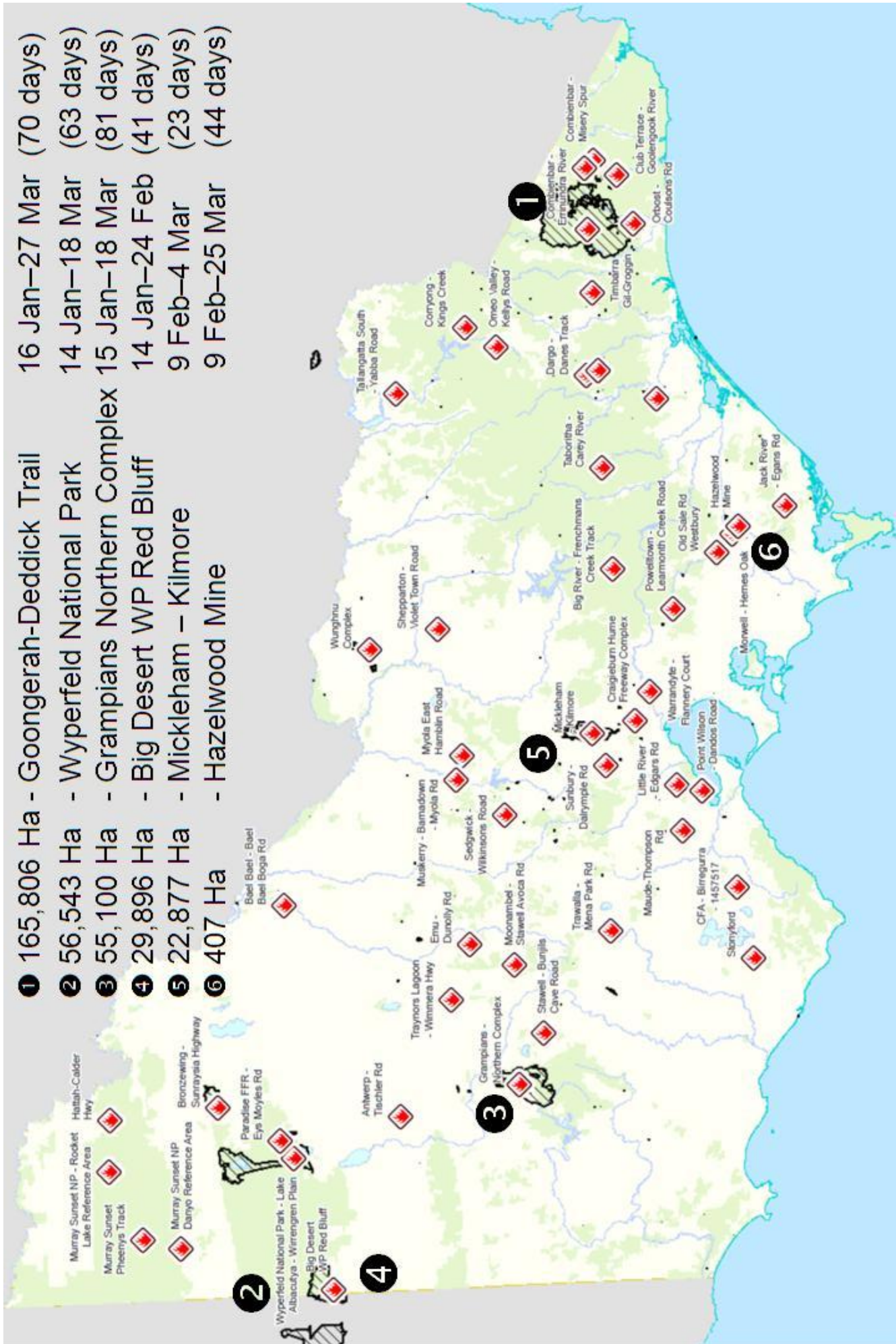
Evacuation arrangements introduced following the 2009 Black Saturday fires were truly tested this year with the evacuation of several communities by emergency services during the FDP.

## State Overview – Loss and Impact

	Number	Estimated Cost (\$m)
<b>Primary residence destroyed</b>	<b>61</b>	
<b>Total residence destroyed</b>	<b>80</b>	
<b>Fencing</b>	<b>2,992 km</b>	<b>12.07</b>
<b>Horticulture</b>	<b>720 ha</b>	<b>7.08</b>
<b>Hay &amp; Stored Grain</b>	<b>8,289 tonne</b>	<b>1.35</b>
<b>Pastures, Crop &amp; Plantation</b>	<b>22,632 ha</b>	<b>10.93</b>
<b>Livestock</b>	<b>21,664</b>	<b>2.84</b>
<b>Farm Infrastructure</b>		<b>1.46</b>

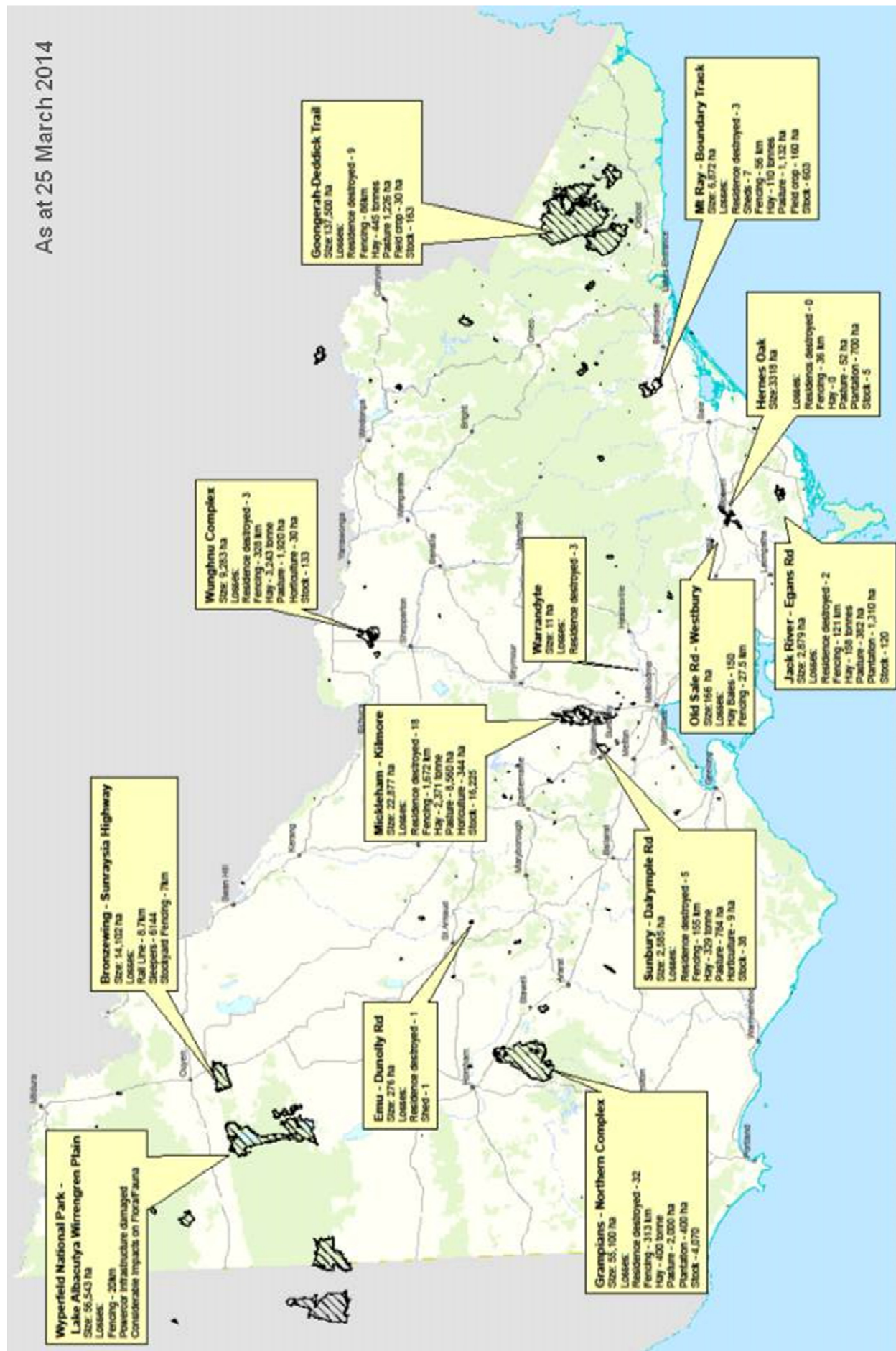
*Health and Human Services – Impact, Loss and Damage  
Accurate as at 25 March 2014*

Victoria was called on to support our interstate counterparts in October 2013 when New South Wales experienced significant fires. Over 750 Victorian emergency response personnel from CFA, DEPI, MFB, VICSES provided support to our interstate colleagues undertaking Incident Management and firefighting roles. In addition personnel and firefighting appliances provided coverage of Fire Rescue New South Wales stations in the Greater Sydney area to release local resources for deployment throughout the state.





## Key Loss and Damage Information



## Emergency Management Partners

### Ambulance Victoria

The Bushfire Season of 2013/14 saw significant activity for Ambulance Victoria (AV). On top of regular resourcing, AV deployed an additional 4,021 paramedic hours to over 30 bushfire operations immediately following the heatwave. AV also deployed first aid agencies in support of fire fighting and relief operations.

These operations were all managed under the new Third Edition of the State Health Emergency Response Plan (SHERP) released in 2013, which provides for a more integrated whole-of-health approach in addition to clear reporting relationships between pre-hospital, health and control agency leaders. As a result, AV Health Commanders at all tiers of response were better connected with Incident Controllers and their health colleagues which ultimately resulted in greater situational awareness and more coordinated operations.

This year, AV co-located its Ambulance Emergency Operations Centre with the Health and Human Services State Emergency Management Centre at 50 Lonsdale St Melbourne. This collaboration proved highly effective, allowing for the provision of significant strategic achievements in compressed timeframes to positively impact on the health outcomes during emergencies.

The heatwave Victoria experienced from Monday 13 January to Saturday 18 January 2014 saw unprecedented levels of demand for ambulance services across the state, particularly in Melbourne.

As a result of the cumulative effect of several hot days and nights, ambulance demand escalated. AV increased its capability to respond by rostering additional paramedics, managers, non-emergency, communications and support staff to manage this. Throughout the week, an additional 240 operational emergency and 100 non-emergency shifts were filled.

Support resources were also provided from the MFB under their Emergency Medical Response program.

Friday 17 January 2014 saw a record 2,553 triple zero calls for ambulance, an increase of about 30 per cent on Monday 13 January's 2014 call volume. This followed Thursday's total of 2,506 "triple zero" calls for ambulance; the second highest number of ambulance calls ever answered by ESTA.

Cardiac arrests also saw a significant spike. AV was called to 77 suspected cardiac arrests on Friday 17 January 2014 alone compared to the average 12 per day. Unfortunately AV also received a high number of calls for children locked in cars during the extreme temperatures.

AV was an integral part of the multi-agency effort to manage the Hazelwood Open Cut Mine fire and its potential effects on the local community.

AV Health Commanders were embedded in the Emergency Management Teams (EMTs) at all tiers and worked closely with the Department of Health to provide support to the community. An additional 7,670 paramedic hours were provided in support of the mine fire and community response.

Specialist Paramedics trained in Breathing Apparatus (BA) were deployed to the mine to support potential rescue operations.

Victoria Police also provided BA trained staff to increase AV's capacity to respond within the mine.

AV paramedics were embedded in the CFA community liaison teams, the Moe Respite Centre and Morwell Community Information and Recovery Centre to provide health advice and information to the community. AV was also involved in relocating the St Hilary's aged care facility as that became required.



**Ambulance Victoria vehicles at Hazelwood Staging Area**

The innovative Community Health Assessment Centre at Morwell was established by AV on behalf of the Department of Health, and was staffed by paramedics and nurses. In 38 days of deployment more than 2,100 members of the local community received direct support. More than 1,700 tests for carbon monoxide poisoning were undertaken, in excess of 1,500 P2 rated respiratory protection masks were distributed, along with 12,000 information leaflets.

The bushfire season saw many significant innovations and improvements in AV's capability as both the Health Command agency and as a pre-hospital health service. It also saw an increase in collaboration and coordination with both control and health agencies.

AV looks forward to contributing to future improvements in these areas.

### Victoria Police

Victoria Police provided critical coordination and support functions prior to and during the FDP. During preseason activities Victoria Police led numerous exercises throughout the state relating to evacuation management in addition to contributing to briefings. Throughout the FDP Victoria Police members supported functions at incident, regional and state levels through involvement with EMTs, extensive traffic management operations during fires and evacuation management in the Grampians and Gippsland. All of this was in addition to Victoria Police's normal business activities in the community.

