EMV
EMERGENCY
MANAGEMENT
VICTORIA

Emergency Management Operational Review

2017–18

Acknowledgment of Country

EMV acknowledges Aboriginal and Torres Strait Islander people as the Traditional Custodians of the land. EMV also acknowledges and pays respect to the Elders, past and present and is committed to working with Aboriginal and Torres Strait Islander communities to achieve a shared vision of safer and more resilient communities.

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Cover photo: Community volunteers assisting with collection and removal of Nurdles between Logan Beach and Port Fairy Bay, an example of the diversity of Victorian emergencies over the financial year.

Please be advised that some of the images appearing in the *Operational Review 2017–18* are low-resolution submissions, often taken quickly by agency personnel at the time of incident response.

Contents

Message from Emergency Management Commissioner

Victoria is being recognised nationally and internationally for the way the emergency management sector is undertaking lessons management.

While it is still an evolving space, the principle of continuous improvement and always striving to learn from the opportunities and the challenges we face so often is being embedded into the way we do business.

The Emergency Management *Operational Review 2017–18* is one tool that shows the work this sector has undertaken during the year. This year clearly demonstrates an all emergencies focus. It also demonstrates the willingness of our sector to work with and help our communities both locally and internationally.

Each year, the emergency management sector in Victoria demonstrates the value of working together and the *Operational Review 2017–18* is an opportunity to highlight and recognise that work, and to share what we have learned across the State.

It is worth taking the time to read through the case studies and to be proud of what we are achieving every day.

Andrew Crisp PSM
Emergency Management Commissioner

Executive Summary

The Emergency Management *Operational Review 2017–18* (Operational Review) is part of an ongoing cycle of learning and improvement, and aims to highlight good practice, changes and improvements that have occurred across the Victorian emergency management sector during 2017–18.

Assurance and learning activities occur throughout the year and the outcomes of these activities are then collated to analyse and identify good practice and opportunities for learning and improvement. These insights are then available in the Operational Review to Departments, agencies, teams and committees to inform any continuous improvement activities.

The scope of this report includes operational activities within the financial year with input from the State Review Team (SRT) which has representatives from more than 17 organisations. The SRT is Victoria's governance group that provides guidance and advice on lessons management, assurance and learning activities and the identification of state level/multi-agency lessons.

The SRT's primary objective is to promote consistent sector wide continuous improvement in a coordinated and effective manner.

Organisations that are members of the SRT and supported the development of this report include:

- Ambulance Victoria (AV)
- Australian Red Cross (ARC)
- Country Fire Authority (CFA)
- Department of Economic Development, Jobs, Transport and Resources (DEDJTR)
- Department of Environment, Land, Water and Planning (DELWP)
- Department of Health and Human Services (DHHS)
- Emergency Management Victoria (EMV)
- Environmental Protection Authority (EPA)
- Emergency Services Telecommunication Authority (ESTA)
- Inspector-General for Emergency Management (IGEM)
- Life Saving Victoria (LSV)
- Local Government Victoria (LGV)
- Metropolitan Fire Brigade (MFB)
- Municipal Association of Victoria (MAV)
- VicRoads
- Victoria Police (VicPol)
- Victoria State Emergency Service (VICSES)
- Other agencies and departments as required

The Operational Review includes a narrative, insights and lessons, and case studies highlighting the broad range of emergency management operational activity that occurred during the financial year. This includes the range and diversity of activities that have been experienced and the high level of support the entire sector provides to ensure 'safer and more resilient communities'.

126,875+

INCIDENTS THAT CFA, DELWP, MFB AND VICSES RESPONDED TO

3.17+

MILLION USERS OF THE VICEMERGENCY APP AND WEBSITE

2.5+

MILLION CALLS FOR ASSISTANCE RECEIVED BY TRIPLE ZERO

35

INCIDENTS OF STATE SIGNIFICANCE

2

INTERNATIONAL DEPLOYMENTS

10

DAYS WHERE HEAT HEALTH ALERTS WERE ISSUED

2,633

WARNINGS AND COMMUNITY NOTIFICATIONS RECEIVED BY THE VICTORIAN COMMUNITY

271

TOTAL DAYS THAT THE STATE CONTROL CENTRE (SCC) WAS ACTIVATED

6

MONTHS WHERE THE SCC WAS ACTIVATED FOR THE ENTIRE MONTH

4

REAL TIME MONITORING AND EVALUATION DEPLOYMENTS

TO SUPPORT REAL TIME LEARNING AND CAPTURING OF INNOVATIVE AND GOOD PRACTICE

318

INSIGHTS DEVELOPED FROM OBSERVATIONS

CAPTURED THROUGH ASSURANCE AND LEARNING ACTIVITIES AND SUBMISSIONS INTO EM-SHARE

17

CASE STUDIES DEVELOPED

INCLUDING SIGNIFICANT BUSHFIRE EVENTS, HIGH ANGLE RESCUE, EVENTS OF ENVIRONMENTAL IMPACT, ALONGSIDE A DYNAMIC RANGE OF EMERGENCY EVENTS

A section of the four kilometre 'lay flat' pipe during the South West Complex fires. This was part of critical emergency works to bring large volumes of water to the fire ground

Introduction

The Emergency Management Operational Review is a summary of the operational activities and learning that was undertaken by Victoria's emergency management personnel across the financial year. This report supports the continuous improvement of the sector by sharing lessons, and is divided into three sections, in order to reflect the process for identifying and learning operational lessons.

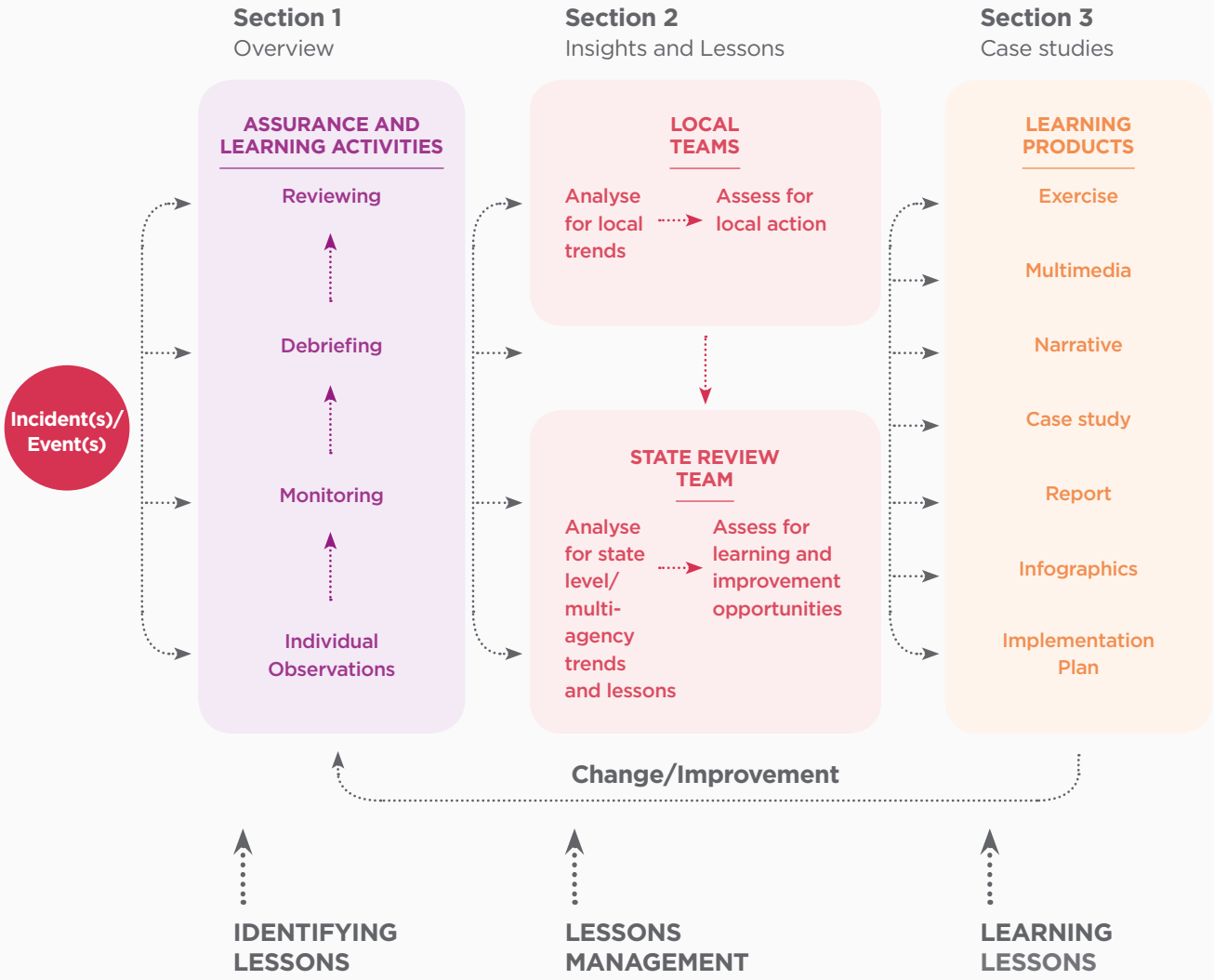
Process

During the 2017–18 financial year, observations were collected from all tiers of emergency management through individual observation collection and outcomes from assurance and learning activities (monitoring, debriefing and reviews). The State Review Team (SRT) supported these activities, collated and analysed the data. This process is established to support the EM-LEARN Framework.

The EM-LEARN Framework provides a shared understanding of what lessons management means for the Victorian Emergency Management sector, where it will take us and what we intent to do to get there. It is available at https://emv.vic.gov.au/how-we-help/reviews-and-lessons-management.

The structure for this report is designed to mirror the process for identifying and learning lessons (figure 1). This is achieved through providing a narrative of the operational period (Section 1), presenting insights and lessons from the data analysis (Section 2) and including a selection of case studies to share experiences and learnings (Section 3).

Figure 1: Process for identifying and learning operational lessons



Scope

The scope of this report includes emergency management operational activities undertaken and overseen during the 2017–18 financial year by the State Review Team (SRT).

Section 1: Overview

The information included in the overview section is intended to provide a summary of the operational activity across the financial year, particularly where assurance and learning activities have been undertaken. This section details activity that has been undertaken across the sector before, during and after emergencies to reflect the broader spectrum of emergency management.

Section 2: Insights and Lessons

Utilising the lessons management life cycle, this section is based on outcomes from assurance and learning activities submitted into EM-Share, analysed by the State Review Team for state level/multi-agency trends, insights and lessons. This section is divided into:

Lessons Management

An overview of the lessons management process and how it is utilised to identify and learn lessons

Insights

The state themes included in previous operational reviews have been updated based on data included within EM-Share during the financial year.

Lessons

An overview of the two state level/multi-agency lessons identified to provide key focus areas for 2018–19.

Section 3: Case Studies

This section provides a selection of case studies that were developed over the financial year, and demonstrate the variety of incidents and events managed by Victorian emergency management personnel. Where relevant and possible, case studies were developed as soon as practicable after an incident and event to capture learnings on what went well and what could be improved. Where case studies were originally published elsewhere, the content has been replicated and the source document has been referenced.

EMV Year in Review

EMV's *Year in Review 2017–18* highlights the achievements and challenges of the sector with many links to the Operational Review. The Operational Review is a summary of sector-wide operational activity across the financial year, and it is designed to complement the EMV *Year in Review 2017–18*. The *Year in Review 2017–18* outlines achievements, celebrates milestones and details key reform led by EMV throughout the year.

While EMV does not have an obligation to produce an Annual Report, the *Year in Review 2017–18* provides reflection on the work achieved to support the sector in creating safer, more resilient communities.

A copy of the *Year in Review 2017–18* is available at http://www.emv.vic.gov.au/publications

When you see this symbol

Read more information in the *Year in Review 2017–18* or elsewhere within this document.

SECTION 1: Overview

Contents

Timeline

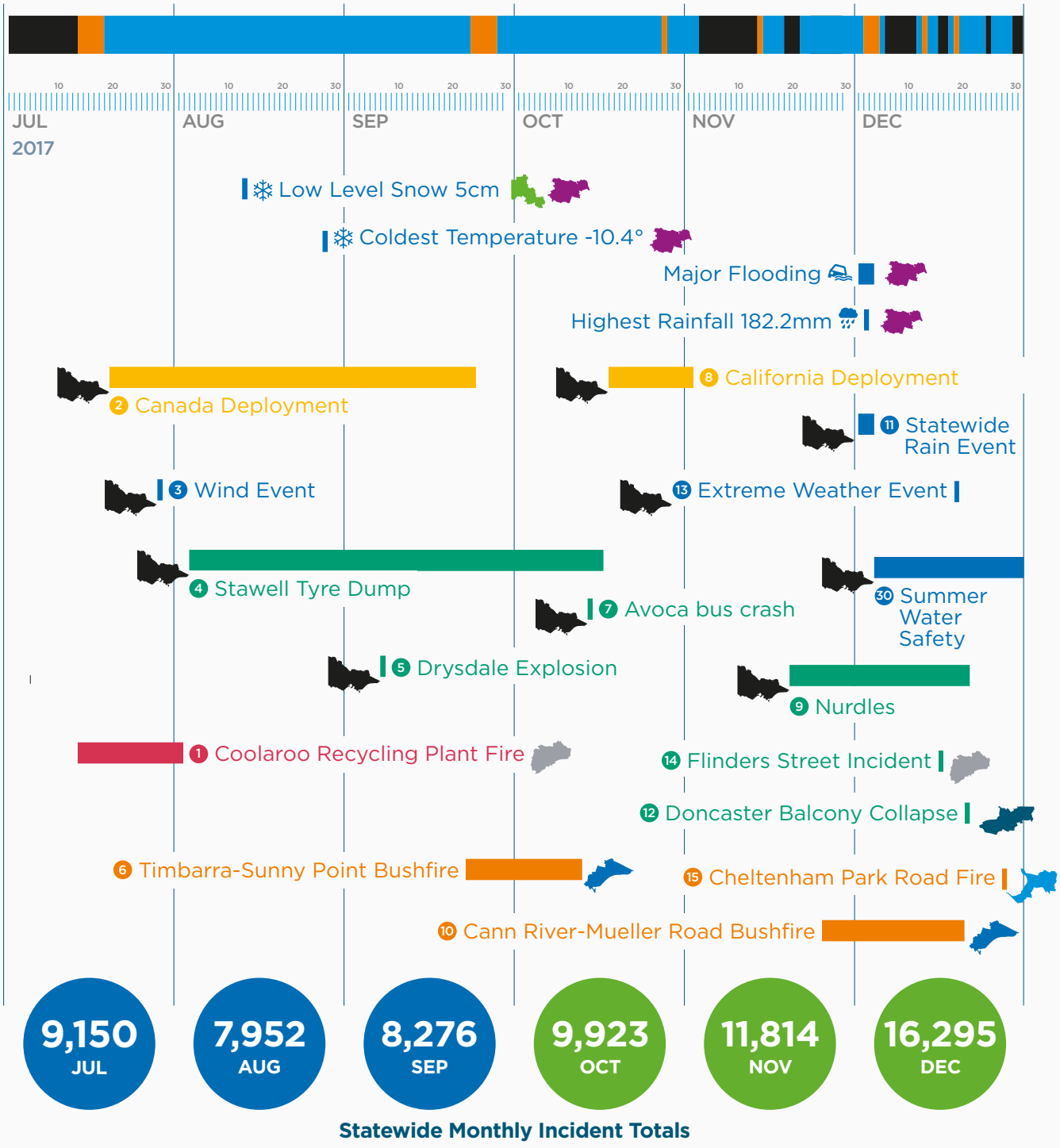
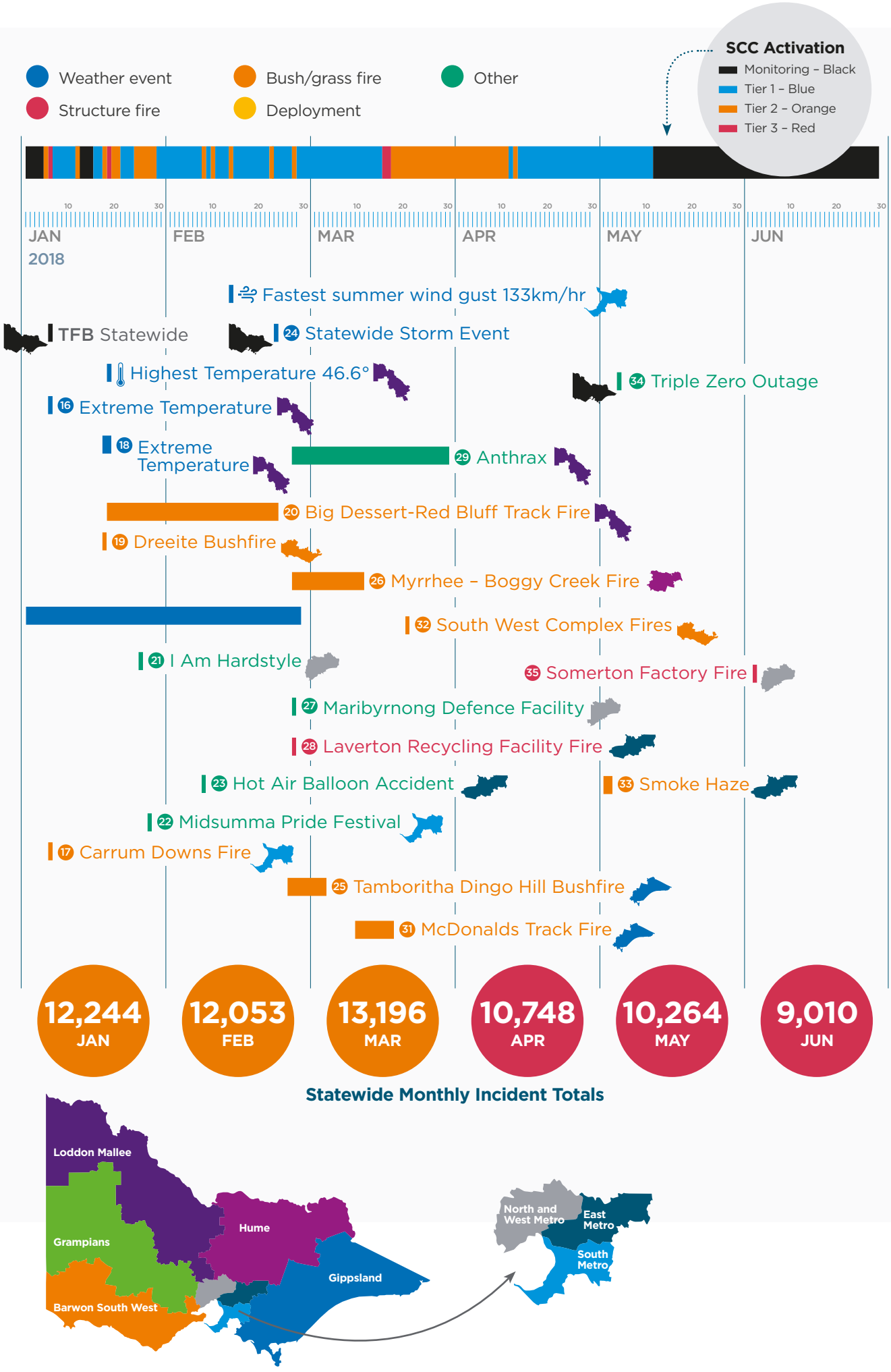
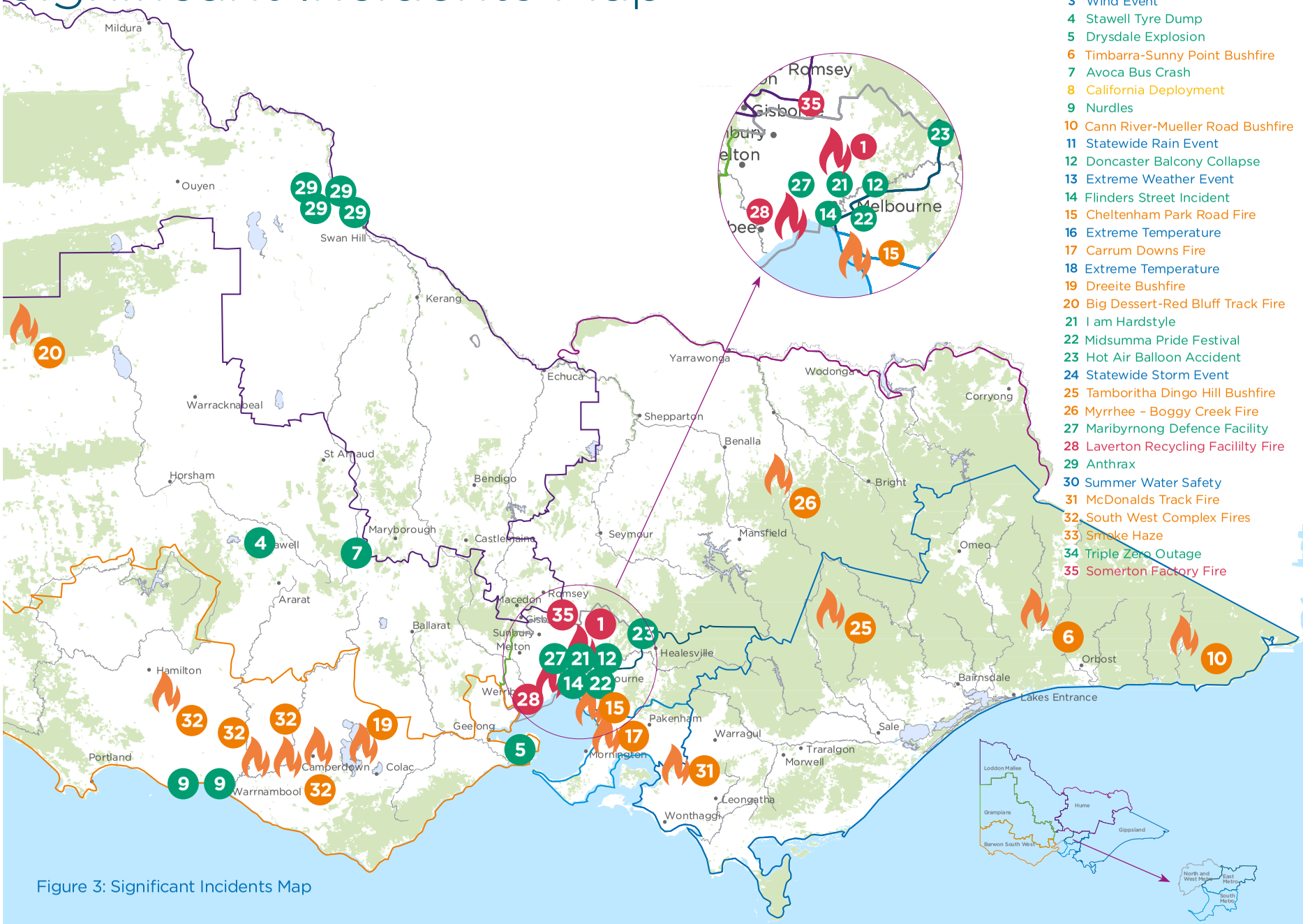


