

Emergency Management Operational Review 2014-15

Part 1: Overview and Case Studies



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Cover photo: Silo Engulfment Response - February 2015
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Message from the Emergency Management Commissioner



Victoria's landscape is at once beautiful and familiar. It can also quickly become a place of harsh extremes, where – from one end of the state to the other – we experience drought and flood, fire and storms.

Managing such conditions in a planned and prepared manner is as challenging as the changing weather that characterises our State.

The 2014-15 summer reinforced the benefits of a joined-up emergency management system, and the work towards an all-agencies, all-hazards approach centred on the community.

Operational planning and preparation for emergencies is a year-round activity. It occurs at local, municipal, regional and state levels. The regional emergency risk project, strategic risk and consequence management, audits, changes in doctrine, training, briefings, exercises and public information campaigns are all part of this continuous process.

In mid-2014 we deployed personnel to support bushfires response in the Province of British Columbia (BC). Later, Victorian resources were sent to assist with both fires and floods interstate. A significant high-rise fire in Docklands in November required extensive relief and recovery support.

In mid-December 2014 lightning sparked more than 350 fires in north eastern Victoria. These fires burnt through almost 15,000 hectares.

On 2-3 January 2015, Victoria experienced severe to extreme fire danger, with high temperatures, damaging winds, severe thunderstorms. A statewide total fire ban day was declared for 3 January 2015 and during this time 220 personnel from NSW assisted in Victoria. Heat health alerts were issued to multiple districts during January and February.

Fortunately, there were no deaths as a result of these fires, but some farmers and agricultural businesses incurred extensive loss and damage to property, livestock and other assets.

Late January and February saw severe thunderstorms with rain and destructive winds impacting on Regional Victoria and Melbourne metropolitan area, resulting in widespread damage, including one death.

All emergencies during 2014-15 involved relief and recovery, coordinated by local councils. Local councils supported community members at relief centres and coordinated support through local recovery plans and consultative committees.

Tragically, there were 26 drowning deaths in Victorian waterways, including swimming pools, in the 12 months from July 2014.

The emergency management sector's commitment to continuous learning and improvement has seen a range of issues identified during these operations – gathered from the observations collected before, during and after – from all levels through individual observation, monitoring, debriefing and reviews.

We will look to this data for trends, and it will become part of a two-year rolling cycle of learning and improvement – an important step towards EMV's shared goal of creating a sustainable and efficient emergency management system that reduces the likelihood, effect and consequences of emergencies.

Executive Summary

The *Emergency Management Operational Review* is part of a two year cycle of learning and improvement. Review and evaluation activities occur throughout the year and the outcomes of these activities are then collated to analyse and identify best practice and opportunities for learning and improvement. These insights are then incorporated into emergency management planning to ensure continuous improvement is occurring across the sector within a two year cycle. This report supersedes the *Post Season Operations Review* and the *Fire Season Overview and Narrative* to provide the emergency management sector with an overview of operational activity throughout the 2014-15 financial year.

The scope of this report includes operational activities within the 2014-15 financial year with input from the responder agencies Country Fire Authority (CFA), Victoria State Emergency Service (VICSES), Department of Environment, Land, Water and Planning (DELWP), Metropolitan Fire Brigade (MFB), and Victoria Police (VicPol). Emergency Management partners also contributed and supported the process with input from a range of other organisations.

The 2014-15 financial year saw a highly varied climate across Victoria. Winter and Spring were warmer than usual, with low rainfall and the driest spring for at least 20 years for many parts of Victoria. Summer was highly varied with more frontal weather coupled with hot conditions. Autumn was cooler with some rain.

A range of planning and preparedness activities were undertaken by the emergency management sector at the municipal, incident, region and state tiers.

Emergency management personnel responded to a wide range of emergencies over the 2014-15

financial year. Operational activity was highest during December 2014 and January 2015, with over 10,000 incidents attended by response agencies in each month. Warnings and alerts to communities also peaked over this period, including the issue of multiple Heat Health Alerts, consistent with the fire danger period and significant storm activity. The only day to be declared a statewide Total Fire Ban was 3 January 2015.

In November 2014, a structure fire in the Lacrosse building in the Docklands area of Melbourne required significant response, relief and recovery support. The fire is believed to have started on 8th floor apartment balcony and spread quickly up the outside of the building to the 21st floor. Over 400 residents were evacuated with no significant health issues or serious injuries. Personnel from over 10 organisations were involved in the response, relief and recovery effort.

While Victoria did not experience as many periods of heat and fire danger as the 2013-14 financial year, there were two peak periods in December 2014 and January 2015. In mid-December, significant bushfires in the north east of Victoria resulted from a 'spike period' of lightning that ignited around 350 fires. Over a two day period in January 2015, Victoria experienced a hot, dry windy period resulting in severe to extreme fire weather conditions, damaging winds and severe thunderstorms. During this time, there were significant fires in the west at Moyston, in the Little Desert and at Hastings. Over this period, 220 personnel from NSW assisted in Victoria.

In February, severe thunderstorms, with destructive winds, impacted the Melbourne metropolitan area, resulting in widespread damage, including a death. VICSES received over 2,000 Requests for Assistance, which included



Victoria Storm Response - February 2015

“Operational activity was highest during December 2014 and January 2015, with over 10,000 incidents attended by response agencies in each month.”

trees down on properties, roads and powerlines.

All emergencies that occurred during 2014-15 involved local coordination of relief and recovery by councils. Local councils supported community members in relief centres and coordinated support through local recovery plans and consultative committees.

Overall, Victoria’s emergency management sector effectively and efficiently managed the response and recovery of a large number of incidents, including storms, bushfires, flash flooding and extreme heat. Part 1 of this report provides the narrative of the operational period and a selection of case studies.

Observations were collected from all tiers of emergency management through individual observation collection, monitoring, debriefing and review activities. This data set was analysed for trends and assessed for action. Part 2 of this report outlines insights identified from the collected observations, categorised into 11 themes:

- incident management team relocation,
- resource management,

- traffic management points,
- evacuation,
- managing multiple emergencies,
- safety and fatigue management,
- community engagement,
- aviation,
- interstate and international deployment,
- emergency management teams, and
- regional control.

Suggested treatments have been identified for each theme, which will be used to develop an action plan. Insights and actions will become part of a two-year rolling cycle of learning and improvement. This will support continuous evaluation activities and improvement processes throughout the year, with insights incorporated into emergency management planning across the sector.

Introduction

The *Emergency Management Operational Review* is a summary of the operational activities undertaken by emergency management personnel across the 2014-15 financial year. This report supports the continuous improvement of the sector by sharing lessons.

The Operations Review is divided into two parts. *Part 1: Overview and Case Studies* includes:

- An overview of the weather and emergency management activities carried out during the 2014-15 financial year, and
- A set of case studies that demonstrate the variety of emergencies managed by emergency management personnel in Victoria during the 2014-15 financial year.

This report is supported by *Part 2: 2014-15 Themes and Insights*, which includes insights based on observations from emergency management personnel regarding the management of Class 1 emergencies. Observations were analysed for trends, which can be divided into two categories:

- Predetermined themes – identified in the *2014-15 Guidelines for Debriefing*¹ as a focus for regional multi-agency end of summer season debriefing.
- Additional themes – identified through the data analysis process.

Background

In previous years, the *Post Season Operations Review* described the operations of fire services across the fire danger period. In 2014, the *Fire Season Overview and Narrative* was also released to provide a description of the season and the emergencies that occurred.

The Inspector-General for Emergency Management (IGEM) reviewed the progress of the actions in the *Post Season Operations Review Fire Danger Period 2013-14*, along with actions identified in the Community Reports into the Goongerah-Deddick Trail Fire and Mt Ray-Boundary Track Fire (January-March 2014). In October 2014, IGEM published the status of these actions and further recommendations in the *2013-14 Fire Season Compliance Report*. A subsequent report into the status of these actions was released in September 2015.

This report, the *Emergency Management Operational Review 2014-15* supersedes the *Post Season Operations Review* and the *Fire Season Overview and Narrative*. This document moves towards a broader focus of:

- Year-round – broadened timeframe from the fire danger period to financial year,
- Multi-hazard – expanded beyond bushfire incidents,
- All-phases – expanded beyond response only activities, and
- Multi-agency – expanded beyond responder agencies.

Purpose

The purpose of this report is to provide an overview of the operational activities in the emergency management sector across the 2014-15 financial year. This document is supported by Part 2, which provides insights and suggested treatments relating to key themes.

Scope

The scope of this report includes operational

¹ *2014-15 Guidelines for Debriefing* provides guidance for responder agencies on conducting debriefs and gathering review information over the summer emergency season. The State Review Team approved this document on 28 January 2015.

“The purpose of this report is to provide an overview of the operational activities in the emergency management sector across the 2014-15 financial year.”



Victoria’s Deployment to Western Australia Fires - February 2015

activities within the 2014-15 financial year. The information provided in this report reflects the activities overseen by the State Review Team (SRT) during the 2014-15 financial year.

The SRT is the overarching leadership group that provides guidance and coordination of review, debrief, monitoring, lessons management activities and performance improvement across the emergency management sector for all hazards. The SRT’s primary objective is to promote consistent sector wide continuous improvement in a coordinated and effective manner.

While there is a focus on the activity of responder agencies relating to Class 1 emergencies, other government departments and emergency management partners have also provided input. Organisations that contributed and supported the development of this report include:

- Country Fire Authority (CFA),
- Victoria State Emergency Service (VICSES),
- Department of Environment, Land, Water and Planning (DELWP),
- Metropolitan Fire Brigade (MFB),
- Victoria Police (VicPol),
- Department of Health and Human Services (DHHS),
- Red Cross (RC),
- Ambulance Victoria (AV)
- Local Government Victoria (LGV)
- Municipal Association of Victoria (MAV)
- Municipal councils,
- Emergency Management Victoria (EMV) and

- Inspector-General Emergency Management (IGEM - Observer/Adviser).

On 1 January 2015, Machinery of Government changes came into effect altering the names and portfolio responsibilities of Victorian government departments. This report uses the current names of departments and portfolio areas, even where the emergency activities were carried out prior to the Machinery of Government changes (e.g. DELWP).

Process

During the 2014-15 financial year, observations were collected from all tiers of emergency management through individual observation collection, monitoring, debriefing and review activities. The SRT supported these activities and collated the data. This data set was analysed for trends and assessed for action. This process is shown in Figure 1.

This report provides the narrative of the operational period and a selection of case studies. The insights that were identified through the analysis are presented in *Part 2: Themes and Insights*.

2014-15 Overview

The information included in the overview section is intended to provide a summary of the weather and operational activity across the financial year. In addition to response, this section provides a summary of the activity that has been undertaken across the sector before, during and after emergencies to reflect the broader spectrum of emergency management.

Case Studies

Local teams and governance groups (e.g. crews, emergency management teams, regional control teams) analysed the data they collected to identify locally relevant insights and actions required to contribute to continuous improvement. These actions are locally coordinated, implemented, monitored and reported.

Where relevant, case studies were developed to identify and share the identified lessons. Where possible, case studies were developed as soon as practicable after the incident to capture and share what went well and what could be improved.

This report provides a selection of case studies that were developed over the 2014-15 financial year. These case studies demonstrate the variety of incidents managed by emergency management personnel in Victoria during 2014-15. Case studies have been chosen to reflect the broad spectrum of emergency management (i.e. not just response to Class 1 emergencies). Where case studies were originally published elsewhere, the content has been replicated and the source document has been referenced.

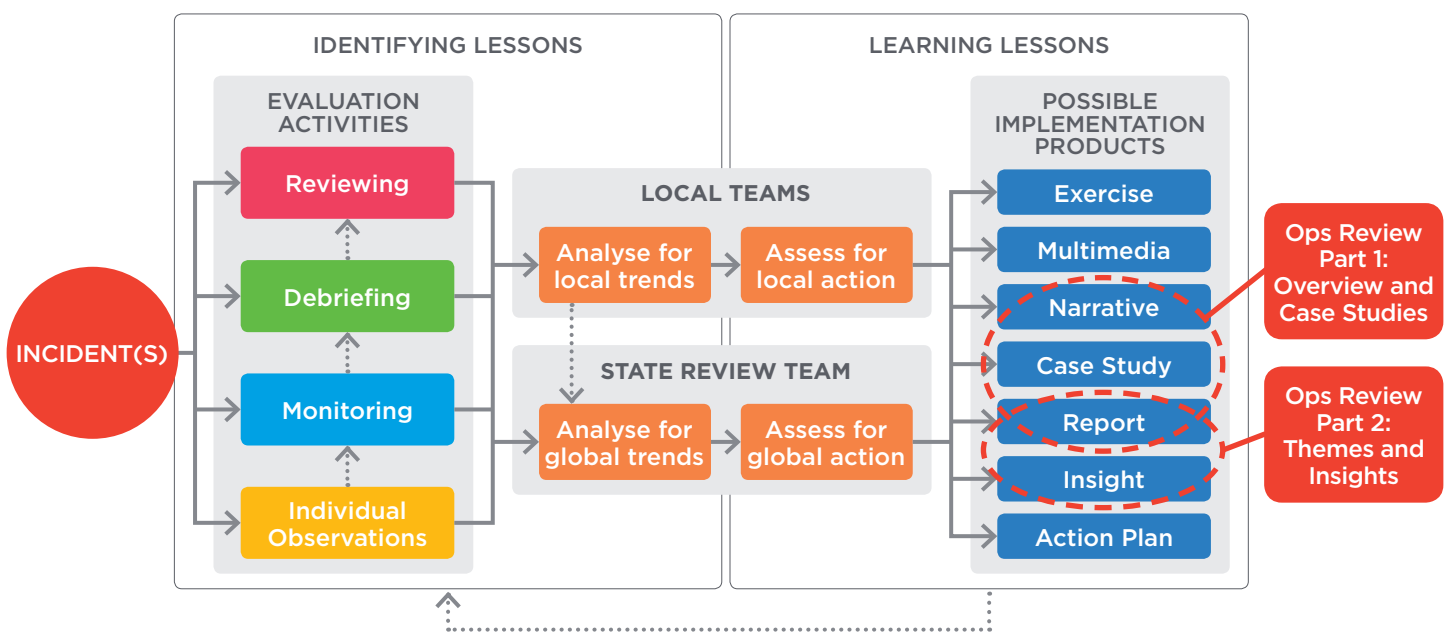


Figure 1: Process for identifying and learning lessons

2014-15 Overview

Weather and Climate

Seasonal Climate Summary

Winter 2014

Dry conditions were present across the Mallee regions and north-central parts of the state during Winter 2014. Southern parts of Victoria saw rainfall vary between average to above for the season. Warmer than average daytime temperatures were experienced across most of Victoria, particularly along the southeast coasts. Daytime temperatures were more than 0.7 °C above the long term average (13 °C), for the state across winter. Warmer nights were observed across most of the southern half of Victoria, with locations on the Mornington Peninsula observing their warmest winter nights on record. The northwest Mallee observed cooler than average nights. Minimum temperatures were just under 0.4 °C above the long term average (4.1 °C) for the state over winter.

Spring 2014

Spring 2014 brought the second-highest mean daily maximum temperature for Victoria in 105 years of records. Temperatures were above average across the State, with much of the coastal southwest the highest on record and many individual sites also setting spring records. Preliminary data shows the average maximum temperature for the state was 21.95 °C, which is 2.54 °C warmer than the 1961-1990 average. Average night-time temperatures were warmer than normal in most parts except the Wimmera and Northern Country districts. It was also the driest spring for at least 20 years for many weather stations. Generally, rainfall was very much below average in the west tending to below average in the centre through to above average in parts of East Gippsland.

Summer 2014-15

The summer of 2014-15 was highly varied in Victoria. Some of the highest daily December

rainfall totals were seen in the east, while much of the west and central areas recorded well below average totals. The start of January saw very hot, dry and windy conditions. Severe thunderstorms were experienced when a trough moved across western and central regions of the state on 3 January 2015. The west of the state recorded above average rainfalls. This coupled with spells of cooler than average days towards the end of the month kept maximum temperatures at or slightly below average for January. It was hot in February with daytime and night time temperatures above average to very much above average across most of the state with average rainfall totals in most parts (exception of below average in the far west). The summer season ended with a change sweeping across the state accompanied by severe thunderstorms. With more frontal weather, there were less 40°C days than usual across the state over the summer period.

Autumn 2015

Autumn 2015 rainfall was generally below average across central to western Victoria and above average for much of Gippsland. Both maximum and minimum autumn temperatures were cooler than average across the west of the State and south and eastern Victoria. Some small areas in the far west of the State were very much cooler than average. Overall, autumn saw average to below-average rainfall except in eastern and central Gippsland and small patches in the North Mallee and Otway Ranges. Several small areas of very-much-below-average rainfall were recorded in the Wimmera, northern and central Victoria. Overall, statewide average rainfall was 19.3% below the long-term (1961-1990) average. Heavy rain on 8 April saw three sites in East Gippsland record their highest daily autumn rainfall.

Figure 2, provides a visual representation of the seasonal climate summaries of rainfall totals and minimum temperature.