### Victoria State Emergency Service

VICSES personnel again showed their ability to provide support to fire agencies during fires throughout the FDP. The provision of representation in EMTs at each level of control, Incident Management functions, staging area support, ground support and liaison are a few of the roles which were undertaken by VICSES volunteers and career staff. Like other agencies all this was undertaken on top of their normal business functions.

### Municipalities

Municipalities across the state were actively involved in supporting other emergency management agencies throughout the FDP. Personnel provided key communication pathways and partnerships during both response and recovery phases of fires. Working with all agencies during the range of fires and emergencies encountered throughout the FDP municipalities were represented at each level of control, provided resources to support operations to both control and coordination agencies and worked in conjunction with the state's recovery agencies to assist communities return to normal.

### Red Cross

While covered in some detail by Health and Human Services there are a number of additional agencies who were actively involved in key functions during response and recovery phases of fires. Red Cross assisted with registration of community members who were displaced during emergencies and support at relief centres throughout the state. In addition local groups supported smaller incidents with catering and welfare.

### Health and Human Services – Emergency Management

Throughout the 2013/14 FDP season Health and Human Services Emergency Management, coordinated through its State Emergency Management Centre and through its Regional Emergency Operations Centres, activated to respond to multiple incidents. These included state-wide heat/health incidents in January and February 2014, and fires across the Grampians, Loddon Mallee, Gippsland and Hume regions, many of them occurring simultaneously and for significant periods of time.

With little respite between each event, Health and Human Services Emergency Management worked on a continuous roster to meet their emergency management requirements.



**Kilmore residents at the local racecourse during the Mickleham/Kilmore Fire**





The mobilisation of health and human services resources was unusually protracted, spanning over a period of more than three months.

The Department of Human Services (DHS) coordinated relief and recovery activities across the state, as well as providing personal hardship financial assistance and practical information for individuals and households affected by emergencies.

The Department of Health (DH) provided heat health messaging, public health advice after bushfires, and extensive advice and services, including a Community Health Assessment Centre, during and after the Hazelwood Mine-Fire.

Health and Human Services Emergency Management Liaison Officers (EMLOs) were embedded at Regional Control Centres (RCCs) and also at the SCC.



## Other Agencies

Dozens of other agencies and organisations supported fire and emergency management agencies throughout the FDP. These consisted of state and locally based groups, many of which undertook these functions in support of lead agencies and through representation on EMTs throughout the summer period.

## Section Three - Observations

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# Observations

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The following summarises feedback for the key review themes and others developed from debriefing and observation collection activities conducted throughout the state and incorporating input from interstate agencies who provided support throughout the FDP.

In addition to the observations and information collected throughout face to face debriefing activities at all levels of command, control and coordination, a significant number of observations were provided by fire and emergency management personnel using the online observation collection system

## Safety

“Operations were undertaken with a priority on the safety of firefighting and emergency management personnel and the community. This included application of arrangements relating to fatigue management, identification and treatment of hazards on the fireground, reporting of incidents, etc.”

An important reflection that was collected this season was that ‘everyone came home safely and the community came home safely’. With the length and level of operational activity experienced this season, it is a credit to the fire agencies, emergency partners and the community that this occurred.

There was an increased and deliberate focus on safety at all levels this season, very much in accordance with the Strategic Control Priorities-State Controller’s Intent. Safety Officers were well embedded in IMTs and increasingly on the fireground. The SCC OHS Advisor role in the State Control Centre was filled on a rostered basis by representatives from CFA, DEPI, MFB and SES which highlighted the positive commitment to the role, with these individuals working cooperatively. This role’s interaction with the State Control Team was considered essential in maintaining an awareness of the status of major incidents plus the ability to raise issues in a timely manner.

State-wide safety messaging was used to maintain a focus on safety during incidents, and the dissemination of safety issues and alerts between and across agencies was acknowledged as an important way to share valuable learnings widely. Comments were made regarding the prominence of safety messaging, including in the Incident Shift Plans. Briefing of key safety issues between Incident Controllers, Regional Controllers and the State Controller was effective.

It was noted that there was increased uptake of reporting by various methods and the importance of maintaining near miss and accident /incident reporting from fireground through to agency was demonstrated this season. Reporting ensured that issues could be addressed early and trends analysed. Reinforcement of reporting requirements should be continual, including on deployments interstate. It was also suggested that a Safety Officer/support member/peer was included in an interstate taskforce to ensure that procedure is followed. While all agencies utilised essentially the same system to record injuries, near misses and hazards, they currently function as individual systems. To enable the ability to assess broader injury trends incorporating all agency personnel, the system access and functionality for SCC OHS Advisor roles needs to be addressed prior to next fire season, including the establishment of confidentiality and privacy protocols relating to access and data management.

Personal hygiene and washing station procedures and amenities at Staging Areas was good. Lessons identified from the Hazelwood Open Cut Mine fire included the importance of providing a pre-deployment briefing to crews on the clean area requirements at the staging area, provision of facilities for cleaning and replacing equipment or clothing where required and developing and following a safety plan. Ensuring that specific messaging continues where there may be health concerns was also supported. Vigilance on the wearing of full protective clothing should continue, particularly where contractors are engaged at incidents.

While individual agencies tended to undertake reviews of incidents involving their personnel, limited interagency review activities occurred. Collaborative reviews into serious injuries and near misses continued to be a gap and exposure for the sector, and a lost opportunity for the broader emergency sector regarding sharing learning opportunities and instigating timely preventative strategies across agencies. Reviewing the current “investigation” criteria and methodologies within the agencies and the establishment of formal interagency arrangements for timely reviews, including promotion of joint reviews could be a key focus moving forward.

Fatigue management was a major focus this season and there was significant feedback collected raising fatigue management as an issue. Whilst it was observed that fatigue management was given increased attention, it was also noted as an area of risk that can always be improved. There were instances of

crews and IMT members returning to incidents stating that they were still fatigued from previous deployments and shifts, and driver experience and fatigue issues did arise, as did reports of heat stress. Readiness fatigue and a greater number of fires running throughout the day and into the night were also contributing factors this year.

Greater education may be required to entrench effective arrangements, and ensure that fatigue is constantly managed. It was also suggested that alignment, standardisation and simplification of multi-agency methods and practices should occur, to ensure consistency in operating, incident planning and reducing the risks to emergency personnel.

Improved planning of shift changeovers, management of workload and attention to heat exhaustion were areas identified as opportunities for improvement. Transportation of personnel was also highlighted as a cause of fatigue this season, given the increased amount of travel across the state that was required. Transporting crews long distances by road also needs to take into consideration crew comfort, particularly the availability and size of buses. A suggestion was made to not deploy single cab tankers on strike teams, to prevent crews sitting on the back and to enhance safety by having all crew members within the cab. Requests were received to develop guidelines and processes regarding travel to and from incidents to provide clarity and consistency across the state, and improve logistics and resource planning.

An observation was made recognising the importance of 'self-care', including knowing when to ask for help, knowing when to ask for time off and accepting when others advise you to take time off. Discussing with and advising fireground crews to consider thinking of their work capacity on extreme days, and how their usual level of functioning may be reduced, was also mentioned.

Another observation collected identified that clear records of personnel attending incidents including the date, which shift, the duration of attendance and their role, varies across the state. This created gaps in the ability to track safety and wellbeing issues and it was suggested that deployment and record management of incident personnel be reviewed to enable accurate records to be kept.

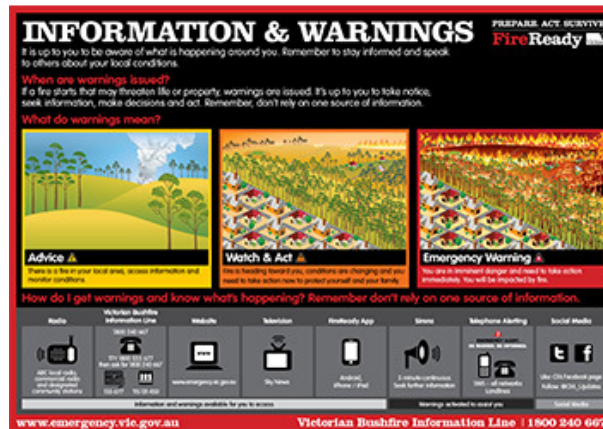
The increased focus on hazardous tree assessment and treatment in previous seasons had clear benefits during 2013/14, with a greater awareness and understanding by personnel and the risks being assessed and treated in a timelier manner.

Issue	Comment	Action
Safety and Welfare.	Deliberate focus on safety during a long and busy season. Safety messaging issued state-wide was important.	Continuously focus, at all levels, on the safety of emergency services personnel and community members before, during and after incidents. Include in pre-season preparedness activities. Review deployment and record management of incident personnel to ensure accurate record keeping.
Fatigue Management.	Increased attention on fatigue across all agencies. Specific agency fatigue policies and procedures makes joint resource management challenging.	Consider reviewing multi-agency fatigue management to improve state-wide alignment and consistency.
Travel to and from incidents.	Travel distances often long when moving personnel across the state.	Consider reviewing multi-agency fatigue management and incorporate travelling into these to improve state-wide alignment and consistency.
OHS reporting and reviews.	Increased use of reporting methods this season ensuring issues could be addressed and trends analysed. Limited multi-agency review of incidents does not promote learning or sharing across the sector.	Reinforce the requirement to report near misses, accidents and incidents with all personnel, at every opportunity. To be communicated as part of 2014/15 pre-season activities.



## Community Engagement

“Community engagement activities before, during and after incidents was undertaken effectively and utilised methods and tools including, social media, OSOM, EA, community meetings, VBIL etc., to disseminate critical information and advice.”



Messaging Summary			
Recommendation to Evacuate	Emergency Warnings	Watch and Act	Advice
13	358	545	2728

1 December 2013 – 31 March 2014 a total of 3644 warnings and advice messages were issued compared to 2733 for the same period in 2012/13.

Emergency Alert was utilised on 79 occasions to provide targeted messaging to communities using telephony based infrastructure.

Community information, warnings and engagement was a highlight of activities undertaken during the 2013/14 FDP. As illustrated above extensive information was provided by IMTs during fires and other emergencies ensuring the highest level of information was provide to affected communities. In addition local, regional and state based media was provided with regular information updates of a general or incident specific nature to drive news based communication to the community. Public Information and community engagement teams undertook a range of other actions including public meetings, static information displays and targeted face to face activities to support affected communities throughout the state.

Debriefing activities and observations collected during the review complemented other evidence which supports the significant improvements which have been implemented by emergency management agencies since the 2009 Black Saturday fires.

The enhancement of One Source One Message (OSOM) templates was identified as one of the many improvements introduced prior to the FDP. Few responses compared to previous years related to the system functionality which reflects improvements to the system and increasing proficiency of agency personnel in its use. Careful consideration of message timing was applied during the evacuation of communities affected by the Grampians - Northern Complex of fires. The “Recommendation to Evacuate” messaging was provided during the public meetings held in Halls Gap and Dadswells Bridge and permitted the community to immediately have questions answered in these forums. One Incident Controller for this fire indicated the strength in information which was provided to both the resident and tourist community ahead of the evacuation resulted in large numbers of people leaving the area voluntarily before the evacuation recommendation.

Before outlining several areas identified for improvement from the review activities this year it is essential to recognise the enormity of community engagement work undertaken by people from all agencies. The statistics shown above show a mean increase of 33% in messaging alone. The VBIL dealt with in excess of 50,000 calls from the community, the second busiest season on record after 2008/09. Individual engagements with members of the community during the Hazelwood Open Cut Mine Fire alone were estimated to be approximately 22,000. Thirty nine community meetings were conducted during or immediately after fires throughout the state. In addition to fire related engagement this year’s extended

period of heatwave conditions meant health and human services within the state played a key role in preparing and informing our community during these periods.

The extended nature of operations this year was identified as an impact on existing Public Information personnel and highlights the need to continually develop capacity and capability within the state. Interstate personnel were responsible for the Public Information function during several fires as part of interstate IMTs who supported Victorian agencies.

Some fires attracted significant numbers of messages which were felt by some agency personnel as “wearing the community out” through over messaging particularly after fires were controlled and during the several days following when the information in messages did not change.

An occasion was identified this year where one community which was under impact by two fires was receiving different levels of warning as one fire was brought under control and the other continued to escalate. This created confusion in this community despite the messages being for two different fires. It was identified the existing management of warnings and advice messaging would be enhanced if this could be displayed spatially. This would enhance understanding by agency personnel of what messaging was in place and for which communities and localities. It would also ensure multiple messaging for the same community being provided by different ICCs could be undertaken in a more coordinated and less confusing manner.