Figure 2: Timeline


Weather event
Bush/grass fire
Other
Structure fire
Deployment
SCC Activation
Monitoring – Black
Tier 1 – Blue
Tier 2 – Orange
Tier 3 – Red
JAN
2018
FEB
MAR
APR
MAY
JUN
Fastest summer wind gust 133km/hr
TFB Statewide
24 Statewide Storm Event
Highest Temperature 46.6°
34 Triple Zero Outage
16 Extreme Temperature
18 Extreme Temperature
29 Anthrax
20 Big Dessert-Red Bluff Track Fire
19 Dreeite Bushfire
26 Myrrhee – Boggy Creek Fire
32 South West Complex Fires
21 I Am Hardstyle
35 Somerton Factory Fire
27 Maribyrnong Defence Facility
28 Laverton Recycling Facility Fire
23 Hot Air Balloon Accident
33 Smoke Haze
22 Midsumma Pride Festival
17 Carrum Downs Fire
25 Tamboritha Dingo Hill Bushfire
31 McDonalds Track Fire
12,244 JAN
12,053 FEB
13,196 MAR
10,748 APR
10,264 MAY
9,010 JUN
Statewide Monthly Incident Totals
Loddon Mallee
Hume
Grampians
Gippsland
Barwon South West
North and West Metro
East Metro
South Metro

Significant Incidents Map



1 Coolaroo Recycling Plant Fire
2 Canada Deployment
3 Wind Event
4 Stawell Tyre Dump
5 Drysdale Explosion
6 Timbarra-Sunny Point Bushfire
7 Avoca Bus Crash
8 California Deployment
9 Nurdles
10 Cann River-Mueller Road Bushfire
11 Statewide Rain Event
12 Doncaster Balcony Collapse
13 Extreme Weather Event
14 Flinders Street Incident
15 Cheltenham Park Road Fire
16 Extreme Temperature
17 Carrum Downs Fire
18 Extreme Temperature
19 Dreeite Bushfire
20 Big Dessert-Red Bluff Track Fire
21 I am Hardstyle
22 Midsumma Pride Festival
23 Hot Air Balloon Accident
24 Statewide Storm Event
25 Tamboritha Dingo Hill Bushfire
26 Myrrhee – Boggy Creek Fire
27 Maribyrnong Defence Facility
28 Laverton Recycling Facililty Fire
29 Anthrax
30 Summer Water Safety
31 McDonalds Track Fire
32 South West Complex Fires
33 Smoke Haze
34 Triple Zero Outage
35 Somerton Factory Fire

Figure 3: Significant Incidents Map

Storm over Oliver's Hill, Frankston. Image by Nick Dobson
-nickorib Nick Dobson Artography and Photography

Weather and Climate

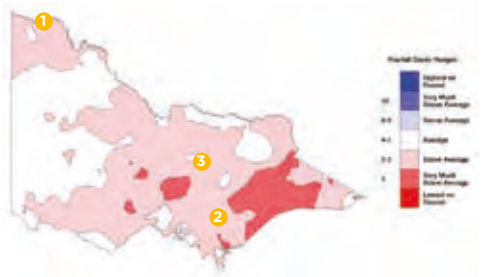
Seasonal Climate Summary

Winter 2017

In 2017 Victoria experienced its driest winter season in over 10 years. Rainfall was approximately 22% below average across the State due to June rainfalls being the lowest on record. As depicted in figure 4, the central and south eastern districts were particularly below average and the western districts saw near to average rainfall. Cooler nights were common state-wide during winter, particularly across the northern regions with several locations reporting their lowest winter mean daily temperatures on record. This included Morwell which broke record at 2.8°C for its lowest winter mean daily in over 30 years, and Strathbogie experiencing its lowest winter mean daily since 1982 at 0.4°C.

Winter 2017 recorded a minimum temperature of 0.65°C below average in Victoria, which produced some of the coldest nights since 2006. On the other hand, maximum temperatures were generally warmer than average for the State, trending closer to average in the northeast. Mildura Airport recorded the hottest day of the winter season at 27.1°C on 29 July and also the warmest night on 15 August at 13.3°C.

Figure 4: 2017 Winter Rain Deciles*



1 Mildura Airport 2 Morwell 3 Strathbogie

© Australian Bureau of Meteorology

* Rain decile index provides a ranking in comparison with the average rainfall for the area

11.6°C

ON 13 JULY MOUNT HOTHAM EXPERIENCED ITS HIGHEST WINTER TEMPERATURE ON RECORD

-10.4°C

IT THEN EXPERIENCED THE LOWEST TEMPERATURE AT ANY VICTORIAN SITE SINCE 1974 ON 28 AUGUST

27.1°C

THE HOTTEST DAY OF THE WINTER SEASON RECORDED AT MILDURA AIRPORT ON 29 JULY AND ALSO THE WARMEST NIGHT ON 15 AUGUST AT 13.3°C.

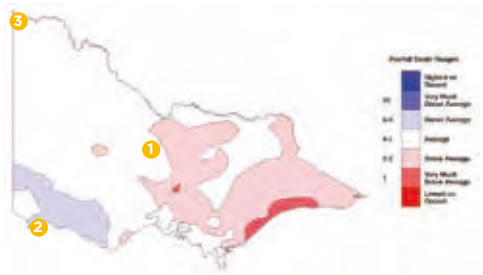
2.8°C

MORWELL'S RECORD BREAKING LOWEST WINTER MEAN DAILY IN OVER 30 YEARS

Spring 2017

Victoria as a whole experienced its fourth-warmest spring on record. Figure 5 depicts the Spring 2017 Rainfall Deciles, displaying a drier than average season in the east and average or above average rainfall in western Victoria. On 16 November Canary Island had the State's wettest day of the season, receiving 80.4 mm and breaking its spring rainfall record. The driest location recorded was Lindsay Point which received 48.0 mm. Overall, both daytime and night time temperatures were warmer than average across most of Victoria. The State's mean maximum temperature was 2.12°C warmer than average. Its mean minimum temperature was also 1.16°C warmer than the spring average, with areas of record warm mean minimum in the West Coast district.

Figure 5: 2017 Spring Rain Deciles



1 Canary Island 2 Cape Nelson Lighthouse
3 Lindsay Point

37.1°C

WAS RECORDED ON 29 NOVEMBER AT THE CAPE NELSON LIGHTHOUSE, ITS HIGHEST SPRING TEMPERATURE ON RECORD

80.4mm

RAINFALL ON CANARY ISLAND, THE STATE'S WETTEST DAY OF THE SEASON...BREAKING ITS SPRING RAINFALL RECORD

2.12°C

WARMER THAN AVERAGE THAN THE STATE'S MEAN MAXIMUM TEMPERATURE

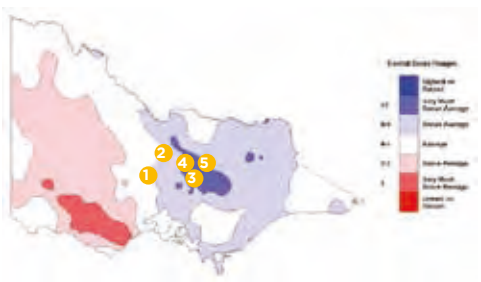
Summer 2017–18

Victoria experienced a wet beginning to the summer season. A state wide rain event occurred on 1 December causing many sites to experience their highest summer daily rainfallon record. Most daily records were broken on 2 December, Gooram (Hillside) had the wettest day with 182.2mm. The season ended with drier than average conditions in February when averaged over the State as a whole, as displayed in figure 6.

Maximum temperatures were fourth highest on record when averaged across the State as a whole. Minimum temperatures were especially warm in comparison, the third highest on record and the warmest since summer 2000/2001. All of the State was above average with most areas in the top 10% of all summers on record. During the prolonged period of heat in northern Victoria in the second half of January, two Extreme Temperature incidents occurred on 6 January and 18 January.

A number of sites also set records for the number of days in a row over 35°C. Walpeup Research saw 14 days over 35°C, breaking the previous record set in March 2008. Other stations such as Bendigo Airport, Echuca, Kyabram and Shepparton all saw 12 days over 35°C breaking their previous records, Bendigo Airport and Kyabram by four days.

Figure 6: 2017–18 Summer Rain Deciles



1 Bendigo Airport 2 Echuca 3 Gooram
4 Kyabram 5 Shepparton

133km/h

WINDS SWEPT WILSON'S PROMONTORY LIGHTHOUSE OFF ITS FEET ON VALENTINES DAY

182.2mm

FELL ON THE WETTEST DAY IN GOORAM (HILLSIDE) ON 2 DECEMBER BREAKING DAILY RECORDS

35°C

WAS EXPERIENCED AT WALPEUP RESEARCH FOR OVER 14 DAYS IN A ROW

READ MORE IN SECTION 1: SIGNIFICANT EVENTS

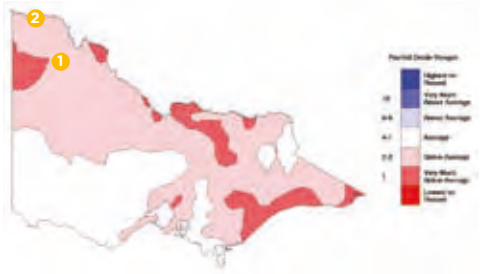
Autumn 2018

Autumn 2018 was generally warm in Victoria, its mean temperature the fourth-warmest on record. Rainfall totals for autumn were below average across most of Victoria, as evident in figure 7 large areas of 'very much below' average rainfall in the north and east of the State.

Averaged across the State, rainfall was 39.2% below the autumn average of 156.8 mm; the lowest autumn rainfall in last 10 years. Subsequently, mean daytime temperatures were well above average across Victoria. The mean temperature was 1.17°C above average with many sites recording their highest autumn temperatures on record. The highest autumn daytime temperature in Victoria was 39.3°C, recorded in Mildura on 10 April and in Hopetoun on 11 April during a prolonged heatwave.

Victoria also experienced strong winds during autumn, the strongest were associated with the passage of a complex low pressure system recorded on 11 May, with gusts of 143 km/h reported at Mount Hotham. A number of bushfires devastated parts of southwestern Victoria on 17 and 18 March; high temperatures and strong winds ahead of the cold front contributed to severe fire weather conditions.

Figure 7: 2018 Autumn Rain Deciles



1 Hopetoun 2 Mildura

1st

SNOWFALL OF 2018 WAS ON 26 MARCH IN VICTORIAN ALPINE REGIONS DUE TO A SUDDEN OUTBREAK OF COLD AIR

MORE SNOW FELL ON 11 AND 12 MAY, AS ANTARCTIC AIR SWEPT ACROSS THE STATE FOLLOWING THE PASSAGE OF A COMPLEX LOW PRESSURE SYSTEM

39.2%

BELOW THE AUTUMN AVERAGE RAINFALL OF 156.8MM AVERAGED ACROSS THE STATE

1.17°C

ABOVE THE MEAN TEMPERATURE AVERAGE... MANY SITES RECORDING THEIR HIGHEST AUTUMN TEMPERATURES ON RECORD

READ MORE IN SECTION 1: SIGNIFICANT EVENTS

Helitak 260 and Firebird 324 on standby at Lethbridge Airport, due to the number of aircraft committed to the South West Fires

Readiness

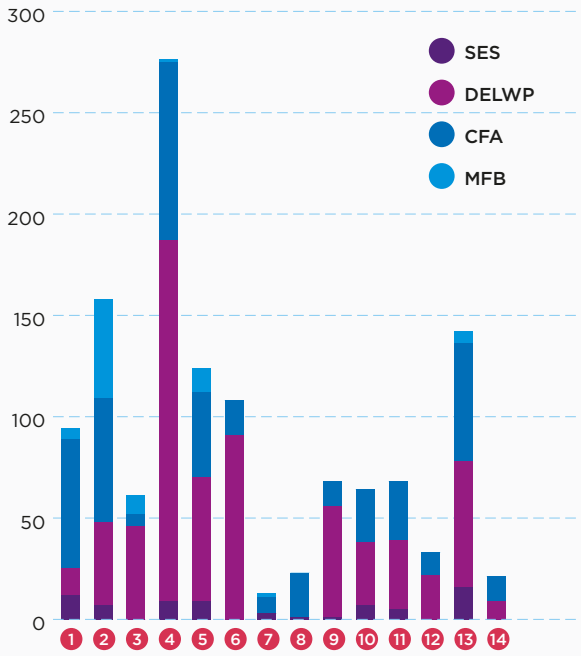

FB324

Capability Development

Incident Management Teams (IMTs)

A number of IMT training courses have been undertaken this past financial year, however the general consensus across the agencies is that numbers of personnel between this year and previous years has remained consistent. This is due to a number of factors, one of which is the increasing number of roles required to meet Joint Standard Operating Procedure levels.

Figure 8: Total number of qualified IMT members by Agency (Level two plus Level 3)



1. Incident Controller (Level 3)
2. Incident Controller (Level 2)/ Deputy Incident Controller
3. Safety Officer
4. Operations Officer
5. Planning Officer
6. Resources Officer
7. Intelligence Officer
8. Situation and Analysis Office
9. Mapping
10. Public Information Officer
11. Information and Warnings
12. Media
13. Logistics
14. Community Officer/ Community Liaison Officer

The number of qualified members has been supplied by each agency and includes Level 2 and Level 3 qualified members (see figure 8). Level 2 incidents are moderately complex and accreditation and experience at this level is one of the pre-requisites to attaining accreditation to operate at Level 3 incidents.

Exercises

'An exercise is a controlled, objective-driven activity used for testing, practising, or evaluating processes or capabilities. They can be as simple as a planning group discussing a plan, or as complex as a major multi-agency event. Exercises are an essential component of preparedness and should be used to enhance capability and contribute to continuous improvement.' Australian Disaster Resilience Handbook Collection, Handbook 3, Managing Exercises

Hydra Exercise AODH (pronounced 'Ay')

The Hydra system is a fully flexible immersive simulation system, and a comprehensive and sophisticated multi-media learning experience. It can accommodate a large variety of strategic decision-making training. The aim of this training tool is to provide experiences within a training setting that are readily transferable to the real-world of a live incident.

Hydra allows for slow-time strategic decision-making. Being a syndicate-based system, Hydra also allows for training where all the participants can assume identical roles and responsibilities that would be undertaken by a single person at a real incident.

INCREASING SEVERE WEATHER EVENTS PLACE THE GREATEST DEMAND ON RESOURCES

THE ALL HAZARDS APPROACH TO EMERGENCY MANAGEMENT IS RESULTING IN INCIDENT MANAGEMENT TEAMS BEING DEPLOYED TO A BROADER RANGE OF INCIDENTS

To be realistic and immersive, simulations are designed so they mirror reality. This means the simulated event is one the student might reasonably expect to be confronted with during their normal work and is in line with their roles and responsibilities. These exercises can all be undertaken within a safe but challenging training setting where good practice can be identified and shared but where mistakes have no operational consequences.

Participants work in teams to apply their judgement and decision-making skills in a simulated learning environment. Teams are presented with a pre-constructed case study that unfolds in real time. Each team works in a separate syndicate room equipped with computer screens, keyboards and printers, and considers the problem and works through a judgement and decision-making framework to formulate a justifiable decision. Teams then share their decisions with other teams through facilitated discussion.

This exercise, designed for Incident Controllers, provides exposure to a range of challenges using a simulated learning environment. Since the pilot program in December 2016, four additional programs have been run (Sept 2017 and May 2018). Figure 9 below shows agency Incident Controller attendance (across the four programs).

Figure 9: Agency Incident Controller attendance

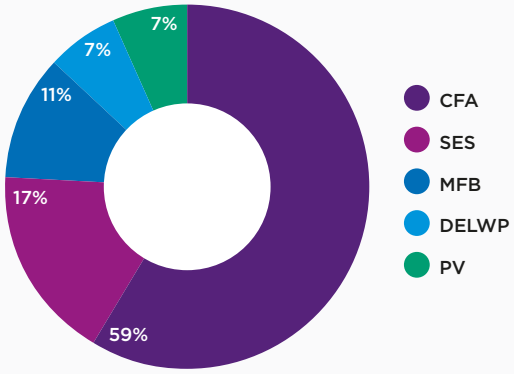
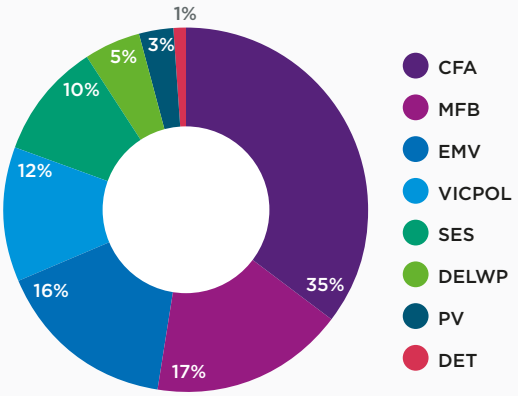


Figure 10 depicts overall agency participation with hydra, including those personnel who have provided a support role to the Incident Controllers.

Figure 10: Agency engagement with Hydra



Hydra Facilitator training

Aimed at increasing the number of non-Victoria Police Hydra facilitators able to deliver the Hydra program to multi-agency Incident Controllers, three personnel from CFA and EMV attended the Hydra Facilitator training course in March 2017. Since then Hydra for Incident Controllers has been held 26 Nov 2017, 29 Nov 2017, 3 May 2018, 7 May 2018.

Other exercises

Exercise Bargoonga (24 November 2017)

Exercise Bargoonga was a functional exercise within the City of Yarra, focussed on the provision of emergency relief and coordination of emergency relief during response operations, with the aim of enhancing Council's emergency management capability.

Exercise Energy Disruption (2 March 2018)

Exercise Energy Disruption invited participants to discuss and explore multi-agency coordination for relief and recovery arrangements following a major energy disruption in Melbourne CBD. The exercise was designed to explore and identify gaps and learnings in their existing emergency management plans, as well as provide an opportunity for knowledge sharing.

Exercise Bee Prepared (13 March 2018)

Agriculture Victoria (Ag Vic) participated in the national apiary emergency response exercise. Exercise Bee Prepared was facilitated by Plant Health Australia, tested Ag Vic's capability and capacity to undertake surveillance and respond in the first 2–7 days post a Varroa mite detection in the suburb of Attwood. A full IMT of 19 staff, ran the scenario which included planning, operations, public information and importantly industry liaison which was filled by a representative of the Australian Honey Bee Council.

The after-action review indicated that the scenario was effectively managed and that Ag Vic's response capacity is well positioned to manage such an incident in the future. Facilitators from Plant Health Australia and the Australian Honey Bee Council representative echoed these sentiments. This exercise proved to place Victoria in good stead for an actual detection of Varroa Mite at the Port of Melbourne on 25 June 2018.

Exercise Bee Prepared image provided by DEDJTR

Exercise Chimera (16 March 2018)

Exercise Chimera was held to evaluate and review the State Public Transport Disruption Sub Plan, predominantly by testing the response of the transport sector to a major disruption emergency in accordance with the SERP Public Transport Disruption Sub-Plan.

DEDJTR EM Staff Resources Exercise (4 May 2018)

Following an identified need to explore and improve engagement with staff members who volunteer to perform emergency management roles at the State Control Centre, this exercise was aimed at engaging emergency management staff and exposing them to a controlled DEDJTR emergency management event.

Exercise Iron Horse (14 May 2018)

This exercise was a multi-agency regional exercise that practiced the activation, set-up and running of an emergency relief centre.

Complex Emergencies within the Maritime Domain (30–31 May 2018)

This was a two day collaboration workshop bringing together the primary stakeholders involved in responses to complex emergencies within the maritime domain. This workshop was the first stage of a project which aims to develop an in-depth understanding of how a response to a complex maritime incident will be conducted, identifying the interdependencies and relationships between the various government and private sector agencies that will manage the response and recovery. The project will be used to inform future contingency planning and preparedness activities.

Exercise Coombes (31 May – 1 June 2018)

Exercise Coombes was a functional exercise delivered over two days at the State Biosecurity Operations Centre (SBOC) at Attwood. Approximately 60 Ag Vic and industry staff participated in the exercise. The exercise tested Ag Vic's response to an incursion of a high-risk Emergency Plant Pest (EPP) – Tarnished Plant Bug (Lygus lineolaris). The exercise was designed to test components of an emergency response during both the Alert and Investigation phase and the Operational phase. The exercise focussed on the capability of staff to use leadership, decision making, planning and communication skills within the State IMT environment. The exercise also tested arrangements for industry involvement during an EPP incursion, including the involvement of Industry Liaison Managers within the IMT. Surveillance team members were also deployed to the field to conduct mock surveillance exercises.

Tarnished plant bug image provided by DEDJTR

Maritime Emergency SCC Concept of Operations exercise (DEDJTR 1 June 2018)

The purpose of the Exercise was to review and apply the Concept of Operations to a hypothetical Class 2 maritime emergency at the State Control Centre. The Exercise was targeted at agencies involved in supporting the State Control Centre during a Class 2 maritime emergency, and was conducted in the form of a functional desktop exercise.

Exercise Long Island and Exercise Chilcott

Exercise Long Island (Gippsland Ports, 5 June 2018), and Exercise Chilcott (Port of Hastings, 10 April 2018 and Portland Ports, 13 June 2018) aimed to practice an IMT activation for a Level 1 oil spill in the Western Port, Gippsland, and Portland regions.

Testing of the State Correctional Emergency Response Plan: Youth Justice Centres (14 June 2018)

This exercise tested the State Correctional Emergency Response Plan: Youth Justice Centres – management of non-routine incidents in State Correctional Youth Justice Centres (Malmsbury and Parkville). The exercise explored key concepts of the plan including the risk environment, resourcing, and transfer of control.

Exercise Consequence

EastLink Operations is required to hold an emergency exercise each year to test the response and management of incidents. With key agencies having recently developed a process to assist in the management of major disruptions to high volume roads due to emergency events, this discussion exercise focussed on the impact and consequences resulting from such a scenario.

Exercise Weedy Seadragon (28 June 2018)

Exercise Weedy Seadragon, a discussion exercise, focussed on the strategic level response to a complex maritime emergency in state waters. Components included the interoperability of control agencies, transfer of control and application of the Maritime Emergencies Plan.

Evaluation for Emergency Management in New Zealand

After successfully delivering Exercise Management and Evaluation courses to emergency personnel in Victoria, in March 2017, EMV in conjunction with the National Centre for Emergency Management Studies (NCEMS), began building bridges with counterparts in New Zealand (NZ). The above mentioned courses were first delivered to Victorian multi-agency emergency management personnel in 2016 and 2017, and have been effective in increasing the emergency management sector's capability in exercise management and evaluation, noting the evaluation course is not only beneficial to exercises, but also to our Real Time Monitoring and Evaluation personnel.