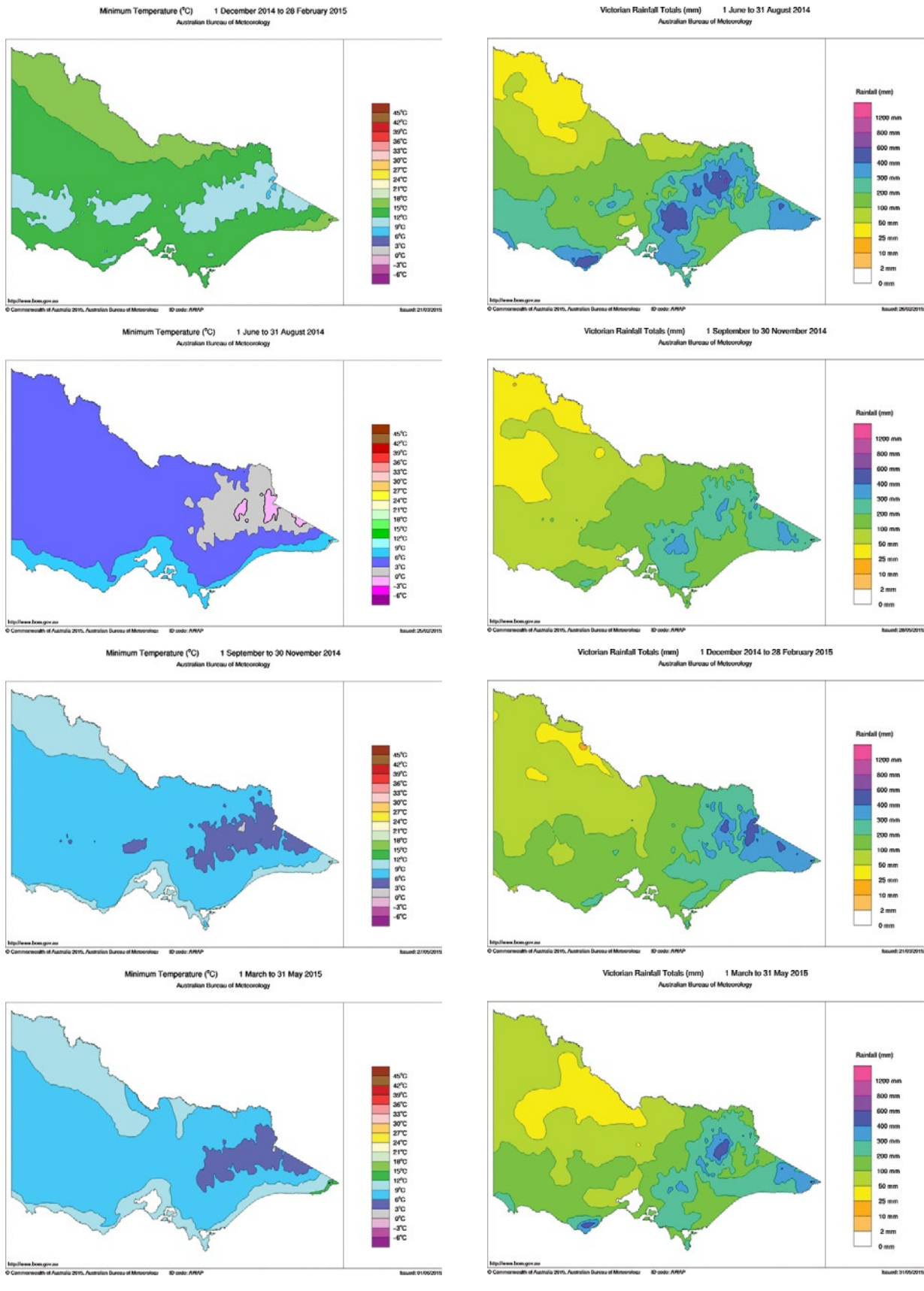


Figure 2: Rainfall Totals and Minimum Temperature by Season

Source: Bureau of Meteorology: Climate Summaries <http://www.bom.gov.au/climate/current/index.shtml>



Christmas Hills Fire-Scape - April 2015

“The expectation of an above normal fire season for 2014-15 has extended in Victoria. The outlook has changed to a potentially major fire season”

Summer Season Outlook

The updated Southern Australia Seasonal Bushfire Outlook 2014-15 was released in November 2014 and indicated the following prognosis for the 2014-15 Fire Danger Period (FDP), see figure 3:

“Rainfall since August has been below average to very much below average across most of Victoria, South Australia and Tasmania, with South Australia recording its driest October on record. Climate models suggest current conditions will either persist or strengthen, with at least a 70% chance of El Niño occurring. Regardless of whether El Niño fully develops, warmer-than-average tropical Pacific Ocean temperatures, combined with cooler waters currently to the north of Australia, increase the chance of some El Niño-like impacts. For many parts of Australia, this suggests below average rainfall and above average temperatures in the months ahead.”

The Victorian Regional Summary included a more detailed prediction:

“The expectation of an above normal fire season for 2014-15 has extended in Victoria. The outlook has changed to a potentially major fire season. All Victorian districts except the Mallee and East Gippsland may expect above normal fire potential. The continuation of dry conditions in all districts except East Gippsland, coupled with an increased likelihood of an earlier start to the season, has extended the above normal outlook beyond the geographic extent advised in September (see Hazard Note 002)”.

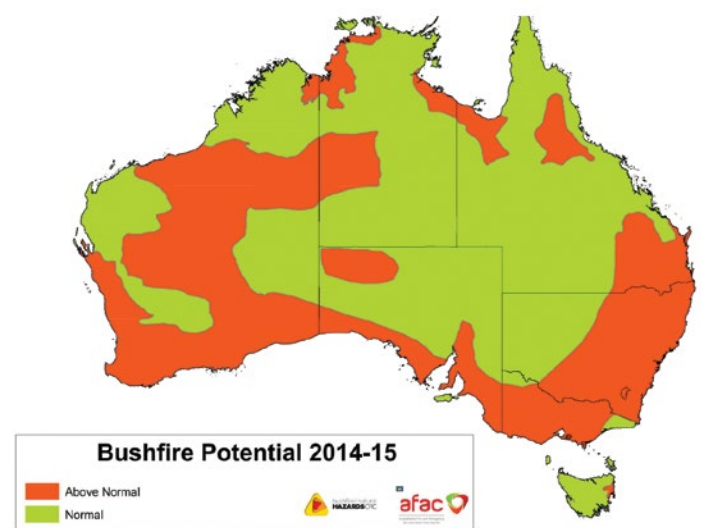


Figure 3: Australia’s Bushfire Potential 2014-15
Source: *Bushfire and Natural Hazards Cooperative Research Centre (BNHCRC) Hazard Note 003 - Southern Australia Seasonal Bushfire Outlook 2014-15*

Total Fire Bans

A Total Fire Ban (TFB) is declared by delegation of the CFA Chief Officer on days when fires are likely to spread rapidly and could be difficult to control, under Section 40 of the CFA Act 1958. On days of TFB, no fire can be lit or remain alight in the open air, unless an appropriate

permit has been issued. During the Fire Danger Period 2014-15, 12 days were declared as a TFB for one or more weather districts, see figure 4. The Mallee weather district received the most TFB declarations. A statewide TFB declaration affecting all weather districts only occurred once on 3 January 2015.

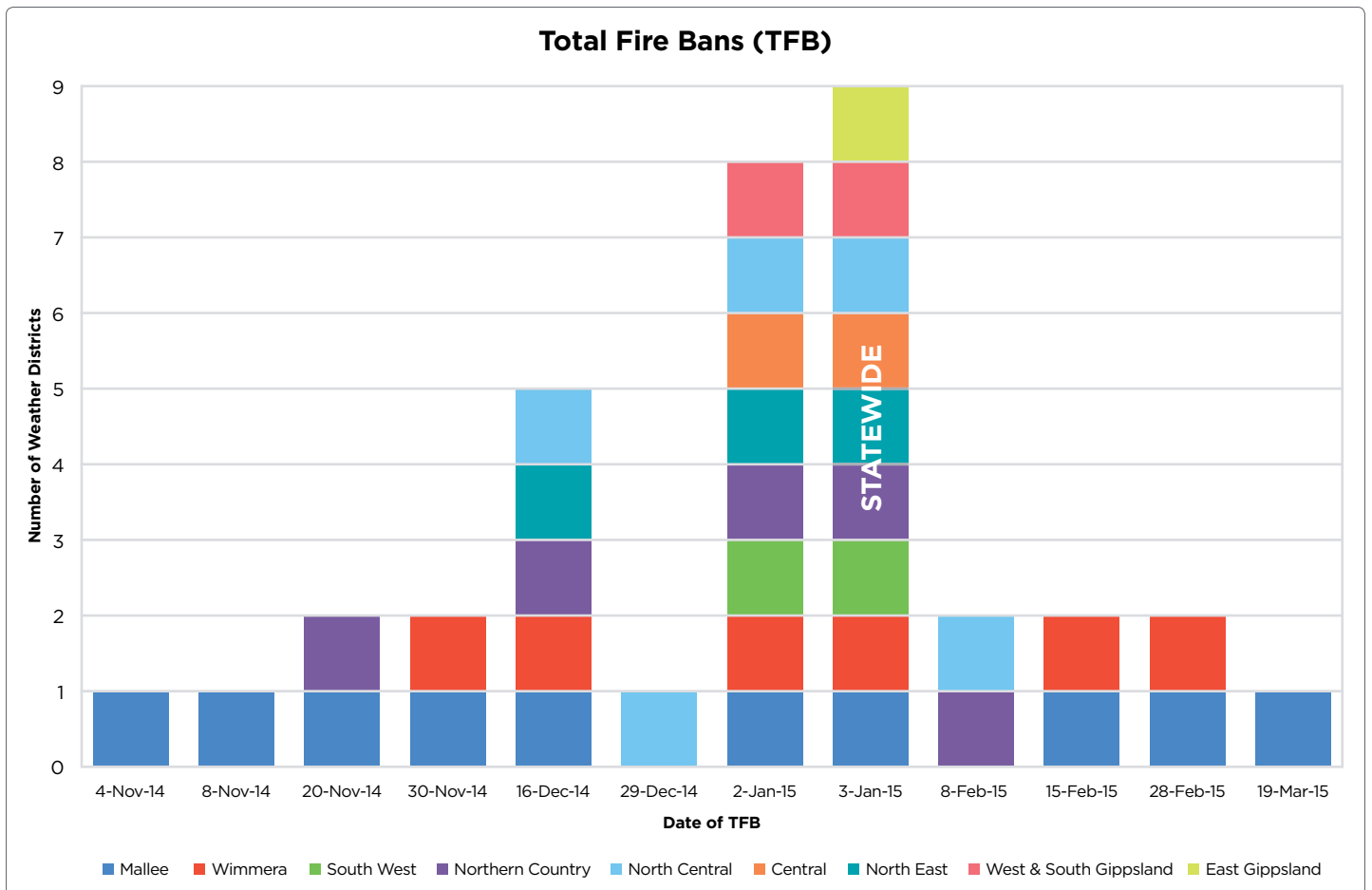


Figure 4: Total Fire Bans (TFBs) for the Fire Danger Period 2014-15

Fire Danger Ratings

Fire Danger Ratings (FDR) are a prediction of fire behaviour by the Bureau of Meteorology (BoM). Based on environmental and weather conditions, FDR predicts how hard it would be to put out a fire once it starts. The higher the rating the more dangerous the conditions.

During the 2014-15 Fire Danger Period there was 23 Severe and 8 Extreme FDRs recorded, see figure 5. There were no Code Red determinations during this time. The majority of FDRs were Low-Moderate and High.

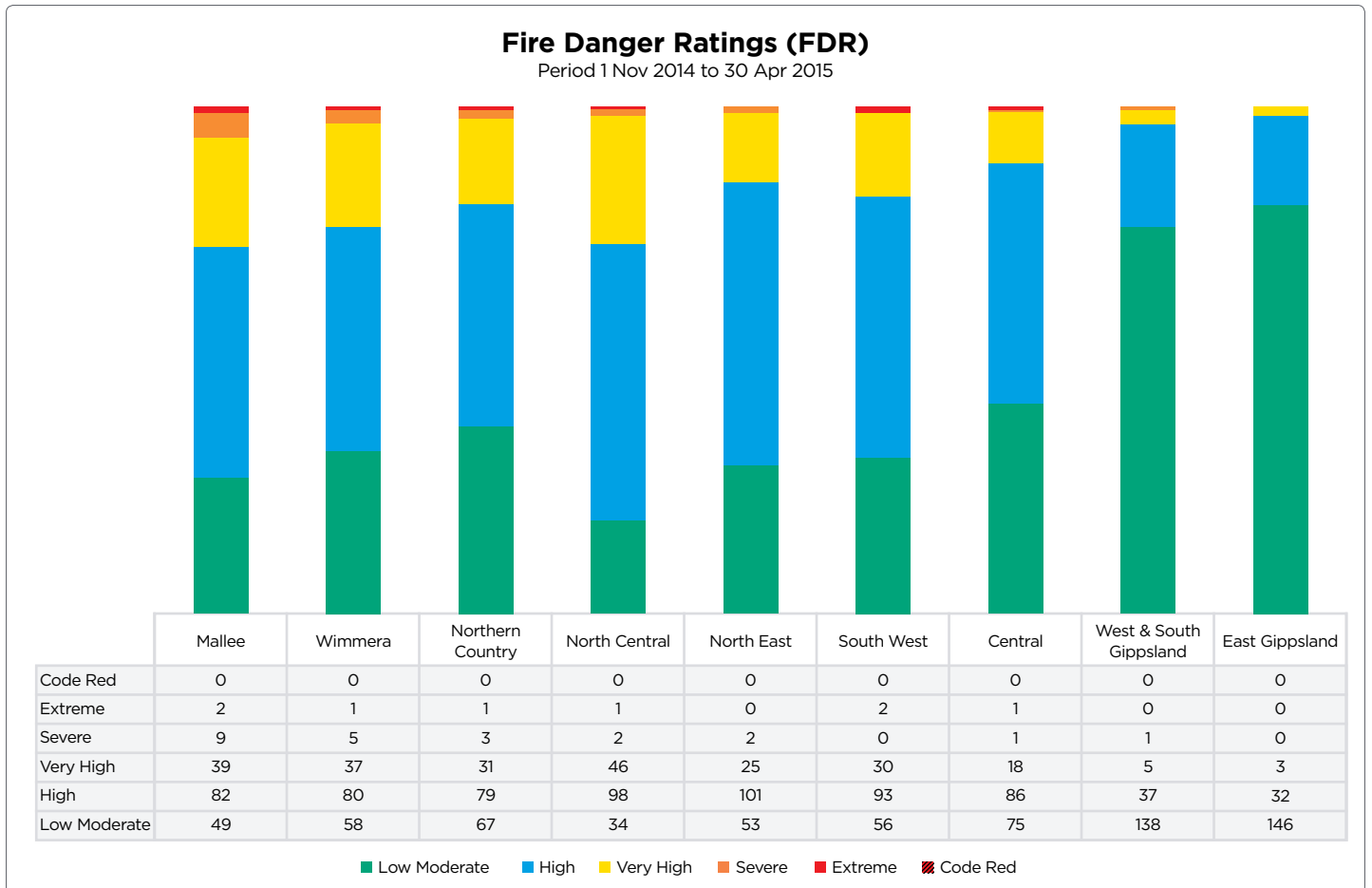


Figure 5: Forecast Fire Danger Ratings (FDR) by Weather District for the Fire Danger Period 2014-15

Planning and Preparedness

A range of planning and preparedness activities were undertaken by the emergency management sector prior to the summer emergency season at the municipal, incident, region and state tiers. While many of these activities are undertaken regularly at this time of year, additional reasons for the high number of planning and preparedness activities conducted prior to the 2014-15 summer emergency season include:

- Changes to legislation, leading to major changes in state arrangements and other doctrine;
- Above normal risk of bushfire for most of the state, indicating potential for a major bushfire season;
- Learning from previous emergency operations regarding a range of hazards.

Planning

Community Based Emergency Management

Representatives from MFB, VICSES, CFA, DELWP, MAV and EMV have supported the development of an approach and framework for communities and organisations to support each other, while building community safety and resilience levels.

This Community Based Emergency Management Approach aims to assist communities to engage with key stakeholders from emergency management organisations, government (state and local), business, industry and other non-government organisations, to work together in developing mutual goals and solutions. As a priority identified in the *Emergency Management Strategic Action Plan Interim - 2014/15*, a range of local communities and organisations have piloted this approach and framework, which has been refined from the initial process piloted in Harrietville.

Working together at the local level aims to build and strengthen connections that can support communities to better plan, respond and recover from emergencies and natural disasters. The approach aims to support communities and organisations to make more informed decisions about their safety in emergencies by:

- Connecting people,
- Gathering local knowledge,
- Understanding hazards and risks,
- Developing goals and solutions, and
- Continuing to learn, share and improve.

It is expected that using this approach will support communities and organisations to:

- Be better connected - before, during and after emergencies,
- 'Map' the local community profile and priorities,
- Understand and manage local priority hazards and risks,
- Develop scenarios, actions and solutions,
- Better prepare, respond and recover, and
- Aim for long term resilience.

Work is underway to support the further integration and continual improvement of this Community Based Emergency Approach with the sector in 2015/16.

Regional Emergency Risk Project

The aim of the Regional Emergency Risk Project was to increase emergency resilience by enhancing the understanding of emergency risks and emergency management planning capabilities at the regional level. The project outcomes were designed to provide the basis for ongoing, comprehensive regional emergency risk management in the years to follow.

This project, in its broadest sense, provided the opportunity for stakeholders to discuss emergency management regional capacities, to exchange experiences and to deepen the

understanding of broader emergency risk management for each respective region.

The project applied a risk assessment methodology based on the International Organisation for Standardisation (ISO) international standard ISO 31000:2009 *Risk Management* principles. The EMV Emergency Management Planning Unit facilitated 17 workshops engaging more than 200 stakeholders from government, agencies, business and universities. Figure 6 highlights how the findings and outputs are contributing to various activities across Victoria's emergency management sector.