Perceived demands from the community for timely massaging during the initial stages of fires was again illustrated as being in direct conflict with message quality as often the desire to disseminate a message was undertaken prior to firefighting resources giving effective situation information

Existing wording used in some messaging was identified as needing further enhancement. The application of existing templates for a community which is being impacted by bushfire was considered to be different to one being impacted on by a fast moving grassfire. The application of “shelter in place” or in fact moving to the other side of the road were illustrated as more appropriate to those people who live in the developing urban areas around Melbourne and provincial cities and towns. This was highlighted at the start of the season and improved as it progressed. Related to this issue were observations which supported the continued need to ensure education relating to warnings is provided to the community to ensure they understand the information and can apply it appropriately. One example outlined the “self evacuation” of staff and patrons from a restaurant in a built up residential/commercial area two kilometres from the edge of a grassfire. There was no risk to the people but illustrated the messaging which was being provided to this community was not being interpreted correctly.

Finally it was identified there is a need to monitor media messaging which is provided from the SCC that it reflects the true conditions across the state and does not generalise too much. For example conditions across the state may include significant variations (hot, dry and windy in Gippsland but raining in Barwon Southwest) and media information needs to reflect this.



**Community members move away from immediate danger of grassfire by crossing the road – a simple relocation**

Issue	Comment	Action
Public Information personnel	The extended nature of operations this year was identified as an impact on existing Public Information personnel and highlights the need to continually develop capacity and capability within the state	Continued and ongoing focus of emergency management agencies to enhance existing capacity and capability for Public Information Section resourcing.
Messaging	Over messaging to the community when there are no changes to the content – particularly when a fire is controlled.  Multiple messages provided to the same community for different fires with different threat levels.  Continue to progress messaging application to fast moving grassfires – take shelter/move to the other side of the road.	Warnings and Capability Working Group to review these issues and develop initiatives prior to 2014/15 FDP
Systems	Pursue a capacity to spatially display existing warnings and advice messaging.	Warnings and Capability Working Group to review these issues and develop initiatives prior to 2014/15 FDP
Education	Continued need to reinforce within the community the meaning of warnings and how these should influence the application of their Bushfire Plan – if one is needed – in urbanised areas.	Warnings and Capability Working Group to review these to ensure a continued community education focus prior to 2014/15 FDP which addresses these observations.
Media Information	Media information issued at state level needs to address different weather or fire conditions across the state.	To be incorporated in agency media training prior to 2104/15 FDP.

## Evacuation

“Arrangements for evacuation (procedures, triggers and processes) during bushfire were well understood.”

Evacuation continued to be a focus of preparedness activities in the lead up to the 2013/14 FDP. Preseason briefings and exercises conducted by Victoria Police, and other partner agencies, continued to enhance a multiagency understanding of this critical activity aimed at reinforcing this as one option to protect our community when faced with bushfire. Observations and feedback from the sector through the review this year illustrate and support this continued focus on evacuation arrangement understanding.

Some minor changes were made by Victoria Police to Community Evacuation Information documentation in the lead up to the FDP although the significant majority of information remained unchanged from previous years.

Victorian emergency management agencies prepared for another FDP with activities relating to evacuation tested but yet to be applied in a real situation.

During the 2013/14 FDP Recommendations to Evacuate occurred during seven bushfires across the state.

Fire	Date	Communities Affected
GRAMPIANS - NORTHERN GRAMPIANS COMPLEX	17 January 2014	Pomonal, Bellfield, Lake Fyans, Halls Gap, Lake Lonsdale, Roses Gap, Dadswells Bridge, Heatherlie, Ledcourt
GOONGERAH – MT JERSEY	8 February 2014	Goongerah
ORBOST – STONEY CREEK	9 February 2014	Simpsons Creek, Tostaree, Walrewa, Waygara, Wombat Creek
GOONGERAH – DEDDICK TRAIL	9 February 2014	Bendoc, Delegate River, Bonang, Cabanandra, Deddick Valley, Dellicknora, Tubbut
ORBOST – RAYMOND CREEK - MOORS	9 February 2014	Bete Bolong, Bete Bolong North, Jarrahmond
GISBORNE – DALRYMPLE ROAD	9 February 2014	Cherokee, Heskett, Karrie, Mount Macedon
	10 February 2014	Bylands
MICKLEHAM - KILMORE	10 February 2014	Kilmore, Kilmore East

During the summer period it was also identified members of some communities undertook to evacuate or relocate from their homes to other locations without a specific Recommendation to Evacuate. There was evidence which demonstrated the perception of risk by some community members to be an opportunity to further develop an understanding in these communities. An example provided by agency personnel related to the Mickleham/Kilmore fire during the early stages when it was impacting on the outskirts of Craigieburn. A local business approximately 2.2 kilometres from the fire, well within the built up area, undertook to evacuate. This example illustrated where the perceived versus the real risk varied greatly.

As identified in previous reviews, there appears to be a continued need for some further work regarding when an evacuation process is applied, compared with what some would term “relocation/temporary relocation”, particularly on the edges of populated areas.

Observations from incident management personnel involved in the Grampians Complex evacuation identified a number of key learnings outlined below.

- Firstly it was considered essential for quality predictive fire behaviour and weather information to be linked into the ICC. A holistic view of the situation was considered necessary - “not solely an emergency response matter it is emergency management”. While evacuation guidelines and procedure existed there was no evacuation plan template to base the plan on and so the Evacuation Manager created this.
- The early appointment of a ‘Deputy Incident Controller – Recovery’ was considered essential, but needs to be the call of the Incident Controller when to initiate this. In the Grampians case it was considered the success of this event was due to a confident, proactive appointee. This person needs to have direct support from (relief/recovery) staff.
- Benefits were identified from having one single IEMT which integrates both response and recovery and all key IMT and IEMT personnel need to be co-located at ICC to avoid duplication and/or miscommunication of information and decisions. The IMT and IEMT need to be connected on the likelihood of successful achievement of the requirements necessary for specified outcomes (resources, information, messaging, etc.)
- Town sectorisation and Traffic Management Point planning took considerable time and effort, but it was necessary so all issues were covered and no disconnection existed. In the administration of the Recommendation to Evacuate it was identified the agency positions who are the signatories need to be determined considering who is available to sign at the time.
- In planning for the return of people it was recognised procedures and guidelines for evacuation exist, but a similar level of guidance and procedural support for returns does not. A decision making document similar to the evacuation documents would be useful for the return decision process. Also in planning for the return of people strategy/tactics and operationalisation of the plan is as important as the evacuation plan.
- Being proactive and getting residents back in to affected areas, once the risk had passed, at the earliest opportunity was considered a priority. However, in undertaking this it was considered some guidelines for residents may be necessary.
- Understanding resource requests to support an evacuation or an evacuated community is critical. Agencies need to provide timely information on resource availability to the IMT, as this has a direct impact on evacuation planning and implementation. Resources which support a timely return of evacuees (eg: hazardous tree assessment) are equally important as those needed for the evacuation. It was identified the same response resources can be effectively utilised for recovery therefore being multi tasked and reducing additional resource demands.
- Common assessment processes for hazardous trees between CFA/DEPI/NEO, VicRoads and local municipalities was one example identified by the Grampians team which could lead to more timely returns.
- Finally it was considered the Incident Controller needs to have the confidence to negotiate any underlying politics. In addition the person must be willing to accept some risk in an informed and outcome focussed manner relating to the evacuation at all stages and any second guessing/questioning of requests made by Incident Controller must be eliminated. There must be a high degree of trust in the Incident Controllers decision making.

Following the first evacuation during the Grampians – Northern Grampians Complex, the opportunity to review the evacuation during bushfire was undertaken by the Strategic Emergency Management Assurance Team (SEMAT)<sup>2</sup> assisted by fire service subject matter experts. This review identified a number of learning and continuous improvement opportunities relating to the following:

- Identification and inclusion of geographic sectors into planning documentation of communities with a high likelihood of evacuation being required;
- Triggers for mandatory insertion of a dedicated Evacuation Manager into the ICC;
- The creation and resourcing of a stand-alone Evacuation Team to support the Evacuation Manager as required;
- Review of existing evacuation guidance material for emergency management personnel;

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<sup>2</sup> Strategic Emergency Management Assurance Team (SEMAT) is a Victoria Police team responsible for reporting to the Chief Commissioner of Police on Command, Control and Coordination during emergencies.

- Ensure warnings are effective, unambiguous and understood by the community in order to better predict community instigated movements;
- Utilisation of evacuation subject matter experts to assist in planning and the execution of evacuations in a mentor role to local resources.

The success of evacuation activities throughout the FDP incorporated the fundamental of using local knowledge, local connections and local solutions.

Issue	Comment	Action
Evacuation	The practical application during the 2013/14 FDP of evacuation arrangements developed following the Victorian Bushfire Royal Commission presents the opportunity to review these arrangements. This will ensure the information, from the fires where this means of providing protection of life was applied, can be utilised to validate existing arrangements and ensure any necessary amendments can be implemented.	Victoria Police lead a multiagency review of learnings from the fires where evacuation was recommended throughout the 2013/14 FDP with the focus on enhancing from this information the existing evacuation arrangements prior to the 2014/15 FDP..
	The Grampians – Northern Complex fire and subsequent evacuation of Halls Gap, Dadswells Bridge and surrounding communities in January 2014 presents an opportunity to develop materials for the Victorian Emergency Management sector to learn from this experience.	State Review Team to develop and communicate materials suitable for the Victorian Emergency Management sector which incorporate the learnings from the Grampians – Northern Complex evacuations.
	This aspect of emergency management requires continued reinforcement within agencies and the community.	Principles of evacuation will continue to be reinforced for the 2014/15 FDP through briefings, exercises and scenarios. Evacuation will again be addressed in the Preseason Update and guidance in provided in the Fire Agencies Handbook.



## Predictive Services and Products

“Predictive models and mapping of fire risk tools were utilised effectively.”

“Predictive services and products were easily accessible.”

Feedback received this season noted that Bureau of Meteorology products reflected improvement and have addressed issues raised previously. Greater and more widespread training and practice in the use of weather and prediction products remains an ongoing requirement. It was acknowledged that this would also help end users to learn or maintain familiarity with what is available and how and where to source these products. It was raised that some previously available products had preferred features over the current products, such as the FDIs being displayed spatially in Forecast Explorer but not in MetEye. They raised that these features were useful considerations in decision making processes, and whether they could be included in the current products. Some attention and an increased awareness and education program regarding the gridded weather product may be needed, as it was identified as an area for improvement. Feedback was also received that the 1830hrs issuing of gridded weather was too late in the day for readiness, and there was potential confusion between gridded and point data.

The Bureau reported that the number of spot fire weather forecasts for wildfires this season (659) was the highest since the 2006/07 fire season. Around 85% of these spot forecasts were prepared over the two month period from the start of the January heat wave (13<sup>th</sup> January) until mid-March. Ninety one separate spot forecasts were prepared for the Hazelwood Open Cut Mine fire alone.

Following the January heat wave, when numerous campaign fires developed, extra staffing at the Bureau was required in the Regional Forecast Centre to handle the numerous spot forecast requests. Additional day and night shifts ran for several weeks with the additional day shift ceasing early-mid February and additional night shifts ending 25 February.

This year a new look wind change chart was developed, renamed the Wind Change Forecast Map. The process used to prepare this new map allowed forecasters to more accurately draw the expected position of the change by layering model data directly over the map. Wind Change Forecast Maps were issued on days where significant wind changes were forecast to move across the State and forecast FDIs were greater than 35. Wind Change Forecast Maps were issued on 19 days this season.

It was mentioned that there still remains variances between predicted verses actual weather conditions, which required constant monitoring of the FDI and often led to last minute increased readiness arrangements needing to be made when trigger levels were met. It was suggested that the business rules relating to the potential trigger days needed to be reviewed, to ensure a higher potential FDI forecast is taken for readiness actions.

The 1300hrs teleconferences were very well supported, particularly the information provided regarding the coming days in relation to intensity and risk factors. REMT personnel found it beneficial to have weather predictions in the 7-Day Action Plan so that they could plan early, and it gave a good basis for decisions regarding resourcing and warnings. 4 day weather information gave personnel at all levels from crews through to the State, the opportunity to pre-plan and prepare themselves.

There was evidence that predictive products were used widely, however the volume of predictions being distributed via EM Webmail continued to remain a challenge for incident personnel to sort through and identify information relevant to them. Suggested improvements were to include the region, district, locality and incident name in the email subject line to make identification of relevant predictions easier. It was also requested that Rostered Duty Officers and District Duty Officers be included on the distribution lists to maintain situational awareness.