A Maritime Safety and Incident Response Advisor from New Zealand attended one of the Victorian courses, and a request for the delivery of the course in NZ followed shortly thereafter. This provided opportunity for 20 multi-agency emergency management personnel from across NZ to gain skills in the area of evaluation, and share experiences and learnings across the sector. The opportunity for the ongoing sharing of resources and cross-jurisdictional knowledge has been truly enhanced, not only within New Zealand, but between the two countries.

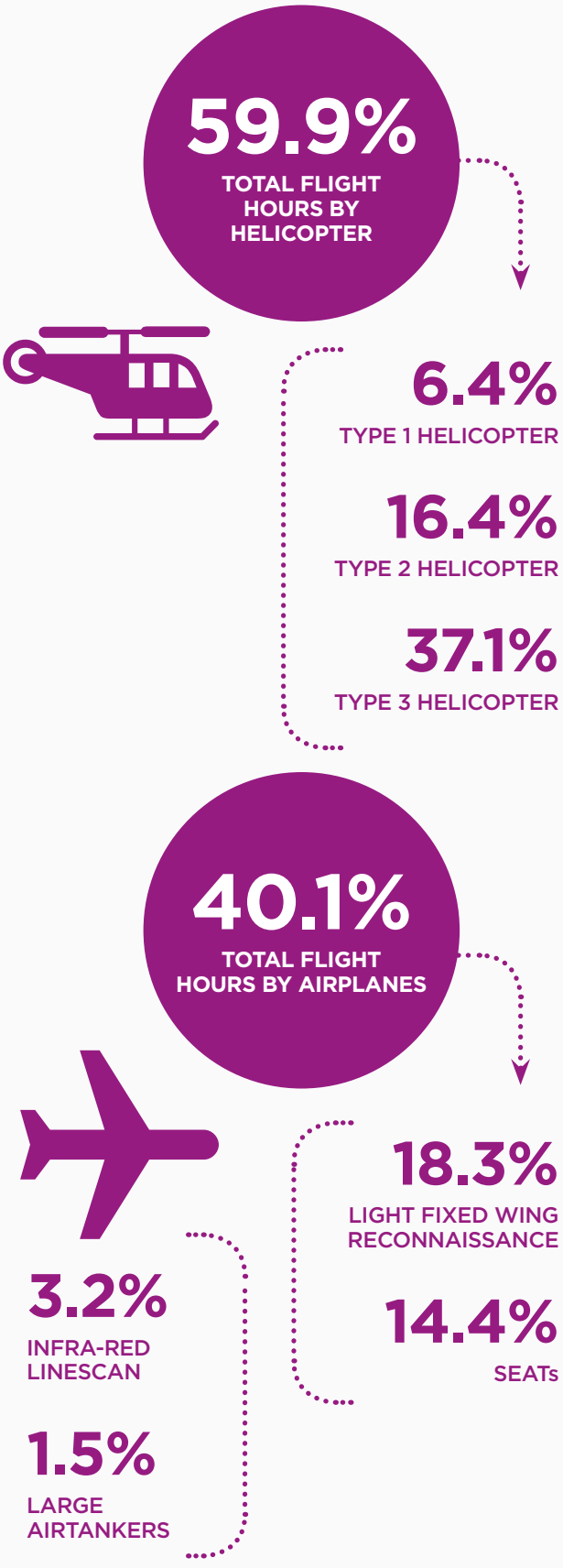
Aviation

Aircraft are prepositioned in readiness across a range of strategic locations throughout Victoria, based upon risk. When requested, aircraft are dispatched under pre-determined dispatch (PDD) protocols to support response to incidents, with consideration given to readiness for other concurrent or potential emergencies.

The Victorian Fire and Emergency Aviation Fleet expanded to 49 aircraft for 2017–18 through the contracting of an additional type 2 fire bombing helicopter located at Bacchus Marsh. Of these 49 aircraft 32 were fire bombing aircraft and the remainder made up of reconnaissance, supervision and camera/sensory equipped aircraft. As in previous years, more than 100 additional firefighting aircraft were available on a 'call when needed' basis.

Four of these aircraft (two Large Air Tankers (LATs) and two Aircranes) were identified as State Strategic Aircraft which were dispatched when additional high volume fire bombing capability was required. The remaining 28 fire bombing aircraft geographically positioned around Victoria were available for PDD which allows for rapid dispatch of aircraft (within predetermined parameters and triggers) through a direct notification of a fire rather than on scene personnel requesting aircraft.

PDD this year expanded again and continues to include all Single Engine Air Tankers (SEATS) and Type 2 helicopters, and half of the Type 1 helicopter fleet (Colac and Mansfield). PDD footprints and Fire Danger Index (FDI) triggers were reviewed, amended and introduced into several locations, due to the continued refinement of the PDD program.



The Joint Standard Operating Procedure (JSOP) J02.06 – Readiness Arrangements – Aviation Resources (Bushfire) was similarly enhanced together with the requirements for expanded PDD location, and these were put in place prior to the 2017–18 summer emergency season.

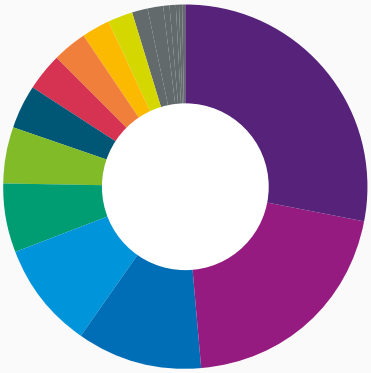
LATs continued to be used in the Victorian Fire and Emergency Aviation fleet, as they are capable of delivering large volumes (11,500 – 15,000 litres) of water or retardant. These aircraft were based at Avalon and also operated extensively from Albury supporting operations in Gippsland and southern New South Wales (NSW).

Victoria sponsored a trial of night firebombing utilising 2 firebombing helicopters. Both companies involved in the trial subsequently received CASA approval to operate using this innovation. It is intended to introduce night firebombing with these aircraft in 2018–19.

8,259
TOTAL HOURS FLOWN THIS YEAR

4,860
OF THESE HOURS WERE UNDERTAKING FIREBOMBING OR DIRECT RESPONSE ACTIVITIES SUCH AS AIR ATTACK SUPERVISION, LINESCAN, AIG AND RAPPEL

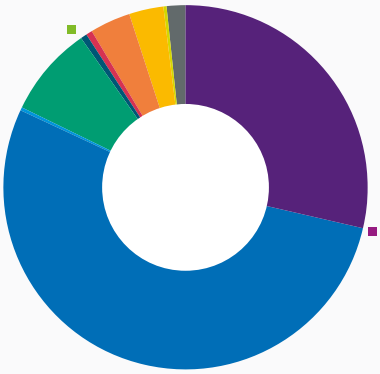
Figure 11: Flight hours by task



- Firebombing (2283.58)
- Air Attack Supervision (1691.3)
- Ferry Aircraft (892.82)
- Aerial Reconnaissance (765.97)
- Aerial Information Gathering (498.37)
- Aerial Detection (404.08)
- Ferry – Operational Personnel (328.38)
- Ferry – Repositioning (263.98)
- IR Linescan (257.6)
- Aerial Driptorch (208.6)
- Aerial Incendiary Machine (163.75)
- Other (380.93)*

* Rappel (128.52), Training (98.48), Charter – Pax (49.62), Abort (36.55), Sling Load (31.45), Night Vision Goggle (27.73), Ferry Other (5.95), Hover Exit (2.63)

Figure 12: Flight hours by agency



- CFA (2351.48)
- SA Country Fire Service (9.22)
- DELWP (4357.88)
- EMV (32.3)
- Joint – CFA/DELWP (650.25)
- MFB (11.87)
- Parks Victoria (52.43)
- Rural Fire Service NSW (298.65)
- State Control Centre (254.43)
- VICSES (23.73)
- Vic Forests (119.23)
- Other (36.18)

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

- Aviation Pre-season Briefings – attended by responder agency representatives these briefings reinforced safety requirements, aviation operations, the expansion of PDD and administrative processes.
- Six Regional Multi-agency Aviation Briefings – outlined safety, Interagency Aviation Operating Procedures (IAOPs), fleet composition, aggregated response, State Airdesk operations, retardant and airbases for the 2017–18 outlook.
- LATs Training – familiarisation and training days supporting the continuation of Victorian Fire and Emergency Aviation fleet that were attended by aviation specialists from Victoria (Vic), Queensland (QLD), NSW, South Australia (SA), Tasmania and Australian Capital Territory.
- Aviation Training – continued to be provided and covered both flight and ground based roles including Air Attack Supervisors (AAS), Air Observers, Airborne Information Gathering (AIG) specialists, Rappel crews and Air Base personnel.
- PDD refresher presentations – regionally based briefings provided information on changes to operating procedures and expansion of PDDs to pilots, aircraft operators and agencies.
- Remotely Piloted Aircraft System (RPAS) Advanced Sensor Capability was added to the range of available airborne options and through the creation of a JSOP were capable of being integrated into operations.

Large Air Tanker (LAT) bomber 390 performing a demonstration drop at Avalon Airport

Doctrine

Victoria's emergency management sector created or updated a wide range of state level doctrine over the 2017–18 financial year, including:

- Joint Standard Operating Procedures (JSOPs)
- Victorian Emergency Operations Handbook
- State Emergency Response Plan – State Health Emergency Response Plan
- State Emergency Response Plan – Electricity and Gas Supply Disruption Sub Plan
- State Emergency Response Plan – Liquid Fuels Sub Plan
- State Operations Plan – Class 2 Electricity Emergencies
- State Operations Plan – Class 2 Gas Emergencies
- State Shark Hazard Plan

In addition agencies have continued to update and maintain their internal plans and procedures.

Relief and Recovery

Under the Emergency Management Act 1986, the EMC has responsibility for coordination of relief and recovery activities of agencies following an emergency, and ensuring emergency management arrangements are in place to support communities in their recovery.

Responsibility for the coordination of relief and recovery at state, regional and local levels sits with EMV, DHHS and municipal councils respectively. Municipal councils lead the delivery of local relief and recovery services and the Victorian Government supports councils in fulfilling these responsibilities by establishing and coordinating all regional and state relief and recovery arrangements and activities.

The State Relief and Recovery Team provides state level operational coordination across emergency events and includes representatives from a range of departments and agencies.

Key projects and activities during 2017–18 included:

Resilient Recovery

EMV is undertaking a process to co-design a Resilient Recovery Strategy that will enable ongoing reform and improvements to Victoria's recovery systems, and draw on key knowledge and experience from stakeholders across the state. During 2017–18, this process included a series of workshops with key State Government representatives, one-on-one meetings and engagement with representatives from local government, community groups and individual respondents to the initial Discussion Paper. It also included an extensive series of state-wide workshops that involved nearly 400 participants from councils, health and human service agencies, community and industry representatives, and individuals involved in recovery activities. The insights, advice and feedback gathered through this process will form the content of the developing Resilient Recovery Strategy.

Impact Assessment

EMV is working with the emergency management sector on improvements to the state's impact assessment model, to provide a comprehensive picture of impacts and community need during and after emergencies. This includes the coordination and tools to support the sectors ability to collect, analyse and communicate sector wide impact information, and better inform response processes, relief and recovery planning and activities. A prototype of the updated model was used to support emergency management activities through the South West fires in March 2018.

The sector will continue to build on and develop a comprehensive impact assessment system to better understand the effects of emergencies on communities.

Ambulance triage and Emergency Relief Centre established during the South West Fires

Panel for post emergency state coordinated clean up

The Victorian Government finalised the panel of suppliers to undertake management and delivery of clean-up services following major emergencies. This marked a significant step forward in providing faster access to post-emergency clean-up services, with experienced and capable operators who are best placed to deal with the complexities and sensitivities involved in working with disaster affected communities. Establishing a panel of suppliers with appropriate capability and capacity will mean a timely response after a significant incident that requires State coordinated clean-up. It will also allow the State Government to access contractors with a diverse range of capabilities following a disaster, based on the specific clean-up needs of affected communities.

During 2017–18 relief and recovery practitioners responded to a range of emergencies across the state and further information is provided in Significant Incidents.

READ MORE IN SECTION 1: SIGNIFICANT EVENTS

Collar tank being utilised by firground personnel during South West Fires

Operational Activity

Across the 2017–18 financial year, the operational activity of responder agencies (CFA, DELWP, MFB and VICSES) responded to a total of 126,875 incidents.

Fire Danger Ratings

Fire Danger Ratings (FDRs) are a prediction of fire behaviour by the Bureau of Meteorology (BoM). Based on environmental and weather conditions, FDRs predict the level of difficulty to extinguish a fire once it starts, with the higher the rating indicating more dangerous conditions, see figure 13.

This financial year saw a decrease in Low-Moderate FDRs in comparison to 2016–17. Subsequently, the overall trend in other categories (High, Very High, Severe and Extreme) saw an increase in FDRs, excluding Code Red which remained at zero.

A total of 41 Severe and four Extreme FDRs were recorded for the 2017–18 summer period (figure 13), twice the amount of Extreme FDRs and a 37% increase for Severe FDRs recorded from the previous season.

All four Extreme FDRs occurred on Saturday 6 January, coinciding with two significant incidents one of which was an extreme temperature event. Consequently this was the only day of state-wide Total Fire Ban (TFB). The majority of FDRs experienced by weather districts occurred in the Mallee District which experienced a total of one Extreme, 17 Severe and 90 Very High. East Gippsland experienced the least of the nine weather districts with 116 Low-Moderate days and 68 High days. Its highest FDR was Very High which was recorded eight total days.

41

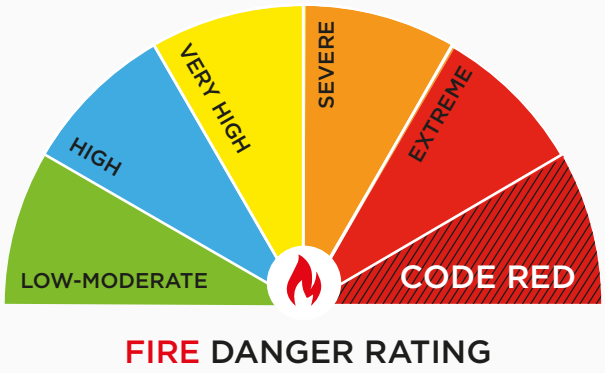
SEVERE AND FOUR EXTREME FDRs RECORDED

TWICE THE AMOUNT OF EXTREME FDRs AND

37%

INCREASE FOR SEVERE FDRs RECORDED FROM THE PREVIOUS SEASON

Figure 13: CFA Fire Danger Rating



What does it mean?

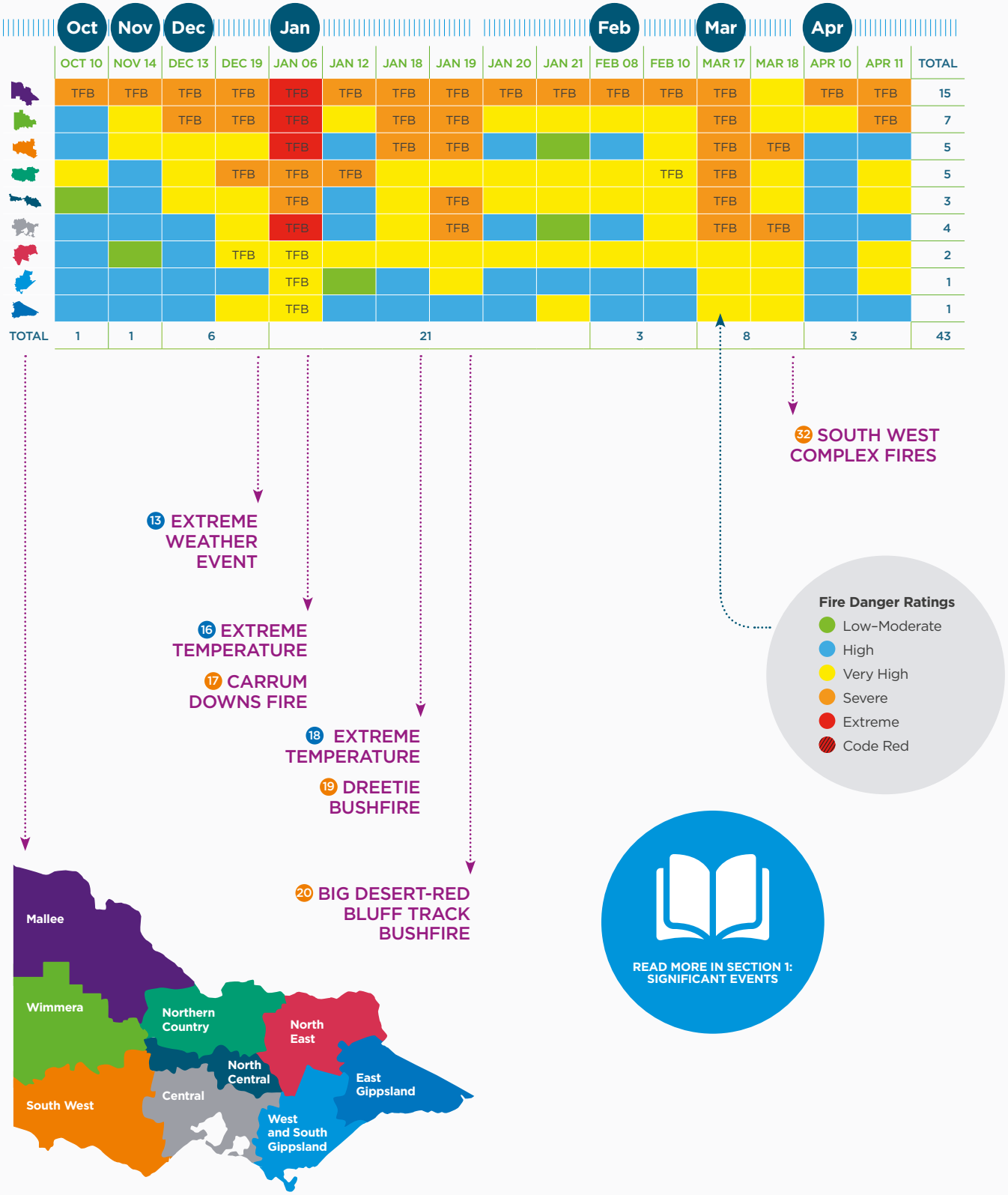
- If a fire starts, it can most likely be controlled in these conditions and homes can provide safety
- Be aware of how fires can start and minimise the risk
- Controlled burning off may occur in these conditions if it is safe
- Check to see if permits apply

- Expect hot, dry and possibly windy conditions.
- If a fire starts and takes hold, it may be uncontrollable
- Well prepared homes that are actively defended can provide safety
- You must be physically and mentally prepared to defend in these conditions

- Expect extremely hot, dry and windy conditions
- If a fire starts and takes hold, it will be uncontrollable, unpredictable and fast moving. Spot fires will start, move quickly and come from many directions
- Homes that are situated and constructed or modified to withstand a bushfire, that are well prepared and actively defended, may provide safety
- You must be physically and mentally prepared to defend in these conditions

- These are the worst conditions for a bush or grass fire
- Homes are not designed or constructed to withstand fires in these condition
- The safest place to be is away from high risk bushfire areas

Figure 14: Total Fire Ban and Fire Danger Rating Comparison 2017–18



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.

The 2017–18 financial year saw a significant increase in the total number of TFBs from the previous year (see figure 16) a total of 43 declared for the whole year. The total number of TFB days was 15 which has nearly doubled in comparison to 2016–17.

With only one day, 6 January 2018, having a state-wide TFB declared, the Mallee Weather District saw the most TFBs declared with a total of 13, followed by the Wimmera Weather District with 7. The remaining Weather Districts; Northern Country, North Central, South West, Central, North East had increased TFBs with the exception of West and South Gippsland and East Gippsland which experienced one TFB, the same as the previous year (see figure 14).

Significant Incidents coincided with one or more Weather Districts having a TFB declared, and only one of those was heat related, which highlights the extraordinary year emergency management agencies have experienced.

15

THE TOTAL NUMBER OF TFB DAYS (15) HAS NEARLY DOUBLED IN THE LAST FINANCIAL YEAR

Figure 15: Four year comparison of Fire Danger Ratings

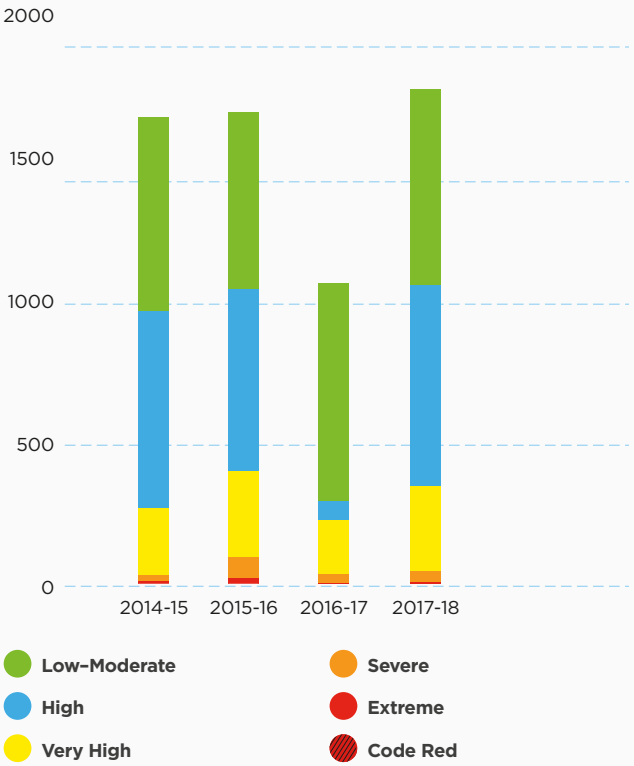
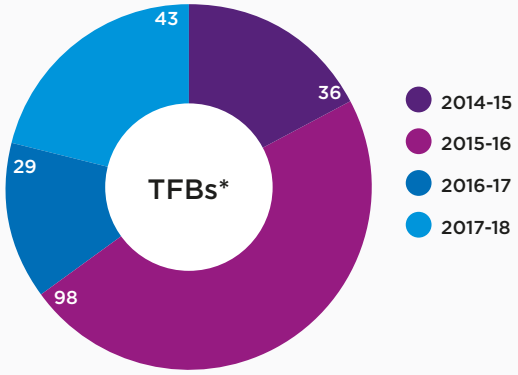


Figure 16: Four Year Comparison of Total Fire Ban Ratings



* Total TFBs declared during summer season

Heat Health

A Heat Health Alert is issued when mean temperatures are predicted to reach or exceed heat health thresholds (see figure 17 which displays each region's Heat Health Threshold, and the corresponding number of times that region exceeded its threshold temperature). Using BoM weather forecast districts and boundaries, DHHS uses the Heat Health Alert system to notify the department's program areas, hospitals, health and community service providers and the general public via email about forecasted extreme heat conditions which are likely to impact human health.