Preparedness

Audits

A range of regular audits are conducted on operational sites and locations in preparedness for operational activity. These audits include:

- The State Control Centre (SCC) and SCC – Redundancy Site (SCCR) are regularly audited to provide assurance to the EMC of their operational capability. Audit information is recorded and stored by EMV.
- Regional Control Centres (RCCs) and Incident Control Centres (ICCs) listed in JSOP 2.03 were audited in October 2014 and May 2015 to provide assurance to the Emergency

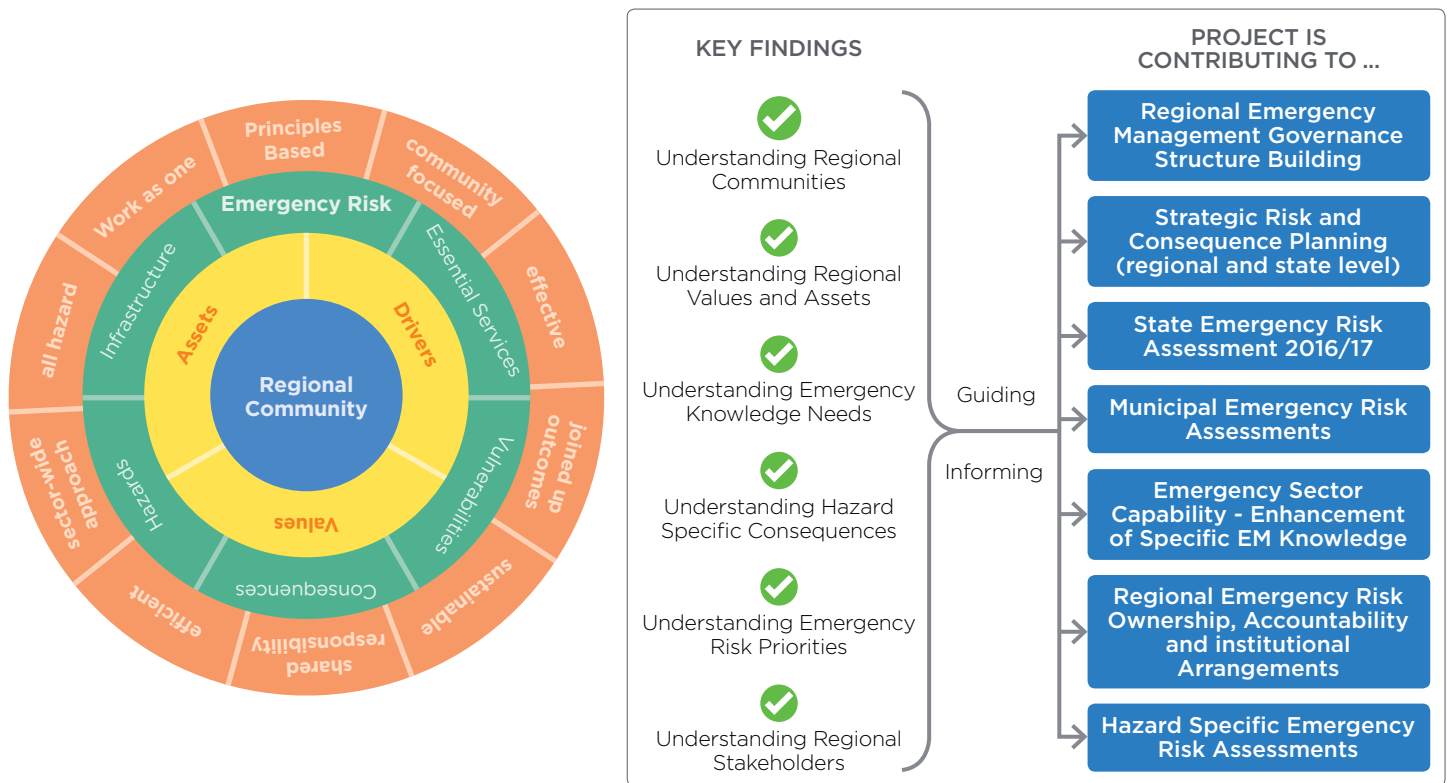


Figure 6: Regional Emergency Risk Project Findings and Outputs Contribution to EM Activities

Management Commissioner (EMC) of their operational capability. The audit process is coordinated by the host agency for the facility (i.e. CFA, DELWP or VICSES), with assistance from partner agencies as required. Audit information is recorded and stored by EMV.

Doctrine

Victoria's emergency management sector created or updated a wide range of state level doctrine over the 2014-15 financial year, including the:

- State Tier Emergency Management Governance Arrangements
- Emergency Management Team Arrangements 2014
- State Bushfire Plan 2014
- State Heat Plan 2014
- Code Red Determination Processes and Communications Plan
- Victorian Ebola Virus Disease Plan 2014
- Victorian Marine Pollution Contingency and Response Plans
- Operating Framework for Biosecurity Emergency Response
- Victorian Bushfire Handbook 2014-15
- Joint Standard Operating Procedures (JSOPs)
- SCC Procedures and Work Instructions
- Concept of Operations (ConOps)
- Safety Fact Sheets

EMV, in conjunction with the agencies, released a number of learning products to communicate information based on the lessons from the 2013-14 summer emergency season. These included case studies and insights, which were disseminated and published on the Emergency Management Portal².

Training

A range of training occurred at the local, regional and state level in preparation for the summer emergency season. The SCC conducted a range of training activities to support the management of the SCC over the summer emergency season. Numbers attending training prior to 30 December 2014 included:

- SCC Inductions - 201 personnel;
- Emergency Management Liaison Officers (EMLO) Inductions - 37 personnel; and,
- SCC Functional Role Training - 489 personnel.

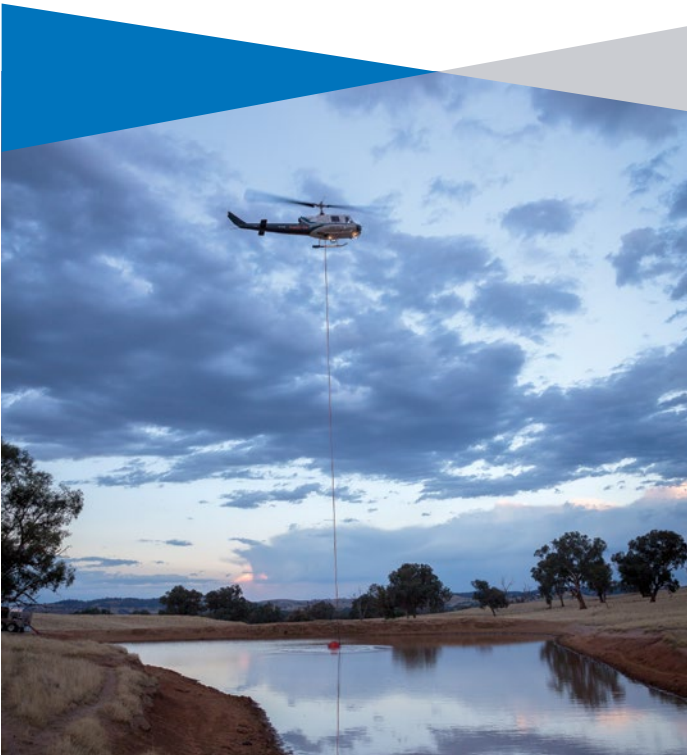
Training continued to be requested and delivered after December 2014, including training of personnel in social media monitoring, public information refreshers, two new emergency broadcasters and warnings and advice officer training.

Briefings and Exercises

A range of briefings were held at different levels across the state in preparedness for the summer season, including:

- *Commonwealth Briefing* - annual operational pre-season briefing presented by the Emergency Management Australia division of the Federal Attorney-General's Department attended by 83 personnel from 28 Victorian agencies and departments.
- *SCC Update Briefing* - four briefings provided an update on arrangements and procedures of the SCC attended by 86 personnel from 10 agencies and departments.
- *State Emergency Management Team (SEMT) Awareness Briefings* - series of five awareness briefings provided SEMT members with an update on current issues and arrangements attended by 171 participants from across government.

² Emergency Management Portal is a web based entry point for emergency management personnel to access information and systems using any internet connected device. It provides direct links to current operational information and a range of common applications including EM-COP, EM Knowledge, EM webmail, eMap and Fireweb. The Portal can be accessed at <http://portal.em.vic.gov.au>.



Wodonga West Fire Response - December 2014

- *Real Time Performance Monitoring (RTPM) Preseason Briefing* - preseason briefing provided an opportunity for learning, interaction, networking and clarification for all monitoring, assurance, evaluation and review personnel attended by 23 personnel from 11 agencies and organisations.
- *Public Information Briefings* - range of briefings for all emergency broadcasters and public information personnel covering updates and developments in operational process, procedure and systems relating to public information.
- *Regional Preseason Briefings* - 17 Regional Briefings were held across the state to provide incident management personnel with updated information on operational arrangements, opportunity to exercise a scenario, and information relevant to their functional role. Approximately 1,200 personnel from at least nine different agencies, departments and organisations participated in the briefings.
- *Regional Control Team Information Forums* - eight information forums provided senior EMV staff and each Regional Control Team with their first formal opportunity to discuss mutual expectations, resolve relevant issues and confirm arrangements.
- *Regional Controller Workshop* - workshop

‘The State Aircraft Fleet for 2014-15 comprised 46 aircraft (four more than 2013-14 summer season). As in previous years, more than 100 additional firefighting aircraft were available on a “call when needed”.’

developed a shared understanding of operating expectations between the State and region and clarified arrangements. They were attended by 75 Regional Controllers and Regional Emergency Management Superintendents (Victoria Police).

- *Regional Code Red Workshops* - six workshops explored and confirmed responsibilities and actions at regional and municipal levels in readiness for a Code Red determination. They were attended by more than 180 members of emergency management agencies and organisations, municipalities and other sector partners.

A large number of preparedness exercises were conducted, including:

- *SCC Exercises* - Four SCC exercises designed to provide opportunities to learn, practice and test the systems, procedures, and functioning of the centre were attended by 35 personnel from five agencies.
- *State Crisis and Resilience Council (SCRC) Exercise* - A discussion exercise to explore the whole of government coordination role for SCRC in a time of crisis was held at the State Crisis Centre.
- *State Emergency Management Team (SEMT) Code Red Exercise* - An exercise to simulate two SEMT meetings to practice the management and functioning of SEMT meetings in preparedness for a Code Red situation was attended by 45 senior operational representatives of response, recovery and other agencies.

Aviation Operations

The Victorian Fire and Emergency Aviation Fleet for 2014-15 comprised 46 aircraft (four more than 2013-

14 summer season). As in previous years, more than 100 additional firefighting aircraft were available on a “call when needed” basis. New Single Engine Air Tanker (SEAT) contracts were negotiated in readiness for the summer emergency season, which saw a 40% increase in weight of attack (a measure of the effectiveness of the effort applied) and 12% increase in average cruise speed from the previous season.

Large Air Tankers (LATs) were introduced into the Victorian Fire and Emergency Aviation fleet in late 2014. A specific multi agency (DELWP/CFA) project was initiated to ensure these aircraft were operational by the required target date of mid December. These LATs were procured to fill a capability gap identified in relation to the delivery of large volumes (greater than 8,000 litres) of fire suppressant or retardant. The National Aerial Firefighting Centre (NAFC) procured the services of two LATs, and an Air Attack Supervision (AAS) aircraft on behalf of Victoria, through established processes.

The Service Period for the LATs ran from 16 December 2014 to 9 March 2015. This was the first occasion these particular configurations of LATs have been operationally utilised in Australia. The three contracted aircraft were based at Avalon Airport, Victoria, but also used temporary operating bases at Royal Australian Air Force bases at Edinburgh (SA) and Pearce (WA), and a Forward Operating Base at Busselton (WA). During the Service Period, the aircraft made 33 drops in Victoria, 29 drops in South Australia, 19 drops in Western Australia, and 6 drops in Tasmania.

A range of preparedness activities were conducted to support aviation operations, including:

- *Aviation Consultation* - four multi agency regional workshops to review and revise the Fire and Emergency Aviation Capability Management Framework attended by more than 60 aviation specialists from more than 7 agencies and departments
- *Aviation Preseason Briefings* - pre season aviation briefing reinforcing safety requirements,

aviation operations, fleet profile (combination of helicopter and fixed wing aircraft) and the expansion of predetermined dispatch (PDD) attended by approximately 100 responder agency representatives and aviation contractors.

- *Large Air Tankers (LATs) Training* - series of familiarisation and training days (in addition to project update circulars) supporting the introduction of LATs into the Victorian Fire and Emergency Aviation fleet attended by aviation specialists from Victoria, Tasmania, Queensland, New South Wales and Australian Capital Territory.
- *Pre-Determined Dispatch (PDD) Briefings* - more than 20 regional briefings to provide information about PDD (responding aircraft automatically upon callouts, rather than waiting to be called on) to inform pilots, aircraft operators and responder agencies about changes to operating procedures and expansion from 5 to 12 locations.

Public Information Campaigns

To support community preparedness for the summer season, the following statewide public information campaigns were undertaken:

- Fire Action Week was held from 16-23 November 2014.
- The 2014-15 Summer Fire Campaign targeted communities at high, very high or extreme risk of bushfire according to the Victorian Fire Risk Register. The core elements of the campaign commenced in early December 2014 and ran until the end of February 2015.
- Water Safety Week was launched on 1 December 2014 as part of the Play it Safe by the Water Campaign, which is a community and government partnership.
- Crime Stoppers bushfire arson campaign aimed to raise awareness of the large scale danger and devastation that recklessly and deliberately lit fires can cause and to make sure Victorian communities are vigilant.

Source: *Summary of Emergency Management Preparedness Activities: Summer Emergency Season 2014-15*, EMV, March 2015.

Response

Operational Planning

State Level Planning

Prior to the 2014-15 summer emergency period, the SCC introduced scenario planning as a way of exploring different situations that may evolve. This helped the state to prepare better for a range of possibilities, both predicted situations and unanticipated emergencies.

During the summer period, state level planning moved to a multiple hazard approach. Monthly readiness plans and 7-day action plans addressed multiple hazards to represent an integrated approach to planning for bushfire, flood, extreme weather and heat. Those plans identified and communicated the objectives for the period, the risks to achieving those objectives, and the actions to be taken to reduce those risks.

Strategic Risk and Consequence Management

Strategic Risk and Consequence Management focuses on the broader implications and consequences of potential or actual incidents that may be beyond the incident(s) area of operation. The process facilitates a whole of Government approach to proactively address consequences associated with a particular risk scenario at both State and Regional level. This management activity includes assessments to highlight strategic risks, consequences, risk



Yapeen Midland Fire Response - December 2014

ownership, mitigation activities and associated confidence levels.

Consequence management during emergencies relies on strong planning and preparedness work that occurs before high risk periods. In the 2014-15 financial year, the Strategic Risk and Consequence Management Unit at the SCC was activated for various incidents and supported by regional Strategic Risk and Consequence Liaison Officers. The Unit was activated for potential and actual incidents, including bushfire, grassfire, heatwave, riverine flood, flash flood, storm, extreme weather and critical infrastructure incidents.

Operational Activity

Across the 2014-15 financial year, the operational activity of responder agencies was fairly consistent, with more than 6,000 emergency incidents occurring every month

(including major emergencies). The busiest months were December 2014 and January 2015, with over 10,000 incidents occurring each month. While still over 6,000 incidents, June 2015 had the lowest number, as shown in figure 7.

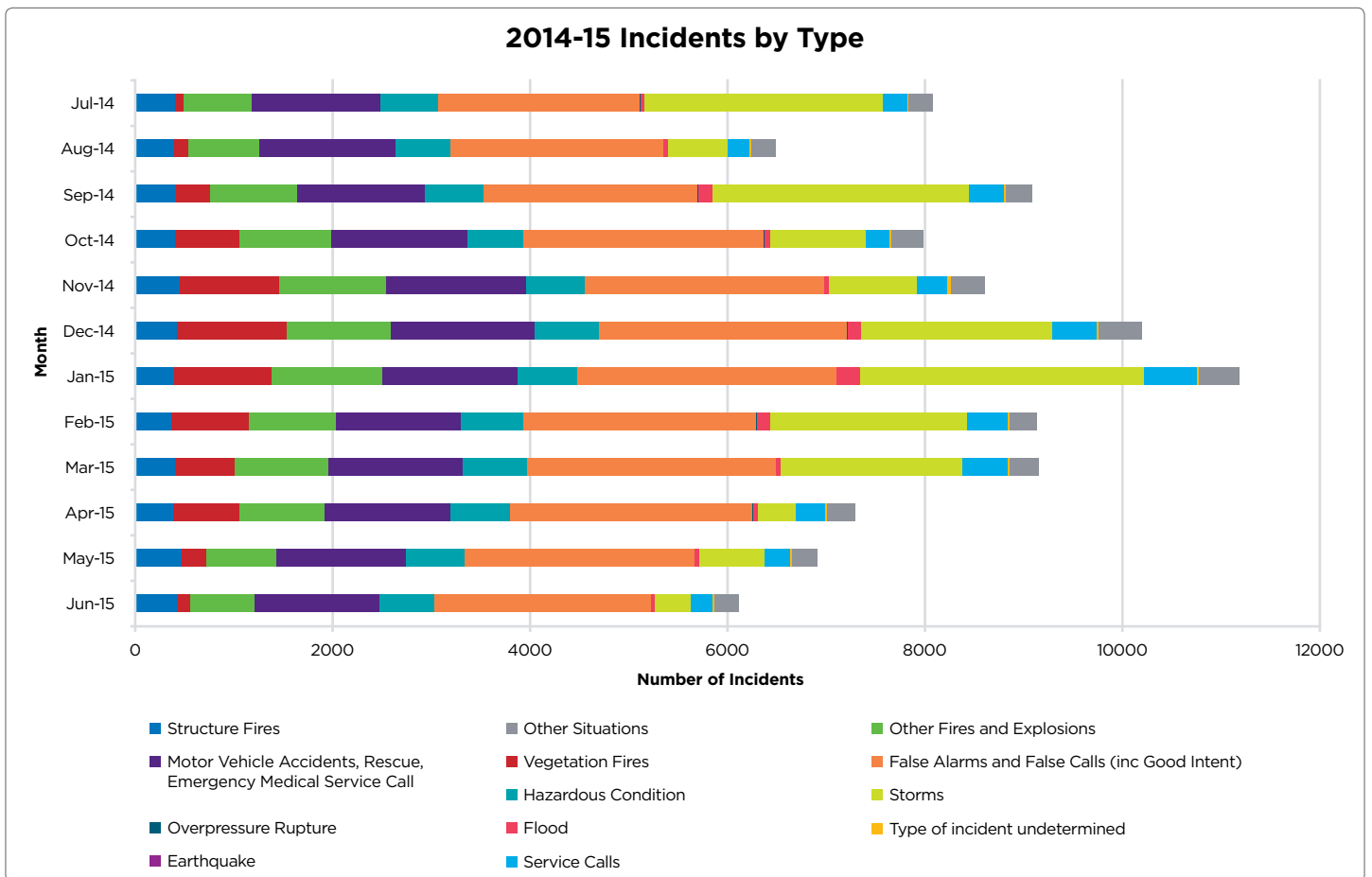


Figure 7: 2014-15 Operational Activity by Incident Type

Figure 8, displays the total number of incidents per month by agency. The fire agencies, CFA and MFB show fairly consistent numbers of incidents year round with a small peak over the fire danger period. VICSES incidents varied greatly month to month, depending on the weather observed in the state, but were particularly busy in September 2014 and January 2015. DELWP attend vegetation fires and therefore show a busier period throughout the fire danger period.