Phoenix modelling was used as a snapshot of potential impact, and was able to be shared with other agencies through eMap, allowing for effective dissemination and readiness. There do remain instances however, where access to weather and predictive products by some agencies in a REMT and IEMT is limited. A suggested improvement received this season included the need to have a process in place to address modelling and wind change forecasts, following instances where predictive maps were being produced, a wind change forecast had been issued, and the modelling not appearing to have factored it in.

Overall, the predictive products generated by the Fire Behaviour Analysts were received well across the state and contributed to greater situational awareness. It was raised that it is important to continually remember and reinforce that Phoenix modelling is a predictive product, and should be used as a guide to inform decision making.



Attention may need to be given into circumstances where Fire Danger Ratings are not being updated simultaneously on agency websites, with a potential solution being to enter the ratings into one location which links to other sites to avoid data inaccuracies.

It was observed and reported that Ground Observers were well used, and the valuable and constant intelligence they provided into IMTs was recognised and appreciated.

Issue	Comment	Action
Provision and distribution of predictive products.	Products well received and contributed to situation awareness.	Continue to support predictive services functionality and the capability and capacity of the Fire Behaviour Analyst role.
Phoenix modelling dissemination.	Relevant prediction could be overlooked in the volume of emails distributed.	Identify prediction by including region, district, locality and incident name in the email subject line.
Interpretation and application of products.	Further training and awareness in understanding and application of weather and predictive products across all agencies.	Continue to provide training and awareness sessions to personnel on location and use of products.
Fire Danger Indices.	Instances where FDIs were thought to be under- or overestimated affecting readiness arrangements.	Consider targeted review of FDIs in SOP J2.03.

## Integrated Initial Attack

“First responding crews had a clear understanding of the procedures and operational priorities when they arrived on scene and during initial attack on the fire.”

“During initial attack activities, crews from various agencies worked together in an integrated way.”

The significance of this year's fire season and increase in fire activity put to the test the extensive work undertaken by fire agencies in embedding integrated initial attack arrangements over the past few years. Nonetheless similar systemic issues to those identified in last year's review appear to remain in some parts of the state.

However, positive observations of the effective, rapid deployment by all agencies leading to many fires being controlled in the early stages were identified. An understanding by agencies of a common objective and strategy to hit fires hard was reported as a contributing factor to this success.

While a number of fires were not contained by initial attack, and some went onto become large blazes, the integration of resources from CFA, DEPI/NEO and MFB during the initial stages of fires was reported to have been well executed. This is despite a number of interoperability issues mostly reflecting the use of different radio networks but nonetheless success was achieved through the application of local default communications plans, unified purpose and effort, common operating arrangements and pre-developed cross agency relationships.

Throughout the summer period Victorian fire services worked cooperatively on a number of fires in the peri-urban environment surrounding Melbourne, at the Hazelwood Open Cut Coal Mine Fire and at other fires involving private and public land across the state.

Aircraft support in the initial stage of many fires restricted the subsequent spread and impact. Pre Determined Dispatch (PDD) of aircraft, which will be covered in more detail later in this report, was again this year identified as a success in those areas of the state where this arrangement existed.

Amongst the many observations made through debriefing and observation collection activities a number of opportunities for ongoing improvement related into this theme were identified. These reflect similar observations made last year.

These observations related to the following;

- Understanding each agencies expectations and needs and how they may impact on response outside of their respective areas of responsibility;
- Understanding and applying pre-determined arrangements are necessary when working across the various agency boundaries;
- Individual personnel knowledge and experience;
- Local relationships between agency personnel;
- Differing agency doctrine in relation to where the Incident Controller is located (CFA on scene initially vs. DEPI in office); and
- Different initial firefighting strategies and tactics (immediate aggressive direct attack vs. indirect attack).

While ongoing progress continues to be made in relation to integrated initial attack, this aspect of fire and emergency management within Victoria requires ongoing reinforcement, most effectively undertaken jointly within agencies at a local level. The strength of local relationships is highlighted to be the most effective manner in which these challenges are overcome in addition to the continued approach of joint training, exercising and briefings.

Issue	Comment	Action
Integrated Initial Attack	Application continues to improve but opportunities for this to be enhanced in some parts of the state remains. While previously adopted as an exercising and briefing topic this should continue to be applied in this manner at tactical level amongst agencies.	Continued focus by agencies in exercising and briefing in the lead up to 2014/15 FDP to ensure these arrangements are fully understood and applied during joint operations.
	Communications prior to and during incidents, including the application/use of early integrated communications plans. Individual personnel knowledge and experience, local relationships between agency personnel.	The application of integrated initial attack principles requires a continued focus and reinforced through briefings, Preseason Update, exercises and scenarios at particularly local level prior to the 2014/15 FDP.
	Differing agency doctrine on where the initial Incident Controller is located. Differing initial firefighting strategies (direct v indirect)	The enhancement of local relationships and understanding of each agencies capacity, capabilities, knowledge and tactics remains the responsibility of State, Regional and local agency people to develop and enhance.



**A display of integrated initial attack**

## Transfer of Control

“The concept of Division Command was clearly understood and applied.”

“The transfer of control from the fireground to an ICC was achieved effectively? *(If this was not practically applied is this concept clearly understood?)*”.

The intensity of operational activity this year was continued to provide operational application of Transfer of Control throughout the state.

Many personnel acknowledged their understanding of the principles and process continued to improve through briefings, exercising and practical application and continues in many cases to be initiated more effectively than in previous years. These efficiencies included recognising incident cues (through good situational awareness) when to transfer control, timeliness, and ensuring clear communication was established with all key issues communicated to the incoming Incident Controller.

The continued practice of ICCs shadowing an incident for some time prior to the transfer was identified as a practice which enhanced the effectiveness of the transfer.

During the FDP the MFB transferred control of a fire within the Metropolitan Fire District for the first time. This fire was one of several burning along a stretch of the Hume Freeway and the transfer resulted in the Gisborne ICC assuming control of five fires, four in the Country Area of Victoria and one in the Metropolitan Fire District. This resulted in a coordinated management of the overall incident.

Transfer of Control of rapidly developing incidents was undertaken on numerous occasions and reported to be improving on previous years as personnel from all agencies become more familiar with the arrangements. Understanding and adoption of the Division Command role and responsibilities post Transfer of Control and the suitability of the initial fireground Incident Controller to perform Division Command role following Transfer of Control remain challenges. Fire agencies have successfully deployed experienced personnel to mentor these initial Incident Controllers on occasions with genuine success during the FDP.

A key observation, as a consequence of fire activity on days of lower readiness this year, was the challenge presented to transfer control on those days when no personnel were in ICCs.

In general, it was accepted this continues to be one aspect of fire management that presents a need for further work to unconditionally establish this as multiagency doctrine.

During the Mickleham-Kilmore fire the transfer of control from the Kangaroo Ground ICC to the Seymour ICC was undertaken. While the transfer of control between ICCs has occurred previously, generally it has been during fires of a protracted nature in remote parts of the state. This was the first occasion the transfer between ICCs of a dynamic fire in grasslands affecting a number of communities was undertaken. A review of this transfer of control identified several areas for improvement and presents an opportunity to learn and develop suitable arrangements for the future.

General observations for improvement included:

- Continued guidance and understanding of the principle, triggers and process;
- Improved application of Transfer of Control at rapidly developing incidents (e.g. fast moving grass fires);
- Ongoing improvements in communication between the fireground, ICCs and agency command and control personnel;
- Unilateral understanding and consistent adoption of the Division Command role and responsibilities post the transfer of control.

In summary the feedback again this year identified positive progress has been made embedding Transfer of Control but there is a continued need to maintain this as a priority area for improvement in order to ensure effective incident management at escalating incidents.

Issue	Comment	Action
Embedding Transfer of Control	<p>Understanding of the principles and process continues to improve through briefings, exercises and practical application.</p> <p>Recognising the cues to transfer control, timeliness of transfer, clear communication of key incident issues, and the shadowing of incidents by ICCs before Transfer of Control contributed to effectiveness.</p>	<p>The application of Command &amp; Control and in particular Transfer of Control is agreed between fire agencies in Victoria. The application of Transfer of Control will continue to be a focus and reinforced through briefings, Pre Season Update, exercises and scenarios at regional and local level prior to the 2014/15 FDP.</p>
Challenges to Transfer of Control	<p>Transfer of Control on lower fire risk days when no ICC in place. Transfer of control at rapidly developing grassfires. Improving communication between fireground, ICCs and agency Command and Control personnel.</p> <p>Understanding and adoption of the Division Command role and responsibilities post Transfer of Control. Suitability of initial fireground IC to perform Division Command role following Transfer of Control.</p> <p>Guidance and understanding on the principles, triggers and process identified in addition to the continued maintenance of Transfer of Control as a priority area for improvement.</p>	<p>The application of Command and Control and in particular Transfer of Control is agreed between fire agencies in Victoria. The application of Transfer of Control will continue to be a focus and reinforced through briefings, Pre Season Update, exercises and scenarios at regional and local level prior to the 2014/15 FDP.</p> <p>Transfer of Control triggers, principles, etc is documented in the Fire Agency Handbook.</p>
Transfer of control between ICCs	<p>Transfer of control between Kangaroo Ground and Seymour ICCs during the Mickleham-Kilmore fire demonstrated this to be a new initiative for this type of dynamic incident</p>	<p>From the learnings captured during a review of this transfer of control the opportunity exists to develop appropriate guidance for future events and incorporate ICC transfer of control into pre-season activities prior to the 2014/15 FDP</p>

## Interoperability

“The progressive standardisation of operating systems and information and communications technologies since 2009 is achieving greater efficiency and interoperability between fire agencies. Examples of where this is benefiting/limiting operations are.....”

The timely sharing of information, knowledge and skills, greater understanding of other agencies' capabilities and resources, and increasing experience through working in multi-agency teams, continues to strengthen each season. Exercising during both preseason and on readiness days, continued to contribute to relationship building, as did maintaining regular contact outside of the FDP. While progress is being made, it requires ongoing reinforcement, practising and commitment by all agencies at every level.

State-wide feedback was received from incident, regional and state levels on the challenges experienced by having systems that weren't connected. In particular, the requirement to use both CFA's Incident Management and Resource Management Systems, and DEPI's Fireweb and Incident Resource Information System, was repeatedly an area recognised as requiring improvement. There were still instances where access to another agency's systems was problematic, and people expected to use the systems had a limited amount of training. As mentioned last season, work needs to be done on developing a single input platform capable of supporting the all hazards approach to incident reporting.

The continual enhancements and additions to the Emergency Management Portal (EMP) were well received, providing a readily accessible and easy to use information sharing platform. The Emergency Management Dashboard (EMD) and Emergency Management Knowledge (EMK) websites, along with the ongoing use of EM Webmail, the shared 'R drive' and eMap, supported information flow and sharing across the agencies. There was good use of SMSer, teleconferences and email for information sharing and communications between ICCs, RCCs and the SCC.

Some regions have identified that the standard of facilities of particular ICCs limits the functionality and improvements need to be looked at, prior to the 2014/15 season. There were several state-wide observations of IT systems falling over or slowing down during critical times, and the capacity of the network to manage the amount of information and numbers of users was raised as an area for improvement.

Agency use of different radio networks was referenced a number of times, as was the ongoing issue of personnel operating on multiple radio channels at incidents. Radio and mobile phone black spots continued to be a problem during some incidents, with temporary infrastructure having to be bought in to overcome the gaps.

Issue	Comment	Action
Systems	Multiple systems that are not connected are still in use. Inefficient and increases the workload of personnel.	Multi-agency work required immediately to develop one platform for all hazard incident management and reporting. This will be achieved through introduction of VINE.
Information flow	Continues to improve every season.	Continue to build, reinforce and practice multi-agency incident management through preseason activities and exercising.



## Preseason Preparedness Activities

“Preseason training, exercising and briefings adequately prepared me for operational activities throughout the FDP.”

### Preseason Briefing Program

The 2013-14 Pre Season Briefing Program (the Program) was jointly developed and delivered as an integrated program for level 3 IMT and senior leadership personnel by the Pre-Season Briefing Steering Committee (PSBPSC) with multi-agency representation from:

- CFA;
- DEPI;
- EMV
- Department of Human Services (DHS);
- MFB;
- Victoria Police; and
- VICSES.