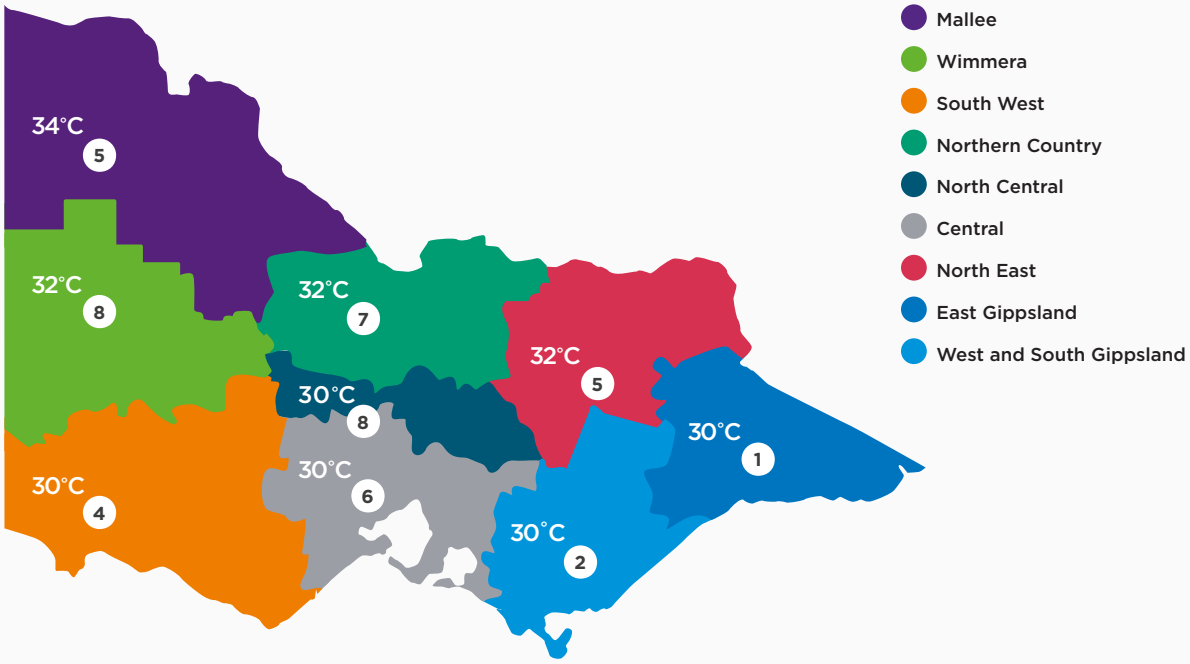
During the summer months there were 46 Heat Health Alerts issued for 10 days of extreme heat over 2017–18, across multiple districts. This is exactly twice the amount than the previous year. 39 of these occurred in January, reflecting the increase in average summer temperatures during these regions.

46

HEAT HEALTH ALERTS ISSUED FOR 10 DAYS OF EXTREME HEAT OVER 2017–18

THE AMOUNT OF HEAT HEALTH ALERTS ISSUED HAS DOUBLED SINCE THE PREVIOUS FINANCIAL YEAR

Figure 17: Summer Heat Health 2017–18



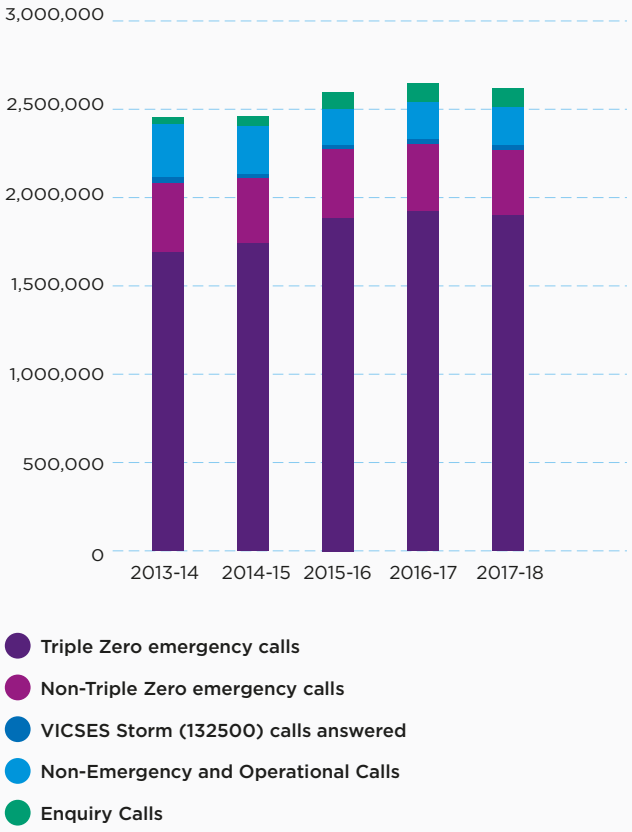
Triple Zero (000)

The Emergency Services Telecommunication Authority (ESTA) provides the critical link between the Victorian community and the State's emergency services agencies. The integration of emergency services communications within ESTA is unique in Australia and rare worldwide. ESTA supports data transactions on the Mobile Data Network (MDN), provides operational communication support to emergency services via the Metropolitan Mobile Radio service (MMR) and delivers state-wide messages to emergency services via the Emergency Alert System (EAS). However, it is best known to the Australian public as Triple Zero (000).

Triple Zero (000) received over 2,570,282 calls for assistance this financial year, a decrease from the previous year. Of these calls, 2,145,038 events were dispatched to the following emergency services:

- Ambulance Emergency (ERTCOMM)
- Ambulance Non-Emergency/Patient Transfer (NETCOMM)
- CFA
- MFB
- VicPol
- VICSES

Figure 18: Four Year comparison of ESTA call statistics



7,042

NUMBER OF CALLS ESTA RECEIVED PER DAY ON AVERAGE

000

6.4%

THE INCREASE IN CALLS THIS YEAR RECEIVED BY ESTA THAT WERE NON-EMERGENCY, OPERATIONAL AND ENQUIRY RELATED

Flood Warnings

BoM provides flood forecasting and warning services for most major rivers in Australia. This is delivered through Flood Warning Centres in Bureau Regional Offices in each state, with services provided in cooperation with government authorities, water agencies and local councils. There were a number of notable events that contributed to the increase in Flood Warnings, depicted in figure 19.

Aug

- Moderate flooding in the Ovens (C) and King Rivers (B) – 22 Aug
- Minor flooding in the Seven/Castle Creeks (J), Upper Murray River (A), Kiewa River (D), Goulburn River (N) in the North East, the Macalister River (G) and Mitchell River (F) in Gippsland and the Glenelg River (M) in the South West – 17–24 Aug

Sep

Minor flooding in rivers

- Yarra River (K) and Bunyip River (I) – Sep 15–17
- Barwon River (L) – Sep 16–17
- La Trobe River (H) – Sep 16–19

Oct

- Minor in the Snowy River (E) at McKillops Bridge as a result of environmental releases from Lake Jindabyne – 4 Oct
- Minor flooding in the Kiewa River (D) – 20 Oct

Dec

- Moderate to major flooding predicted across North East, Goulburn-Broken and Central regions – 1–3 Dec
- High uncertainty in rainfall prediction (location, timing and amount of rain) – 1–3 Dec
- Major flooding recorded in the Seven/Castle Creeks (J) at Euroa, and minor flooding across other areas – 1–3 Dec

May

- Minor flooding in the Watts River (O) – May 12

Figure 19: Notable Flood Events 2017–18

- A Murray River
- B King River
- C Ovens River
- D Kiewa River
- E Snowy River
- F Mitchell River
- G Macalister River
- H La Trobe River
- I Bunyip River
- J Seven/Castle Creeks
- K Yarra River
- L Barwon River
- M Glenelg River
- N Goulbourn River
- O Watts River

***Includes warnings, which impacted Victorian communities, issued by NSW Office**

VicEmergency Website and Application

There were 3.17 million users of the VicEmergency app and website during 2017–18 and the app was downloaded a total of 887,000 times.

While access to demographics for the users of the VicEmergency website and app is limited, it is known that approximately 56% of users are men and 44% women. There is a reasonably even spread of users between the ages of 25 and 64 years. There were fewer users over 65 and those between 18 and 24 years. Most users come from Melbourne (2.4 million users), Bendigo (58,300), Geelong (27,000) and Ballarat (16,500).

Across Australia, users access the website and app from Sydney (334,000), Adelaide (75,000), and Brisbane (40,700). Outside Australia users were based in the United States (20,000), United Kingdom (6,200) and New Zealand (5,200).

Twitter @vicemergency

The VicEmergency Twitter account tweeted more than 3,190 tweets, was re-tweeted more than 6,579 times and garnered more than 9.5 million impressions (the number of times users saw a @vicemergency tweet). The VicEmergency Twitter account has 15,900 followers, with 42% being males between the ages of 25–34.

Facebook @vicemergency

The VicEmergency Facebook page generated 3,413 posts. VicEmergency Facebook content generated more than 84 million impressions and attracted more than 280,000 post engagements including more than 57,000 shares. The Facebook page has also grown to almost 98,000 fans, with the majority (68%) being females between the ages of 35–44.

The 2018 summer fire campaign saw VicEmergency Facebook launch the new interactive virtual reality videos that puts the user into the path the fire. The content was incredibly popular and received media coverage across Australia and UK. Following on from the success of that launch EMV continued to try new things on social media by using Facebook events for the virtual reality regional roadshow component of the campaign and used polls, GIFs and light-hearted videos to get messaging across.

3.17m
USERS OF THE VICEMERGENCY APP AND WEBSITE

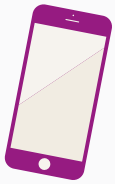
VIC EMERGENCY

887,000
AMOUNT OF TIMES THE APP WAS DOWNLOADED

649,700
USERS OF THE VICEMERGENCY WEBSITE

98,000
FACEBOOK FOLLOWERS

15,900
TWITTER FOLLOWERS



3,190
TWEETS

6,579
RE-TWEETS

Public Information and Warnings

Following the launch of EM-COP Public Publishing in November 2016 more than 3,800 warnings have been issued for 11 different hazards including fire (2,916), flood (360), hazardous materials (194), air quality (163), storm (75) and heat (16). The focus of the last year has been on readiness for class two emergencies including health emergencies and biosecurity emergencies.

Work has also been undertaken in the class three space to ensure that EM-COP Public Publishing, VicEmergency and Emergency Alert can be used to provide information and warnings to the community during a security emergency. Further work is underway to ensure the new Melbourne Central Business District speaker system can be used to provide information to the community during all emergencies.

Video updates from the Incident Controller were posted on the VicEmergency Facebook during the South West Complex Fires

In response to the South West fires the Public Information Section was active at State, Regional and Incident levels. This supported the coordinated provision of information to the community and demonstrated the progress that has been made in improving work in this space. A key example of this was digital communications including video briefings from the Incident Controller that were provided to the community through social media, handover videos to incoming public information section resources and drone footage of the peat fires. This provided unprecedented access to the fireground and successful live streaming of community meetings. As a result, the VicEmergency Facebook and Twitter social media channels reached three million impressions with 20,000 engagements between 17 and 31 March.

READ MORE IN SECTION 1: SIGNIFICANT EVENTS

WARNINGS ISSUED

- 163 AIR QUALITY
- 360 FLOOD
- 16 HEAT
- 2,916 FIRE
- 75 STORM
- 194 HAZARDOUS MATERIALS

Warnings and Community Notifications

This financial year the Victorian community received 2,633 warnings including 27 Evacuation warnings and 48 Emergency Warnings.
As evident in figure 21, this is 300 fewer warnings than 2016–17 financial year.

The 2,633 warnings were issued by 166 Information and Warnings Officers. There are more than 300 people trained to issue warnings across Victoria, 10% of those issuing 55% of the warnings this year.

From December 2017 to February 2018, 1,099 warnings were issued with the highest total occurring in January. This reflects a more traditional summer season in comparison to last financial year when significant flooding occurred in September/October, see figure 20.

Figure 20: Warnings by Incident Type 2017–18

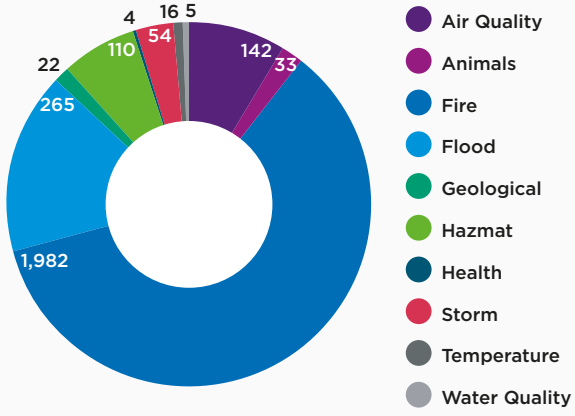
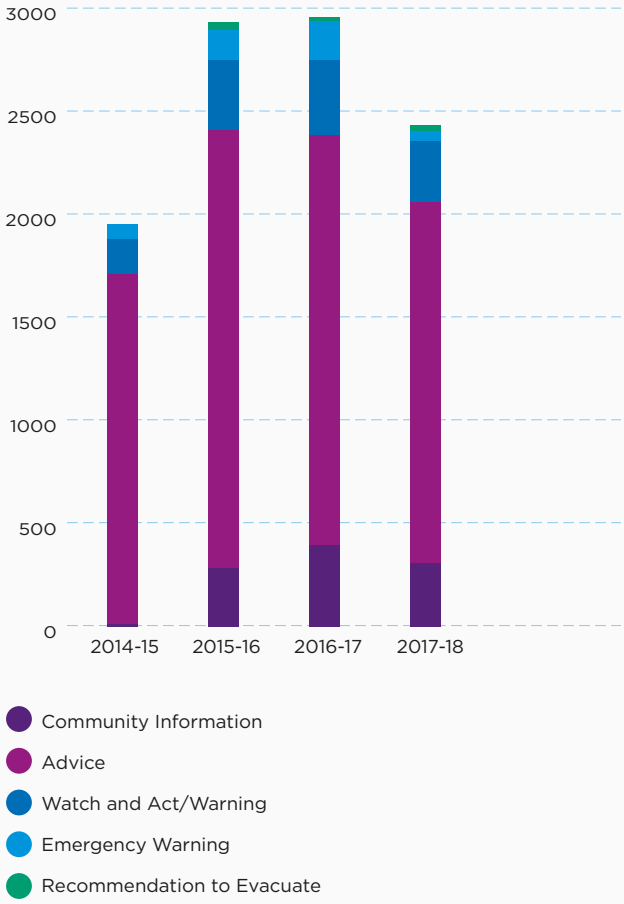


Figure 21: Four Year Comparison of Warnings and Community Notifications



Emergency Alert is a telephone alerting system used to send text messages to mobile phones and voice recordings to landlines. In December 2017, in response to a forecast for extreme storms and anticipated heavy rainfall 6.2 million SMS were sent across a large area of Victoria. This was the first time that Emergency Alert had been used in such a large volume in Victoria.

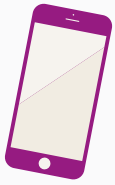
VICSES performed an after action review process and post event research for Public information and Warnings to better inform future communications during flood and storm events. 3,804 Victorians from most affected areas were surveyed between 18 and 23 December both online and via telephone.

VICSES debrief following the Statewide Rain Event

6.4m

SMS SENT BY EMERGENCY ALERT AND INITIATED 12,670 PHONE CALLS

STATEWIDE RAIN EVENT



91%

RESIDENTS WERE AT HOME FOR SOME DURATION OF THE EVENT

19%

HAD EXPERIENCED HOME FLOODING BEFORE OR LIVED WITH SOMEONE WHO HAD

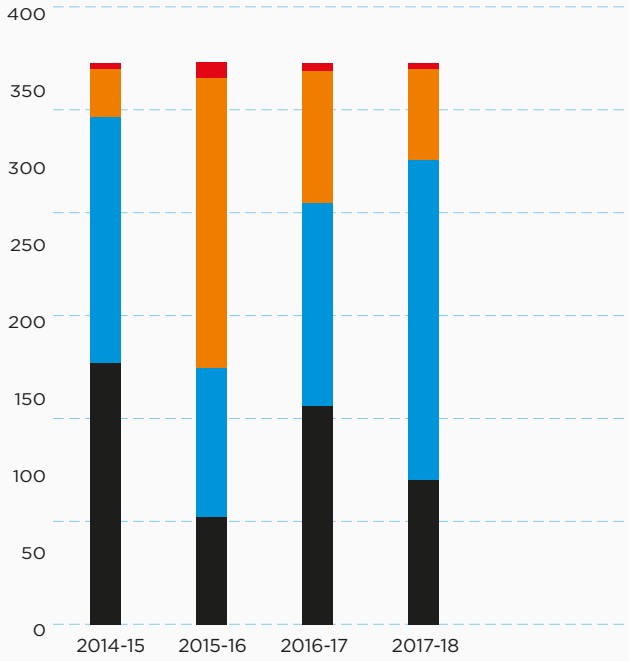
READ MORE IN SECTION 1: SIGNIFICANT EVENTS

State Control Centre

The State Control Centre (SCC) is Victoria's primary platform control centre for the management of emergencies. Its purpose is to provide a facility to support the Emergency Management Commissioner to meet State control priorities and objectives. The SCC is also the hub of a network of Regional Control Centres (RCCs) and Incident Control Centres (ICCs) across the state.

Over the 2017–18 financial year, 42 agencies were represented in the SCC, with 731 individuals rostered for 15,332 SCC shifts. These SCC shifts occurred over the 271 days that the SCC was activated at Tier 1 (Blue) or above.

Figure 22: Four Year Comparison of SCC Activations



The participation of agencies is crucial to the functioning of the SCC. Having multiple agencies, departments and other organisation liaisons not only enables inter-agency collaboration, but provides opportunity for personnel to utilise knowledge and expertise from outside their regular capability. This provides a vital support to the management of all emergencies and subsequently all communities. Figure 23 displays the total number of personnel activations recorded on the shift plan. The days where most activations occurred coincided with four significant events.

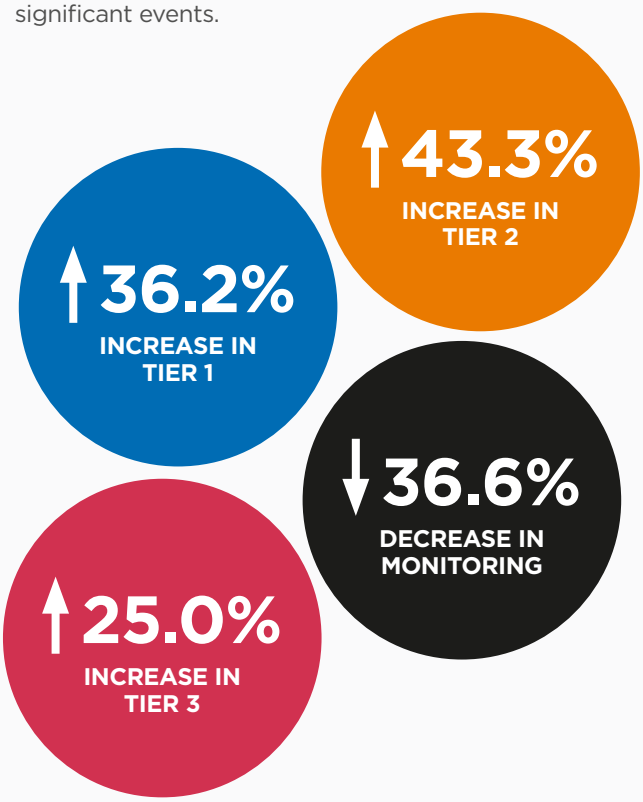
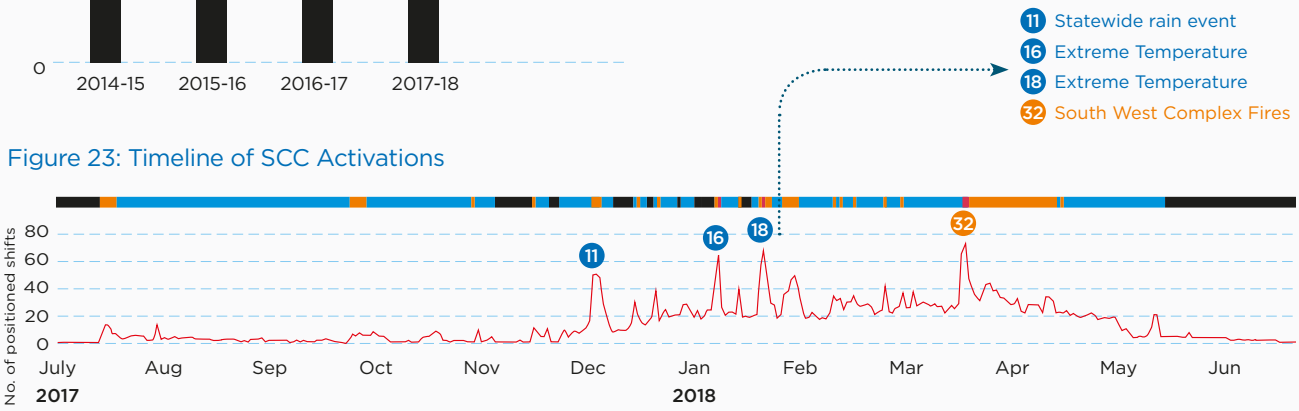


Figure 23: Timeline of SCC Activations



SCC Activation

Monitoring – Black | Tier 1 – Blue | Tier 2 – Orange | Tier 3 – Red

This past financial year, DELWP have again been the most represented agency within the SCC with 144 personnel completing 4,574 shifts (that's an approximate average of 30 shifts per person this year!). EMV had the highest average of shifts per person over the last four years however the presence of EMV led positions (including EMV Duty Officer and State Risk and Consequence Unit) influence the data outcomes, resulting in higher number of shifts per person see figures 24 and 25.