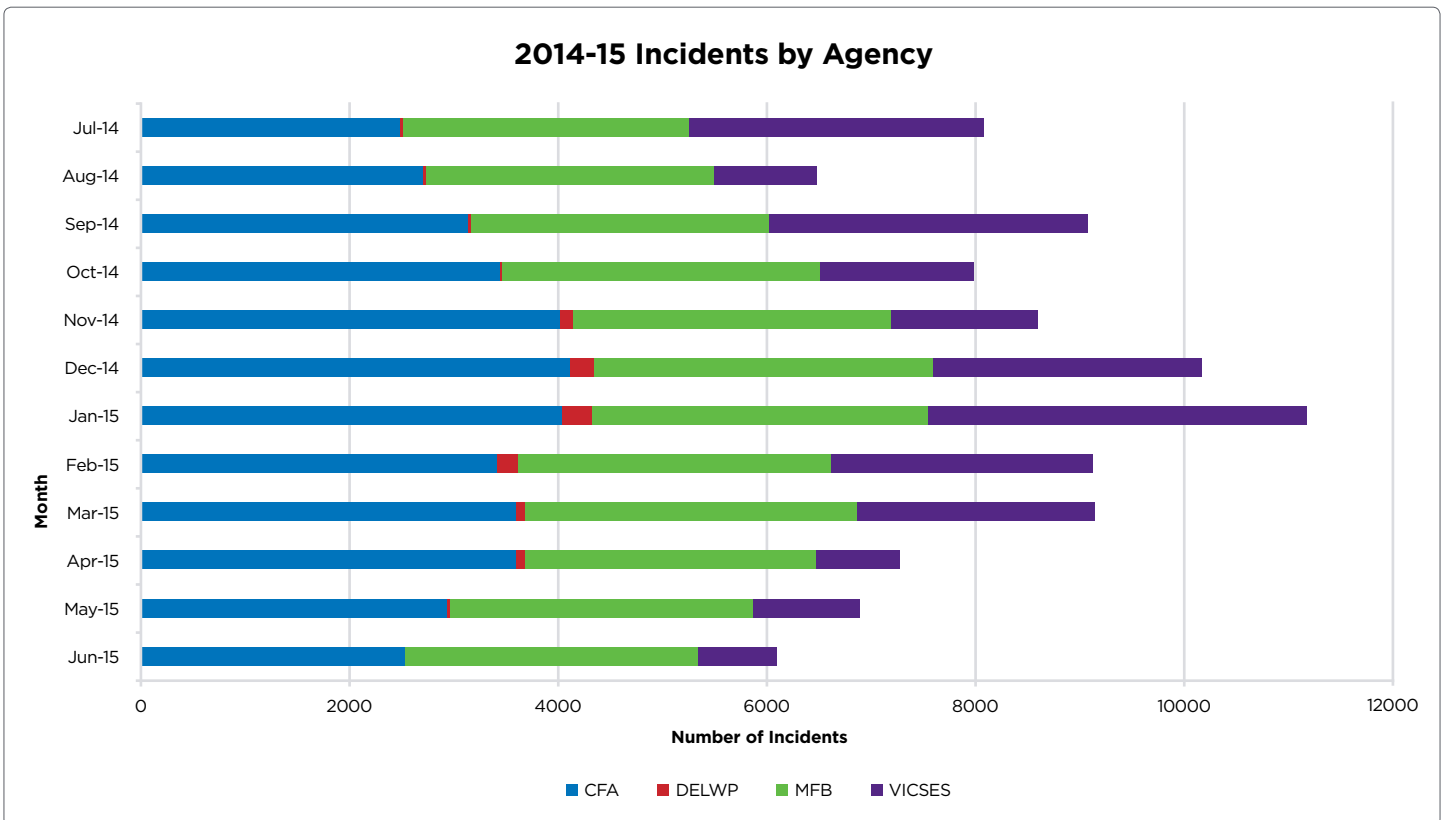


Figure 8: 2014-15 Operational Activity by Responder Agency

Warnings and Community Alerting

Currently within Victoria there are a range of warnings and alerts the community will receive depending on the type of emergency. Bushfires, grassfires, structure fires and hazardous material incidents may require advice, watch and act, emergency warning, recommendation to evacuate and community updates. Other emergencies may require other messaging types (e.g. flood watch).

For the 2014-15 financial year, as seen in figure 9, the months of December 2014 and January 2015 saw the most number of total warnings and alerts to the community, consistent with the fire danger period. Multiple Heat Health Alerts were issued to a number of districts during January and February 2015. Warnings and alerts relating to flooding, severe weather and thunderstorms peaked in July 2014, December 2014 and April 2015.

During the 2014-15 fire season, community

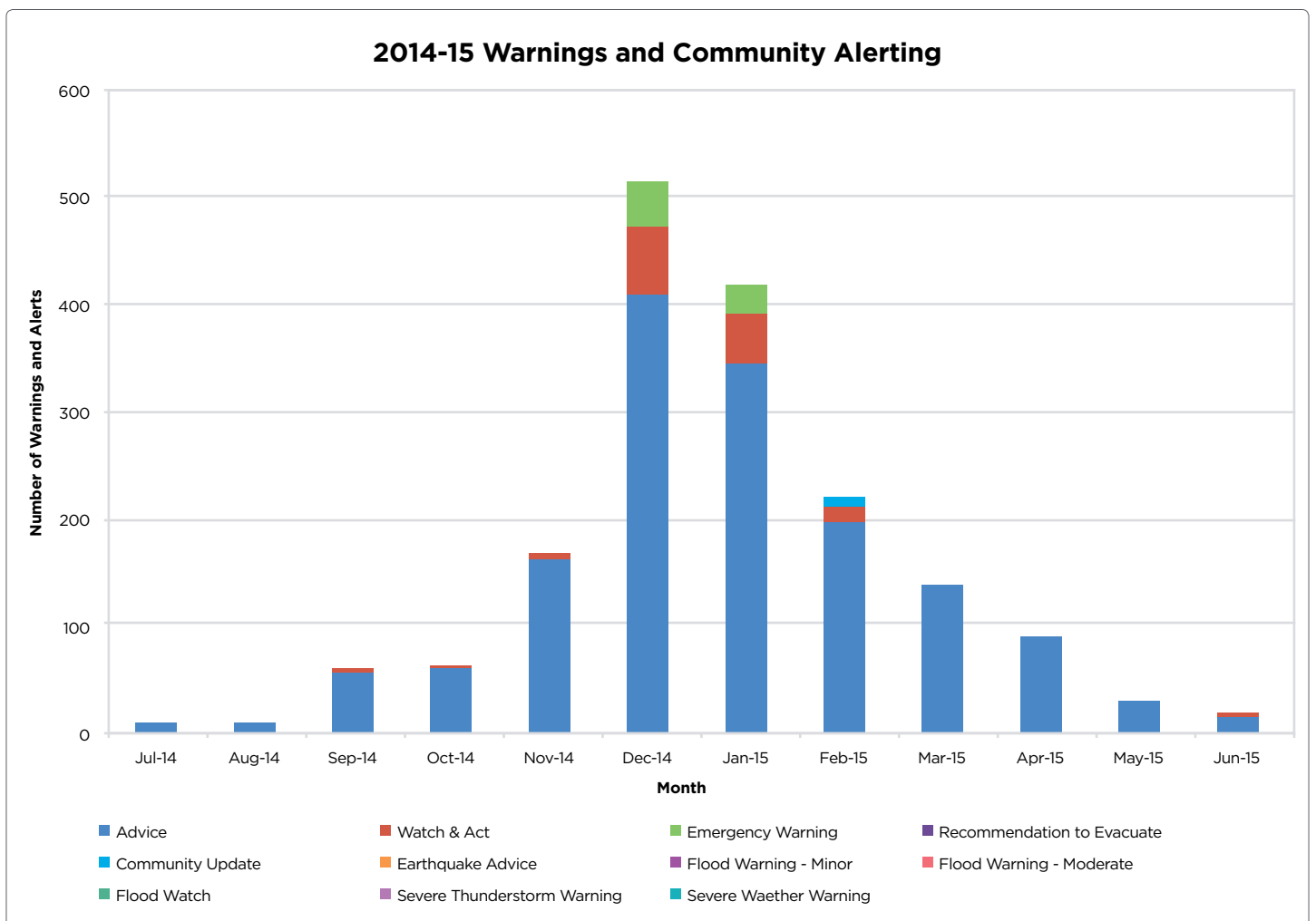


Figure 9: 2014-15 Total Warnings and Community Alerting

information activities included:

- more than 2,200 Warnings and Advice messages issued;
- around 51,000 voice calls and text messages sent using the national telephone alerting system, Emergency Alert;
- more than 14,300 calls for information received by the Victorian Bushfire Information Line; and
- approximately 237,000 new device registrations received for the FireReady App.

State Control Centre

The State Control Centre (SCC) is Victoria's primary control centre for the management of emergencies. The SCC is the hub of a network of regional control (RCC) and incident control (ICC) centres across the state. The EMC has the legislative responsibility for the management of the SCC.

The purpose of the SCC is to provide a facility to support the EMC to meet the State control priorities and objectives. It does this by:

- ensuring the State Response Controller and State Control Team maintain appropriate situational awareness to support strategic decision-making,
- engaging with and providing information to key stakeholders and the State Emergency Management Team,
- ensuring readiness arrangements are in place,
- ensuring control strategies and arrangements are appropriate,
- ensuring incident progression is predicted,
- ensuring information and community warnings are timely and appropriate,
- prioritising the allocation of state and specialist resources, and
- providing support to State, regional, incident control and agency personnel.

The 2014-15 Summer Emergencies Season saw

Victoria experience flooding, storms, fires, heat events and a range of other emergencies that required the activation of the SCC.

Surveys and debriefs undertaken after the summer emergency season found that the operations and management of the SCC continues to improve every season. However, there was room for improvement in relation to information and communications technology. Some further training and guidance on the SCC's involvement with various types of emergencies may also be required.

Elements of rostering have been highlighted as an opportunity for improvement, including fatigue management, personnel availability and how systems could better support the rostering function. There were also some minor occupational health and safety considerations noted by personnel and these may need consideration by SCC management (although many of these things have already been rectified). Overwhelmingly, personnel recognised that the operations of the SCC continue to improve and are confident that the centre is well-managed.

Source: 2014/15 End of Summer Emergency Season Survey - State Control Centre Victoria, EMV, July 2015.

Interstate Deployment Summary

Victoria Deployment to British Columbia - Fire

The Province of British Columbia (BC) made a formal request for assistance to the Department of Environment and Primary Industries (DEPI - now known as DELWP), on the 5 August 2014, to provide firefighting resources in support of the response to the high level of fire activity being experienced in BC. On behalf of EMV, DEPI facilitated the request and coordinated the deployment. The Forest Fire Management Group (FFMG) agreement was activated, which enabled

“A total of 78 Australian fire personnel, representing 14 agencies from across Australia, were deployed to BC within a week of receiving the request, for up to five weeks.”



Victoria's Deployment to British Columbia Fires - August 2014

Victoria to approach other FFMG members and their counterpart fire and emergency service agencies to help fill the request.

A total of 78 Australian fire personnel, representing 14 agencies from across Australia, were deployed to BC within a week of receiving the request, for up to five weeks. This is the second deployment of Australians to BC coordinated by Victoria, the first being in 2009, whilst BC has provided resources to Victoria twice in the last decade - in the 2006/07 fire season and in 2009.

Overall, the deployment went smoothly and the Australian contingent received positive feedback from all levels of wildfire management personnel from BC and Ontario. Members of the contingent demonstrated a high level of professionalism and were well respected for the experience and skills that they offered relating to fire management. The previous 2009 Australian contingent had left a positive legacy that this contingent was able to further build upon.

Source: *Australian Support to British Columbia, Canada - August - September 2014*, EMV, November 2015.

New South Wales Deployment to Victoria - Fire

Across early January 2015 when Victoria experienced severe to extreme fire danger, NSW provided critical support to Victoria with more than 220 personnel and seven aircraft. This included two Incident Management Teams, four

heavy strike teams, two Liaison Officers. The seven aircraft were additional to Victoria's fleet of 46 and included the air crane Gypsy Lady, two Type 2 Helitaks and four single engine air tankers. The firefighters, Incident Management Team staff and aircraft operated in parts of western, central and north east Victoria.

Victoria Deployment to South Australia - Fire

In January 2015 South Australia faced the worst fire conditions since the 1983 Ash Wednesday fires, with soaring temperatures and strong winds. Additional resources were requested from Victoria and New South Wales. Three Victorian Liaison Officers were deployed to Adelaide on the night of 3 January to coordinate the deployment.

On Sunday 4 January, four Victorian strike teams (25 vehicles and 75 personnel) from South West Victoria arrived in South Australia to assist at the Sampson Flat fire. Victorian crews worked on the X Ray Sector assisting with asset protection and containment where possible. Firefighters faced very challenging conditions due to difficult to access terrain, and inconsistent wind conditions resulting in unpredictable fire behaviour.

The two Victorian LATs arrived in Adelaide on Sunday 4 January, with two Aircraft Officers to coordinate the supporting crews from Victoria. The LATs operated successfully out of the Royal Australian Air Force base at Edinburgh.

On Monday 5 January, the following additional resources were requested and subsequently deployed:

- Three replacement Victorian Liaison Officers,
- Replacement crews for the four tanker strike teams,
- Two additional strike teams (personnel only) to work alternate shifts with the original strike teams,
- Two additional composite strike teams, each comprising one forward command vehicle (FCV), two ultra-light and three heavy tankers, and
- One bushfire environmental impact team (Bushfire Rapid Risk Assessment Team) provided by DELWP.

To support the Victorian resources deployed, a Field Liaison Officer, two District Mechanical Officers with a vehicle and two peer support coordinators were also deployed.

The majority of the contingent returned to Victoria on 7 and 8 January, with the remaining personnel and liaison team returning over following days.

Victoria Deployment to Western Australia - Fire

Western Australia (WA) experienced a very significant and busy fire season. By early February 2015, 54 fires burned across several regions of WA, with two fires of concern, O'Sullivan (approximately 22,700 hectares) in the Warren Region and the Lower Hotham fire (approximately 4,000 hectares) in the Swan Region. These fires were particularly active and threatening a number of communities, with community warnings and traffic management points in place. The weather forecast held no respite from temperatures in the low 30s with strong northerly winds and dry thunderstorms also forecasted. Due to their long and busy season, fatigue was becoming an issue for local WA crews. For the first time, WA requested personnel from interstate organisations to assist in incident management and firefighting, which Victoria was

able to provide from multiple agencies. This was also the first time the Arrangements for Interstate Assistance (Fire and Emergency Services) had been activated between the two States since its issue by the Commonwealth Attorney General's Department on 31 October 2014.

More than 185 Victorian emergency services personnel were deployed to assist with firefighting efforts in southwest WA. On Monday 2 February, a five person Liaison Team arrived in Perth and commenced operating from the State Operations Centre (SOC) in Cockburn Central, to prepare for the incoming Victorian crews. On Tuesday 3 February, after receiving a briefing at the airport, a contingent of 142 IMT and fireground personnel departed Melbourne for Perth. On arrival, they received a briefing including fire behaviour and weather, communications plan and command arrangements. The crews then travelled south to the fires and accommodation.

The following day, personnel received operational briefings including the current situation, truck familiarisation, communications and occupational health and safety risks including hazardous trees. 120 firefighters and IMT personnel were deployed to the O'Sullivan fire, six IMT members to the Great Southern Regional Operations Centre (ROC) in Albany (Boddington Fire) and nine IMT members to the Lower South West ROC in Manjimup (O'Sullivan Fire). Seven peer and health support personnel were in place across the deployment. Three aircraft and aviation personnel (including two LATs) arrived on Thursday 5 February, and after a SOC briefing were deployed to Pearce Air Force Base north of Perth. One of the Victorian infra red line scanning aircraft and two operators arrived later the same day to assist in information and intelligence gathering.

The majority of the contingent returned to Victoria on Sunday 8 February, with the remaining personnel and liaison team returning over following days.



Victoria's Deployment to New South Wales Storms - April 2015

“This request resulted in a Victorian multiagency deployment of 341 personnel and equipment, supported by dozens of agency personnel working in the SCC.”

Victoria Deployment to New South Wales - Storm

During the latter half of April 2015, east coast low pressure weather systems impacted New South Wales and southern Queensland resulting in extreme weather events. The heavy rainfall, damaging hail, destructive winds and widespread flooding contributed to nine deaths (four in New South Wales and five in Queensland) and significant damage to infrastructure (private and community).

As a result of the overwhelming level of assistance required by the community, New South Wales State Emergency Service (NSWSES) requested support from Victorian emergency management agencies. This request resulted in a Victorian multiagency deployment of 341 personnel and equipment, supported by dozens of agency personnel working in the SCC. Victorian personnel assisted New South Wales agencies to respond to over 22,000 requests for assistance (RFA).

In all, 341 Victorian personnel were deployed to NSW over an 18 day period. The multiagency response included:

- 292 VICSES;
- 27 DELWP;
- 16 CFA;
- 4 EMV; and
- 2 MFB.

These personnel were supported with 26 vehicles deployed from Victoria.

The Victorian deployment included volunteers and staff providing a diverse range of expertise

including:

- Storm and Flood Response Operators;
- Advanced chainsaw operators for complex/large tree removal;
- IMT members;
- Taskforce Command / Victorian liaison to NSW State Operations Centre (SOC); and
- Mechanical Officers and supporting vehicles.

Victorian personnel operated across various parts of NSW including:

- Western Sydney and Blue Mountains Region including suburbs of Bankstown, Parramatta, Hornsby, Warringah, Pittwater, Chatswood, Newport
- Central Coast Region - Wyong
- Hunter Region - Newcastle, Lake Macquarie
- Northern Rivers and New England/North West - Tweed Heads, Murwillumbah, Tweed Coast,
- Mid North Coast Region - Lismore, Grafton.

Disaster statistics provided by the Insurance Council of Australia have placed an approximate insured cost for these weather events at \$1.55 Billion.

Source: *Victorias Review of the Victorian Deployment to New South Wales Storms - April 2015*, EMV, July 2015.