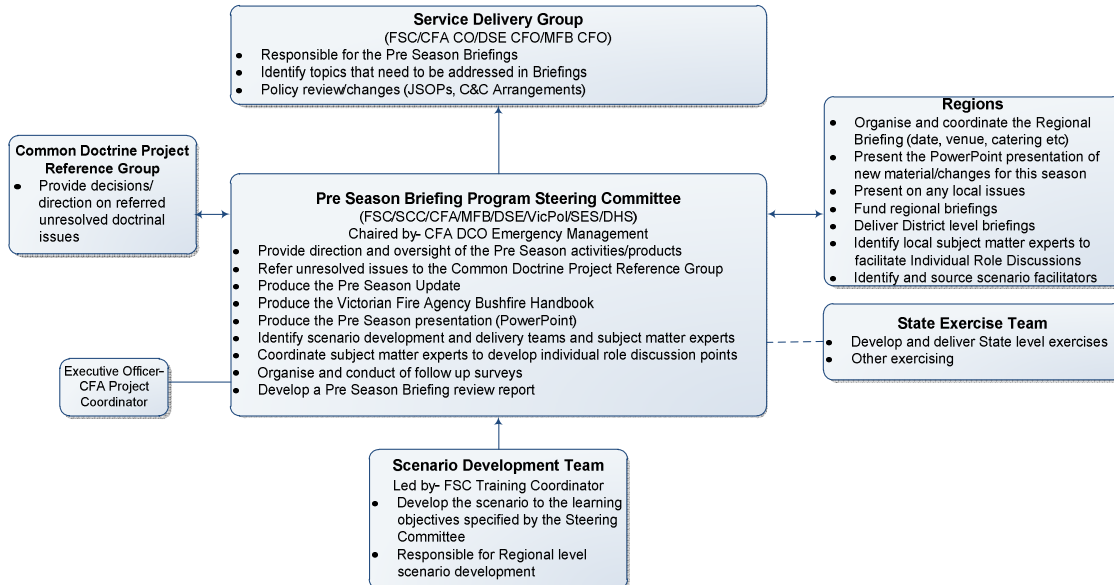


The format consisted of a PowerPoint presentation outlining changes, a scenario workshop aimed at working through key themes (evacuation, warnings and advice, traffic management including traffic management points, safety, initial attack and command and control including transfer of control) and functional role discussions focussing on issues relevant to each role.

Supporting products specifically targeted for audiences at different levels included The Victorian Fire Agency Bushfire Handbook (Edition 3), the Pre-Season Update magazine and two scenario packages.

Sixteen Regional Briefings were held across the state with 1230 people attending from fire and emergency management agencies.

### Preseason Briefing Program Governance Arrangements



The feedback from the PSBPSC and the post preseason briefing program survey clearly shows the briefing format and supporting documentation is generally well received. In addition several further key points were identified by the PSBPSC as outlined below.

With the identification and release of key personnel being deemed a critical component to the success of pre-season briefings, and the supporting evidence from the post-briefing survey showing that 91.6% of survey recipients were satisfied with the scenario facilitators, it is believed Regions need to be responsible for the identification, sourcing, supply and coordination of facilitators.



It has been identified there is a lack of cohesion between the development of the program and the post season debrief process. To ensure continuous improvement opportunities are addressed, it is critical the outcomes and learnings from the post season activities are advised in a timely manner to assist in informing and influencing the themes for the preseason activities. Without a stronger link between the pre and post season activities there is a great risk identified issues from previous fire seasons will continue to remain an issue for emergency service personnel.

Learning opportunities were reduced because of limited time in the scenario session to address a large number of themes. This suggests a reduced number of key themes would allow a more in-depth discussion and thorough learning opportunity.

At a regional and district level, organisations/agencies need to be conducting preseason briefings for personnel at that level, ensuring topics are aligned to the key themes so there is consistency in the messages being delivered at all levels.

A strategic approach to doctrine review and development needs to be coordinated closely between all agencies to ensure key changes of source documents are captured in a timely manner.

The “no changes to documentation date” (31 July of each year) requires revision for future preseason briefing programs; the identification of a more realistic date for greater adherence from those involved is required.

The continuation of the established partnership between the State Aircraft Unit (SAU) and the PSBPSC will allow for the ongoing development of briefings, incorporating aviation. Having an SAU representative on the committee will reduce issues (such as development of the SAU content, timings, subject matter experts to deliver the material and inabilities to meet specific timelines) previously encountered.

To ensure a consistent approach to obtaining data and surveying attendees, on-line registration is an effective tool. It is recognised it does have some limitations, although these are predominately based around a lack of understanding by users rather than technical based difficulties.

Topic	Comments	Action
Preseason briefing activities	The Pre-Season Briefing Program and Steering Committee (PSBPSC) have completed a review of the 2013/14 pre-season briefing program and have identified several improvement opportunities	The PSBPSC implement a program for the 2014/15 FDP incorporating the learnings and recommendations identified in their review

## Exercising

Exercising was again a critical component in pre-season activities in the lead up to the 2013/14 FDP. Extensive exercising was undertaken by fire and emergency management agencies at local, regional and state levels. Many hundreds of hours were dedicated by personnel to embedding knowledge and skills via exercising as part of pre-season preparedness. Unfortunately, the extent of exercises conducted across the state hasn't been captured in full, leaving a potential void in our knowledge of personnel capability and proficiency, and our ability as a sector to demonstrate to the community the level of preparedness activities undertaken.

Evacuation remained a key focus of many multi-agency exercises and the exercise scenario incorporated into regional pre-season briefings was again well received and supported.

From the themes identified by personnel where continuous improvement opportunities still exist, a structured approach to emergency management exercising, driven from learnings identified following reviews of the 2013/14 FDP, is being applied and accordingly will be incorporated into the 2014/15 pre-season activities.

The development of an exercise management system to enable a transparent and consolidated vision of exercising at all levels across the state is a significant improvement opportunity currently being adopted.

Issue	Comment	Action
Exercises	Exercising is well established and should continue with a multi-agency representation	Emergency management agency personnel to be supported in the identification, development, conduct and evaluation of exercises at all levels
Preseason activities	There is an existing linkage between the post season review and preseason exercising	Continue use of a structured approach for preseason exercising initiated from information gathered during FDP reviews.
Exercise Management System	The extent of exercises conducted across the state hasn't been captured in full, leaving a potential void in our knowledge of personnel capability and proficiency, and our ability as a sector to demonstrate to the community the level of preparedness activities undertaken.	The development of an exercise management system to enable a transparent and consolidated vision of exercising at all levels across the state is currently being adopted by the Fire Service Commissioner.

## Other Key Observations and Findings

### Traffic Management Points

Traffic Management Points (TMPs) again played an important role this year in safeguarding the community and emergency management personnel during fires throughout the state. Some parts of the state saw the activation of TMPs for the first time since their introduction while other areas again activated TMPs in what has become a regular activity.

Despite progress in improving arrangements related to TMPs in the past two years, personnel from emergency management agencies and importantly the community voiced ongoing concern and opportunities to improve existing arrangements.



Traffic Management Points in use

Fires in the peri-urban environment raised community emotion around the activation of TMPs and the subsequent restriction of community access into fire areas. While TMPs performed critical roles of managing access where dangerous conditions existed, some community members considered TMPs restricted their ability to return to their properties in a timely manner.

The media reported examples of community members confronting TMP staff in hostile exchanges, community members breaking through or sneaking around TMPs in a bid to check if their homes had survived fires, community members already within an area having to make arrangements to be met at TMPs to exchange food, fuel and other items so they could remain in the area. Other examples cited were where community members who remained with their homes during the passage of a fire provided information to others who had left relating to road access without a broader understanding of conditions affecting roads in the area. This resulted in people who had left challenging TMP status without a full picture of the circumstances.

TMPs featured significantly in a number of incident and regional debriefing activities. In addition, a state level debrief focused solely on TMPs was undertaken involving emergency management agencies and drew on learning from a number of fires throughout the FDP. Predominantly the issues raised through this process related not to the activation of TMPs but the subsequent management and eventual removal after the passage of a fire.

Two key themes emerged from the state level debrief. The first related to animal welfare issues, for example the need to feed or move stock. This was especially relevant to the Kilmore fires. No major issues were raised in relation to wildlife welfare support. The second issue related to access to remote communities where there is minimal road infrastructure. This was especially relevant with the Goongerah fires.

A number of key issues were identified relating to TMP operation and have been collated into the following categories:

- Pre event;
- During Event;
- Future Challenges; and
- Actions.

#### Pre event

The following outlines key considerations which were identified as critical prior to an event:

- Access Safety Assessment Teams to be structured and trained to enable early, safe access to undertake assessments of incident areas. Ensure their skills enable the identification of issues enabling work to be undertaken earlier and roads opened quicker;

- It was suggested the existing Impact Assessment Teams may be provided with additional skills, or the team supplemented with personnel possessing an enhanced skill set including:
  - Fire and road safety;
  - Tree assessment;
  - Power pole/line assessment;
  - Road condition assessment (road surface and bridge impact);
  - Fire behaviour; and
  - Knowledge of reduced speed options.
- The composition of the team should be sourced from a wide range of agencies and incorporate personnel from outside the affected municipality;
- Support services personnel to be trained to enable early/safe access to the incident ground;
- Further training and briefing to enhance the understanding by TMP staff on the application of the TMP guideline flexibility;
- Access for private and contractor fire fighting units through the appropriate distribution, pre-season, of authorising stickers for vehicles and plant;
- Enhancing the understanding amongst emergency management agencies that response should be inclusive of immediate relief/support demands. Also greater training and engagement of broader EMT member agencies in supporting response phase;
- Community engagement and education to reinforce an understanding of their preparedness considerations must include the possible duration of self-sufficiency during an emergency;
- Preposition Access Safety Assessment Teams based on risk and linked to readiness arrangements;
- Through ongoing activities conducted for the media by emergency management agencies, reinforcement of TMP arrangements and their application to the media, the media's role during incidents, the criticality of accurate reporting and the importance of considering, in the first instance, landholders privacy where losses have occurred.

## During Event

The following outlines key considerations which were identified as critical during an event:

- The principle of when activating a TMP it should become an ongoing goal to consider its closure/movement at earliest opportunity when safe. Continue reducing TMP footprint when safe to do so;
- Understanding the best option for a detour point for through traffic may not be the TMP;
- Positioning all traffic related Emergency Management Liaison Officers (EMLOs) (Victoria Police, VicRoads, municipalities, etc) in the same area in an ICC to enhance communication and development of a common operating picture relating to the incident and its effect on TMP needs;
- Consider appointing a Traffic Manager in an ICC with the specific role of coordinating all traffic related issues (detours, TMP's, priority for road clearance/opening, active monitoring of ongoing need for and location of TMPs)
- Introducing TMPs discussions as a standing agenda item at all EMT meetings;
- Providing Global Positioning System (GPS) coordinates for TMPs so they can be mapped to eMap;
- Ensure all TMPs have radio/communications access.
- Safety assessments to be scheduled and undertaken early as a critical support to shared responsibilities with the community;
- Animal health considerations, both to treat injured animals and ensure the welfare of others, undertaken with damaged fencing, contaminated water and lack of fodder - Consider use of adequately trained escorts to enable access for vets, livestock transport, fodder delivery, water carriers etc;

- Ensure that the State Emergency Animal Welfare Coordinator and State Emergency Animal Welfare Units are included in the SCC and ICC to improve the response to animal welfare issues and more effective engagement with the rural community; and
- Maintain solid communications lines between Municipal Emergency Response Coordinators (MERCs)/Municipal Emergency Resource Officers (MEROs), traffic liaison in IMTs and TMP staff so there is no delay for plant (water trucks, graders, dozers, excavators etc) accessing the incident. The communications needs to connect the above people to ensure a clear understanding of plant which has been ordered and may arrive and potentially include a specified arrival time at the TMP.

## Future Challenges

The following outlines key considerations which were identified as presenting future challenges:

- During fires which have large footprints, agencies and municipalities may struggle to provide specialist resources; and
- Consideration of the cost of TMP staffing alternatives using Vic Roads and/or contractors and the perceived authority of non-Victoria Police agencies/personnel at TMPs.