Figure 24: SCC Shifts by Agency 2017–18

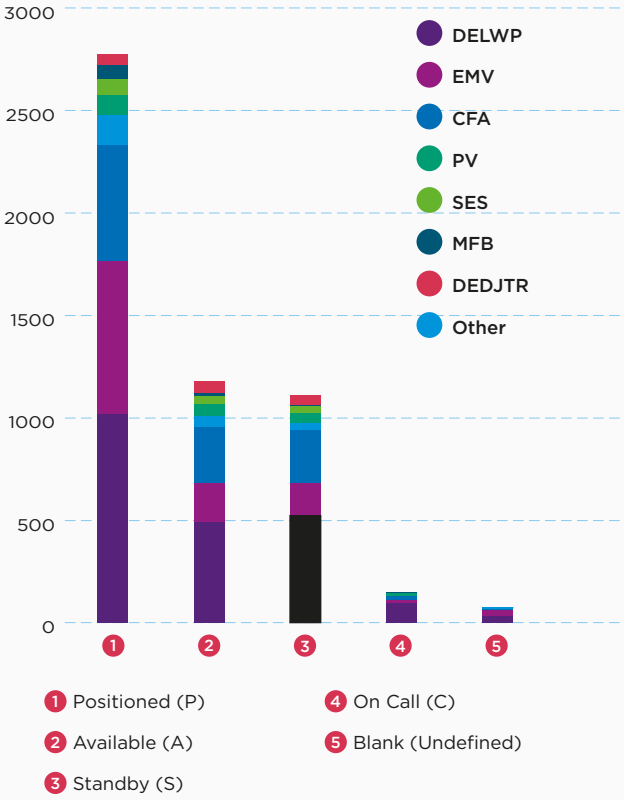
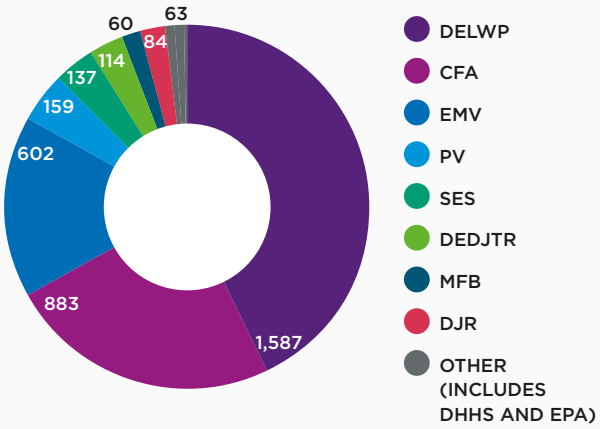


Figure 25: SCC Agency Shift Contribution 2017–18



3,334
SHIFTS WORKED BY 96 EMV STAFF

627
SHIFTS WORKED BY 104 CFA STAFF

242
SHIFTS WORKED BY 12 BoM STAFF

67
SHIFTS WORKED BY 26 DEDJTR STAFF

Field crews were deployed to retrieve Nurdles from Port Fairy, Killamey and Thunder Point following the illegal dumping of the plastic pellets into Warrnambool Sewerage Treatment Plant on 30 November

Significant Incidents

During 2017–18, there were 35 incidents identified as of state significance, occurring in all regions and some having state-wide impacts. The following incident summaries provide some insight into the broad range of hazards and complexities the year has brought for emergency response, identifying learnings from the events and links between response and learning and improvement from the event, for more information see the significant incidents timeline and map at figure 2 and 3.

Incident statistics

31,377
FALSE ALARMS AND CALLS

INCLUDES GOOD INTENTION CALLS

5,109
HAZARDOUS CONDITIONS

33,289
SERVICE CALLS

MOTOR VEHICLE ACCIDENTS, RESCUE AND EMERGENCY MEDICAL

14,286
STORM RELATED RESPONSE

(INCLUDES TREE DOWN/ TRAFFIC HAZARD)

27,183
OTHER SITUATIONS

Fire

59,436
HECTARES BURNT

27
BUSHFIRE PRIMARY PLACE OF RESIDENCE LOSSES

7,310
STRUCTURE FIRES

6,846
GRASS AND SCRUB/ BUSHFIRES

366
FUEL MANAGEMENT

75,770
FUEL MANAGEMENT HECTARES

Flood/ storm

24,450
REQUESTS FOR ASSISTANCE

5,476
TREES DOWN

8,837
TREES DOWN/ TRAFFIC HAZARD

5,900
BUILDINGS DAMAGED

2,167
FLOODING

2,070
RESCUES

Water safety

702
WATER RESCUES

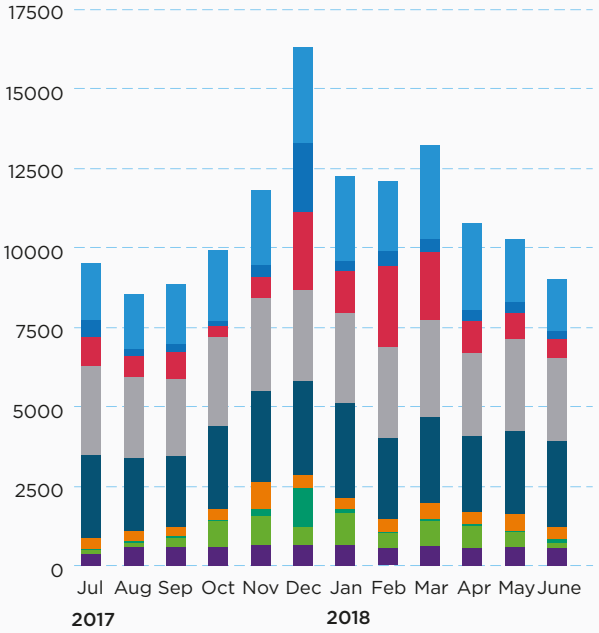
45
REPORTED DROWNING DEATHS

1,874
FIRST AID TREATMENTS

17
SHARK SIGHTINGS UNCONFIRMED

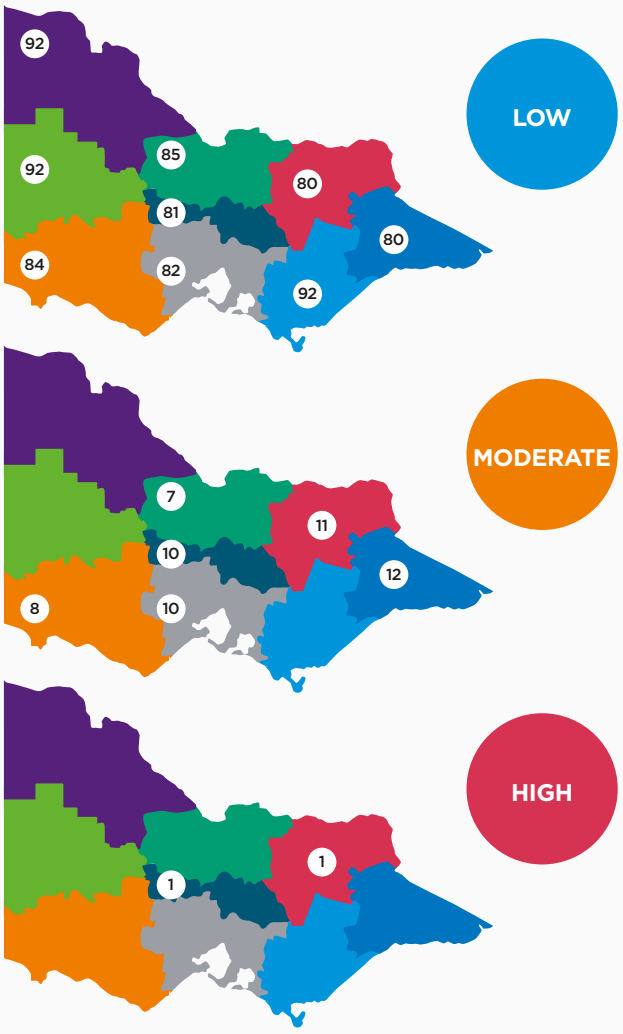
7
SHARK SIGHTINGS CONFIRMED

Figure 26: Monthly Breakdown of Incidents



- Structure Fires
- Vegetation and Grass Fires and Bushfires
- Flood
- Hazardous Condition
- False Alarms and False Calls (inc Good Intent)
- Motor Vehicle Accidents, Rescue and Emergency Medical Service Call
- Storm Related Response (Tree Down/Traffic Hazard)
- Building Damage
- Other Situations

Figure 27: Epidemic Thunderstorm Asthma Forecast 1 Oct 2017 – 31 Dec 2017



- Mallee
- Wimmera
- South West
- Northern Country
- North Central
- Central
- North East
- East Gippsland
- West and South Gippsland

Remaining piles of recycling and waste material at Coolaroo Recycling Plant following the fire

1 Coolaroo Recycling Plant

Date commenced/duration

13 July 2017/21 days

SCC activation

- Tier 2 – Orange (13 July – 18 July)
- Tier 1 – Blue (19 July – 02 August)

Location

Coolaroo Recycling Plant, Maffra Street, Coolaroo

115
NUMBER OF HOMES DOORKNOCKED

1,711
NUMBER OF EMERGENCY SERVICES PEOPLE ON SCENE

READ MORE IN YEAR IN REVIEW AND SECTION 3: CASE STUDIES

What happened?

MFB and CFA firefighters responded to a significant fire at SKM Recycling facility in Maffra Street, Coolaroo (Coolaroo Fire). The Coolaroo Fire burnt 100 metres x 250 metres of recycling material consisting of multiple piles of paper, cardboards, plastics and other waste materials.

The initial response included 54 appliances from MFB and CFA and 170 personnel. Potential adverse health impacts posed by the smoke required community evacuation. A total of 115 homes were doorknocked to action this and 22 people from 13 homes were relocated. This was supported by the issuing of a number of community messages including a Prepare to Evacuate and Evacuate Warnings, as well as an Emergency Alert sent to mobile and landline phones in the affected area. As part of the engagement strategy, community and impacted business owner meetings were held by MFB and local Government.

Onsite health monitoring of 1,711 emergency services personnel occurred on scene and a Community Health Assessment Centre was established which assessed 31 people over a period of 12 days. Victoria received interstate assistance comprising of 10 NSW, nine Australian Capital Territory (ACT) and nine SA personnel, particularly to provide Compressed Air Foam System (CAFS) units with operators.

What did we learn?

New air quality monitoring and smoke plume modelling arrangements were exercised in tandem with EPA during the incident. An operational review was conducted promptly and JSOPs were reviewed regarding incident air monitoring for community health. Part of the overall incident strategy included a focus on business continuity, including local industry, to allow the transition to recovery to occur in an efficient and effective way. The incident strategy also focused on reducing the environmental impact of airborne (smoke) and land based site-related pollutants.

MFBs traditional approach to on-site management was challenged, due to the complexity of the event and number of stakeholders. Protracted major incidents are best managed from a dedicated facility, such as an Incident Control Centre (ICC), rather than from the incident site. The decision to transfer control to the Burnley ICC was beneficial in strategically managing the incident and consequences of this incident, as well as providing a well-resourced and sufficiently sized facility for Emergency Management Team (EMT) members to actively and efficiently assist.

During this incident, the importance of the need to appropriately and continuously manage the health and wellbeing of emergency services crews and partners, by ensuring appropriate and sustained health monitoring and rehabilitation services, was reinforced. The success of this initiative was driven by the development of an MFB-led health and wellbeing strategy.

L–R Matt Potter, Justin Jemmeson, Tom Goldstraw, Mick Morley, Mark Urquhart, Peter Hay, Nick Ryan, Chris Eagle, Dave Nugent

2 Canada Deployment

Date commenced/duration

19 July 2017/68 days

SCC activation

Tier 1 – Blue

Location

Victoria ➔ British Columbia, Canada

What Happened?

26 Victorians were deployed to Canada as part of an Australian contingent to assist with large wildfires igniting across British Columbia and other provinces. From 1 April to 21 September there were over 1,263 fires and a total of 1.2 million hectares were burnt. EMV coordinated the deployment of the Southern States (WA, SA, Vic and Tas) and New South Wales Rural Fire Service (NSW RFS) coordinated the Northern States (ACT, NSW and QLD). Victorians were deployed in several roles 13 aircraft, four liaison and nine in IMT roles.

READ MORE IN SECTION 1: INTERSTATE/ INTERNATIONAL DEPLOYMENT SUMMARY

What Did We Learn?

The International Interstate Liaison Unit Report noted that deployments continue to provide learning opportunities to identify both benefits and areas of improvement between the differing business as usual arrangements on an international scale. One key learning was the importance of clarification between National Resource Sharing Centre (NRSC) and EMV's roles and responsibilities as Southern State Coordinator to ensure logistics were being managed.

1,263
FIRES BETWEEN 1 APRIL–21 SEPTEMBER

1.2m
HECTARES BURNT

26
13 AIRCRAFT, 4 LIAISON AND 9 IN IMT ROLES

3 Statewide Wind Event

Date commenced/duration

29 July 2017/1 day

SCC activation

Tier 1 – Blue

Location

State-wide

What Happened?

A state-wide wind event occurred due to a strong cold front approaching the Southwest of Victoria. BoM issued Severe Weather warnings for destructive winds across Central, South West and parts of the East Gippsland, North Central, North East, West and South Gippsland and Wimmera forecast districts. The strongest gusts were recorded 107km/hr at Fawkner Beacon (Port Phillip Bay) and 104km/hr at Melbourne Airport.

446 buildings were damaged during the event, 283 trees reported down and 342 trees down/traffic hazards. Over 2,000 power outages disconnected properties across the metropolitan area. Six rescues were performed by agencies who received over 1,125 Requests for Assistance (RFAs) (1,000+ of these were VICSES).

107km

STRONGEST GUST RECORDED AT FAWKNER BEACON (PORT PHILLIP BAY)

446

BUILDINGS WERE DAMAGED DURING THE EVENT

Figure 28: Severe weather intelligence briefing wind event on Saturday 29 July 2017

- Mallee
- Wimmera
- South West
- Northern Country
- North Central
- Central
- North East
- East Gippsland
- West and South Gippsland

(L) Low-end wind event (average gusts ≤ 100km/h)

(H) High-end wind event (average gusts > 100km/h)

Adaption of BoM Severe Weather Intelligence Briefing on Saturday 29 July 2017

Tyres and shred being loaded for removal from the Stawell Tyre Stockpile. This was one of 380 truckloads that were required to clear the site

4 Stawell Tyre Removal

Date commenced/duration

1 August 2017/77 days

EPA took the lead from CFA on future site remediation work

SCC activation

- Tier 1 – Blue (01 Aug – 23 Sept)
- Tier 2 – Orange (24 Sept – 28 Sept)
- Tier 1 – Blue (29 Sept – 17 Oct)

Location

38 Saleyards Road, Stawell VIC 3380

READ MORE IN SECTION 3: CASE STUDIES

What happened?

A large stockpile of tyres on the outskirts of Stawell was identified to be a significant fire risk. Approximately one million tyres were removed from the site using 380 truckloads filled with tyres and shred. Previous fire hazard assessment performed by EPA and CFA indicated that the stockpile had significant potential impacts to the social, economic and environmental wellbeing of the Stawell township and its surrounding region.

What Did We Learn?

The successful removal of tyres relied upon cooperation between multiple agencies and was completed under a Whole of Victoria Government Strategic Oversight Group (WoVG). This multi-agency group utilised technical expertise of EPA, Northern Grampians Shire Council, CFA, Victoria Police, Victorian Government's Solicitor's Office, DELWP, Grampians Wimmera Mallee Water, EMV and DHHS alongside private sector partners such as Tyrecyle, Cardno, Greencap and local subcontractors.

5 Drysdale Explosion

Date commenced/duration

7 September 2017/1 day

SCC activation

Tier 1 – Blue

Location

Mortimer Petroleum, High Street, Drysdale

What happened?

A fire and explosion incident occurred at a petro-chemical distribution facility in Drysdale. The fire ignited in a large shed, 20m x 50m wide, storing LPG cylinders with unknown cause. 50 residents were relocated from 35 properties to a local evacuation centre.

50
RESIDENTS WERE RELOCATED FROM 35 PROPERTIES

THE FIRE IGNITED IN A LARGE SHED... STORING LPG CYLINDERS WITH UNKNOWN CAUSE

Fireground personnel blacking out after the Timbarra-Sunny Point bushfire

6 Timbarra-Sunny Point Bushfire

Date commenced/duration

23 September 2017/20 days

SCC activation

- Tier 1 – Blue (23 Sept)
- Tier 2 – Orange (24 Sept – 28 Sept)
- Tier 1 – Blue (29 Sept – 12 Oct)

Location

Timbarra-Sunny Point, north of Buchan

READ MORE IN SECTION 3: CASE STUDIES

What happened?

Bushfires ignited in steep and forested terrain north of Buchan, caused by a private burn and fuelled by strong northerly winds. A total of 8,120 hectares were burnt during the incident. The IMT completed the control strategy within 24hrs of the incident being reported. A community meeting led by the Incident Controller (IC) was then conducted to outline the situation to locals and provided discussion of planning and risks, traffic management, staging area, community liaison and aircraft arrangements.

What Did We Learn?

During the debriefing process, it was noted that the pre-existing relationship and rural resilience efforts between agencies and community assisted agency response greatly. Local knowledge provided advantage for agencies and enabled members of the community be engaged and understand the challenges the fire presented.

7 Avoca Bus Crash

Date commenced/duration

14 October 2017

SCC activation

- Tier 1 – Blue

Location

Sunraysia Highway, near Avoca

What happened?

A bus carrying primarily elderly people rolled after a tree collision on the Sunraysia Highway. The convoy were returning to Mildura from Ballarat and unfortunately the crash resulted in one fatality. 18 of the travelers were hospitalised and 11 were uninjured.

A fleet of Ambulances including Mobile Intensive Care Ambulances (MICA), helicopters and non-emergency contractors transported patients to hospital. A private bus transported the uninjured to a relief centre in Avoca, where they were assessed again before being released. At this point, one passenger was then transported to hospital (included in the numbers above). AV escalated its Emergency Response Plan to Red (highest category) and activated the Ambulance Emergency Operations Centre.

8 Californian Deployment

Date commenced/duration

18 October 2017/15 days

SCC activation

- Tier 1 – Blue (18 Oct – 28 Oct)
- Tier 2 – Orange (29 Oct)
- Tier 1 – Blue (30 Oct – 01 Nov)

Location

Victoria ➔ California, USA

What happened?

The State of California requested assistance from Victoria to provide firefighting support for a series of 250 wildfires which burnt 99,148 hectares across the state. Victorians were deployed in liaison and firefighting roles which included eight CFA and 16 Forest Fire Management Victoria (FFMVic) and 10 Parks Victoria (PV) personnel, the only state in the country that was deployed for this event. The fires caused 44 fatalities, 185 hospitalisations and destroyed over 8,900 structures. The team attended induction training at CalFire State Training Centre on 21 October (US time), prior to being deployed. A Victorian Liaison Officer was already positioned in California working with CalFire on the deployment.

What Did We Learn?

Learnings from previous deployments including the British Columbia deployment, such as email updates being sent to families weekly and the use of the Interstate/International Liaison Unit (IILU) checklist were implemented during this deployment.

READ MORE IN SECTION 1: INTERSTATE/ INTERNATIONAL DEPLOYMENT SUMMARY

99,148
HECTARES BURNT

Nurdles removal at East Beach in Port Fairy on 4 November 2018

9 Nurdles

Date commenced/duration

20 November 2017/33 days

SCC activation

▬ Monitoring

Location

Logan Beach, Warrnambool to Port Fairy Bay

What happened?

Nurdles are small plastic pellets (roughly the size of a lentil) used for plastic manufacturing. Hundreds of thousands of nurdles washed up on the Warrnambool coastline, the result of illegal dumping into Warrnambool Sewage Treatment Plant. 26km of coastline was inundated with nurdles between Logan Beach and Port Fairy Bay. The highest density of nurdles was located at East Beach, Shelly Beach and Logan Beach. A multi-agency response to clean up the nurdles was conducted with substantial efforts from community volunteers and ongoing monitoring managed by Wannon Water.

Field crews were briefed in the Warrnambool ICC and deployed in the field. The incident was divided into three sectors; Port Fairy, Killarney and Thunder Point with operational staging areas and IMT staff positioned at each point to support volunteers. The IMT deployed a field intelligence team with Global Positioning System (GPS) and Wannon Water deployed labour hire crews to assist.

26km

COASTLINE WAS INUNDATED WITH NURDLES

NURDLES ARE SMALL PLASTIC PELLETS (ROUGHLY THE SIZE OF A LENTIL) USED FOR PLASTIC MANUFACTURING

10 Cann River-Mueller Road Bushfire

Date commenced/duration

26 November 2017/25 days

SCC activation

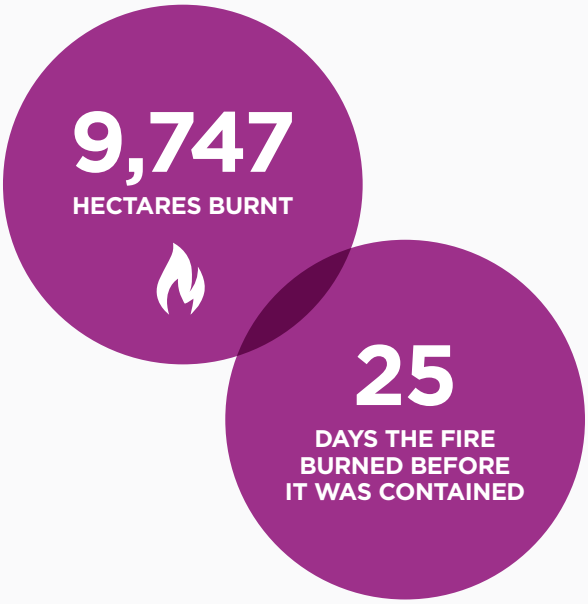
- Tier 1 – Blue (26 Nov – 01 Dec, 05 Dec, 12 Dec, 14 Dec – 15 Dec, 18 Dec, 20 Dec)
- Tier 2 – Orange (02 Dec – 04 Dec, 13 Dec, 19 Dec)
- Monitoring – (06 Dec – 11 Dec, 16 Dec – 17 Dec)

Location

Mueller Road, Cann River Gippsland

What happened?

A bushfire was reported to DELWP on Sunday afternoon in Cann River, suspected be caused by lightning. Due to south easterly winds, it increased significantly and burned through retardant lines. The fire took a total for 25 days to contain and burned 9,747 hectares of bush.



11 Statewide Rain Event

Date commenced/duration

1 December 2017/3 days

SCC activation

- Tier 1 – Blue (01 Dec)
- Tier 2 – Orange (02 Dec – 03 Dec)

Location

Statewide. Top most affected locations were Euroa, Myrtleford, Bright, Ovens and Buckland Valley.

What happened?

BoM predicted a wet start to summer with heavy rain across the state and consequential minor to moderate flooding, with the possibility of major flooding in some areas. The event damaged 901 buildings, 211 trees were reported down and 372 trees down/traffic hazards. 37 rescues were performed by agencies who received over 2,814 RFAs, including 381 sandbag requests. Major flood warnings were issued on Seven/Castles Creeks (Euroa), Ovens River (Myrtleford/Bright) and the King River.

Residents along parts of the Ovens River and Buckland Valley were issued with Prepare to Evacuate messages, a total of 7.4 million text messages were sent.