Relief and Recovery

Relief and Recovery Arrangements

Victoria's relief and recovery arrangements were reviewed in preparation for emergencies over the 2014-15 summer season.

A revised *State Emergency Relief and Recovery Plan (Emergency Management Manual Victoria Part 4)* was published in September 2014. Agriculture has been added as a fifth recovery environment, to consider alongside the social, economic, natural and built recovery environments. Many emergencies in Victoria significantly impact the agricultural community and the plan considers their long-term recovery needs.

Each of the State's eight regions reviewed their regional relief and recovery plans, in consultation with regional emergency management committees. Relief and recovery arrangements were also maintained in municipal emergency management plans.

During the 2014-15 financial year, the EMC continued to delegate state and regional relief and recovery coordination to the Secretary, Department of Health and Human Services (formerly Department of Human Services prior to 1 January 2015 Machinery of Government changes). Local councils retained responsibility for local relief and recovery coordination.

Relief and Recovery Support Following 2014-15 Summer Season Emergencies

All emergencies that occurred over the 2014-15 summer season involved relief and recovery being coordinated locally by local councils. Local councils supported community members in relief

centres and coordinated support through local recovery plans and consultative committees.

Victorian Government agencies worked with councils to support affected communities and deliver recovery programs. Households were supported to meet their immediate needs through 320 DHHS personal hardship emergency relief payments, and further re-establishment payments were provided to eligible households. Department of Economic Development, Jobs, Transport and Resources (DEDJTR) contacted around 400 landholders to address urgent animal welfare cases, assess agricultural losses, refer urgent personal needs to appropriate agencies, and plan longer-term recovery needs. A summary of activities for each emergency is below.

Docklands apartment building fire - 25 November 2014

On 25 November 2014, a fire broke out in an apartment building in Melbourne's Docklands district. Approximately 400 residents were evacuated and unable to return for between 10 and 30 days. A relief centre was established at Etihad Stadium for four days to provide information and assistance to displaced residents. An information centre was then established at Council House for a further seven days.

The Victorian Government provided relief and recovery support with the City of Melbourne. This included attendance at the relief and information centres, providing \$249,000 in personal hardship emergency relief payments, supporting residents with temporary accommodation and assisting with transport requirements. DHHS used its new emergency management information technology system for the first time, to send residents text messages in multiple languages.

All displaced residents were assisted to find alternate accommodation. DHHS has supported the City of Melbourne with relief coordination and

“Moyston was the most significantly affected area, with 5,700 hectares burned, 91 properties affected, two houses destroyed and significant agricultural losses including over 5,100 sheep.”



Moyston Fire Response - January 2015

developing a recovery plan. Ongoing recovery is being coordinated by the local council.

Mildura and Swan Hill storm - 3 December 2014

A storm on 3 December 2014 caused significant damage to crops around Mildura and Swan Hill. Southern NSW was also significantly impacted. The Victorian Government announced one-off Recovery Grants of up to \$10,000 to affected primary producers. Rural Finance Victoria oversaw the assessment of applications for Recovery Grants.

North-East Victoria Fires - 16 December 2014

Victoria’s first significant fires of the 2014-15 summer season commenced on 16 December 2014, and impacted around Wodonga, Creightons Creek, Benalla and Wangaratta. The fires affected approximately 140 landholders, destroying five homes and burning approximately 18,000 hectares. There were also significant agricultural losses, with approximately 90 kilometres of fencing, 3,000 sheep and 340 cattle lost.

Relief centres were established for affected residents. DHHS provided \$11,000 in personal hardship emergency relief payments. DEDJTR delivered agricultural relief and recovery services to affected primary producers. Asylum seekers were amongst many volunteers who worked with Blaze-aid to replace fencing. The Minister for Emergency Services approved personal hardship re-establishment payments for eligible households.

DHHS appointed a recovery manager for six months, to assist the affected municipalities with their recovery planning and identifying ongoing needs. Affected local councils continue to coordinate recovery with DHHS support.

Fires in Moyston, Edenhope and Hastings - 3 January 2015

During 2-3 January 2015, hot, dry and windy conditions resulted in severe to extreme fire weather, damaging winds and severe thunderstorms that ignited around 600 fires across Victoria.

Moyston was the most significantly affected area, with 5,700 hectares burned, 91 properties affected, two houses destroyed and significant agricultural losses including over 5,100 sheep. Relief centres were established and \$37,000 was provided through DHHS personal hardship emergency relief payments. DEDJTR delivered agricultural relief and recovery services to affected primary producers. The Ararat Rural City Council has been assessing ongoing recovery needs and developed a recovery plan. Moyston has been affected by fire several times over recent years, and psychosocial support for the affected community has been a priority. The Minister for Emergency Services approved personal hardship re-establishment payments for eligible households.

Over 3-5 January 2015 approximately 1,600 hectares was burned near Edenhope. Approximately 1,000 hectares of a plantation was burned and two

properties were destroyed. DHHS has supported the West Wimmera Shire Council with recovery planning. The Minister for Emergency Services approved personal hardship re-establishment payments for eligible households.

A bushfire in the Bittern and Hastings area started on 3 January 2015 and burned approximately 130 hectares. There were 16 properties affected, including smoke damage, loss of decking and outbuildings to four properties, and 12 properties with damaged fences. Most of the Warragine Park was burnt and the coastal boardwalk was also significantly damaged. DHHS has assisted Mornington Peninsula Shire Council with its recovery planning.

Somerville storm - 7 January 2015

Storms on 7 January 2015 resulted in power outages and storm damage in Somerville on the Mornington Peninsula. Eight power poles were uprooted, leaving 287 houses without power. Eight properties reported some storm damage, with two properties losing all or part of their roofs. One house was uninhabitable. The Mornington Peninsula Shire Council established a relief centre in Somerville for affected residents. The Minister for Emergency Services approved personal hardship re-establishment payments for eligible households.

Eastern Melbourne storm - 7 January 2015

A severe thunderstorm crossed eastern Melbourne on 7 January 2015, resulting in two houses being badly damaged. Localities affected included Bayswater, Belgrave, Croydon, Mt Evelyn, Wantirna and Wantirna South. Power outages occurred across the region due to severe weather. Local councils assisted affected residents.

Bendigo storm - 9 January 2015

A severe storm hit Bendigo on 9 January 2015. Three households were displaced due to water damage. The Greater Bendigo City Council

provided support to displaced residents. The Minister for Emergency Services approved personal hardship re-establishment payments for eligible households.

Ongoing Recovery from Previous Emergencies

In addition to supporting communities affected by emergencies over the 2014-15 summer, recovery activities have continued from previous years.

Early 2014 fires

Supporting communities affected by fires in early 2014 and Hazelwood Mine Fire also continued over the 2014-15 summer season. Support has included:

- Community development officers employed to support a community-led recovery and link individuals into support services,
- Consultant psychologists delivering community information and professional development sessions to help individuals and health workers understand the personal recovery experience,
- Three community arts officers engaged to work on creative recovery programs in impacted communities,
- Grants provided to stimulate economic activity, conduct buy-local and tourism campaigns, and small infrastructure projects in affected communities, and
- Scholarships awarded for six young people to participate in a leadership development program, and ten adults to participate in community leadership development programs.

2009 Bushfires

7 February 2015 marked the sixth anniversary of the 2009 Bushfires. The Victorian Bushfire Appeal Fund continues to support the provision of psychological recovery services and counselling as well as the operation of community foundations and small grants programs for impacted communities.

Case Studies

CASE STUDY	DATE	EM PHASE	HAZARD TYPE	PAGE
Code Red Exercises	Nov/Dec 2014	Before	All hazards	32
Docklands Structure Fire	25 November 2014	During/ After	Fire - Structure	35
Fires in Hume Region	15 - 25 December 2014	During	Fire - Bushfire	40
Fires in Loddon Mallee Region	16 - 19 December 2014	During	Fire - Bushfire	42
Regional Readiness and Response	30 December 2014 - 4 January 2015	Before	All hazards	44
Moyston Bushfire	2 January 2015	During	Fire - Bushfire	47
Farm Fire Safety	Late 2014 and early 2015	Before/ During	Fire - Bushfire	50
Silo Engulfment	10 February 2015	During	Rescue	51
February Thunderstorm	28 February 2015	During	Storm	54
Christmas Hills Fire-Scape	April 2015	Before	Planned Burning	56
NSW Deployment: Social Media at an Incident Control Centre Clarence Nambucca Region	May 2015	During	Storm	58

Case Study:

Code Red Exercises

Regional Code Red Workshops

Regional Code Red Workshops were delivered by members of Emergency Management Victoria (EMV), in each Emergency Management Region to members of emergency management agencies and organisations, municipalities and other key organisations during November and December 2014. The aim of the workshops were to explore and confirm the responsibilities and actions of emergency management agencies and organisations, municipalities, and other key service providers (involved in response and recovery) at regional and municipal levels in readiness for when there is to be a fire danger rating of Code Red in all or part of the State of Victoria. More than 180 representatives of a variety of emergency management agencies and organisations, municipalities and other key service providers attended the six workshops, with a particularly strong representation by municipal councils.

A report has been developed on the workshops, which includes an analysis of discussions throughout the workshop in conjunction with analysis of a post-workshop electronic questionnaire providing valuable information and feedback. This report identifies a number of key observations, insights and lessons identified which have been provided to the Emergency Management

Commissioner (EMC) and Agency Chiefs for noting and action.

Lessons Identified:

- *Collaboration:* To effectively deliver these workshops within the required timeframes demanded collaboration amongst key stakeholders, and a unified approach;
- *Extensive workload:* There was extensive time dedicated to researching and developing the relevant and required documentation, planning for the workshops (including venue sourcing, catering, etc), travel and delivery of the workshops, developing, distributing and analysing the electronic questionnaire, and writing the report;
- *Local knowledge:* Regional EMV personnel provided extensive local knowledge, particularly with regard to venue hire and catering, which was invaluable;
- *Communication:* Links with key personnel at a regional level was critical to the success of these workshops;
- *Relationships:* The ability to have existing relationships with other agency personnel allowed for the sharing of resources for facilitation purposes;
- *Discussion:* It was identified early on that there would be greater benefit in circulating the first component of the workshop questions, which were based around individual agency actions and expectations, in advance of workshop attendance by participants. The approach was adapted to incorporate this and found the workshops generated greater discussion;

“a Code Red situation is a determination by the EMC to clearly identify to the community, emergency management agencies, municipalities, and other key service providers the potential for the worst possible bushfire conditions.”



Moyston Fire Response - January 2015

- *Subject Matter Experts:* Fire agency representatives proved to be an invaluable resource at the workshops;
- *Evaluation:* Although initially overlooked, they were able to incorporate a fairly vigorous evaluation which provided insight into the effectiveness of the workshops; and,
- *Information sharing:* There was evidence of a strong desire from most participants to continue to share information and knowledge in relation to emergency management, in particular the changing areas and topics of high importance.

State Emergency Management Team Code Red Exercise

The EMC (or proxy) may form the State Emergency Management Team (SEMT) if an emergency, either anticipated or occurring, requires activation of a state tier response control structure. An Emergency Management Team (EMT):

“is a collaborative forum where agencies with a diverse range of responsibilities during

emergencies identify and discuss the risks and likely consequences of an emergency and assist the controller to establish priorities and plan a “whole of government” approach to its management” (Emergency Management Manual Victoria, p. 3-22).

The role of the SEMT is to:

- Facilitate a discussion to enable agencies to develop a consistent situational awareness regarding the emergencies affecting the state,
- Identify strategic state risks and consequences and plan the actions of agencies to manage these risks and consequences, and
- Support the EMC to develop a state strategic plan for the management of the emergency, outlining high level actions of all agencies.

On 28 November 2014, EMV coordinated an exercise to practice the management and functioning of SEMT meetings in preparedness for a Code Red situation. Participants in the exercise were the senior operational representative of agencies with a role or responsibility in the management of an emergency or its consequences (i.e. the typical

SEMT members from response, recovery and other agencies).

Introduced following the 2009 Black Saturday Fires, a Code Red situation is a determination by the EMC to clearly identify to the community, emergency management agencies, municipalities, and other key service providers the potential for the worst possible bushfire conditions. The Code Red determination is linked to significantly high forecast fire danger indices in either grassland or forest, and signals the gravity of the forecast conditions to everyone in Victoria so every possible preparedness and readiness activity can be undertaken prior to the onset of the conditions.

The exercise simulated two SEMT meetings called in preparedness for a potential Code Red situation (at different timeframes before a Code Red day), in accordance with the *Code Red Determination Processes and Communications Plan* released in December 2014.

Lessons Identified:

- The feedback about the exercise was generally positive.
- The exercise was generally reported to be effective at improving understanding of a Code Red situation, including risks, consequences, preventative actions, roles, responsibilities and interdependencies.
- There are a number of areas for improvement concerning the functioning of the team, including communication methods,

information flow and the need for more practicing and exercising.

- SEMT agencies and organisations should further explore redundancy needs, backup systems, continuity issues and implications for service delivery in the context of Code Red situations.
- The exercise was reported to be valuable, realistic and educational, although there are opportunities for minor improvements in the format and timing.

Source: Adapted from CFA Brigade Magazine Autumn 2015

Further Reading: Regional Code Red Workshops (November and December, 2014) Final Report

SEMT Code Red Exercise – Evaluation Report Final March 2015

Case Study:

Docklands Structure Fire

Incident Overview:

At 0225hrs on 25 November 2014, the Metropolitan Fire Brigade (MFB) responded to an apartment fire at the Lacrosse building at 673 Latrobe Street, Docklands. The fire is believed to have started on the balcony of an apartment on the eighth floor and spread quickly up the outside of the building to the balconies on the floors above, to the 21st floor. Falling embers and debris also started fires on balconies below the floor of origin. Initial crews arrived on scene at 0229hrs with the response escalating to a fourth alarm response. A total of 19 appliances (including aerial appliances) and approximately 70 firefighters were utilised. The MFB was able to extinguish the fire and evacuate the building without injury to the occupants or personnel.

The management of the fire and the resulting evacuations involved coordination and support from other agencies across the sector including Victoria Police, Victoria State Emergency Service, Ambulance Victoria, Red Cross, Salvation Army, Department of Health and Human Services, and the City of Melbourne. The Etihad Stadium Management and Platinum Strata Complex Management also assisted.

Transition to recovery occurred later that day and the City of Melbourne provided relief and recovery services, supported by the Department of Health and Human Services (DHHS). All of the building's residents (in excess of 400), were successfully

evacuated with no significant health issues or serious injuries. Some evacuees were treated for minor injuries incurred when descending the building's stairs in the wet conditions.

Demographic information of the residents included:

- 83% were aged between 21-40 with 60% between 21-30 and 23% between 31-40.
- 80% were international residents (Asian 36%, Indian 22%, South American 5%), many of whom are international students.
- There were a small number of young families and families with elderly relatives.

There were three categories of impacted residents:

- Those whose apartments were affected directly by fire.
- Those whose apartments were affected by smoke and water damage.
- Those whose apartments were unaffected by fire or water damage.

A range of complex issues have emerged following the fire. Investigations into the fire have highlighted issues surrounding the use of Aluminium Composite Panel (ACP) as a building façade in a non-compliant application. The use of ACP's has implications for past, present and future building projects around the country. The ACP's have a polyethylene core (in this case 100%) which is highly combustible which combined with the building design elements contributed to the rapid vertical fire spread. Whilst there

“At 0225hrs on 25 November 2014, the Metropolitan Fire Brigade (MFB) responded to an apartment fire at the Lacrosse building at 673 Latrobe Street, Docklands.”

were no reports of serious injuries at this fire, the result could have easily been much different. The MFB has requested a Coronial investigation, and a Senate inquiry has been announced into non-conforming building products to determine measures that will help ensure that there are no repeats of these types of fires.

Additional issues include: overcrowding in many of the apartments, lack of contents insurance by many tenants with leases, language issues, a lack of understanding of tenant and owner rights, complications in communication flow between the commercial entity controlling the building and response and recovery agencies, as well as the need to source accommodation for those most affected tenants for up to eight months. The ongoing nature of these issues will require a coordinated recovery phase across multiple agencies and both the private and public sector

Planning and Response

Lessons Identified:

IMT Location: The MFB's Incident Management Team (IMT) was established on the fireground to allow for optimum command and control of the fire and this functioned effectively during the course of firefighting operations. The MFB's control unit bus was established for functional management and to conduct Emergency Management Team (EMT) meetings. The bus served its purpose in regards to IMTs but was not suitable for EMTs of this size. The EMTs were moved to the Etihad Stadium, to accommodate



Docklands Fire Response - November 2014

the numbers involved, as part of the transition to recovery but this move also caused some confusion as its location was a distance from the Emergency Relief Centre (ERC).

Discussions took place concerning transferring control of the scene to Victoria Police at approximately 0530 hours. MFB retained control of the scene until it was handed over to Melbourne City Council to coordinate the transition to recovery phase at 1430 hours.

Resource Management: The MFB's response to the fire was a 4th Alarm Structure Fire response in line with established procedures. This response was appropriate and provided the necessary resources to combat this fire. Due to the time of the fire, some support services and other agencies experienced difficulties and delays in responding sufficient resources to this incident.

Traffic Management Points: This fire occurred at approximately 0230hrs on a Tuesday morning. This meant that there were not a lot of issues with regards to traffic at the time and appliances and other agency vehicles had clear access and

gress to and from the scene. Victoria Police assisted with traffic management by closing off streets in the affected area and diverting traffic from the vicinity. Yarra Trams also halted tram movements along Latrobe Street to allow for clear access of responding vehicles and for the safety of all responders. A traffic management plan was developed so that streets and tram lines were opened back up to traffic as soon as practicable, to allow for movements to return to normal and ease morning peak hour congestion.

Evacuation (and associated issues): Due to the time of the fire, as expected, many of the occupants were asleep. This meant that the evacuation of the building was a challenge to the resources that were on scene. The Victoria State Emergency Service (VICSES) was called upon to assist in managing the evacuees.

A three stage process took place:

1. Firstly the occupants were evacuated and assembled on Latrobe Street,
2. They were then moved to the Southern Cross bus terminal to provide them with shelter, and
3. Finally, the evacuees were transferred to the Etihad Stadium, which served as an Emergency Relief Centre to accommodate the large number of evacuees and provide them with shelter, amenities, food and water. Due to the scale of the evacuation and management of the evacuees, a MFB Commander was assigned to manage this task until support from other agencies could attend.