Issue	Comment	Action
Traffic Management Points	<p>TMPs again played an important role this year in safeguarding the community and emergency management personnel during fires across the state.</p> <p>Despite progress in improving arrangements related to TMPs in the past two years, personnel from emergency management agencies and importantly the community voiced ongoing concern and opportunities to improve existing arrangements.</p> <p>Key issues relating to TMP operation identified during debriefing activities and were collated into the following categories:</p> <ul style="list-style-type: none"> <li>• Pre event;</li> <li>• During Event;</li> <li>• Future Challenges; and</li> <li>• Actions.</li> </ul>	<p>The following actions were identified for implementation before the 2014/15 FDP:</p> <p>Establish a working group consisting of the State Emergency Animal Welfare Coordinator (or delegate), Victoria Police, Victorian Farmers Federation, CFA, DEPI, Vic Roads and municipal representatives. The proposed group could be formed as a working group under the Victorian Emergency Animal Welfare Committee.</p> <p>The working groups role would be to:</p> <ul style="list-style-type: none"> <li>• review and revise existing guidance material for primary producers relating to the impact of fire on access to properties;</li> <li>• review the impact of TMPs on animal welfare with a view of streamlining the arrangements to enhance the delivery of animal welfare services after a bushfire; and</li> <li>• review arrangements for how the rural community can communicate animal welfare issue more effectively to the ICC during a bushfire.</li> </ul> <p>A Road Management Working Group to be established (RMWG) consisting Victoria Police, CFA, DEPI, Vic Roads and municipal representatives. The RMWG to:</p> <ul style="list-style-type: none"> <li>• Consider and evaluate the potential for a Traffic Manager role within an ICC;</li> <li>• Consider and develop potential solutions/options for use of detours, TMP placement/operation, procedures</li> </ul>

Issue	Comment	Action
		<p>to prioritise road clearance/opening, active monitoring of ongoing need for and location of TMPs; and</p> <ul style="list-style-type: none"> <li>• Consider methods for communicating location and status of TMPs to the community.</li> </ul> <p>Increased and improved community education and messaging before and during incidents, designed to enhance community resilience by preparing them for the potential duration of TMPs during incident. Community education relating to TMP levels, access and operation.</p> <p>Consider expanding the use of the TMP Guidelines for all emergencies.</p>



## Resource Management

The extensive operational activity throughout the FDP presented many challenges and opportunities for fire services and emergency management partners from Victoria, interstate and internationally to manage the significant resource demands created by fires.

Resource personnel performed at incident, regional and state level for in excess of six months providing people and equipment to local and intrastate fires and emergencies. In addition numerous liaison officers from interstate supported the management of their agency resources while deployed in Victoria.

Campaign fires and the coverage of fire and emergency response capacity to communities throughout Victoria required effective management to ensure resource needs were achieved. Interstate and international fire and land agencies provided response personnel and resources to a number of fires while Fire Rescue New South Wales “stepped up” to several CFA fire stations across the state, releasing people from these locations to undertake fire management and firefighting roles specifically at the Hazelwood Mine Fire in Gippsland.

Due to the level of activity this year, resources and their management attracted a large number of observations and comments through the review of the FDP. An additional resources focused debrief was conducted involving personnel who were regularly involved in resource management at incident, region and state levels.

The timing of requests from incident level again presented challenges in the effective management of resources requests. Requests which only provided a limited timeframe to fill coupled with availability of personnel through the protracted period of operations and time and space issues of travelling were cited as key issues. Prioritisation of requests at regional or state level without timely feedback to incident level resulted in plans being developed which could not be achieved.

Examples where this did work effectively related to situations where specific resources remained the responsibility of an individual region/district/agency and they fulfilled this resource request on an ongoing basis using flexibility of tour duration and transport arrangements. This flexibility enabled access to a greater pool of available personnel, particularly volunteers, than would have been available for deployment tours of several days. Swing shift operations were also highlighted as beneficial at some fires for resourcing. The significant advantage of this method of operation was the incident resources required less management at regional and state level to fulfil requests.

It was observed in some debriefing activities a proactive approach to resourcing undertaken by some regions worked effectively this year. Maintaining an understanding of likely needs beyond a few days enabled planning to be undertaken, so when requests were made they could be quickly responded to without the delay of determining if a capacity existed.

A recurring issue identified in previous years related to a clear understanding of what type and role resources were requested to perform. This was seen to be resolved through incident personnel clearly defining the role which the resources were to undertake and match this to the appropriate resources, for example the right type of trucks for the terrain regardless of agency.

Resource Unit personnel at each level of control were identified as having performed well in exceptional circumstances this year. Some regions operated dedicated resources units while others relied on agency commanders to undertake this function at various times. The use of the same personnel for extended periods who developed a clear understanding of needs, system and processes resulted in consistent and more effective resource management. Where personnel changed roles frequently it was identified different systems were introduced between deployment shifts working in the same level of control, it took a period of time to establish an understanding of the incident resource needs resulting in delays, new and less experienced personnel were often placed into situations where incidents required extensive and complex resource management without the established experience and knowledge of processes and systems. Resource personnel have commented this year was the most challenging in recent years and illustrated the roles within the Resource Units at each level of control is now exceptionally demanding, presenting challenges attracting people to these roles in the future, without some serious changes.

The integration of local resources into incident based requests at time delayed the escalation of requests. The time often taken by local personnel attempting to fill requests reduced the time then available for the state based Resources Unit to fill requests, resulting in the interpretation by other regions the delays were caused at state level. Other challenges resulted from requests being received at state level from multiple regions or incidents over a period of time which necessitated multiple contacts with one or more other regions seeking resources resulting in strained relationships between the state Resources Unit and regions/districts in all agencies.

Observations relating to systems and processes made up the majority of resource management feedback this year. It was identified from the feedback provided the existing State Resource Request System (SRRS) received mixed responses in relation to its operation. Some observations recognised the need for ongoing training for resources personnel to understand the operation of the system while others were clearly comfortable with its operation. Upgrades completed to the system during the FDP created some uncertainty amongst people in relation to the new capacities while other identified a number of further improvements which would enhance the capacity of the system in the future.

The absence of some resource management processes and the variation of existing processes by personnel at various levels, either through a misunderstanding of expectations or introduction of process variations for some incidents, were also identified through debriefs and observations during the review. Different means of requesting resources at the same incident by different agencies therefore not giving the Resources Unit a complete picture of requests or resource provision was also reported. This compounded issues with incident planning, briefings, task allocation, accommodation and catering on occasions. The provision and quality of information contained in movement orders appears to vary across the state by agency and location. State Agency Commanders identified a significant amount of time was spent resolving internal agency resourcing issues detracting from other functions expected of them.

In general it must be recognised the level of resourcing activity during the FDP has not been seen for several years, with the Hazelwood Mine Fire alone resulting in several thousand individual resource movements from intra and interstate. This combined with the protracted nature of fires in several locations resulted in a significant resource management workload for people from every fire and emergency management agency across the state this year which by must be considered in context to the opportunities for improvement identified by our people.

Work has already commenced on identifying and implementing improvements relating to resource management. Additional improvements were introduced to the SRRS in June 2014 and an informal user group has been established by the Fire Service Commissioner providing a focused team to identify issues; develop options and implement solutions relating to resource management as soon as possible.

Issue	Comments	Action
Resource Systems	<p>The current SRRS provides for components of resource management but is restricted to requests. The subsequent management once deployed is undertaken through different agency IT platforms.</p> <p>The existing capacity of the SRRS is not well understood by some personnel outside the Resources Unit.</p>	<p>Observations and learnings from the 2013/14 FDP provided to the newly developed user group for further analysis and development of appropriate initiatives for implementation as soon as possible. It is recognised significant system changes will require development. Activities may not all be introduced prior to the 2014/15 FDP.</p> <p>The existing and future capacity of the SRRS must be communicated to Controllers and Commanders at each level of control prior to 2014/15 FDP.</p>
Processes	While existing processes exist there is a need to continually improve business rules and ensure consistency of application by agencies.	Existing processes should be reviewed, enhanced and communicated by the newly developed user group prior to 2014/15 FDP.
People	Resource Unit personnel training for new and existing personnel requires a continued focus to ensure agencies can benefit from people who utilise common processes and systems for multiagency resource management	Existing training programs should be reviewed to ensure learnings from the FDP are incorporated. Exercising opportunities should be provided for Resource personnel during preseason activities to further develop capability and consistency amongst agencies.

## Incident Management Team Readiness

The capability to meet SOP J2.03 Incident Management Teams-Readiness Arrangements requirements at both Incident Control Centre and Regional Control Centre levels was significantly tested this season, due to the increased activity. The JSOP went through a comprehensive review following the 2012/13 fire season in response to a great deal of feedback and amendments were made prior to this fire season. Overall the fire agencies and our emergency management partners were able to maintain readiness and respond to incidents, whilst also providing resource support interstate when requested. Once again, the commitment and cooperation demonstrated by personnel from all agencies was a feature of these arrangements. It was noted through several debriefs that good communication and planning prior to and during the season ensured arrangements across multi-agency Districts, ICCs and Regions worked well.

Rolling availability plans, collaborative forward planning for high fire danger days and the distribution of timely information to IMT members were raised as some of the successful processes observed this year. The Barwon South West and Grampians Regions in particular noted that significant progress in mentoring staff had been made through actively deploying identified trainees in joint IMTs.

On a number of occasions readiness fatigue was raised. Factors contributing to this included the use of gridded weather and the 10% of an area being FDI 35 or greater rule, the JSOP overdoing low FDI triggers but underdoing high FDI triggers, and resourcing of IMTs to meet readiness levels impacting on the capacity to resource Divisional Command Points. Feedback received mentioned that the increased level of readiness early in the season had impacts on capability later in the period. Linked to this was the use of the weather forecast issued the day before for IMT readiness. As the forecasts could often change overnight or early in the morning, significant workloads and associated fatigue were created. Suggestions were made to consider more factors in the decision making process for IMT readiness.

It was also raised that the discretion sitting with Regional Controllers in terms of IMT readiness, could lead to inconsistency between Regional Controllers, particularly for the borderline days. It was requested that some guidance regarding this be developed and provided to Regional Controllers across the state, to ensure a consistent approach. It was also recommended that the JSOP be reviewed as some thought it was too definitive, and did not allow for discretionary ability.

Preformed IMTs occasionally included personnel not familiar with other agencies systems, for example CFA IMS and DEPI Fireweb, which made the functionality for those people to carry out the required role challenging. Further work to improve this is required through the interoperability projects and continual access to training and exercising opportunities.

Issue	Comment	Action
Application of SOP J 2.03.	Demonstrated commitment to meeting requirements of the JSOP regarding readiness. Multiagency teams worked effectively, especially where the same people worked together regularly. Regional Controller discretion observed to be inconsistently applied.	Develop guidance for Regional Controllers regarding the use of discretion regarding readiness resourcing.

## Regional Control

The emergency management arrangements for Victoria utilise a three-tiered model in the management of emergencies. The model addresses and provides for the active leadership and management of strategic, operational and tactical issues which can emerge during an emergency. The emphasis at state level is on strategic aspects, the regional tier considers both strategic and operational issues and the incident tier mainly operates at the tactical level.

The regional tier is an important component of the state's emergency management model as it interfaces with both the incident and state tiers before, during and after any emergency.

Regional control is accountable for delivering a range of emergency management outcomes relating to prevention, preparedness, response and recovery.

The regional control concept has been enlivened by the Emergency Management Commissioner through the appointment of appropriately approved personnel to perform the role of Regional Controller. This approach is in its fourth year of operation and given the State Government's progressive reform of Victoria's emergency management arrangements, it is timely to review the role, function and effectiveness of regional control.

A review team, charged with examining the regional control arrangements which have been in place post the VBRC, conducted nine focus sessions, meeting with representatives from all of the Victorian emergency management regions and the SCT. A number of consistent themes emerged from the review, along with a number of areas that provide opportunities for improvement. None of these improvement opportunities appear to have had a detrimental effect on the effectiveness of the response to the high number of fires and related emergencies during the 2013/14 summer, which is considered to be largely due to the professionalism, enthusiasm and relationships that exist across all tiers of emergency management in Victoria.

Under Emergency Management Victoria (EMV), it is believed on the whole the current arrangements should be able to support an 'all hazards' approach to emergency management.

The review team have provided a comprehensive list of recommendations in their final report on the review of regional control arrangements in Victoria. Consideration being given to the recommendations provides opportunity to further embed and enhance existing arrangements.

Issue	Comment	Action
Regional Control	A review into regional control has been completed. This review engaged with personnel from across the state and incorporates a number of recommended actions	The State Control Team review the recommended actions included in this report



**An example of an EMT**

Debriefing again highlighted the ongoing achievements which have been made in the past few years in terms of engagement, communication, collaboration and focus being the key responsibilities of these teams. Emergency management partners generally recognised they feel far better informed throughout the FDP on the potential for activity driven by weather forecasts, existing fire activity and expectations of their respective organisations to be ready to provide input whether at incident, regional or state levels as a consequence of being a part of EMTs.

It was noted there is an increased understanding of what each agency brings to the team in terms of knowledge and capability.