Following the severe weather experienced across Victoria, Council and DHHS outreach teams visited impacted properties in Wangaratta, Shepparton, Moira and Mitchell to provide information on emergency relief payments, food safety messaging and health advice.

The jointly funded Commonwealth and Victorian Natural Disaster Relief and Recovery Arrangements were activated to support the 12 flood affected local government areas to help cover counter disaster operations such as sandbagging, construction of temporary levees and the restoration of essential public assets such as roads and stormwater infrastructure.

What Did We Learn?

Among other learnings, utilising non-typical surge capability both equipment and personnel were effective and resulted in a greater capacity for VICSES to respond to RFAs. For example, the use of Corrections Victoria prisoners, lions club volunteers and an asphalting machine to sandbag required areas.

2,814
REQUESTS FOR ASSISTANCE

7.4m
MILLION TEXT MESSAGES WERE SENT

Agencies including CFA, MFB, VICSES and AV were present at the scene following the balcony collapse

12 Doncaster East Balcony Collapse

Date commenced/duration

16 December 2017

SCC activation

▬ Monitoring

Location

Balinga court, Doncaster East

17

PEOPLE INJURED AND TWO FATALITIES

35

DEBRIEFING WAS FACILITATED BY DONCARE WHICH WAS ATTENDED BY 35 AFFECTED PERSONS

What happened?

A balcony collapsed under the weight of 36 people at a two storey house in Doncaster East. Unfortunately there were two fatalities and 17 injured among those present, who were attending a Christmas party at the premises. AV established a medical triage point to assess patients who were transported to a number of hospitals.

Once all persons were removed from the immediate scene CFA, MFB and VICSES cleared the property and control of the incident was transferred to Victoria Police. Victim welfare management was coordinated by Victoria Police, DHHS and the City of Manningham. Further debriefing was facilitated by Doncare which was attended by 35 affected persons.

What Did We Learn?

Throughout the debrief process relief and recovery efforts were identified as being particularly effective due to close liaising between Victoria Police investigators, DHHS and the CEO of Doncare. The focus was on compassion and facilitating the needs of victims and their relatives, which assisted in the healing process of those affected.

READ MORE IN SECTION 3: CASE STUDIES

13 Extreme Weather Event

Date commenced/duration

19 December 2017/1 day

SCC activation

Tier 2 – Orange

Location

Top most affected locations were Doncaster East (133 RFAs), Mildura (71), Merbein (55), Templestowe (39), Shepparton (38), Wangaratta (38), Irymple (37), Wallan (36), Lancefield (34) and Nunawading (27).

What happened?

This extreme weather event was the result of storms, lightning and damaging winds which caused numerous fires and RFAs for storm related damage. 744 buildings were damaged statewide during the event, 271 trees reported down and 571 trees down/traffic hazards. 23 rescues were performed by agencies who received over 1,734 RFAs.

Winds for 19 December were predicted to be 125km/hr across Melbourne, as were scattered showers and thunderstorms across central Victoria with isolated severe storms. Severe Thunderstorm Warnings were issued for damaging winds, heavy rainfall and large hailstones for people in Northern Country, North Central, North East, West and South Gippsland and parts of Central, East Gippsland and Mallee Forecast Districts. Victoria received interstate assistance from SA SES which included a 14 person storm response crew and two person command team of four response vehicles and one command vehicle for three days.

14 Flinders Street Incident

Date commenced/duration

21 December 2017

SCC activation

Tier 1 – Blue

Location

Melbourne City

What happened?

A driver allegedly drove through pedestrians at the intersection of Elizabeth Street and Flinders Street in Melbourne City. There was one fatality from the event and a total of 20 patients. This included 18 victims, one police officer and the alleged offender.

Following the tragic event at Flinders St, volunteers from the ARC and Victorian Councils of Churches Emergency Ministries (VCC EM) responded quickly and provided counselling and support services to those who witnessed or were affected by this event. The Victims Support Line was also made available to help those affected. In the days after the incident, ARC and VCC EM volunteers continued to provide support at Flinders Street Station and the Elizabeth Street pop up park.

VCC EM personnel providing counselling and support to those who witnessed the event

15 Cheltenham Park Road Fire

Date commenced/duration

27 December 2017/3 hours

SCC activation

Tier 1 – Blue

Location

Cheltenham Park

What happened?

Agencies responded to a scrub fire on Park Road, Cheltenham, caused by a campfire. Due to the weather conditions and risk to the community due to location, it escalated to a 5th Alarm. A Prepare to Evacuate warning was issued and residents on Glebe Avenue evacuated with the assistance of VicPol. Aircraft was used to support ground crews in containing the blaze. This included two Helitaks and two Firebirds. The fire caused damage to the nearby Cheltenham Primary School, specifically to the fence, gate and shed. It also entered the neighbourhood cemetery.

What Did We Learn?

Air support within the metropolitan region is infrequent so learnings were utilised to ensure the effective communications at events that require their use, especially when located in areas of urban fringe.

READ MORE IN SECTION 3: CASE STUDIES

16 Extreme Temperature

Date commenced/duration

6 January 2018/1 day

SCC activation

Tier 3 – Red TFB STATEWIDE

Location

Highest Temperatures were recorded at Walpeup (45.2), Mildura (45), Avalon (44), Swan Hill (43.9) and Melbourne (41.7)

What happened?

Extreme temperature prompted a state wide TFB. There were four Extreme, two Severe and one Very High FDRs recorded on the day. Three Heat Health alerts were issued for North Central, Central and West and South Gippsland. 114 grass and scrub fires ignited and 32 structure fires. VICSES received 233 RFAs, and 38 active facilities (ICC, RCC and SCC) with over 564 personnel. Two forward liaisons were deployed to SA due to three districts being in Catastrophic (Code Red).

114
GRASS AND SCRUB FIRES IGNITED AND 32 STRUCTURE FIRES

233
RFAs RECEIVED BY VICSES

38
ACTIVE FACILITIES (ICC, RCC AND SCC) WITH OVER 564 PERSONNEL

Gypsy Lady air-crane carrying out water bombing operations during Carrum Downs fire

17 Carrum Downs Fire

Date commenced/duration

6 January 2018/1 day

SCC activation

Tier 3 – Red TFB STATEWIDE

Location

Carrum Downs

What happened?

A fire was ignited in a bushland location close to Carrum Downs, spreading toward a residential area. A red flag warning was issued to all crews due to a wind change with gusts of up to 100km per hour. The fire consumed one house and caused damage to other structures, burning a total of 29 hectares. A community relief was opened at Frankston North Community Centre.

What Did We Learn?

A number of insights emerged from a community meeting held on the Wednesday following the incident. These included the discussion to streamline the evacuation process and warnings and advice messages received through the VicEmergency app. Some community members were unaware of where to access timely and relevant information.

18 Extreme Temperature

Date commenced/duration

18 January 2018/2 days

SCC activation

- Tier 2 – Orange (18 Jan)
- Tier 3 – Red (19 Jan)

What happened?

Extreme temperature prompted a statewide TFB on 19 January. There were eight Severe, seven Very High and three High FDRs recorded on the day. Nine Heat Health alerts were issued. 80 grass and scrub fires ignited and 80 structure fires resulted in the loss of two unoccupied houses. VICSES received 135 RFAs, and 62 active facilities (ICC, RCC and SCC) with over 885 personnel.

8

SEVERE, SEVEN VERY HIGHAND THREE HIGH FDRs RECORDED

9

HEAT HEALTH ALERTS WERE ISSUED

80

GRASS AND SCRUB FIRES IGNITED

80

STRUCTURE FIRES THAT RESULTED IN THE LOSS OF TWO UNOCCUPIED HOUSES

19 Dreeite Bushfire

Date commenced/duration

18 January 2018 (1 day)

SCC activation

- Tier 2 – Orange

Location

North West of Colac

What happened?

The fire consumed 426 hectares including two unoccupied houses, five sheds, fencing, hay bales and power lines connecting properties. A relief centre was opened in Colac for two families. Two firefighters were treated for heat stress and one firefighter was transported to Geelong Hospital with spinal injuries.

20 Big Desert Red Bluff Track Bushfire

Date commenced/duration

19 January 2018/37 days

SCC activation

- Tier 3 – Red (19 Jan) TFB STATEWIDE
- Tier 2 – Orange (20 Jan – 21 Jan, 25 Jan – 29 Jan, 08 Feb, 10 Feb, 14 Feb)
- Tier 1 – Blue (22 Jan – 24, 30 Jan – 07 Feb, 09 Feb, 11 Feb – 13 Feb, 15 Feb – 22 Feb, 24 Feb)

Location

Red Bluff Track, Big Desert Wilderness Area

What happened?

A fire ignited caused by lightning on an Extreme Weather warning day and 5,596 hectares were burnt.

21 I am Hardstyle

Date commenced/duration

26 January 2018/overnight

SCC activation

Tier 2 – Orange

Location

Festival Hall, West Melbourne

What happened?

Multiple overdoses occurred due to a bad batch of circulating recreational pills. Eight people were treated at the scene in an ambulance tent while a ninth collapsed nearby and was taken to hospital. Those affected were hypothermic, or extremely hot and unable to regulate their body temperature. Patients were not breathing, unconscious and unrousable, requiring intubation and ventilation. This raised further concern for AV that the drugs may be circulating throughout the Australia Day long weekend.

22 Midsumma Pride Festival

Date commenced/duration

28 January 2018/1 day

SCC activation

Tier 2 – Orange

Location

St Kilda

What happened?

Midsumma Pride Festival consisted of a crowd of over 45,000, marching through St Kilda in support of the LGBTQIA+ community. The temperature was 38.1°C resulting in a heat related incident for many of those marching. 15 patients were hospitalised with heat related illness.

45,000+

MARCHED THROUGH ST KILDA IN SUPPORT OF THE LGBTQIA+ COMMUNITY

23 Hot Air Balloon Accident

Date commenced/duration

08 February 2018/1 day

SCC activation

Tier 2 – Orange

Location

Blease Lane, Dixon Creek

What happened?

A hot air balloon landed heavily after descending from its flight, appearing to have stalled. The balloon dragged along the ground before coming to a stop. AV activated its mass casualty plan as paramedics assessed those affected. 16 people were treated on scene and seven patients hospitalised as a result.

24 Statewide Storm Event

Date commenced/duration

14 February 2018/1 day

SCC activation

- Tier 2 – Orange

Location

Statewide

What happened?

A Severe Weather Warning for damaging wind gusts was issued for Valentine's Day, alongside with elevated FDRs across the state. VICSES received 1,195 RFAs, and performed seven rescues. 230 buildings were damaged, 514 trees down and 442 tree down/traffic hazard. There was an excess of 70,000 power outages across the metropolitan area, predominately in the South Eastern suburbs. One civilian fatality occurred as the result of clearing away debris with a chainsaw.

25 Tamboritha Dingo Hill

Date commenced/duration

27 February 2018/57 days

SCC activation

- Tier 1 – Blue (27 Feb, 01 Mar – 16 Mar, 13 Apr, 15 Apr – 24 Apr)
- Tier 2 – Orange (28 Feb, 19 Mar – 12 Apr, 14 Apr)
- Tier 3 – Red (17 Mar – 18 Mar)

Location

Tamboritha Dingo Hill

What happened?

A bushfire at Tamboritha Dingo Hill was reported at midday on 27 February, which burnt a total of 10,839 ha of bushland. An unattended campfire ignited the bushfire, which was burning in steep, rocky terrain. Due to windy weather conditions the fire continued to spot across containment lines and continued to burn quickly in a north-easterly direction. The strong winds presented a challenge for aircraft and hindered crews from performing firebombing operations.

10,839
HECTURES BURNT

AN UNATTENDED CAMPFIRE IGNITED THE BUSHFIRE, WHICH WAS BURNING IN STEEP, ROCKY TERRAIN.

Aerial view of Myrrhee Bushland Reserve and smoke plume caused during the Myrrhee – Boggy Creek fire

26 Myrrhee – Boggy Creek

Date commenced/duration

28 February 2018/13 days

SCC activation

- Tier 2 – Orange (28 Feb)
- Tier 1 – Blue (1 Mar – 12 Mar)

Location

Myrrhee

What happened?

The Myrrhee – Boggy Creek fire burnt across open grassland and into Myrrhee Bushland Reserve (280ha), caused by a machinery fire. A total of 677 hectares were burnt in the blaze. The fire caused some concern due to its proximity to an electrical interconnector 6km away, and potential that the smoke it produced could cause an interconnector to trip. Steep and rocky terrain limited first attack options for fire crews. Two Emergency Warnings were issued for residents of Myrrhee Valley and Whitfield/Whitlands, affecting approximately 54 properties. An Advice message was also issued for the Upper King Valley. A relief centre opened at 1700hrs at Moyhu Memorial hall in Bartley Street Moyhu. A community meeting was held at 1200hrs on Thursday at Whitfield recreation reserve.

27 Maribyrnong Defence Facility

Date commenced/duration

28 February 2018/4 hours

SCC activation

Tier 2 – Orange

Location

Maribyrnong

What happened?

A machinery fire ignited at the facility requiring 44 appliances and 103 personnel on the scene. Three buildings (unoccupied) were destroyed in the blaze. Crews experienced issues obtaining water sources which resulted in hoses being laid over Maribyrnong Road, and asbestos and other chemicals were present onsite which increased the risk. Subsequently a number of resources worked into the night. Four aircraft supported ground crews to contain the blaze including two Helitaks and two Firebirds. Subsequently a number of resources worked into the night.

103

PERSONNEL ON THE SCENE AT A MACHINERY FIRE

FOUR AIRCRAFT SUPPORTED GROUND CREWS TO CONTAIN THE BLAZE

28 Laverton Recycling Facility

Date commenced/duration

28 February 2018/4 hours

SCC activation

Tier 2 – Orange

Location

Laverton Recycling Facility

What happened?

A fire ignited amongst rubber and plastics from a 30m x 40m x 10m pile of recyclables at Laverton Recycling facility. 27 appliances with 70 personnel responded alongside 20 fire trucks, appliances, command staff and breathing apparatus (BA) support. CFA responded to support the 14 MFB appliances on scene including a Teleboom to fight the fire.

Following the initial response, an excavator was employed to disassemble the rubbish pile. The cause of the fire was unknown.

29 Anthrax

Date commenced/duration

26 February 2018/24 days

SCC activation

Tier 2 – Orange

Location

Infected premises include areas in Nyah, Piangil, Piangil West and Turoar. Broader surveillance work included locations in Swan Hill West, Nowie, Chillingollah East and as far as Hattah.

What happened?

Anthrax is a bacterial infection that can be found in the soil in a spore form. Grazing herbivores are infected through ingesting spores present in infected soil and typically infection is diagnosed after sudden death. Seasonal conditions and the presence of unvaccinated stock led to an outbreak of anthrax in the Swan Hill district after an outbreak was diagnosed in the same area in 2017. There were over 15 sheep mortalities across two properties confirmed to be due to anthrax infection. The properties under investigation were quarantined and livestock were subsequently vaccinated.

15+
SHEEP MORTALITIES CONFIRMED

ANTHRAX IS A BACTERIAL INFECTION THAT CAN BE FOUND IN THE SOIL IN A SPORE FORM

30 Summer Water Safety

Date commenced/duration

1 December 2017/3 months

Location

Statewide

What happened?

Victoria experienced its highest summer drowning toll since 1997–98. Nine more drownings occurred than the five year average for the same time period. There were a total of 45 drownings in the state, 23 of which were summer drownings, 702 rescues and 1,874 first aid treatments of water related injury.

McDonalds Track Fire

31 

Date commenced/duration

10 March 2018/9 days

Location

Cherry Tree Road/McDonalds Track, Nyora, 3987

What happened?

This bushfire ignited from undetermined causes in steep bushland at McDonalds track, in proximity to Nyora. This fire destroyed 232 hectares of scrub and pine plantation. Hancock Victorian Plantations advised the cost of the fire was in excess of $1 million.

Helitak 334 performing a waterbombing operation during the South West Fires

32 South West Complex Fires

Date commenced/duration

17 March 2018/50 days

SCC activation

- Tier 3 – Red (17 Mar – 18 Mar)
- Tier 2 – Orange (19 Mar – 12 Apr, 14 Apr)
- Tier 1 – Blue (13 Apr, 15 Apr – 05 May)

Location

Terang, Garvoc, Gazette, Camperdown

What happened?

Following an extremely dry 2017–18 summer, BoM forecasted high temperatures and strong winds across southwest Victoria for the weekend of 17–18 March and a total fire ban was declared.

Hot, dry and gusty northerly winds ahead of a strong cold front subsequently produced some of Victoria's worst bushfire conditions of the season. 53 fires broke out between 2000hrs Saturday and 0900hrs Sunday, four considered significant broke out near Gazette, Garvoc, Terang and Camperdown. Several of the fires, particularly in the Camperdown-Cobden area, then moved underground into peat, creating complex challenges until early May.

READ MORE
IN SECTION 2:
INSIGHTS AND LESSONS

In response to the fires, four Evacuate Now messages, 34 Emergency Warnings, 95 Warnings (Watch and Act) messages, 109 Advice messages, 34 Community Information messages and one All Clear were issued between 17 March and 8 May.

At least 26 agencies were involved at the incident level, with support from interstate. There were 86 dispatches of aircraft between 18 March and 4 May. Remote piloted aerial systems also operated over a 41 day period between 23 March and 2 May.

Ten relief centres were established and attended by more than 800 people on the Saturday night and Sunday. Lessons from previous events including the Hazelwood Mine Fire meant that in addition to fire suppression; community engagement, air quality, community health, consequence management, and relief and recovery became key fire management objectives. Health assessments for responders and the community were conducted over a 43 day period with a total of 1,332 assessments undertaken.

By the time the fires were extinguished, 26 residences and 66 outbuildings had been destroyed, with 2,995 livestock losses. Total hectares burnt across the fires included 9,725ha in Terang, 3,666ha in Gazette, 4,031ha in Garvoc, 6,725ha in Camperdown, 79ha in Cobrico Swamp and 28ha in Lake Elingamite. There were no deaths or serious injuries reported as a result of the fires.

The Insurance Council of Australia declared the south-west bushfires a catastrophe, ensuring that related insurance claims were treated as a priority.

The jointly funded Commonwealth and Victorian Natural Disaster Relief and Recovery Arrangements (NDRRA) – Category A and Category B were activated in recognition of the significant impact of the fires on the community. On 20 April 2018, Acting Prime Minister Michael McCormack also activated NDRRA Category C Primary Producer Grants to a maximum of $10,000 for affected primary producers to assist with recovery.

In recognition of the significance of the fires on the community, the Victorian Government activated the jointly funded Commonwealth and Victorian Natural Disaster Relief and Recovery Arrangements to support the community through counter disaster operations, restoration of essential public assets and, support to primary producers through grants. Recovery, led by the Regional Recovery Leadership Committee and chaired by the DHHS, continues to support the coordination of services and agencies, and ensure local municipalities are supported through recovery.

What did we learn?

The process for identifying lessons from the South-west Complex fires is underway. This commenced with a formal debrief plan to collect learnings from community members, emergency management agencies, departments and local councils involved in the response and recovery to support the capturing of learnings in a coordinated way from the community, incident, region and state. This included 16 operational debriefs at incident, region and state tiers and community drop-in sessions held in Corangamite Shire and Moyne Shire. The data collected is undergoing analysis using the nationally and internationally recognised OIL (Observation, Insight, Lesson) methodology.

This is the first time a coordinated and comprehensive approach, supported by a dedicated multi-agency and multi-state team, has been utilised to debrief a significant/complex emergency encompassing the community and operational personnel.

Substantial hose lay used to deliver water to various areas during the South West Fires

Five of the state themes were explored as part of the debriefing program:

- Intelligence and information sharing
- Community engagement/connection
- Safety and fatigue management
- Capability and resource management
- Managing concurrent emergencies/phases

Overall, more than 2,500 observations have been captured throughout the Debriefing Program from:

- more than 313 people present at the 10 community and six operational debriefs
- interviews with emergency management personnel
- outcomes from internal agency/team debriefs provided to the Debriefing Team, and
- files/observations submitted into EM-Share (Victoria's lessons management IT system).

READ MORE
IN SECTION 2:
INSIGHTS AND LESSONS

a) Severe Wind Event – State Wide

Date commenced

17 March 2018

What happened?

A Severe Weather Warning for damaging winds was issued on Friday 16 March 2018 for Saturday 17 March and Sunday 18 March, alongside with elevated FDRs across the state for both the Saturday and Sunday. VICSES received 1,345 RFAs, and performed 17 rescues. 143 buildings were damaged, 385 trees down and 685 tree down/traffic hazard. Metropolitan Melbourne areas including bayside suburbs and the Mornington Peninsula were the hardest hit during Saturday afternoon. The Southwest region saw a significant increase in RFAs later on Saturday with Colac responding to 100 RFAs.

b) Terang – Cobden Road Fire (including Peat Fires)

Date commenced

17 March 2018

What happened?

150 premises were impacted and losses included 19 residences, 419 livestock, kilometres of fencing and hay. 59 warnings were issued to the community.

Two significant Peat Fires at Cobrico Swap (79 hectares with perimeter of 5.5km) and Lake Elingamite (28 hectares with a perimeter of 6.3km) presented significant challenges to crews and were managed once water sources at both sites were identified. Lack of rainfall and weather outlook created the environment for peat fires to burn for a total of 45 days (22/03/2018 – 05/05/2018). A total of 114 warnings were issued during the peat fires which were split into three zones (within 1 km, 1–6km and beyond 6km). Air Monitoring Hazardous was greater than 250pm 2.5 and Carbon Monoxide within the innermost zone. Measures to limit crew's exposure to CO and PM 2.5 were undertaken during firefighting efforts.

c) Garvoc Fire

Date commenced

17 March 2018

What happened?

This resulted in 4,031 fire affected hectares, losses included four residences, 1,512 livestock, fencing and hay. 31 warnings were issued and a total of 69 premises were ultimately affected.

Aerial view of smoking peat during the South West Fires, burning for a total of 45 days

d) Gazette Fire

Date commenced

17 March 2018

What happened?

This resulted in 3,666 fire affected hectares, including the loss of three residences, 1,046 livestock, fencing and hay. 21 warnings were issued and a total of 34 premises were affected.

e) Camperdown – Bullen Merri Fire

Date commenced

17 March 2018

What happened?

The fire was 6,725 hectares in size and impacted 18 premises. There were four livestock losses as a result, fencing and over 200 tonnes of hay. 21 warnings were issued to the community.