The evacuation of the building's occupants was further hindered due to the installed Emergency Warning Information System (EWIS) failing to fulfil its function. The fire damaged the wiring to the system rendering it inoperable. This issue is being examined as part of the investigation process.

A major issue that was identified during this evacuation was the evidence of overcrowding of

apartments. One apartment had 14 occupants making it difficult to account for all occupants. It is estimated that the number of people in some apartments was double what was reasonably expected.

Another issue that became evident was that some of the occupants, having self-evacuated, did not report to the evacuation points. This also made the management of the evacuees difficult. The high level of occupant numbers in some apartments also resulted in personal items being stored inappropriately in areas such as apartment balconies. There was evidence of increased fuel loads on balconies which contributed to the growth and spread of the fire.

This incident has highlighted the need to raise the awareness of the potential for overcrowding in these buildings. This important issue, and how it is addressed, requires further consideration by Building Managers, Municipal Building Surveyors, Building Certifiers and the Industry Regulators.

Managing Multiple Emergencies: Whilst this fire was not part of a multiple emergency situation, it did present as an incident that needed to be dealt with on two fronts. It involved the extinguishment of a multi storey building fire that was spreading vertically very rapidly and a complex evacuation. Both of these issues required coordinating of appropriate resources and adherence to incident management arrangements to manage the incident in an effective and, more importantly, safe manner.

Relief

While Etihad Stadium was identified in the City of Melbourne Central Business District (CBD) Safety Plan for use in the event of a large scale mass evacuation of the CBD, it had not been identified as an ERC for general use under the Municipal Emergency Management Plan (MEMPlan).

This resulted in a delay in contacting some of the relief agencies and therefore a delay in establishing an internal communication process in the ERC. This was further compounded by the large number of people moving in and out of the ERC, language barriers and ongoing uncertainty as to whether people would be able to return to their homes, which was not finalised until early in the afternoon.

Victoria Police, VICSES, Ambulance Victoria, Red Cross, Salvation Army, Victorian Council of Churches, and DHHS, worked with the City of Melbourne and Etihad Stadium who provided excellent support for the four days it operated.

The ERC closed at 1800hrs on Friday 28 November 2014. An information centre was established at Council House and operated until Friday 5 December 2014. City of Melbourne, DHHS, Australian Red Cross and the Victorian Council of Churches continued to support the residents.

As there were a large number of Korean students attending the relief centre, the City of Melbourne called in the services of the Korean Embassy who attended from day two providing translation and other support services. Legal Aid was also present for three days providing insurance and tenancy advice. DHHS provided additional assistance to families with children or elderly relatives including temporary accommodation until they were able to return to their apartments. DHHS also provided 263 Personal Hardship Assistance Payments totalling \$248,970.

Recovery

Red Cross re-activated Register.Find.Reunite to consolidate a list of residents to identify any ongoing recovery requirements. Residents in 40 apartments required further follow up and support. DHHS contacted this group and provided a range of case support services and referrals where required.

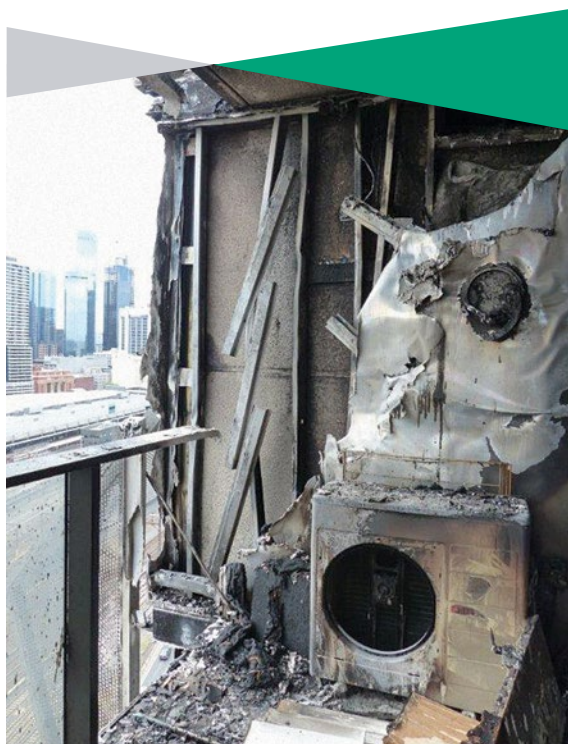
A Recovery Committee was chaired by the City of Melbourne and membership included the State and Regional Recovery Coordinators, DHHS, DEDJTR, Australian Red Cross, Victorian Council of Churches and Platinum Strata. The Committee meet weekly during November and December and endorsed a recovery plan.

The first group of residents were allowed to return to their apartments after seven days. Over the next three weeks, the remaining residents were advised via the Platinum Strata and City of Melbourne websites of their return dates. The final residents returned to their apartments on 24 December 2014. Twenty-one apartments remain uninhabitable.

The Victorian Council of Churches undertook a door knock after residents had returned to make sure they were ok and to provide information about additional services, if they were required.

Lessons Identified:

Preparedness: It was identified that while each organisation had plans in place prior to the event, the size and scale of this event had not been considered.



Docklands Fire Response - November 2014

Emergency Relief Centre (ERC): Etihad Stadium is not a designated ERC, which resulted in:

- The size and lay out of Etihad stadium impacting on relief coordination;
- Communication within the ERC was at times informal and ad hoc;
- Responsibility for the management control of the ERC was initially unclear;
- Staff fatigue was an issue;
- Set up logistics for the ERC were not well thought through, with entry and exit points poorly regulated in the early stages; and,
- Concern that provision of overnight accommodation was not available at the ERC.

A number of successes in the provision of relief were identified, including:

- Additional agencies including the Korean Embassy and Legal Aid being available at the ERC;
- Daily debriefing of organisations;
- ERC/relief planning for days two, three and four enabled changes to site layout to meet changing circumstances;
- DHHS used its new emergency management information technology system for the first time, to send residents text messages on days

“Victoria Police, VICSES, Ambulance Victoria, Red Cross, Salvation Army, Victorian Council of Churches, and DHHS, worked with the City of Melbourne and Etihad Stadium who provided excellent support for the four days it operated.”

- three and four;
- Collaboration between Victoria Police, SES, MFB and City of Melbourne in coordinating access for residents to gain personal items;
- Salvation Army in providing material aid and other services;
- The coordination of getting Real Estate Agents together to discuss lease implications and alternative accommodation for residents;
- Legal Aid in providing tenancy advice; and,
- The City of Melbourne arranging temporary accommodation for pets and arranging their return when their owners were able to return to their apartments.

Roles and Responsibilities: Organisations with formalised roles within the relief and recovery space (local government, Red Cross, DHHS) were clear about their roles and responsibilities and quickly adapted them to the scale that was required.

Communication / Information / Data: The following challenges were identified:

- Agency messaging about the incident often lagged behind that of media;
- A clear communication strategy took time to establish but then worked well; and
- Direct communications with affected people was restricted to those who had registered details with Red Cross however, information was also available on City of Melbourne and Platinum Strata websites.

Source: EM Knowledge > Reviews-Lessons > Learning Products > Case Studies

Case Study:

Fires in Hume Region

Overview

During the period 15 – 25 December 2014, Hume Region experienced a number of significant fires at Wodonga West, Lake Rohan (20 kms north west of Wangaratta) and Creightons Creek (10 kms south of Euroa).

Following these three major fires the Hume Regional Control Team (RCT) reviewed and reported on the following key themes relating to the management of these incidents:

- Transfer of Control;
- Effectiveness of Incident Management (including aspects of regional control);
- Effectiveness and Timeliness of Warnings.

With input from Incident Management personnel, the following key learnings have been identified by the team.

Transfer of Control

Key Positives Identified

Transfer of control was undertaken effectively for the three fires. Some smaller incidents within the Wangaratta Incident Control Centre (ICC) catchment were transferred to Mansfield ICC in order to reduce the workload on the Wangaratta IMT while they were managing the Lake Rohan Fire and another at Stewarton.

Identified Improvements

- Defining the correct default communications plan when working across different ICC



Wodonga West Fire Response - December 2014

catchments and Districts.

- Enhancing capacity of Incident Management Teams (IMTs) to manage multiple significant fires. Some delays in transferring fires to Wangaratta were experienced because resources had been relocated to Wodonga.
- Transfer of the Creightons Creek Fire back to local command was undertaken when there was still significant rehabilitation to be completed which would have benefited from management through an ICC.

Effectiveness of Incident Management (Including aspects of Regional Control)

Key Positives Identified

- Safe, rapid, aggressive and integrated first attack supported by aircraft.
- Provision of New South Wales resources through interstate partnership arrangements and existing relationships in addition to strike teams from outside Hume Region.
- Effective linkages between IMT Operations and field based personnel.
- Flexibility to move prepositioned IMT personnel from inactive ICCs to those managing incidents.
- Provision of IMT personnel from other regions as incidents continued over multiple days and nights.
- Municipal Emergency Response Coordinators (MERC) and Municipal Emergency Resource Officers (MERO) located at ICCs enhanced integration and decision making rather than at Municipal Emergency Coordination Centres (MECC) as has been the case in the past.



Wodonga West Fire Response - December 2014

“Key Positives Identified:
Safe, rapid, aggressive
and integrated first attack
supported by aircraft.”

- Development of evacuation plans including some door knocking of potentially affected areas well ahead of impact. This also identified vulnerable people not on the Vulnerable Persons register and enabled relocations by Department of Human Services.
- Including a Victoria Police member as a Deputy Incident Controller responsible for traffic management and evacuation. This ensured issues related to Traffic Management Points were addressed quickly and efficiently. This included frequent review of their status and managing some escorted entries to the fire area for critical community/industry needs.
- Early integration of agricultural recovery through regional level coordination and ICC Operations was very effective.
- Effective Emergency Management Teams (EMTs) at incident and Regional level with good involvement from agencies who provided input into a common operating picture and worked proactively to identify and address issues.
- RCT used the issues identified in the 2013-14 Gippsland Fires Report as a key part of their focus.
- Use of community meetings with representation from the IMT and key agencies.
- RCT Risk and Consequence and Resource planning – assisted by personnel from outside Hume Region.
- Comprehensive contingency plan was developed for the potential escape of the controlled Creightons Creek fire during future predicted high fire risk days.

Identified Improvements

- Consideration and management of fatigue within the RCT when fires require overnight Regional Control presence.
- Planning to manage multiple Level 3 incidents from one ICC.
- Clarity in evacuation planning and communication. The use of Evacuation Plan documentation for a preparatory door knock was interpreted incorrectly resulting in confusion and an assumption it was an evacuation recommendation.
- Focus Incident EMTs on supporting fire suppression along significant roads permitting them to be opened earlier.

Effectiveness and Timeliness of Warnings

Key Positives Identified

- The large number of community warnings and messaging, ranging in scale from broad generic to specifically targeted, were well managed through effective tracking and monitoring by the Public Information Sections.

Identified Improvements

- Customising messages for fires which are close to one another to avoid community confusion about which message relates to which fire.

Source: EM Knowledge > Reviews-Lessons > Learning Products > Case Studies

Case Study:

Fires in Loddon Mallee Region

Overview

Between 16 -19 December 2014, three grass and scrub fires in Loddon Mallee Region burnt over 600 hectares, damaged two out buildings and affected fencing, livestock and pasture.

The Yapeen - Midland Fire, managed from the Epsom Incident Control Centre (ICC), was the first, starting at 1604 hrs on 16 December. This fire was contained to 41 hectares. Shortly after this, the Pastoria East - Burke and Wills Track Fire, managed from the Gisborne ICC, was reported at 1721 hrs and burnt 372 hectares. On 18 December the final of the three fires Mia Mia - Blacksmiths Track, started at 1027 hrs and managed by the Epsom ICC, eventually affected 287 hectares. Emergency Warnings were issued for each of the fires. The Large Airtankers (LATs), introduced to Victoria this season, were also utilised during some of these fires.

While the three fires were not individually large, as a complex they did present challenges at incident and regional control tiers which are noteworthy, and present learnings for emergency management agencies. The conditions ahead of these fires were consistent with most northern parts of the state. Grasslands were completely cured, soil dryness was increasing due to warm conditions and little rain, and forests were primed for rapid fire development. When a westerly change, with strong to gale force winds and some rain, moved across Victoria during this period, the winds ahead of, and with this change, were largely responsible for the rapid escalation of the two larger fires. Several hundred fire and emergency management personnel were involved in response and recovery activities throughout the week. The Loddon Mallee Regional Control Team collected the following observations and learnings from fireground, Incident and emergency personnel involved in the three fires.

Key Positives Identified

Readiness and Response:

Scaled up readiness (based on predetermined triggers) of ICCs and fireground personnel led to an effective immediate response. The first attack wordbacks contained accurate, important details which led to a rapid integrated response and subsequent escalation of resources (one person providing this information was coached by an instructor leading up to the day). This information also contributed to Warnings and Advice being quickly issued by the Incident Management Teams (IMTs) for all fires and included Emergency Warnings to relevant communities.

Transfer of Control:

Transfer of Control was undertaken in a timely manner with the responsible ICCs "shadowing" fireground activity ahead of the transfer which enabled the development of a common operating picture. A sensible and practical decision to transfer the Mia Mia Fire to Epsom, despite being within the Seymour footprint, was made because Seymour were already committed with other incidents. This was based on an awareness of operational activity and neighbouring ICC/IMT activity when determining where to transfer control.

Aircraft:

Aircraft were invaluable in making a difference during first attack and protecting assets. Working in conjunction with ground crews they limited fire spread and delivered water drop at critical times.

Local Knowledge:

The local knowledge input of people at the Local Command Facility (LCF) and Division Command was also invaluable assisting with intelligence and providing an understanding of local conditions.

Recovery:

To enhance recovery activities, the Regional Control Team coordinated the use of ground observers and DEPI Agriculture (now part of DEDJTR) staff across

“While the three fires were not individually large, as a complex they did present challenges at incident and regional control tiers which are noteworthy, and present learnings for emergency management agencies”



Mystic Park Fire Response - December 2014

the three fires. This resulted in a quick, detailed and coordinated approach, with a well communicated outcome across the tiers of control. When coordinated locally this has the best results.

Identified Improvements

Prevention:

Power lines at the Pastoria East fire had been cleared in accordance with treatment standards but this had left trees within 6 metres of the westerly side. While councils had undertaken roadside prevention works these had not been checked for suitability or regrowth. Prevention and mitigation activities need to be informed by the learnings from fires.

Resourcing:

Resourcing of the Gisborne ICC (number of people and roles) continues to present resourcing challenges reflective of a broader limited IMT resource capacity at times and requires the continued targeting of suitable people to address these gaps. This ICC has a footprint covering three regions which requires a high level of coordination between these regions. Clarity around the role and resourcing of LCFs and their interaction with the Division Command and IMT is required.

Warnings and Advice:

Delays were experienced with some messaging as possibly too much fire detail was sought. There is an assumption people in the community understand, and know how to apply, what we are telling them in a message and the differences between Advice, Watch and Act, and Emergency Warnings. Continued community education is

needed to ensure a broad understanding of warnings and advice.

Aircraft:

The aircraft locations on the day were subject to strong westerly winds which limited deployment of even heavy aircraft. Strategic placement and relocation of aircraft ahead of this type of weather change could enhance their availability and deployment. Varying feedback from fireground personnel was received about the success of LATs. Some feedback reported they were very effective while others indicated crews were required to move too far back from the fire edge to follow up the drops efficiently. Greater awareness and understanding about the effective application of LATs is essential to ensure the benefit of this resource is achieved.

Recovery:

Fires across multiple boundaries require careful thought on coordination and communication during recovery.

Source: EM Knowledge > Reviews-Lessons > Learning Products > Case Studies

Case Study:

Regional Readiness and Response

Overview

The period 30 December 2014 to 4 January 2015 was another uniquely challenging time for emergency management in Victoria. Weather predictions for the weekend (3 and 4 January), particularly for Barwon South West Region, were considered to be amongst the worst since Black Saturday 2009.

Across the northwest, central and north east of the state, conditions were also predicted to enable rapid, high intensity fires in both bush and grasslands. The weather coupled with many Victorians holidaying in these areas further increased the risk. During this period Regional Controllers and Emergency Management Teams (EMTs) from the state's three western regions successfully dealt with a number of emergency management challenges.

Primarily the challenges can be categorised as:

Competing Incident Management Team (IMT) resourcing – given the forecast conditions insufficient personnel were available to achieve either requirements of Joint Standard Operating Procedure (JSOP) 2.03 *Incident Management Team - Readiness Arrangements for Bushfire* or a desirable level of personnel in some Incident Control Centres (ICCs);

Transfer of Control – two fires during the period were close to ICC Catchment boundaries

and in one case near the border of three ICC Catchments and two Regional boundaries;

Multiple Hazards – in addition to presenting extreme fire weather conditions in Victoria's northwest, severe storm activity was expected with the change as it moved across the state on 3 January 2015 and the weather also initiated a number of Heat Health Alerts. These circumstances presented the need for the Loddon Mallee Regional Control Team to consider the best manner in which to ensure effective control during this dynamic weather period.

Key Issues and Decisions

IMT Resourcing

Resourcing a number of positions at ICCs during the period presented immediate challenges for Regional Controllers to develop alternative arrangements. Despite requesting these resources from other locations competing demands still existed.

Case 1 – After resourcing three of the five ICCs within the Region, the Regional Controller was faced with the situation of having the ability to adequately resource only one of the remaining two ICCs. A solid appreciation of the forecast conditions (including potential lightning activity), area fire history (particularly where lightning was predicted), and risks and consequences enabled discussions within the Regional Control Team (RCT) which resulted in the decision to resource the ICC in the area which presented the greatest likelihood and

“Weather predictions for the weekend (3 and 4 January), particularly for Barwon South West Region, were considered to be amongst the worst since Black Saturday 2009.”



Grampians Region Forward Readiness Planner - CFA and DELWP Executive Support Officers

risk if fires started. This departure from the JSOP2.03 requirements was communicated to the State Response Controller (SRC) and received endorsement from the SRC and Emergency Management Commissioner (EMC). Sufficient resourcing was achieved to operate the fifth ICC as a Division Command Centre.