There are still opportunities to improve the operation and focus of EMTs. In particular, the need for roles and associated levels to be clearly identified and acknowledged, with each tier undertaking duties specific to their management level.

Since the last FDP, new guidelines for the operation of EMTs have been released and it has been identified there is a variation amongst agencies and personnel as to the level of knowledge of the arrangements.

While evidence was provided of the effective engagement the relevant agencies in EMTs at incident and regional level, the most notable feedback received regarding EMTs was from the Municipal Association of Victoria (MAV) on behalf of municipalities. Following a workshop involving a number of councils, the issues outlined below were identified:

- While some councils were invited to be members of EMTs and reported appropriate levels of engagement with ICCs, there was a lack of consistency across the state and in many cases engagement with councils was lacking. Some councils advised they were not invited to be part of an EMT or to attend the ICC/RCC. Any contact was often well after the event had started;
- There appeared to be a lack of understanding of roles of local government by representatives of other agencies in the ICC/RCC;
- Local knowledge that could be provided by councils was often overlooked. This local knowledge was all the more critical when ICCs/RCCs were staffed by agency representatives from other regions;
- At times conflicting advice was received from ICCs/RCCs to councils and the community;
- Confusing information coming from ICCs made it difficult for councils to know when to open/close Municipal Emergency Coordination Centres (MECCs). As a result many councils relied on their informed discretion to know when to establish or wind down MECC operations. Some councils did not open MECCs or closed them due to lack of EMLOs. Late or poor communication hindered the functioning of MECCs;
- In some cases the EMT arrangements have been interpreted to imply the MERC is positioned at the ICC thus removing this person from the MECC and exacerbating communication breakdowns; and
- There was inconsistency with seasonal and incident debriefs, with some councils being actively engaged while others were not. Some councils advised they were discouraged from attending.

It was also observed throughout the FDP some municipalities either lacked capacity or understanding of the need to have representation present at ICCs and RCCs and consequently presents opportunity the for emergency management agencies and MAV to review these arrangements prior to next FDP.

Issue	Comment	Action
Operation and understanding	<p>The general effectiveness of EMTs continues to improve through relationships, engagement, communications, and collaboration.</p> <p>Improvement opportunities identified by MAV creates the opportunity to refocus on informing emergency management sector personnel of the significant knowledge and expertise municipalities bring to EMTs at incident and regional level.</p> <p>It was also observed throughout the FDP some municipalities either lacked capacity or understanding of the need to have representation present at ICCs and RCCs and consequently presents opportunity the for emergency management agencies and MAV to review these arrangements prior to next FDP.</p>	<p>The EMT arrangements outlining the role of council on IEMTs and REMTs is reinforced through preseason activities prior to the 2014/15 FDP</p> <p>Incident Controller training material be reviewed to ensure it specifies inclusion of local government into IEMTs and REMTs.</p> <p>Incident Controllers be encouraged to utilise the local knowledge within council, particularly when local agency representation is minimal. This should be incorporated into pre-season activities prior to the 2014/15 FDP.</p> <p>Councils should be involved in incident and period debriefing activities in their area when they performed some role. This should be incorporated into pre-season activities prior to the 2014/15 FDP.</p> <p>General arrangements between MAV and emergency agencies to be discussed prior to 2014/15 FDP.</p>



## Interstate International Liaison Unit

The Interstate and International Liaison Unit (IILU) is established within the SCC when either of the following occurs:

- Victorian fire and emergency management resources deploy to provide support to another jurisdiction either within Australia or internationally; or
- Interstate or international resources deploy to assist Victorian agencies during an incident.

Prior to the integration of CFA and DEPI agency control and coordination into the Integrated Emergency Coordination Centre (iECC), now the SCC, resource management into and out of Victoria was largely undertaken independently by agencies. From 2006/07 the opportunity to improve the management of this activity was realised with the IILU functioning from the iECC. In the past several years the IILU as it is now known, has been responsible for coordinating the movement of personnel and resources into and out of Victoria nationally and internationally.

In 2009 the IILU operated for several weeks coordinate the personnel and resources which came to assist Victoria in the aftermath of the Black Saturday Fires. Since then it has been operational for the Christchurch earthquake, Queensland cyclones and floods, Western Australian and Tasmanian Fire.

In 2013/14 the IILU commenced its operation through coordinating the support of Victorian fire and emergency management personnel to New South Wales in October 2013. This deployment included personnel from CFA, MFB, and VICSES. Firefighting resources assisted in many parts of the state including the Blue Mountains and around the greater Sydney area in order to release Fire Rescue New South Wales personnel to assist across the state.

As fire activity increased throughout January the need to call upon assistance from our interstate partners was again identified. Firefighting resources and Incident Management personnel formed the majority of the requests throughout January supporting fires in the Grampians and East Gippsland. In early February as the worst fire weather conditions in five years approached, interstate resources from NSW were readied to assist. They responded to several fires across the state while IMT personnel from Queensland assisted in providing respite for many Victorian IMT personnel.

The Hazelwood Open Cut Mine Fire saw a scale of interstate support not seen before. Personnel and appliances from Queensland, New South Wales, Australian Capital Territory, Tasmania, and South Australia provided support for more than a month. In addition Fire Rescue NSW personnel and appliances provided backfill into many CFA integrated stations across the state in order to release CFA personnel to be involved in operations at Hazelwood. In all the IILU coordinated several thousand individual personnel movements throughout the 2013/14 FDP. In addition the IILU coordinated After Action Reviews with liaison staff and gained feedback from many others deployed throughout the FDP.

*"It has been an honour to learn from Victoria; I will be far more open minded and collaborative when I return to any future IMTs".*

NSW IMT member

*"Victoria should be proud of their dedicated people".*

QLD IMT member

*"It was a privilege to be selected for an IMT deployment to Victoria. To work alongside such professional and competent Victorian personnel has been an incredible experience and one which I can only benefit from through my career".*

QLD IMT member

Feedback and observations from those people involved in the operation of the IILU this year included:

- The nature of IILU operations has evolved into a specialist role within the SCC structure which requires a discrete skills set;
- The effective operation of the IILU relies on continuity of people. Those who have been involved previously but of equal importance continuity during deployments;
- Additional personnel need to be trained in the operation of the IILU, including SCC Management support staff; and
- The process of managing logistics associated with IILU activities is very time consuming.

Feedback from our interstate counterparts was very positive about their experiences in Victoria, not only relating to what the IILU accomplished, but also included many observations which have been incorporated into the various sections of this report.

Issue	Comment	Action
Interstate/International Liaison Unit	<p>The IILU was extensively involved in the movement of personnel out of and into Victoria pre and during the Victorian FDP. The learning from these activities presents opportunity to further refine existing arrangements. In particular the observations of those people who provided sustained involvement in the unit leads to a number of key areas which can be concentrated on.</p> <p>In particular the following key issues have been highlighted:</p> <ul style="list-style-type: none"> <li>• The nature of IILU operations has evolved into a specialist role within the SCC structure which requires a discrete skills set;</li> <li>• The effective operation of the IILU relies on continuity of people. Those who have been involved previously but of equal importance continuity during deployments;</li> <li>• Additional personnel need to be trained in the operation of the IILU, including SCC Management support staff; and</li> <li>• The process of managing logistics associated with IILU activities is very time consuming and requires streamlining wherever possible.</li> </ul>	<p>A review of the interstate deployments during the 2013/14 FDP again identified the successes of using people from all agencies (including MFB and VICSES).</p> <p>Key observations relate to a need to continue the evolution of this integral function with the SCC.</p> <p>The Deployment Working Group established following 2012/13 FDP, to incorporate this new knowledge into future plans to enhance the operation of the IILU.</p>



Interstate support during the season

## Aircraft Operations

During the 2013/14 fire season, 42 fleet aircraft were used over nearly 10,000 hours for fire fighting operations. There were 1,675 dispatches; 69 on the busiest day.

The fleet consisted of:

• Type 3 (light helicopters)	15 (3 of these were fire bombers)
• Type 2 (Medium helicopters)	5
• Type 1 (Heavy volume helicopters)	4
• Single Engine Air Tankers (SEAT) Fire Bombers	13
• Infra-Red Line Scan Aircraft	1
• Passenger transport aircraft	1
• Light fixed wing aircraft	3

An additional 150 aircraft were on-call when needed. Aircraft from New South Wales were also used on several occasions including the Mickleham-Kilmore fire. The general effectiveness of aircraft operations throughout the FDP was supported at all levels. Feedback from regional debriefing activities again recognised the important role fire-bombing aircraft (fixed wing and helicopter) provided during the initial attack and restriction of spread during fires.

The PDD arrangements initiated in Loddon Mallee Region last year were expanded to include Barwon South West during 2013/14. These arrangements were again strongly supported by field personnel as critical in the provision of effective initial attack particularly on fast moving fires. The expansion of PDD to other parts of the state was strongly supported. Ensuring the effective use of a limited resource, readiness arrangements which resulted in aircraft being relocated around the state based on risk was also seen as a positive move.

Intelligence gathering utilising the Aerial Intelligence Gathering (AIG) platform (Firebird 307) was highlighted as a significant improvement using this emerging technology. However it was recognised there needs to be a greater understanding of particularly the AIG platform's capabilities to provide real time intelligence and how this information is accessed by incident management teams.

Another airborne intelligence platform that was utilised extensively throughout the season was the line scan aircraft. In addition to its use over bushfires, it was used extensively during the Hazelwood Open Cut Mine Fire to provide intelligence relating to the extinguishment progress of the mine batters.



**Type 1 Helitak involved in fire bombing**

The ongoing development of night capabilities within the aircraft fleet saw the use again of Night Vision Goggle (NVG) Forward Looking Infra-Red (FLIR). This capability which permits FLIR operation at night under certain circumstances was used effectively in the Hume and Gippsland regions to follow a lightning band as it moved across the state identifying numerous spots which permitted crews to access these locations before dawn and limiting the spread of these new starts. The NVG FLIR was also used on a number of fires throughout the season.

The significant use of aircraft this year illustrated the need for more effective arrangements in the utilisation of fire agency personnel. It was reported some regions relied exclusively on their own local aviation personnel during protracted fires, potentially leading to fatigue issues as the season progressed. Personnel from other regions who were not subjected to the same level of operational activity may have provided support to these areas gaining valuable experience while permitting local personnel some respite.

A number of observations collected during the review highlighted the need to revisit the integration of aircraft with ground resources, specifically the need for ground resources to secure and extinguish fire line which has been “knocked down” by aircraft. Examples cited related to aircraft doing excellent work on fires only to lose this progress when ground based resources were not there to secure the line.

Issue	Comment	Action
PDD	PDD arrangements in Loddon Mallee and Barwon South regions during 2013/14 were regarded as being a critical component of first attack success	The Fire and Emergency Aviation Management Group to review the potential expansion of PDD arrangements prior to 2014/15 FDP.
AIG	AIG platform again demonstrated this year the benefits of this emerging technology in providing critical real-time intelligence to incident management personnel.	Emergency Management Capability Manager (EMV) to ensure agency personnel are informed of the AIG capabilities and ways to access this intelligence during incidents prior to 2014/15 FDP.
Ground crew training	Feedback gathered during the review identified the need to revisit the importance of integration of ground crews with aircraft to ensure effective fire management and safety.	The Aviation User Network to review existing guidance material for ground crews on their role when working with aircraft prior to the 2014/15 FDP.
Agency aviation personnel management	There is a need for effective management of personnel across regional boundaries to ensure the maintenance of existing capability while ensuring fatigue is managed.	The Aviation User Network develop arrangements to ensure the most effective use of personnel from across the state particularly during campaign or protracted incidents prior to the 2014/15 FDP.

### Background

Following the 2013/14 FDP a decision was made to hold a high level debriefs of SCC Operations rather than the individual functional debriefs that have been used in the past. These debriefs would potentially involve several hundred individuals if all individuals who had performed a role in the SCC attended. Separate debriefs were held for the SEMT, Duty Officers/ Agency Commanders (SDO/SAC) and surge staff. In an attempt to conduct the style of debriefing required and maintain attendance at a manageable level a decision was taken to invite only those surge staff who had completed four or more shifts of work over the period 1 December 2013 to 7 March 2014 when the latest data regarding deployment was produced. Approximately 85 individuals representing all agencies that operated within the centre attended the surge staff debrief. Approximately 12 individuals attended the SDO/ SAC debrief and approximately 52 individuals attended the SEMT debrief.