South West Complex Fires Timeline

1–16 MARCH

17 MARCH

- Terang – Cobden Road Fire
- Cobrico Swamp Peat Fire
- Lake Elingamite Peat Fire

39°C
MAX TEMPERATURE

10–20%
RELATIVE HUMIDITY

wind activity
NORTH/NORTH WESTERLY WINDS

FDR
SEVERE

18 MARCH

- Garvoc Fire
- Gazette Fire
- Camperdown – Bullen Merri Fire

35°C
MAX TEMPERATURE

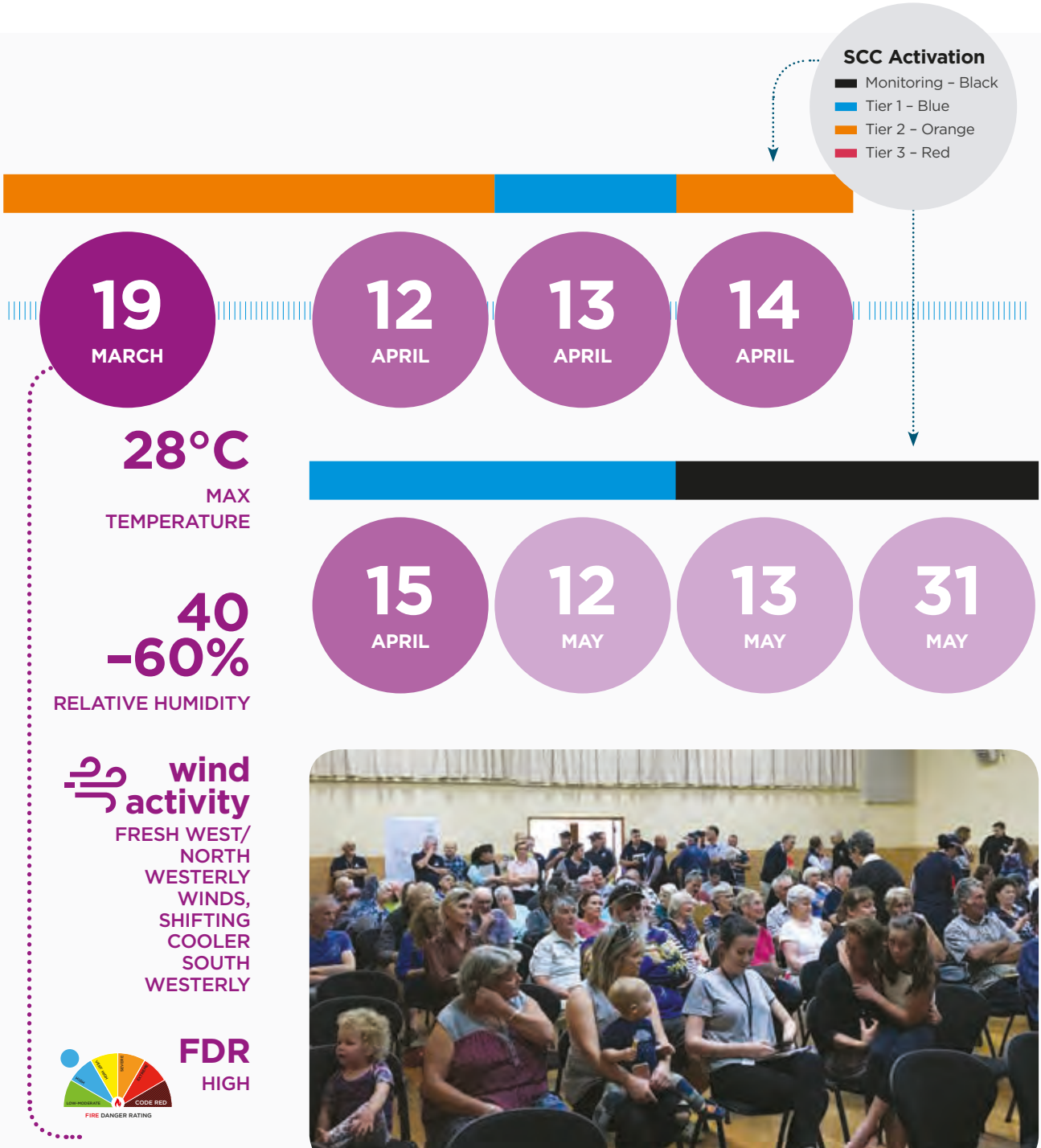
15–25%
RELATIVE HUMIDITY

wind activity
120KM/H DAMAGING WINDS IN ALPS. 90–110KM/H IN SOUTHERN/ COASTAL AREAS. GUSTY NORTHERLY WIND EAST OF THE TROUGH SHIFTING NORTH WEST/SOUTH WESTERLY BEHIND TROUGH

FDR
SEVERE

2100hrs
FIRST WARNING ISSUED BY VICEMERGENCY

237,662
VICEMERGENCY USERS TODAY, THE THIRD LARGEST NUMBER OF USERS EVER IN A DAY!



Community meeting held during South West Complex fires

33 Smoke Haze

Date commenced/duration

1 May 2018/2 days

SCC activation

Tier 1 – Blue

Location

Predominately Melbourne region

What happened?

The SCC was activated to monitor the impacts of smoke in the Melbourne region on the morning of 1 March. The smoke was the result of burn-off activities across the state due to the Fire Danger Period ending on 30 April. This was coupled with associated calm weather conditions on the day which created poor ventilation and air quality. During the two day period, there were 1,953 registered private burns. FFMVic had a total of 29 planned burns (including three ignited and 26 postponed) as well as seven CFA planned burns. 25 private burn offs escaped during this period and required CFA assistance to bring them under control. MFB had 58 calls relating to the haze, including 25 calls for smell of smoke, two fire indicator panels, two calls for alarm sounding and two Emergency Medical Responses. Based on the information received from the agencies there were minimal impacts to the community as a whole.

What Did We Learn?

Social media monitoring identified some dissatisfaction from the community associated with the impacts from smoke. The calls to the burn off notification line exceeded capacity at times.

34 Triple Zero '000' Outage

Date commenced/duration

4 May 2018/12hrs

SCC activation

Tier 1 – Blue

What happened?

A Telstra outage occurred due to three separate faults, card failure in a router, a cut cable outside Orange NSW and software faults due to the high volume of calls being re-routed. This impacted the ability to call Triple Zero, receive automatic alarms and personal medical alarm services across Australia.

35 Somerton Factory Fire

Date commenced/duration

2 June 2018/3 days

SCC activation

Monitoring

Location

Somerton

What happened?

A pasta factory measuring 80 metres x 30 metres was destroyed by accidental fire due to maintenance works. A Watch and Act message and 5 Advice messages were issued for nearby communities, also Emergency Alert was used to send a telephone alert to neighbouring factories. 80 CFA and MFB firefighters attended the scene.

Fireboming bucket operations during the deployment to British Columbia, Canada.

Interstate/International Deployment Summary

Victorian firefighters are recognised for their versatility and are capable of responding to a broad range of emergencies outside the borders of the state. Deployments allow Victoria to strengthen its relationship with international and interstate agencies, permitting the exchange of personnel, resources, knowledge sharing and other valuable skills.

Personnel selected for deployment have a unique opportunity for professional development and bring learnings home to their colleagues in Australia which are shared and collected through debriefing.

During the 2017–18 financial year Victoria was deployed internationally twice, firstly to British Columbia (BC), Canada and then to California, USA. In BC personnel were deployed in IMT roles, while in California personnel were firefighters assisting with fireground response to prolific wildfires events.

There were two significant incidents during the year that Victoria received interstate assistance for; Coolaroo Recycling Plant Fire and South West Complex Fires.

During 2017–18 there were no interstate deployments. Last year, Victorian personnel were deployed interstate four times for a range of incidents including storm and cyclone for response and recovery.

READ MORE IN SECTION 1: SIGNIFICANT EVENTS

INTERNATIONAL DEPLOYMENT

Canada Deployment

Date commenced/duration

17 July 2017/42 days

What happened?

On 17 July 2017, Victoria deployed as part of an Australian contingent to British Columbia to support firefighting efforts for several large wildfires across the country. Canada requested 54 personnel from Australia, the total length of the deployment being 42 days. The operation was managed by the National Resource Sharing Centre (NRSC) at the Australasian Fire and Emergency Service Authorities Council (AFAC). The Victorian State Control Centre coordinated the deployment of personnel from Victoria, Tasmania, SA, Western Australia, including four from CFA, 15 from FFMVic and seven from PV. NSW RFS coordinated deployment of the northern states.

THE VICTORIAN STATE CONTROL CENTRE COORDINATED THE DEPLOYMENT OF PERSONNEL FROM VICTORIA, TASMANIA, SA AND WESTERN AUSTRALIA

26
VICTORIAN PERSONNEL

4
CFA

15
FFMVic

7
PV

Clinton Base Camp at Elephant Hill Incident, during Canada deployment

A hotter and dryer than average fire season placed the Canadian National Level at Level 5 (highest level) and significant fires in California and other states placed additional pressure and limited cross border assistance. At the conclusion of the deployment there had been excess of 1,263 fires.

What did we learn?

Sustains

- The preparation processes and arrangements pre-deployment were efficient, particularly the IILU checklist.
- The cross agency approach used by the Area Representatives (AREPS) was beneficial because it ensured that personnel were contacted and welfare checks undertaken on a regular basis by the AREP in the field. These were reported back to the Interagency Resource Representative (IARR) for action or follow up.
- Personnel had good understanding of their role, which assisted in their ability to cooperate and work as a team.

Learning Opportunities

- There were some instances where issues with the communication arrangement between NRSC and USA became apparent.
- The contact details of several families required an update from the previous year so they could be kept informed and experiences could be shared back home.
- At times personnel experienced fatigue due to minimal breaks before deployment.

INTERNATIONAL DEPLOYMENT

California Deployment

Date commenced/duration

18 October 2017/21 Days

What happened?

The 2017 California wildfire season was the most destructive wildfire season on record with multiple wildfires burning across the state and causing devastating effects. A total of 9,133 fires burned 1,381,405 acres (5,590.35 km^2), according to the California Department of Forestry and Fire Protection, including five of the 20 most destructive wildland-urban interface fires in the state's history. Throughout the burn period, the fires destroyed or damaged more than 10,000 structures in the state (destroyed 9,470, damaged 810), a higher tally than the previous nine years combined.

The large wildfires caused 43 fatalities – 41 civilians and two firefighters – almost higher than the previous 10 years combined. As part of a Victoria to California agreement a total of 34 personnel deployed to California, 33 Victorian members from CFA (7) and FFMVic (26) and one Liaison Officer who was already positioned in California working with Cal Fire on the deployment. The contingent was known as AusVic Crew 1 for the duration of the deployment and formed part of an assembly of over 10,000 firefighters from 384 fire agencies covering 14 states in the USA. After the 21 day duration, Emergency Management Victoria had a formal debrief with AusVic Crew 1 to capture lessons from the preparation, deployment and post deployment experience.

THIS DEPLOYMENT WAS MANAGED EXCLUSIVELY BY THE STATE CONTROL CENTRE

Back row L–R: Jess Huff, Aimee Haywood, Joanna Wand, Katie Knight, Willow Bourke
Front row L–R: Emily Ferguson, Brooke Bailey, Alyshia Whitworth, Flick Wardlaw. Provided by AusVic Crew #1

What did we learn?

Sustains

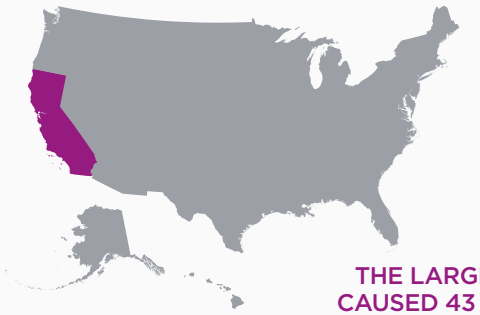
- Training provided by Californian Department of Forestry and Fire Protection (Cal Fire) was excellent and particularly valuable to deployment personnel.
- The attentive use of social media, specifically the California Deployment Facebook Group was greatly appreciated by families at home.
- Majority of personnel found that their itinerary of flights and transport was timely and well-organised. This was especially displayed when crews went through airport customs as a team.

Learning Opportunities

- The differences in fatigue management arrangements between Australia and USA was challenging for personnel.
- The entire contingent was not accommodated in the same location during the deployment and did not travel back to Australia on the same flight.
- Some documentation was duplicated during the pre-deployment phase.

Instagram post from Cal Fire describing the locations of Australian deployment personnel

READ MORE IN SECTION 3: CASE STUDIES



THE LARGE WILDFIRES CAUSED 43 FATALITIES – 41 CIVILIANS AND TWO FIREFIGHTERS – ALMOST HIGHER THAN THE PREVIOUS 10 YEARS COMBINED.

34
PERSONNEL

7
CFA

26
FFMVic

1
LIAISON OFFICER

INTERSTATE DEPLOYMENT

Coolaroo Recycling Plant Fire

The fire at SKM Recycling facility at Coolaroo on 13 July 2017 required interstate assistance, particularly to provide Compressed Air Foam Systems (CAFs). Crews from SA, Fire Rescue NSW and Australian Capital Territory (ACT) deployed assets that arrived on the night of 14 July 2017.

Compressed Air Foam Systems (CAFS) were utilised to suppress fire at SKM Recycling Plant

READ MORE IN SECTION 1: SIGNIFICANT INCIDENTS AND SECTION 3: CASE STUDIES

REQUIRED INTERSTATE ASSISTANCE

Fire and Rescue NSW (FRNSW)

10 PERSONNEL

2 BULK WATER TANKERS

1 TURBINE AIDED FIRE FIGHTING ROBOT (TAF 20)

South Australia Country Fire Service (SACFS)

9 PERSONNEL

1 BULK WATER CARRIER

1 TANKER

1 LOGISTICS VEHICLE

ACT Territory Fire and Rescue

9 PERSONNEL

1 BULK WATER CARRIER

1 TANKER

INTERSTATE DEPLOYMENT

South West Complex Fires

Victoria sought interstate assistance for the South West Complex Fires which ignited on 17 March 2017. The ignition of peat fires as a result of the original grass fires required assistance and provision of additional resources from interstate to support the current emergency response effort. Requests for Assistance were sent to Tasmanian Fire Service (TFS), Aviation Rescues Fire Fighting Service (ARFFS) and Fire Rescue New South Wales (FRNSW) which supplied the follow resources:

FRNSW
2 April – 29 April (28 days)

1
HI TRANS PUMP

1
HOSE LAYING TRAILER

8
PERSONNEL (OPERATORS)

TFS
26 March – 15 April (21 days)

1
CAFS PUMPER

3
3,000LT CFAS SUPPORT TANKERS

44
PERSONNEL (LIAISON OFFICERS, OPERATORS AND A MECHANIC)

ARFFS
30 March – 10 April (13 days)

4
ARFF TENDERS

30
PERSONNEL (LIAISON OFFICERS, OPERATORS AND A MECHANIC)

PEAT FIRES REQUIRED ASSISTANCE AND PROVISION OF ADDITIONAL RESOURCES

PERSONNEL INCLUDED LIAISON OFFICERS, OPERATORS AND MECHANICS

READ MORE IN SECTION 1: SIGNIFICANT EVENTS

xxxxxx

Assurance and Learning Activity

Operational assurance and learning activities include capturing individual observations and conducting monitoring (real time monitoring and evaluation (RTM&E), debriefing (after action reviews and formal debriefs) and reviews (targeted and ad hoc reviews).

The findings from these assurance and learning activities are all included in the data that is analysed and reported in Section Two: Insights and Lessons.

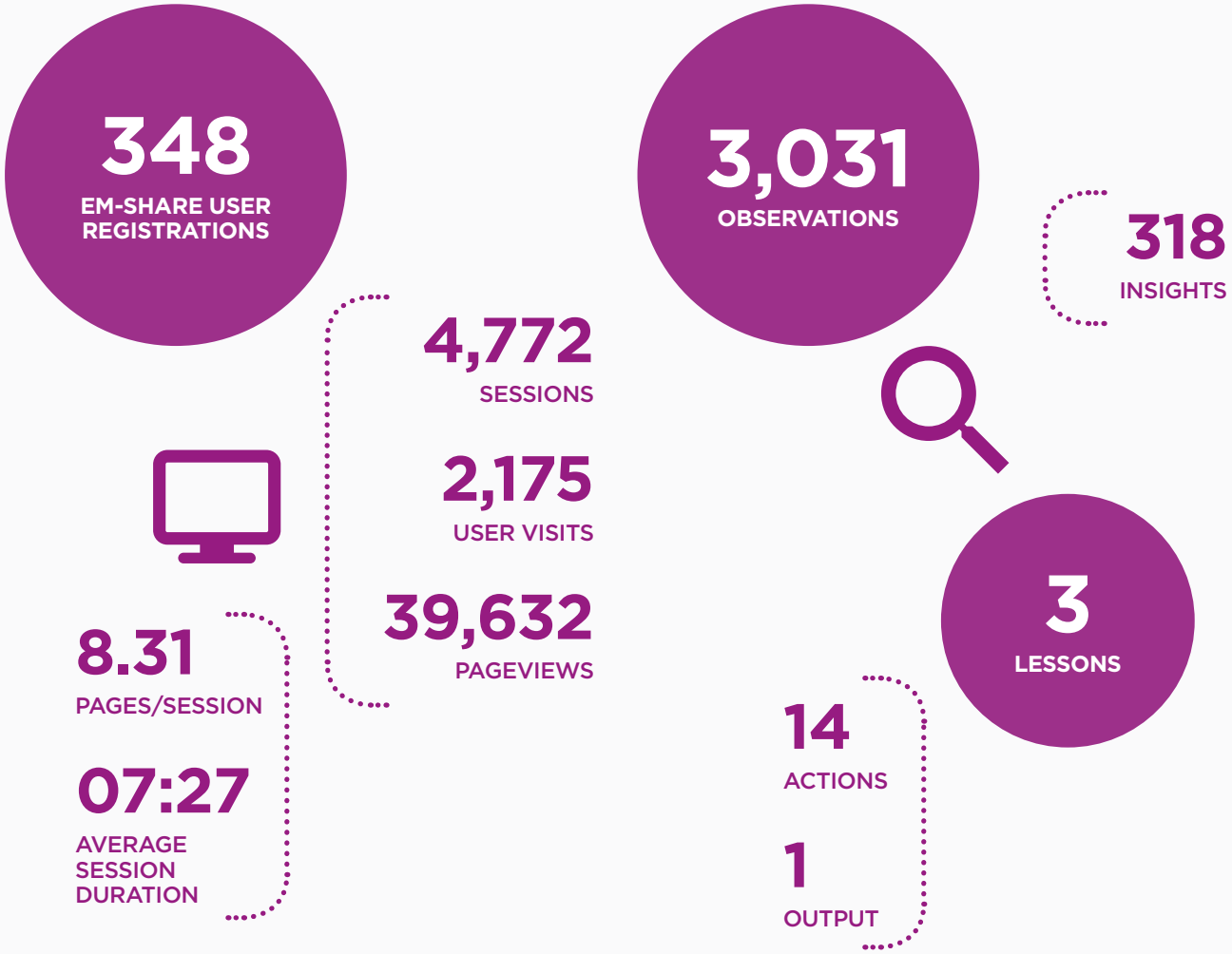
Capturing Observations

In October 2017, Victoria's lessons management IT system (EM-Share) was released to supersede the Observation Sharing Centre to assist with collecting observations and assurance and learning activity outcomes.

EM-Share also provides transparency in how personnel experiences are being utilised to inform the sector's continuous improvement using the national approach to lessons management analysis, observation, insight, lesson (OIL).

Previously using the Observation Sharing Centre around 100–150 observations and debriefing files would be submitted.

FROM THE RELEASE OF EM-SHARE ON 5 OCTOBER 2017 UNTIL 30 JUNE 2018 THE FOLLOWING WAS SUBMITTED



Monitoring

There have been a range of monitoring activities conducted by responder agencies, relief agencies, Victoria Police and Inspector-General for Emergency Management (IGEM) over the last 15 years.

Each of these processes were developed by different agencies or groups of agencies to address a particular requirement and have proven to be highly valuable in providing timely feedback to operational personnel and assurance to the Emergency Management Commissioner (EMC).

During 2016, EMV engaged the Cube Group to undertake the review of current RTPM, RTE and SEMAT processes and debrief those personnel who were involved in these processes over the 2015–16 summer season. The review identified that stakeholders of the various monitoring and evaluation processes reported uncertainty about the multiple processes, particularly given the overlapping focus areas. The review provided options for more efficient and effective RTPM and RTE with a stronger focus on multi-agency processes, coordinated data collection and more transparent processes.

In 2017 the SRT explored the future direction of RTPM, RTE and SEMAT functions across the sector to ensure processes are clearly understood, efficient, relevant and well documented. In late 2017 the new integrated program of Real Time Monitoring and Evaluation (RTM&E) was released superseding RTPM and RTE. During the 2017–18 summer period RTM&E was deployed four times:

- 2–5 December 2017 – Heavy Rain Event
- 19–20 January 2018 – State Control Centre Activation
- 17–18 March 2018 – Dandenong Incident Control Centre (ICC) and South Metropolitan Regional Control Centre (RCC) Readiness
- 22–25 March 2018 – Barwon South West Relief and Recovery.

Debriefing

Debriefing for incidents and deployments occurred throughout the year, with assistance provided by EMV and the SRT when requested. In February 2018 the SRT developed Debriefing and Lessons Management Training which covers:

- planning, facilitating, recording debriefs and managing the change/improvement outcomes,
- how debriefing fits into a broader lessons management approach, and
- how to use the National observation, insight, lesson (OIL) model for analysing data to identify and learn lessons, including how to use EM-Share.

A number of SRT representatives delivered the training to over 50 personnel from across the emergency management sector between 16 and 20 February 2018.

In early April the Emergency Management Commissioner approved the South West Fires Community and Multi-agency Debriefing Plan (the Debrief Plan). This is the first time a coordinated and comprehensive approach, supported by a dedicated multi-agency and multi-state team, has been utilised to debrief a significant/complex emergency encompassing the community and operational personnel. Extensive resourcing across Victorian and interstate agencies supported the debriefing program. This included 21 personnel across eight agencies within the debriefing team and 20 personnel across 11 agencies represented on the Debriefing Coordination Group. This included personnel that had attended the debriefing training in February as an opportunity to further build capability for debriefing across the sector.

To support analysing insights and identifying lessons, as per the Debrief Plan, the national lessons management process of observation, insights and lessons (OIL) was utilised to analyse the data collected.

The SRT also assisted VICSES with debriefing VICSES units, incident and regional tiers after the Heavy Rain Event in December 2017.

The South West Fires Debrief plan comprised of multi-agency and community debriefing in the months following the incident

READ MORE IN SECTION 1: SIGNIFICANT EVENTS

Reviews

The following internal and external reviews were also undertaken throughout the 2017–18 financial year including:

- Coordinated Operational Reviews of the Coolaroo Fire (July 2017) were conducted including a review conducted by IGEM into the response to the July 2017 Coolaroo fire which examined the effectiveness of emergency management improvements introduced following the Hazelwood mine fire.
- An evaluation of LEARNtember 2017 was conducted by EMV.
- VICSES conducted post event research into the public information and warnings during the Heavy Rain Event 1–3 December 2017.