Case 2 - Resourcing the Public Information Officer, Warnings and Advice Officer and Aircraft Officer could not be achieved at one of the three ICCs within the Region. The Regional Controller discussed this within the RCT and determined any warnings and public information would be undertaken by one of the other IMTs if necessary.

Both cases illustrate a comprehensive appreciation of the circumstances and an agile and collaborative approach to developing effective solutions.

Transfer of Control

Fires originating on or near the footprint boundaries of ICCs always present challenges when determining where and when control from the field to an ICC will be transferred.

Case 1 - fire originated in the footprint of one ICC, but if first attack failed, it would quickly spread into the neighbouring ICC catchment. Unfortunately the neighbouring ICC did not have all IMT positions filled due to resourcing issues on the day. With the assistance of excellent on ground intelligence, local knowledge, input from the Incident Controller of the first ICC (stated they were already shadowing the fire) and confidence in fireground personnel to develop an effective Division Command structure, the Regional Controller determined the Transfer of Control should go to the initial ICC for more effective control, despite the fire moving out of its catchment area.

Case 2 - fire originated near the boundary of multiple ICC catchments and two Regional boundaries. This fire was within the catchment of ICCs which were already involved in managing existing fires. The adjoining Regional Controller, having an appreciation for the situation developing in the neighbouring Region, immediately communicated with his Regional counterpart and agreed if transfer of control was necessary it would be to an ICC in

his Region. This would significantly reduce the workload of the already committed IMTs. Due to aggressive first attack and local management of the fire, transfer of control was not necessary.

Both these cases illustrate that ICC Catchments provide a guide to the location where transfer of control should be undertaken, however the most effective location may not be within this catchment for the purposes of effective control and command. Maintaining a situational awareness of activities in neighbouring Regions and timely communication between the Regional Controllers involved, enabled the development of a suitable solution.

Multiple Hazards

A Region was presented with multiple hazards as a result of the predicted weather. Extreme fire weather, severe thunderstorm potential and high temperatures leading to Heat Health Alerts all combined over a relatively short time period on 3 January 2015. The RCT held discussions on the day prior and agreed to maintain a single Regional Controller during the period with key links to fire agency commanders, Health and Human Services and Victoria State Emergency Service for non-bushfire hazards.

The Regional Controller, RCT and Regional Emergency Management Team planned for response to all three hazards and maintained a common operating picture through regular communication with Regional and State levels. The outcome of the decision to maintain a single

Regional Controller was overwhelmingly positive with clear and coordinated public messaging and no confusion in the control and command arrangements.

This is yet another situation where the decision challenged previous thinking in the emergency management sector and illustrates the enormous improvements which have been made over the past five years. It also illustrates Regional Controllers, and other emergency management personnel, are now far more agile and capable, regardless of their background, and can apply their experience and learnings to any hazard environment.

Source: EM Knowledge > Reviews-Lessons > Learning Products > Case Studies

Case Study:

Moyston Bushfire

Incident Overview:

Friday 2 January 2015 was a Total Fire Ban day and incident management teams were in place, air and ground observers were on standby in the field. Early that morning the rostered duty officer (RDO) activated a hot day response and four fixed-wing water bombers were on standby at Stawell airport. The weather was 35°C, relative humidity of 9%, and there was a 28km/h northerly wind gusting to 50km/h.

At 11.52am the first call came in over the radio of smoke sighting in the Moyston area. The Big Hill Stawell fire tower confirmed smoke showing and building rapidly, and a request was made to the State Air Desk for all four water-bombing aircraft to respond. A few minutes later, Moyston Captain called “make tankers 10”, which was followed up eight minutes later by the Ararat Group Officer, now known as Better Route Rd Control, asking for 20 tankers and an Emergency Warning to be sent out for the Moyston township and surrounding area. The fast-moving grassfire was about to impact the township.

Soon after Moyston Tanker 2 was at the scene, the fire had already travelled over 3km, which made initial size up difficult. The topography and fuel loads in parts made the suppression challenging. Within the first hour, five strike teams had responded, with a further nine requested from outside the district. A strike team was requested to cover the Westmere

group, but it was deployed direct to the fire at the request of the fireground.

The forward rate of spread was stopped at 5pm, by which time the fire had travelled 21km in five hours and reached a size of 4,454 hectares with 64km perimeter. The next day, a strong south-westerly wind impacted the fireground. As a result of the great work by crews, no breakaways occurred.

What worked well?

Aircraft: Eleven aircraft including two large air tankers (LATs) substantially contributed to minimise the losses from the fire. Whilst the aircraft didn’t extinguish the fire, the initial drops of the LATs north of Moyston prevented the fire from entering the township.

Food: Being well fed helps to reduce fatigue on the fireground. Food services were set up early and close to the staging area so it was quick and easy to access. There were plenty of people serving food and they were well resourced. The Rapid Relief Team and Moyston Auxiliary did a great job. Opportunities for improvement include serving food that caters to a wider range of diets and having food available during mopping up when the fire was out.

Private Firefighting equipment: This is used extensively around Moyston because of the number of farming communities. It can be a recipe for disaster because of the possible lack of communication to the units, but at the



Moyston Fire Response - January 2015

“A few minutes later, Moyston Captain called “make tankers 10”, which was followed up eight minutes later by the Ararat Group Officer, now known as Better Route Rd Control, asking for 20 tankers and an Emergency Warning to be sent out for the Moyston township and surrounding area.”

Moyston fire everyone had a lot of situational awareness and used common sense, with the majority of the private firefighting equipment driven by well-practised brigade members.

Division Command: The role of Division Command was established through local initiative and was a team effort. It was originally located in vehicles then moved to a local fire station. It was run by five qualified people who were very busy, which reinforces the needs of a Division Command. The district and group were well prepared and used lessons learned by people who went to Gisborne the week before.

Public Information: The public information and warnings unit worked extremely well in providing timely warnings to the community. EMV carried out an evaluation on the warnings and information provided to the community which focused on specific issues identified during the incident or through standard monitoring processes. It's important to note that the evaluation excluded contact with the incident control centre, public information officer or warnings officer, so situational issues are not considered.

Overall there were a number of other good practices identified such as timely warnings, access to water tankers, the use of graders, ground observers getting timely information to the ICC and good leadership on the fireground.

What could we improve on?

Fatigue: The first responders were mainly retirees and they worked for over 12 hours before relief

arrived. There were also some issues with traffic management points which meant some relief crews were delayed. Heat stress was a critical issue on the fireground. It's also important that health and fitness are taken into consideration when preparing for hot days and on the fireground to ensure the safety of all members. Hydration and fatigue management are critical.

First-aid: There were many safety incidents that required first-aid, including incorrect footwear causing sprained ankles, heat-related problems and chest pains. Crews are given first-aid training, first-aid kits and, in some cases, a defibrillator. Until Ambulance Victoria is on the fireground, skilled crews should attend to first-aid. Safety incidents must be correctly reported (which wasn't always the case) and the incident controller must be made aware of them.

Communications: There were a number of issues regarding communication, particularly between the different control locations and the ICC. The main issue with communication was the ICC being co-located at a DELWP work centre where the phone lines and voicemail defaulted to the normal business lines at the work stations when not answered. This created a lot of uncertainty about whether messages were getting through to the right people.

Stepping up brigades: This fire required a lot of brigade support with around 39 district 16 brigades committed to the initial firefight. This meant some townships had minimal resources



Moyston Fire Response - January 2015

for local incidents. The need to step up brigades created confusion and it was identified there needs to be clarity about the procedure.

Some other areas for improvement were the importance of local knowledge, using roles instead of individual names, realistic timeframes when planning for evacuation and the importance of fuel reduction and preparedness activities.

What would you do next time?

Local facilities: The key issue identified in the debrief was the arrangement to use Horsham ICC instead of the local Ararat ICC. This was due to the limited capacity to fill IMT roles across the region and meeting the arrangements in the *Joint Standard Operating Procedures 2.03 Incident Management Team - Readiness Arrangements for Bushfire*. Although Ararat ICC didn't have the resources for a Level 3 IMT at that time, it should still be used to assist the fireground and create workarounds to get the ball rolling in the initial few hours then move the Horsham IMT to Ararat ICC.

Resourcing: Resourcing is a major issue for Ararat ICC. Training for Level 3 IMT roles is an ongoing activity that takes significant time and effort. The time of year also impacted on ICC staffing in the region and the region didn't have any additional people. It was agreed that the development of IMT capability will be a future priority for all agencies.

Connectivity of information: In the short term, the Ararat area is going to concentrate on getting

to know key players in the Horsham and Ballarat area. In addition, the people who work in the ICCs are going to get to know the local people to avoid some of the communication issues experienced during this incident. Personal acquaintance along with mobile phone numbers would go some way towards mitigating these issues.

In addition to the improvements discussed above, there was also discussion about identifying approved plant operators and machinery available in the area and the regular real-time practice of pre-plans and exercise scenarios by agencies to uncover communication problems allowing for early resolution and reduce the problems encountered during incidents.

Conclusion:

The impact of the Moyston fire was dramatically reduced as a result of the interoperability, ingenuity, initiative and quick thinking of those involved. The debrief was beneficial, with discussions highlighting areas that worked really well and exploring areas that still need some work.

Source: Adapted from CFA Brigade Magazine Autumn 2015

Case Study:

Farm Fire Safety

Introduction:

In late 2014 and early 2015 a number of bushfires occurred in Victoria as a result of lightning strikes. These fires burnt through farm land with a mix of lifestyle properties. The fires burnt rapidly with some locals advising that the fire travelled at speeds of approximately 20 km/h at various times.

These fires occurred during times of peak activity. In the CFA North East Region they experienced in excess of 350 fires over a two day period caused by lightning. The vast majority of these fires were extinguished by CFA Brigades or private appliances.

In a small number of cases, these fires spread rapidly. Two of those fires which are the focus of this Case Study are the Lake Rowan fire which is located west of Wangaratta and the Moyston fire which was south west of Ararat. Both of these fires spread rapidly under high wind speeds and challenged responders and the community.

Farm fire safety:

A key standout from these fires is the number of houses that survived. The houses, primarily associated with farms, performed very well when compared to those in fires in other non-farming areas due to the long term management of fire risk. After an examination of the available information and site inspections the following was identified:

- Farmers within the fire areas had an excellent understanding of fire behaviour and the treatments required to manage the risk from grassfires.
- Key fire safety treatments utilised by farmers included:
 - o Ensuring the immediate area around the home was designed to offset the impact of a fire. This included the driveway circling the house, lawns and garden beds well watered and the appropriate placement of machinery sheds to further protect the house.



Moyston Fire Response - January 2015

- o The paddocks in the north and western areas of the home were well managed by the appropriate selection of crops or had been eaten out by livestock.
- o Management of hay storage areas by ensuring hay was stored in areas with limited combustibles.
- o Strong local knowledge through regular burning off and the majority of farmers are also CFA volunteers.
- CFA in conjunction with other agencies and local community groups had undertaken extensive fire safety education programs in the surrounding areas including Field Days, Livestock Sales and Agricultural Shows. These events utilised CFAs 'On the Land, Agricultural Fire Management Guidelines'.

Lessons Identified:

1. Utilise farmers who are also locals to communicate fire safety information within their local area.
2. Ensure CFAs publication 'On the Land' is utilised whenever engaging with farmers or landowners in grassland areas.
3. Ensure fire safety considerations are integrated with farm planning processes.
4. Continue to develop local solutions led by locals.
5. Meet and discuss fire safety with all available community groups.
6. Support industry to develop specific packages for items including sprinklers and farm fire fighting capability.

Source: Adapted from CFA Case Study: Farm Fire Safety - Lake Rowan and Moyston fires - 2015

Case Study:

Silo Engulfment

Incident Overview:

On 10 February 2015 a local farmer became engulfed by grain in a silo on his Axe Creek property. The silo was about a third full, containing approximately 10 tonnes of barley, and the farmer was trapped up to his chest. Country Fire Authority (CFA) got the call to respond after people on the farm had worked tirelessly for two hours to free the farmer. It was a warm afternoon and temperatures inside the silo had reached 50°C.

The initial call responded Axe Creek and Bendigo brigades, including a ladder platform, for a confined space rescue. The responding officer also requested VICSES and Oscar 1 Emergency Response Brigade to assist. Oscar 1 is a CFA specialist mines rescue brigade based in Bendigo.

En route the senior station officer (SSO) conducted an initial assessment of the resources available and considered the options to conduct the rescue operation. Although the SSO was a confined space rescue technician, he didn't have any formal grain engulfment training. However, he was aware of a number of techniques he could use to rescue the farmer because of lessons learned from previous grain engulfment incidents. He had also carried out his own research about engulfment rescue techniques.

When crews arrived at the scene, it was decided the control of the incident would remain with the Axe Creek brigade lieutenant and the SSO would perform the role of technical rescue sector commander. An incident emergency management team was formed during the incident which included Victoria Police, Victoria State Emergency Service (VICSES), Ambulance Victoria and CFA. Worksafe also attended the incident but, after the incident, it raised concerns about its ability to investigate the incident while it was occurring.

The initial size-up identified that the efforts of the farmer's colleagues had made some inroads to free him. The farmer's colleagues had used a makeshift harness and built a coffer dam around the trapped man and had released some grain from around his chest. Coffers are used to shield a victim from further grain engulfment and allow the grain to be removed so the victim can be released.

During the rescue, attempts were made to limit the amount of movement in and on the silo, because any vibration would cause grain to engulf the farmer. Using the ladder platform, crews accessed the inside of the silo to continue to work on the trapped farmer. Ambulance Victoria officers monitored the farmer's condition remotely from the cage of the ladder platform and the Bendigo confined space rescue operators, along with the Oscar 1 members, continued the initial plan to free the man using the existing coffer dam arrangement.

All the equipment used inside the silo had to be safe, so there was no threat of a spark that could cause a dust explosion. The extreme temperatures meant that crews working inside the silo had to be rotated to avoid heat stress. Whilst the rescue efforts were being made internally, VICSES prepared a number of redundancies. A secondary roping system was set up to help with the internal rescue, if it was required. In addition, a fallback plan was prepared to release the grain from below if an urgent evacuation was thought necessary. This process has the potential to cause a dust explosion, so an uncontrolled release of grain would have been a last resort.

During the rescue crews were able to communicate with the trapped farmer and continue to remove the grain from around his body. He was released after being trapped for almost four hours. He climbed the internal

ladder to the ladder platform before receiving medical treatment. Crews working inside the silo were also checked by Ambulance Victoria for heat-related illness because of the extreme conditions they worked in.

As a result of this incident, after action reviews were conducted within CFA and at a multi-agency regional level with the intent to learn from this incident and continue to build strong relationships across the agencies involved.

Lessons Identified:

Preplanning for a potential event: The members who responded as a part of the Bendigo crew had done some mental preplanning for this type of incident. This preplanning can be invaluable, particularly if a team reviews the processes that should be considered and thinks about the available options in this situation.

Training and cooperation: Increased awareness of the capabilities of VICSES, Oscar 1 and CFA technical rescue has led to a more collaborative approach when responding to technical rescue incidents. Greater understanding of the various techniques, equipment and procedures will lead to better outcomes for the community. A review has begun of the computer-aided dispatch tables to make sure the correct appliances are sent to a technical response.



Silo Engulfment Response - February 2015
Photograph Courtesy of the Bendigo Advertiser 10/02/2015

Understanding the risks: The agencies and individuals involved in this incident were aware of the dangers of grain engulfment and had varying levels of understanding of the procedures for dealing with this type of incident. A number of agency commanders had previously attended engulfment rescues or had researched various risk mitigation treatments for grain engulfment.

Role of Worksafe: At emergency incidents Worksafe inspectors may attend to provide support, investigate an industrial accident or review safety management at the emergency. Crews on scene should give all reasonable assistance to inspectors so they can carry out their duties, which may include providing an escort or a guide while the incident isn't under control. But where an inspector's safety could be at risk because of the nature or status of the incident, or if diverting emergency personnel to help the inspector would jeopardise the welfare of any victims or the incident, the inspector should be advised and access restricted until the matters are resolved.

Working in extreme conditions: Crews working to perform the rescue were exposed to extreme

“The silo was about a third full, containing approximately 10 tonnes of barley, and the farmer was trapped up to his chest.”



Silo Engulfment Response - February 2015
Photograph Courtesy of the Bendigo Advertiser 10/02/2015

temperatures and humidity. To limit heat illness, a large number of crews were needed and rotated regularly. A rehabilitation unit was available in the area but, because it’s a fairly new resource, it was overlooked during the rescue.

Silo awareness for the farming sector: Given the time it took to notify emergency services, the farmers may not have fully understood the risks. Thankfully, this incident had a successful outcome as the farmer was released, but there have been similar incidents where victims have died either by working inside a loaded silo or entering a silo to rescue a colleague. Engulfment, oxygen depletion, excessive heat and combustibility are significant risks for farmers. These incidents can turn into disaster very quickly and the farming community needs to be aware of the dangers.

Conclusion:

In 2007 a farmer tragically lost his life during a grain engulfment in Hamilton. This incident was the catalyst for a number of initiatives to better equip our members with the skills and knowledge to deal with silo entrapments.

- In late April this year, two CFA officers attended a ‘train the trainer’ course on rescue techniques for grain engulfment, conducted by Kansas Fire and Rescue Training Institute and Purdue University in Fargo, North Dakota. This will equip CFA as a leader in grain engulfment rescue training in Australia and will no doubt save lives in the future.

- CFA is currently developing technical rescue resources to deploy to complex incidents such as grain engulfment.
- Local initiatives and expertise mean we can train members to deal with incidents. Through increased knowledge, equipment design and multi-agency exercising, we can limit the impact of these emergencies on our communities.

Source: CFA Brigade Magazine Winter 2015

Case Study:

February Thunderstorm

Incident Overview:

On Saturday 28 February 2015, a low pressure trough and cold front crossed south eastern Australia. A line of thunderstorms became organised to the west of Melbourne along the leading edge of the low pressure trough and subsequently increased the intensity of the wind change.