### Process

The SCC surge staff debrief of the 2013/14 FDP utilised a consultative approach to determine positive aspects of SCC Operations as well as potential areas for improvements. All participants were encouraged to contribute items under these headings. Throughout the day these items were analysed and refined into thematic groups. No pre-determined themes were presented to participants to guide the flow of the debrief, allowing for the identification of themes to be driven by the broader pool of SCC staff present. Once consensus was reached on a range of themes all participants voted to determine the highest priority themes to be addressed. These themes were then made the focus of further discussion with the goal of creating an initial action plan to address the improvement. A similar process was utilised for the SDO/SAC and SEMT debriefs. This process followed a similar process to identify positives and opportunities for improvement, then utilised the standard debrief template to identify possible solutions.

### Surge staff results

#### Positives

As expected when input is received from a large audience, a wide range of items were identified as positive issues.

In terms of general themes raised, the following is a summary of the key positives identified:

- **Attitude**

Across all groups the attitude of individuals was highlighted as a positive feature of working with the SCC. Participants reported positive attitudinal features including;

- A 'make it happen' attitude;
- Commitment by everyone for best outcomes;
- Flexibility and willingness of people to help;
- People worked well together friendly helpful;
- People made success happen;
- Professionalism / tone of the room and people; and
- Dedication and ongoing commitment of people.

This focus on individuals having the appropriate attitude and approach to their role within the SCC aligns with the identification of core capabilities for IMT members recently developed as part of the Incident Management Team Training Project.

- **Teamwork**

Not surprisingly given the previous issue around attitude, the ability of those individuals to work together as teams was consistently highlighted as positive aspect of working in the SCC. Key results attributed to the high quality teamwork present in the SCC included;

- Excellent communication across all functions;
- Greater cooperation and cohesion within function and across functional areas;
- Better integration with and access to all other functions; and
- Greater cohesion and cooperation between SCC functions and ICC functions.



- **Multi Agency Approach**

Surge staff identified that the adoption of a multi-agency approach to SCC operations has become standard and that this was a positive development.

- Typical comments included: Interoperability between all agencies at all levels;
- All agencies worked well together (agency blind);
- Multi agency cooperation;
- Willingness to work together across agencies; and
- Integration of cross agency teams.

It would appear that at the SCC level at least, that inter-operability is not only accepted as a concept but has become the standard working mode.

- **Technology and Systems**

A substantive number of participants reported improvement in IT systems across all aspects of SCC Operations. The EMPortal/EMKnowledgeweb and eMap were specifically highlighted as successful additions to the SCC.

- **Information Flow**

Significant improvement in information flow within the room was identified as part of the debrief process. To some extent, this is a logical effect of improved teamwork and the multi-agency approach mentioned earlier. The conduct of regular “heads up” meetings in particular was viewed as having significantly contributed to effective information flow.

- **Rostering**

Improvements in rostering and matching rostered roles to needs were identified as areas where SCC operations had shown positive improvement over the FDP.

- **IILU**

The operation of the Interstate and International Liaison Unit was highlighted as a positive aspect of operations over the FDP.

## **Opportunities for Improvement**

Whilst positive issues were collected, the key focus of the debrief was on identifying opportunities for improvement and developing subsequent actions to implement them. As such a large number of potential issues were identified. Over the course of the debrief these issues were analysed and grouped until the key themes for future improvement were identified. Participants then utilised a multi-voting approach to select six themes to analyse for possible solutions as part of the debrief process.

Interestingly a number of the themes identified as key opportunities for improvement were identical to items that had been identified previously as positives of working in the SCC (IT systems, information flow and rostering). While initially appearing contradictory this potentially reflects that whilst staff acknowledge substantial improvement over past practice there is still further room for substantial improvement in these areas. Several comments collected over the day support this by identifying significant overall improvement in SCC operations in recent years and acknowledging the substantial effort that has gone into change management at the SCC.

For each of the six key themes voted as a high priority a short summary of the nature of the improvement and potential actions to implement it are provided below.

- **Resources**

This theme focussed on the system for requesting and deploying resources. As well as the technical and functional requirements of a resources system the group identified business rules and processes that could improve the efficiency of an integrated resources management system.



- **Systems (IT and Work)**

This theme focussed on access and integration to systems, information and data across agencies and through functions to support emergency management. The desired end state identified a system /dashboard that has the capacity to interact with existing systems and accommodate gaps, it was also seen as desirable to align business as usual systems with response systems and then align these across agencies.

- **Information Flow/Reporting**

This theme focussed on gaining agreement on information and reporting needs as a first step to improving information flow and reporting. The group suggested the development and use of standard templates and products as a key factor in providing useful and timely information in the SCC.

- **Rostering/ Shift Planning**

This theme took a holistic approach to the issue of providing appropriate staffing to service the SCC requirements. Issues considered included drawing on a broader range of sources to staff SCC positions, rostering at levels appropriate to the role and activation of the SCC, developing an integrated system for rostering and tracking deployments and addressing business rules and agreements to allow government employees to effectively support emergency management operations.

- **Command and Control**

The group working on this theme recognised that the issue had broader implications than SCC operations. Key needs identified included removing duplication, providing definition regarding roles and ensuring individuals developed a clear understanding of the roles and responsibilities at state, region and incident level.

- **Roles and Responsibilities**

This theme was focussed on providing greater clarity regarding the roles and their associated responsibilities within the SCC. The group identified that whilst people often had a thorough understanding of their own role and functional unit, their knowledge of other roles and units within the SCC was limited. As well as defining roles the group identified a need to clearly define which roles provided key information to the SCC. The group identified strategies around reviewing existing role statements and communicating expectations and responsibilities of roles more broadly.

## **State Duty Officer/ State Agency Commander Results**

### **Positives**

A range of improvements related to the role of SDO/SAC were identified by the group. Consistent themes which appeared in the positives identified include;

- **Improved Information**

Participants reported improvements in a range of documents and information services including safety briefs, media documents, state-wide predictive information and weather information. In addition the use of the EM Portal, eMap and WebEx to support access to information and remote conferencing were highlighted as positive outcomes.

- **Operational Improvements**

This group reported that interoperability in general was improved over the FDP. Specific operational items that were identified include the production of consistent warnings, pre-positioning and pre-determined dispatch of aircraft. The management of the evacuation associated with the Grampians fire was also highlighted as a positive from the FDP.

### **Opportunities for Improvement**

Whilst positive issues were collected, the key focus of the debrief was on identifying opportunities for improvement and developing subsequent actions to implement them. As such a large number of potential

issues and opportunities for improvement were identified. These issues were collected utilising the pre-determined themes for debriefing. Three key opportunities for improvement were identified by this group namely, resource management, information sharing/ common situational awareness and warnings.

- **Resource Management Systems**

The issue of greatest concern to the SDO/SAC group was resource management. Whilst there was some disagreement regarding the causes of issues within this system there was consensus that overall the system did not serve the needs of the agencies. The group felt that at times the majority of their time in the role of SDO/SAC was spent addressing resourcing issues leaving little time to address other responsibilities of agency command. Whilst most aspects of resource management were criticised by this group it was apparent that the level of understanding regarding existing system and processes was incomplete. Given this, the ability of the group to utilise existing systems was compromised. Whilst critical of the overall system the group was highly complementary of the resources staff. It was widely acknowledged that the ability to maintain resources at multiple incidents for the prolonged duration required over the FDP was only possible due to the sustained efforts of the individuals working within the resources unit at State, Regional and Incident levels.

- **Information Sharing/ Common Situational Awareness**

The SDO/SAC group reported that the lack of a common operating picture remained a significant barrier to efficiency in operations. The group identified a lack of information integration across agencies and the line of control still existed. Potential solutions offered to address this issue included development of an integrated IT system, a consolidated fire reporting system and further training to ensure personnel could fully utilise any systems that are implemented.

- **Warnings**

The key issue identified with the warnings system by this group related to the large number of warnings issued. The group felt that there was a large amount of repetition and duplication in the warnings issued. Additionally the group felt that the consistency in the issuing of warnings could be improved.

## **State Emergency Management Team Results**

### **Positives**

A range of issues were recognised as positive outcomes arising from work carried out over the 2013/14 FDP. The major items recognised as positives included:

- **Interoperability**

There was a consensus that the level of commitment from members and the collaborative approach across all organisations present at SEMT has significantly contributed to interoperability and a joined up government approach to emergency management. Members reported the development of a positive culture at the SEMT describing that culture as supportive, inclusive and collaborative. In addition the group reported improved administrative arrangements supporting SEMT meetings including SEMT Situation Reporting, timely minutes and more focussed agendas.

- **Community Engagement**

A focus on community engagement was highlighted as a positive development over the FDP. SEMT members reported increased effort and focus on community issues and information. Members also highlighted the value of strategic risk and consequence information in maintaining a focus on the community in planning and SEMT operations.

### **Opportunities for Improvement**

Several themes emerged from the debrief in respect to opportunities for improvement. An overview of the main themes is presented below.

- **Training/Induction**

SEMT has identified a need for an Induction process solely focussed on SEMT members. It is felt that this may assist in providing clarity around roles and reporting requirements. Training that spans base level

information regarding specific hazards up to an understanding of strategic issues is required. Regardless of the training or exercising required, members need this provided in a manner that allows it to fit in with their broader work requirements. Members indicate that they would like to take part in training and scenario exercises but they do not have a lot of time to attend these sessions.

- **Briefing/ Meeting Operation**

Members expressed a desire to reinforce the strategic consequence focus of meetings. SEMT meetings need to facilitate two-way communication and exploration of issues rather than simply being a reporting forum. Many felt that briefings were too operationally focussed and consumed a large percentage of the available meeting time. In order to address this issue it was suggested that members obtain situational awareness prior to the SEMT meeting. This could be achieved by separating the briefing from the meeting. Members acknowledged that the lack of a “common operating picture” made this difficult at present. In obtaining briefings and information members expressed a preference for greater use of diagrams and spatial information in preference to verbal or written information.

Communication and the relationships between SEMT and REMTs was also highlighted as an area with potential for improvement. This issue is related to lack of role clarity highlighted in training improvements earlier. Some concerns were expressed regarding the frequency of meetings and the amount of time involved in attending them.

- **Online Teleconferencing**

The use of the existing teleconferencing system was widely reported as an area where significant improvement was required. Concerns included the poor sound quality present on teleconferences, a lack of discipline and protocols relating to teleconferencing and a desire to make more use of the existing WebEx system. Suggested improvements include more microphones and speakers in the room, the use of video conferencing and the adoption of web based remote access systems to provide improved access and integration for members that are located remotely.

- **SEMT Situation Reporting**

There were apparently contradictory requests to standardise the SEMT Situation Report as well as allow for its customisation to reflect input from only those agencies with issues relevant to the event. The adoption of consistent timeframes for reporting and submission of information across agencies was seen as a further area where potential improvement could be obtained. Members also requested opportunities to practice utilising the reporting tool prior to activation during the FDP.

Issue	Comment	Action
State Control Centre Operations	<p>Through reviewing the operation of the SCC and all activities associated with this level of control and the facility a substantial number of learnings have been identified.</p> <p>Key themes and continuous improvement initiatives will be incorporated into future business plans for appropriate work to be undertaken which identifies solutions and prioritises these for resolution.</p>	SCC Management to develop solutions for issues identified through review process and prioritise for endorsement as part of future business plans.

# State Review Team Learnings

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The Joint Operations, Incident Management and Safety Survey which had remained largely unaltered for over ten years, was removed this year. It was identified each year different people, in varying numbers, completed this survey which in turn significantly varied the quantitative data and the quality of the output.

With a view to continuous improvement of the information collected, this year a change was made to the process of collecting observations from the field in that an on-line observation tool, already in place with CFA and incorporated into the EM Portal, was modified to be more specific for the post FDP observation collection. This system was utilised by an extensive number of predominately fire agency personnel therefore showing the system to have continued value, complementing face-to-face debriefing and capturing observations in real time compared to previous years.

It was recognised whilst this review is focussed predominately on fire related incidents throughout the FDP, there is also a significant amount of contribution by other agencies with regard to heat-health related incidents across the same period and accordingly there was a greater push to capture and incorporate observations and learnings from AV and the Department of Health and Human Services. Having said this, it is recognised our emergency management partners continue to undertake their own internal debriefing and reviews following an FDP but this information still does not find its way to a consolidated learning and improvement framework.

It is also recognised there are significant challenges in collecting information at the conclusion of the FDP from some agencies as their attention shifts to other responsibilities, and often key observations are overlooked or forgotten during the FDP and subsequently lost by the end of the season when review activities commence.

Understanding the requirement to do more than simply produce a report at the season's end, a range of communications and learning materials are currently being developed by the State Review Team to highlight specific examples of best practice or where continuous improvement opportunities exist.

The State Review Team continues to recognise and focus on further improving the linkages between post and preseason activities.





Department of  
Environment and  
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