Thunderstorms became organised and morphed into a "squall line"; a line of thunderstorms grouped together along a low pressure trough or cold front that produces strong and squally winds. The squall line reached Melbourne at approximately 2025hrs, with destructive wind gusts reaching 131 km/h as reported at Fawkner Beacon at 2027hrs. The Bureau of Meteorology (BoM) issued a Very Dangerous Thunderstorm Warning at 2029hrs, warning of destructive winds

The squall line subsequently crossed the eastern suburbs of Melbourne between 2030 and 2115 hours, contracted east, and weakened.

Victoria State Emergency Service (VICSES) received over 2,000 RFAs (Requests For Assistance), mostly relating to trees down and property damage. Metropolitan Fire Brigade (MFB) received 141 incidents and at the peak of the storm 40 appliances were committed. This is more than 8 times the usual call rate for this day and time. Department of Economic Development, Jobs, Transport and Resources (DEDJTR) advised of short term power outages to 89,000 premises. No transmission infrastructure was affected.

In Victoria, the BoM Severe Weather Season commences at the beginning of September each year and ceases at the end of April of the following year. An additional meteorologist is rostered for thunderstorm forecasting and warnings. This period is defined to encompass the majority of seasonal

severe weather occurrences, although it is recognised that severe weather can occur at any time of year.

Severe thunderstorm warnings are, on average, issued up to a couple of times a week during this period – few result in widespread significant damage. The BoMs capability to identify and warn for severe thunderstorms is within a range of 20 to 60 minutes and up to a few hours for district based products for long lived thunderstorm events.

Severe Thunderstorm Warnings with the tag 'This is a very Dangerous Thunderstorm' are very infrequent, on average once or twice a year. However, in each event where they have been issued significant damage has resulted.

In this event, a warning was issued by BoM within 4 minutes from the observation of the criteria of 'This is a very Dangerous Thunderstorm' being reached. BoM have advised that they have reviewed this event and are confident that they could not have issued the warning any earlier than it was.

Lessons Identified:

Command, Control, Coordination: Given that all forecasts and briefings assessed the storm risk as low with only a 'chance' of severe weather being a risk, no triggers were reached to increase readiness, resulting in agencies operating in business as usual ahead of escalation on the evening of 28 February 2015. Given the nature of it being a no notice event, the recall of staff was generally timely for VICSES and Country Fire Authority (CFA). VICSES and MFB activated emergency management personnel to the State Control Centre (SCC), Emergency Services Telecommunications Authority (ESTA) and Mulgrave Incident Control Centre (ICC), although there were challenges experienced in obtaining Emergency Management Liaison Officers within a timely manner.

Timelines and Appropriateness of Warnings:
At the State Control Team meeting at 0730hrs

“VICSES received over 2,000 RFAs, mostly relating to trees down and property damage. MFB received 141 incidents and at the peak of the storm 40 appliances were committed. This is more than 8 times the usual call rate for this day and time.”



Victoria Storm Response - February 2015

and Weather Briefing at 1300hrs on Saturday 28 February 2015 the risk of thunderstorms was regarded as “Chance”. As a result, agencies planned for business as usual activities. A Severe Weather Warning for damaging winds for the Mallee and Wimmera districts was issued at 1849hrs on Saturday 28 February 2015 to warn for the strong and squally winds with the wind change. The Severe Weather Warning was updated at 1951hrs to include the North Central, Central and West and South Gippsland districts and cancelled at 2309hrs.

Section 5.4.1 of the BoM Severe Weather Directive (SWD) states: “In the event that a ‘very dangerous thunderstorm’ has developed, it is important to notify the community of the imminent threat and heightened danger.” Section 5.4.6 of the BoM Severe Weather Directive states: the forecaster must page the VICSES immediately using a priority 1 emergency. The forecaster must also contact the ABC hotline in order to get an urgent message to media. With the very sudden onset of the Very Dangerous Thunderstorm, BoM’s review of this event has confirmed that undertaking higher priority tasks such as updating the warning products, continuing to assess the path of the storm and providing advice to the emergency services, took precedence over contacting the ABC hotline. Some issues have been identified regarding the ability for emergency services organisations to be able to access media outlets to warn communities, which are being reviewed.

Call Taking and Dispatch: Call waiting from the public did reach the maximum call queue of 200 during

the peak between 2030 and 2130hrs. This results in further callers receiving a recorded message and then disconnecting the call. At the peak, 30 call takers were added to the Storm Queue, and dispatchers were increased from two to four. By 2148hrs call waiting had reduced to 19 and by 2201hrs the call waiting queue had reduced to below 10. At midnight on 28 February 2015, ESTA had answered 1067 calls for VICSES Storm and Flood line.

Reporting (Common Operating Picture):

Information flow and gaining a common operating picture presented some challenges throughout the event. A common platform for sharing information on resource utilisation across agencies will help State Agency Commanders request and provide support to other agencies. EMV is currently implementing the EM-COP project (Emergency Management – Common Operating Platform) which will utilise the lessons from this event to shape the outcome to support these types of events.

Other lessons have been identified through a review into the event including the multi-agency response to a rescue and the need to review processes for urban search and rescue response and on-call arrangements. The *EMV Guidelines for Debriefing* and *CFA/DELWP After Action Review* process cards were also actively utilised to support the review of the incident, which identified learnings which will be incorporated into future reviews of debriefing and review processes.

Source: EM Knowledge > Reviews-Lessons > Learning Products > Case Studies

Case Study:

Christmas Hills Fire-Scape

Incident Overview:

In mid March 2014, members of Christmas Hills Fire Brigade and Christmas Hills Landcare Group met with CFA members responsible for a new CFA initiative called Fire-Scape.

Fire-Scape helps residents plan strategically for fire, improve local fire knowledge and enable sustainable land management. It enables fire management agencies and community organisations, such as Landcare and other land managers, to work together to consider fire not only as a threat to properties but also as a way to improve the quality of native vegetation.

A trial demonstration planned burn at Christmas Hills was successfully carried out in April 2015 by Christmas Hills Brigade, Landcare, Nillumbik Shire and Bend of Island Conservation Association. The program was also trialled at Fish Creek in South Gippsland with six properties totalling 15 hectares, and in Barongarook near Colac (200 hectares).

The program comprises two workshops and a demonstration burn. The first workshop addresses topics such as developing a fire management plan in cooperation with your neighbours, risk management and bushfire protection, fire behaviour and an introduction to fire ecology. During this session a field visit is organised and a community burn strategy developed. In the second workshop the group begins site preparation



Christmas Hills Fire-Scape - April 2015

and hazard assessment, learns about the local fire history and completes the community burn strategy. The final component is the planned burn, usually in autumn, and carried out by the local fire brigade with workshop participants attending.

The demonstration burn was carried out on a bush property. It showed community members what's involved in planning and carrying out a burn, and they were encouraged to develop a community fire management plan at a local scale. Although small, the burn was the culmination of a number of community consultations over 12 months. The burn was conducted by Christmas Hills Fire Brigade and the burn controller was a CFA staff member. The burn process was explained to participating residents by Parks Victoria and Landcare.

All three Christmas Hills brigade trucks attended, along with around 20 firefighters. The site was unbounded on three sides, so considerable effort was directed at constructing and patrolling a mineral earth break around the site and, later on, blacking out the perimeter with the least site disturbance (see more on the Christmas Hills Fire Brigade Facebook page).

The next step in the process is for the site to be monitored by Landcare in order to document the ecological outcomes of the burn. This burn-off marks the completion of the Fire-Scape pilot program, and the brigade is keen to apply the experience it has gained to more planned burning in the brigade's area.

“Fire-Scape helps residents plan strategically for fire, improve local fire knowledge and enable sustainable land management.”



Christmas Hills Fire-Scape - April 2015

Lessons Identified:

Planning: The Victorian Fire Risk Register was incorporated in the planning stage to ensure that the property selected reflected risk management priorities. The burn and Fire-Scape process was a resounding success mainly due to the amount of planning and preparation by the landowner, committee and the brigade. The small size of the burn and conditions allowed the group finish at around 4.30pm, with just a couple of people monitoring the next day. On the other hand, it was labour intensive and a lot of work for those involved for a relatively small burn. The planning process could be streamlined.

Education: The burn commentators provided an excellent overview of what was occurring, which provided insight for the onlookers and ensured the activity was educational. The implementation of a prescribed burning program that gives a balanced view of asset protection and ecological perspectives has been extremely beneficial for the community, particularly when planning the burn and deciding what would be burnt to ensure habitats could continue to survive after the burn.

Landholders: Future burns are dependent on the availability of brigades and landowners. To ensure continued momentum for the program, landowners who’ve already expressed interest through an initial survey, will be contacted to seek their interest in future burns. The brigade intends to develop a couple of pre-planned burns to take advantage of any suitable burn window and reduce any delay in prescribed burning in the future.

Cross-tenure burns: Christmas Hills Fire Brigade is enthusiastic about trialling cross-tenure burns with other agencies in the area so that a larger burn can be tried where agency personnel can support follow-up burn patrolling and weeding.

For more information on the Fire-Scape program, please contact your local CFA Vegetation Management Officer.

Source: CFA Brigade Magazine Spring 2015
Further reading: Christmas Hills Fire Brigade Facebook Page

Case Study:

New South Wales (NSW) Deployment: Social Media at an Incident Control Centre Clarence Nambucca Region

Overview

During April 2015, low pressure weather systems impacted New South Wales (NSW) and southern Queensland resulting in heavy rainfall, damaging hail, destructive winds and widespread flooding. New South Wales State Emergency Service (NSWSES) requested support from Victorian emergency management agencies. A Victorian multiagency deployment of 341 personnel assisted NSW agencies respond to over 22,000 requests for assistance (RFA).

A Victorian Social Media Officer was deployed to the Incident Control Centre (ICC) in Clarence Nambucca Region of NSW as part of the Victorian Incident Management Team sent to the area. Between Friday 1 May - Sunday 3 May 2015 a total of 49 flood warnings, 49 flood bulletins, one evacuation warning and two evacuation orders were issued to the Clarence Nambucca Region.

During this period, social media was established as a key channel to distribute timely, tailored and relevant information and warnings to the community as the incident unfolded. The Social Media Officer was responsible for operating the

Clarence Nambucca Regional Facebook page, along with local pages for Corindi, Yamba and Urunga NSWSES Units.

In just three days, a total of 77 social media posts were made through Facebook, reaching a combined total of 222,159 people in the community. This activity led to significant growth in the social media following of these local Facebook pages, seeing a 20% increase for the Clarence Nambucca Region page and a 31% increase for the Urunga page.

One in ten people engaged with the content posted on Facebook by either leaving a comment, tagging a friend or family member to advise them of the information, sharing a post to their own Facebook page or clicking on a link included in a post for more information. Again, this further amplified the information and ensured these small communities were aware of what was happening through localised, trusted social media sources.

A dedicated social media resource at incident level ensured the right local information reached the right people as quickly as possible. Being situated at the ground level allowed the Social Media Officer to work closely with trusted, local sources to gather and disseminate this important information. This information was made particularly relevant and trustworthy by using local known information sources such as NSWSES Unit members or community champions on the ground in affected areas.

“A Victorian multiagency deployment of 341 personnel assisted NSW agencies respond to over 22,000 requests for assistance (RFA).”



Victoria’s Deployment to New South Wales Storms - April 2015

These positive outcomes in such a short time period highlight the strong benefits and value of having a social media specific role located at an ICC and using social media as a key channel to provide the community with information and warnings during an emergency incident.

What worked well?

- The provision of a dedicated social media resource at incident level to publish public information and warnings to the community. This negated the often ineffective process of State requesting IC to provide information and IC requesting publishing of timely information on a State forum, allowing instead local control over timely and relevant information pushed out with regular updates
- High level of timely, tailored, relevant information provided to the local community. There was a marked increase in likes, reach and overall engagement through the regional Facebook page and local unit pages as a result of social media activity.
- Assisting small NSWSES units whose social media pages were managed by volunteers that didn’t have resources to post info during operational activity. Each unit was contacted to offer support and management of their page during the incident and all accepted with gratitude. They were well aware that their local pages were a powerful avenue to reach local communities but were unable to provide the required resourcing.
- Establishing local on ground contacts in the NSWSES units to supply content (photos/

videos) for social media posting. Local intelligence being sought out and provided from the community was critical to the usefulness of the social media content. For example, local NSWSES advised of a live web cam on the roof a local business where we could track live the closure of Lavenders Bridge - brilliant content from local knowledge!

- Increased education and awareness about the powerful use of social media during an emergency. More traditional operational staff gained an understanding and interest into how social media worked. For example, Incident Controllers/Regional Controllers being trained and seeing value in social media as a medium.
- A high level of interest in social media messaging was expressed across all levels of staff in the operations centre and local units. Many requests were made for briefings on social media methodology and statistical outcomes (number of individuals being exposed to the information) of posts being made on social media.
- Identifying and establishing relationships with local media outlets and community groups with large social media followings via Facebook. Each contact was introduced to the NSWSES pages and invited to share content to further amplify messaging to their local networks. There was a very positive response and 100% take up on the invitation. These contacts should prove robust enough to re-establish during the next event.



Victoria's Deployment to New South Wales Storms - April 2015

- Preliminary work in establishing relationships with local staff and members in the room and on the ground. This approach from the Social Media Officer paid strong dividends with all openly sharing knowledge that fed social media content.

What could have been improved?

- A NSWSES social media manual or policy would have been useful to ensure consistency in social media posts and content being used.
- Direction and triggers for consultation with NSWSES State Headquarters about sign off process for social media posts. For example, when posting info about Evacuation Warning to North Macksville, despite being signed off by local Incident Controller, there was concern at State Headquarters over flow of information up the chain of command.
- Media Leader should have been located out in operational environment of ICC to ensure clear line of communications at all times with social media activity.
- Having a centralised list of logins or contact points for all the local NSWSES unit pages for the Region. This would have allowed

quicker access to pages to assist.

- Access to a range of template images from State on key safety messages e.g. 'If it's flooded it, forget it!'
- Supply of tools to track analytics of social media posting. Sprout Social and Bitly logins would have been fantastic to have on hand as a starting point.

Source: EM Knowledge > Reviews-Lessons > Learning Products > Case Studies

Appendix: One

Graph Data

Figures 4 and 5

Data included in the graphs has been provided by the Emergency Management Victoria (EMV) State Control Centre (SCC). The data has been collected through SCC reporting of declared Total Fire Ban (TFB) locations and forecast Fire Danger Ratings (FDRs) by weather district. The data is for the period of 1 November 2014 to 30 April 2015.

Figures 7 and 8

Data included in the graphs has been provided by VICSES, CFA, Metropolitan Fire Brigade (MFB) and Department of Environment, Land, Water and Planning (DELWP) and will not match agency government reporting for the 2014-15 financial year due to the specific need of this report. The data is current as at the time of extraction only. Figures may alter if further fire reports for incidents related to the period are completed.

VICSES Data:

Data Source – Operational Incident Management System (OIMS) incident data

Measure – count of primary incidents, summary based on reported incident type except where the reported type is undetermined, unclassified or unknown, then the Emergency Services Telecommunications Authority (ESTA) Computer Aided Dispatch (CAD) paged event type is used.

The incident types are made up of the following VICSES data -

- Storm – Includes damage resulting from storms
- Flood – Includes calls to properties inundated with water as well as flash floods
- Earthquake – Self explanatory
- Motor Vehicle Accident (MVA), Rescue, Emergency Medical Service (EMS) Call – Road rescue and rescue other which includes assisting Police
- Other Situations - Public relations, community service, driver reviver, fund raising and other miscellaneous incident types.

CFA Data:

Data Source – Fire and Incident Reporting System (FIRS) incident data

Measure – All completed primary incidents recorded as occurring in CFA or Mutual Aid territory during the period 1/7/2014 and 30/6/2015, by incident type division as extracted from CFAs Fire and Incident Reporting System by CFA as at 15 July 2015.

The incident types are made up of the following CFA data -

- False Alarms and False Calls (inc Good Intent) – Includes type of call data for Good Intent Call and False Alarms and False Calls
- Structure Fires – Includes type of call data for Fire and Explosions > Building fire; building only or building and contents
- Vegetation Fires – Includes type of call data for Fire and Explosions > Vegetation and other Outside Fires and Small Vegetation Fire
- Other Fires and Explosions – Includes type of call data for all other codes within Fire and

- Explosions excluding those for vegetation and structure fires
- Hazardous Condition - Includes type of call data for Hazardous Condition
- MVA, Rescue, EMS Call - Includes type of call data for MVA, Rescue, EMS Calls
- Other Situations - Includes type of call data for Other Situations
- Overpressure Rupture - Includes type of call data for Overpressure Rupture
- Service Calls - Includes type of call data for Service Calls
- Type of incident undetermined - Includes type of call data for Type of incident undetermined

MFB Data:

Data Source - Australian Incident Reporting System (AIRS) incident data

Measure - count of all calls attended in the MD area (Metropolitan District). The AIRS classification system was utilised, item A23 (Type of Incident) to determine the type. This classification is completed by the Station Officer after the attendance.

The incident types are made up of the following MFB data -

- False Alarms and False Calls (inc Good Intent) - Includes type of call data for False Alarms and False Calls (inc Good Intent)
- Structure Fires - Includes type of call data for Fire and Explosions > Structure fires
- Vegetation Fires - Includes type of call data for Fire and Explosions > Vegetation fires
- Other Fires and Explosions - Includes type of call data for all other codes within Fire and Explosions excluding those for vegetation and

- structure fires
- Hazardous Condition - Includes type of call data for Hazardous Condition
- MVA, Rescue, EMS Call - Includes type of call data for Emergency Medical Response and Rescues and other Medical Assistance
- Other Situations - Includes type of call data for Other Situations
- Overpressure Rupture - Includes type of call data for Overpressure Rupture
- Service Calls - Includes type of call data for Service Calls
- Type of incident undetermined - Includes type of call data for Type of incident undetermined

DELWP Data:

Data Source - Fireweb Fire Incident Report data
Measure - Count of reported fires attended by DELWP by Month by Origin for the state.

The incident types are made up of the following DELWP data -

- Vegetation Fires - Includes total number of incidents

Figure 9

Data included in the graphs has been provided by the EMV Public Information and Warnings Team and the Victoria State Emergency Service (VICSES) Media and Community Information Team. The data is pulled from the VICSES and Fire One Source One Message (OSOM) system for the period of 1 July 2014 - 30 June 2015.



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