Further work is being undertaken by the SRT to support the sector with reviewing processes including the development of resources, doctrine and training.

SCC Assurance and Learning Unit

The Assurance and Learning Unit within the State Control Centre (SCC) supports the EMC, State Response Controller and State Relief and Recovery Manager in maintaining an overview of state wide assurance and learning activities that are undertaken in relation to emergency events. The Unit is positioned within the AIIMS structure building on the concept of the investigation unit, to support and promote the assurance and learning mechanisms that exist throughout the emergency management system before, during and after emergency events. The Unit also provides strategic advice to decision makers, delivers assistance with assurance and learning processes and identifies emerging opportunities for capturing and sharing lessons.

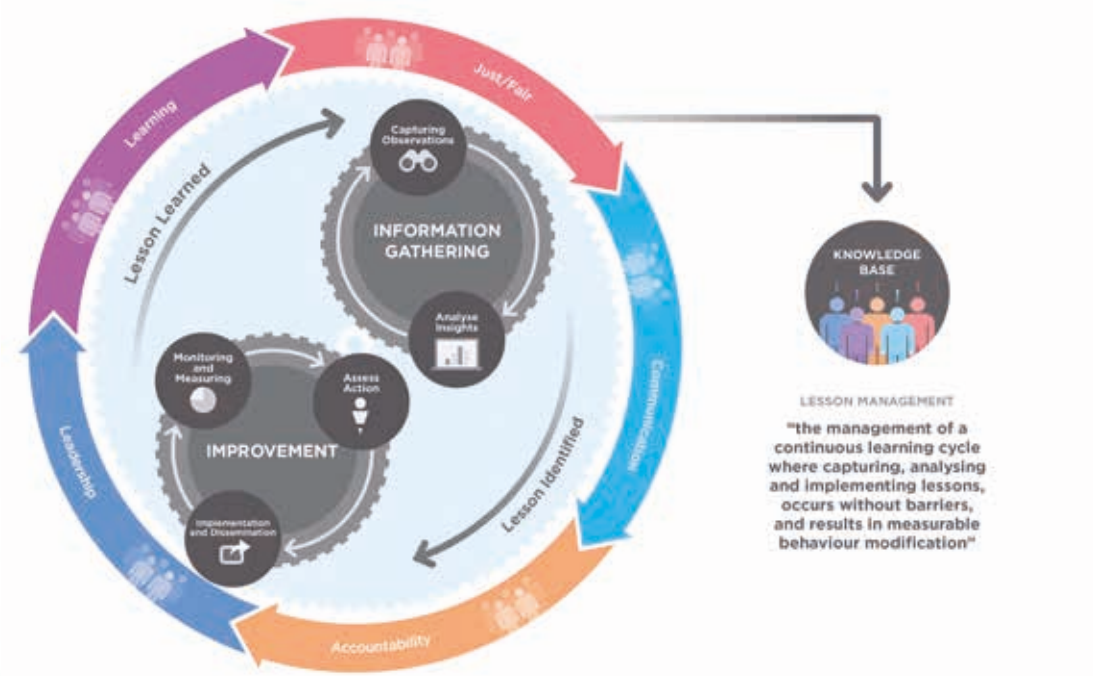
For the first time since it was established at the State Control Centre in 2015, the Assurance and Learning Unit was positioned at the Barwon South West Regional Control Centre in Geelong and Incident Control Centre in Warrnambool during the South West Fires. Assurance and Learning Officers were deployed to support the incident and region with capturing learnings from the ongoing fires in real time and support the development of a debrief plan.

The Assurance and Learning Unit monitor EM-Share in real time for trends, supports the SCC with capturing observations and conducting hot debriefs, deploys RTM&E and supports and advises on planning for debriefing and reviews. The Assurance and Learning Unit is rostered throughout the operational period and is activated on Tier 2 and Tier 3 days.

SECTION 2: Themes and Insights

Utilising the lessons management life cycle, this section is based on outcomes submitted into EM-Share from assurance and learning activities (individual observations, debriefing, monitoring and reviewing). The data was then analysed by the State Review Team (SRT) for state level/multi-agency insights and lessons against the state themes to highlight what is working well and what could be improved as part of ongoing continuous improvement.

Figure 28: Lessons Management Life Cycle



Contents

What we mean by

Trend

A pattern in the learnings being captured from assurance and learning activities across multiple instances (which can include geographical areas, agencies and/or events). This may comprise of similar, different or changing learnings that may require further analysis and validation.

State themes

The Victorian state themes have been identified over the past three Operational Reviews based on the trends emerging from assurance and learning outcomes received by the State Review Team (SRT). An update on the themes are provided each year to identify how the emergency management sector is learning and changing, particularly the areas that are working well and areas that could be improved. As new trends emerge these are analysed for state wide/multi-agency significance and added, and as themes become less prominent they are removed.

Observation

A record of a noteworthy fact or occurrence as seen during an activity or operation by an individual; it is the evidence or data collected – that is, what is seen or discovered (observed) and can be relating to areas to sustain or improve.

Insight

A deduction drawn from the evidence collected (observations), which needs to be further considered. Insights are usually based on at least three observations from different individuals. Insights provide guidance for future analysis and potential action. Insights can relate to areas to sustain or improve, and can contribute to reinforcing positive behaviour or changing practices.

Lesson

Lessons are knowledge or understanding gained by experience. The experience may be an example of a good practice or an opportunity for improvement. A lesson is classified as identified usually based on at least three insights and includes a viable course of action to either sustain a positive action or address an area for improvement.

Lessons Management

Identifying Lessons

Capturing Observations

Observations were collected from all tiers of emergency management through the following assurance and learning activities:

- Individual observations – Individuals submitted their observations through EM-Share.
- Debriefing – Formal debriefs and After Action Reviews (AARs) gathered observations at the end of a shift, tour of duty, incident, campaign or season.
- Monitoring – Deployments of Real Time Monitoring and Evaluation (RTM&E) provided real time feedback to operational personnel and captured observations and insights in real time.
- Reviews – A number of ad hoc reviews were undertaken, which identified insights from specific incidents.

Analysing for Trends

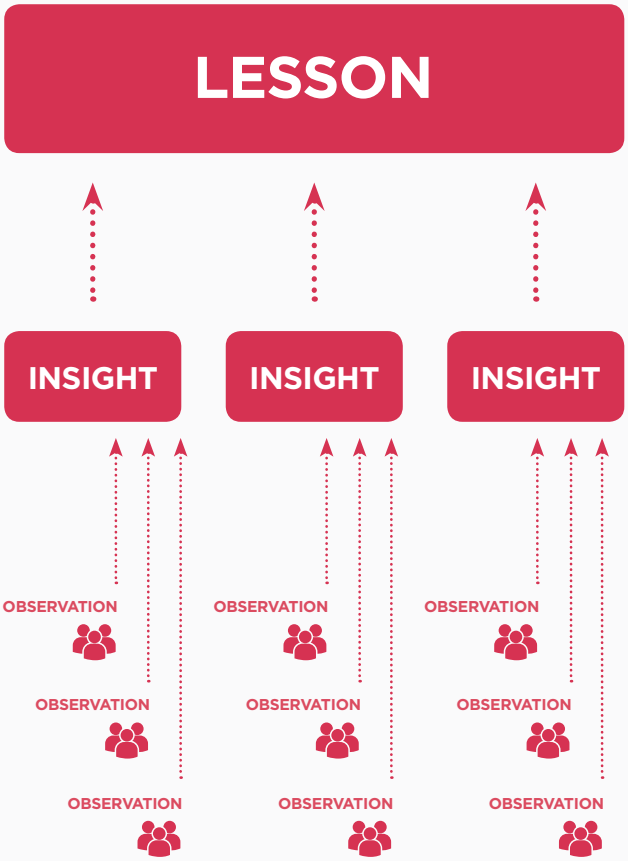
Local teams and governance groups (e.g. crews, Incident Management Teams, (IMTs), Emergency Management Teams (EMTs), Regional Control Teams (RCTs)) analysed the data they collected to identify locally relevant insights, lessons and actions required to contribute to continuous improvement. These actions are locally coordinated, implemented, monitored and reported. In some cases, this led to the development of a case study that is included in Section 3.

In addition to local analysis and action, the SRT collated the information from all tiers of emergency management, and analysed this for state level/multi-agency trends to identify good practice, changes and improvements to be considered for implementation.

Insights were generally based on multiple observations relating to a theme, and were usually collected from more than one incident/assurance and learning activity, see figure 29. This analysis provided insights into aspects that went well and areas for potential improvement across the state themes.

READ MORE IN SECTION 3: CASE STUDIES

Figure 29: The observation, insight and lesson methodology



Learning Lessons

Assessing for Action

Departments, agencies, teams and committees are encouraged to utilise the information provided in the Operational Review to inform continuous improvement activities.

The insights and lessons included in this report form part of an ongoing cycle of learning and improvement. This allows continuous assurance and learning activities and implementation processes to occur throughout the year, with insights incorporated into emergency management across the sector.

Implementing and Monitoring

The SRT support the implementation of change and improvement by developing and disseminating learning products within the EM-COP Library (Reviews-Lessons>Learning Products). Some learning products already produced and disseminated include the case studies included in Section 3.

Information included in this report has been shared with subject matter experts, through organisational networks, and with various committees. Where appropriate, these themes have also been included in annual refresher briefings and doctrine updates.

READ MORE IN SECTION 3: CASE STUDIES

State Theme Insights

Why are these important?

The state theme insights provide the trends from relevant insights captured through EM-Share across multiple agencies and multiple events. These themes and insights should be considered when updating doctrine, training, exercising and conducting any debriefs, monitoring and reviewing activities. The Where can I get more information? Sections provide further detail and information about the work being undertaken to support continuous improvement of these themes and reference case studies that include learnings relating to the themes from actual events in the financial year.

Some of the themes have less information than others, and this is because it is based on the information provided to the State Review Team through individual observations submitted into EM-Share and the outcomes from assurance and learning activities. All emergency management personnel are encouraged to submit observations and files into EM-Share about their experiences so these can inform the operational review, provide transparency across agencies on areas working well and for improvement which then enable ongoing continuous improvement and sharing of experiences and learnings across the sector.

Aviation

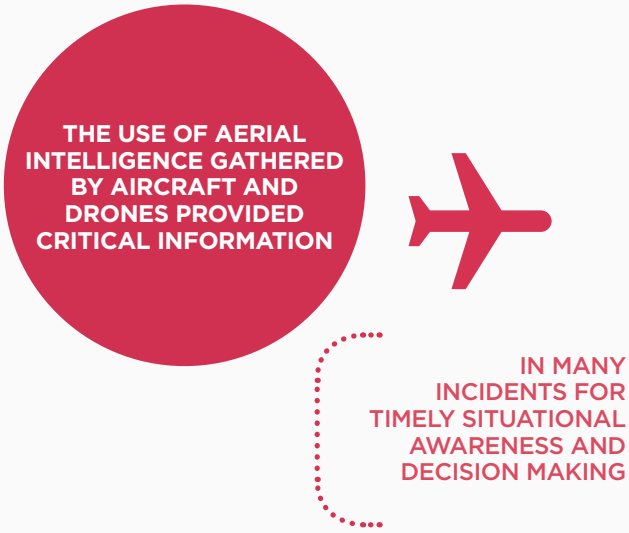
EM-Share Insights: 1

What worked well?

The use of aerial intelligence gathered by aircraft and drones provided critical information in many incidents for timely situational awareness and decision making. This information also supported community warnings and information.

Where can I get more information?

- Section 1 > Readiness > Aviation
- Section 3
  - Amboyne Monument Track Fire Case Study
  - Cheltenham Park Scrub Fire Case Study
  - Portland High Angle Rescue Case Study
  - Timbarra-Sunny Point Bushfire Case Study



Capability and Resource Management

EM-Share Insights: 93

What worked well?

- The use of non-typical surge capability and specialist functions, both equipment and personnel was effective and resulted in enhanced intelligence and greater capacity for agencies to respond during events.
- The coordination of mentoring and the process to activate personnel requiring mentoring was highly valuable and supported capacity building in operational roles.
- Pre-established relationships and continuity of team members between agencies and specific personnel, often enabled effective communication and decision making as personnel already knew each other and how to make contact efficiently. This strongly contributed to timely and collaborative emergency management during events.
- When collaboration and regular communication was occurring between Region and State, particularly with regards to resource sharing, there was improved access to resources and more effective fatigue management.
- Observations identified that some staff had breaks in time between their training and being positioned into their operational roles. Those who had completed a refresher or pre-season practice session saw the benefit of reinforcing role expectations and training prior to their shift and resulted in a smoother transition into operational shifts with less time required to reacquaint themselves into systems and processes.

What could be improved?

- Managing expectations between business as usual (BAU) and operational roles was an ongoing challenge for operational personnel, this was especially evident during emergency events of long duration when BAU work was increasing while deployed/activated.
- At times, there was a shortage of experienced staff to fill rostered shifts particularly when operational rosters where not yet in place. This was often due to the ability of some personnel to maintain expertise in the absence of long duration incidents and at times personnel were not fulfilling rostered shifts. This impacted personnel through having to fill more than expected shifts and contributed to fatigue management and BAU expectation challenges.
- Management of fatigue across agencies is at times challenging particularly as a result of inconsistencies in shift structures, differing agreements and staff understanding of the arrangements. This resulted in challenges with logistical arrangements, handovers and continuity of roles.
- There were times where there was inconsistent understanding of roles between individual and functional unit responsibilities resulting in potential lack of clarity, inefficiencies in information sharing and duplication of effect.
- Personnel understanding and utilisation of data management and information sharing IT systems was inconsistent, potentially as a result of differing levels of training and experience with the systems. In some cases personnel were experiencing issues accessing and using systems including EM-COP, EM-Drive and State Resource Request System (SRRS).

Where can I get more information?

- Section 1 > Readiness > Capability Development
- Section 3
  - Cheltenham Park Scrub Fire Case Study
  - Epidemic Thunderstorm Asthma Case Study
  - Fryerstown Antique Fair Case Study
  - Learning from Smoke Management Case Study

Community Engagement and Connection

EM-Share Insights: 58

What worked well?

- There were a range of engagement methods used effectively during incidents such as FaceBook pages, community noticeboards, variable messaging signs and door knocks. This was effective for reaching a large audience and allowing for multiple channels of information sources for the community.
- Observations indicate a number of community members felt emergency management agencies, as well as volunteer organisations, greatly assisted with their recovery from emergency events through case support and referrals, and timely provision of services.

What could be improved?

- There were instances where there was communication challenges with emergency messaging and community information via the various applications, due to telecommunication outages and black spots, potentially impacting intelligence gathering and decision making.
- Observations identified occasions where a lack of/ breakdown in communication flow and information sharing, across emergency management levels and across agencies, may have resulted in lack of clarity in roles and responsibilities and the ability to make informed decisions.
- Some challenges with public information and warnings were experienced, potentially due to procedures being followed inconsistently, procedures lacking currency and varied capability and understanding of systems and business rules within the operational functional units.

Where can I get more information?

- Section 1 > Readiness > Public Information and Warnings
- Section 3
  - Cheltenham Park Scrub Fire Case Study
  - Epidemic Thunderstorm Asthma Case Study
  - Victorian Avalanche Warnings Case Study

Emergency Management Teams (EMTs)

EM-Share Insights: 31

What worked well?

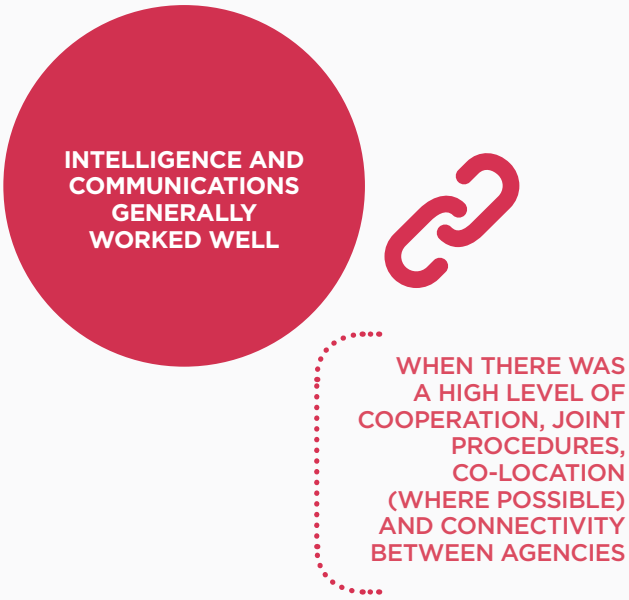
- Emergency management personnel noted that the emergency management arrangements allowed for a standardised approach to decision making when personnel may not have had pre-existing personnel relationships, particularly when deployed to a different geographic area or operational centre.
- Observations suggest that emergency management and particularly functions such as intelligence and communications generally worked well when there was a high level of cooperation, joint procedures, co-location (where possible) and connectivity between agencies.
- When effective local relationships were established and personnel were present in operational facilities (i.e. emergency management liaison officers) this greatly assisted with communication, intelligence sharing and supporting the response.

What could be improved?

- There were times when emergency management IT systems were not being used consistently by operational personnel which resulted in challenges with sharing information and intelligence in a timely manner.
- Observations indicate that there were occasions when inconsistent use and interpretation of data and intelligence potentially impacted effective decision making.
- When agencies whose primary focus is not emergency management, and are integral to the event, were not fully integrated into emergency management operations, there were times when information sharing, intelligence gathering and utilisation to inform decisions was challenging.

Where can I get more information?

- Section 1 > Operational Activity > Significant Incidents
- Section 3
  - Doncaster Balcony Collapse: Transition to Recovery Case Study
  - Mt Cottrell – Dohertys Road Grassfire Case Study
  - Portland High Angle Rescue Case Study
  - Slocombes Cave Reserve High Angle Rescue Case Study



Evacuation

EM-Share Insights: 10

What worked well?

- Observations indicate that evacuation was most streamlined when implemented in communities who had plans in place and were closely engaged with local emergency agencies.
- The assistance of emergency management organisations was greatly appreciated by communities during planning and implementation of evacuation, particularly when the community were prepared for the evacuation through timely messaging.

What could be improved?

It has been noted that when plans were enacted for evacuation there were potential inconsistencies by the community in the level of planning, understanding and application of the information and warnings received.

Where can I get more information?

- Section 1 > Operational Activity > Significant Incidents
- Section 3
  - California Deployment Case Study
  - Cheltenham Park Scrub Fire Case Study
  - Doncaster Balcony Collapse: Transition to Recovery Case Study

Interstate and International Deployments

EM-Share Insights: 0

Where can I get more information?

- Section 1 > Interstate/International Deployment Summary
- Section 3 – California Deployment Case Study

Managing Concurrent Emergencies

EM-Share Insights: 9

What worked well?

- Community warnings and information during concurrent emergencies were generally effective through a range of communication platforms. In some areas the warnings were adequate to allow the community members to initiate their personal plans, or those without plans were able to begin to act based upon advice being provided.
- Observations indicate that arrangements to support the management of multiple hazards and consequences were generally effective, and the sector could respond to changing demands as required. This was supported by ongoing consideration of escalation triggers for various hazards.

What could be improved?

- The ability to provide timely and accurate community information and warnings during concurrent emergencies was at times challenging due to terrain, time of day or weather conditions which was further compounded by sparse or conflicting information.
- Observations indicate that command and control arrangements are at times unclear due to inconsistencies in documented definitions, process and procedures in the context of managing concurrent emergencies across agencies which has at times inhibited information flow.

Where can I get more information?

- Section 1 > Operational Activity > Significant Incidents
- Section 3 – Learning from Smoke Management Case Study

THE ABILITY TO PROVIDE TIMELY AND ACCURATE COMMUNITY INFORMATION AND WARNINGS DURING CONCURRENT EMERGENCIES WAS AT TIMES CHALLENGING

Regional Control

EM-Share Insights: 8

What worked well?

- When there were established processes for information sharing between Incident and Region, a common understanding of the emergency enhanced efficient and effective decision making.
- In many instances Regional Control Teams (RCTs) were staffed by well experienced personnel who had worked together previously, enabling strong relationships and therefore effective coordination.

What could be improved?

- Operational structures to support effective decision making was at times impacted by personal relationships overriding the structure and potential resourcing challenges with the Intelligence function.
- Some gaps in doctrine were identified and observations indicate some documentation, templates and plans are difficult to understand and apply, impacting the ability to ensure effective decision making.

Where can I get more information?

- Section 1 > Operational Activity > Significant Incidents
- Section 3
  - Doncaster Balcony Collapse: Transition to Recovery Case Study
  - Learning from Smoke Management Case Study

Safety and Fatigue Management

EM-Share Insights: 34

What worked well?

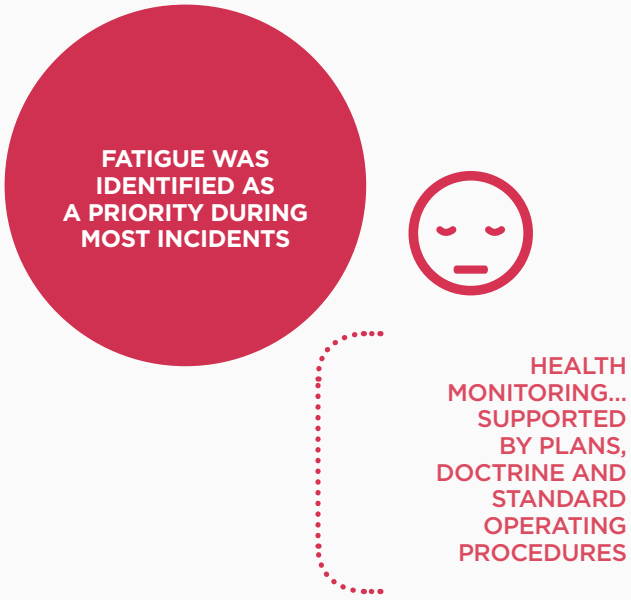
- Fatigue was identified as a priority during most incidents and a shared responsibility for fatigue management (organisations, supervisors and team members) was promoted and supported through doctrine and communication resulting in a clear understanding by majority of personnel.
- Health monitoring of emergency management personnel and the community was underpinned and supported by plans, doctrine and standard operating procedures, and observations indicate that it has significantly improved in comparison to previous years and was often highlighted as a priority across events for emergency management personnel and community.
- Observations indicate that the quality of air monitoring data has significantly improved and made it easier to interpret by agencies which supported evidence based decision making.

What could be improved?

- On some occasions it was reported that fatigue management was a challenge due to protracted events and managing resources across response and recovery. Tracking hours and monitoring fatigue for contractors and volunteers was a particular challenge. A variety of strategies were implemented at both the Incident and Regional Control levels, as well as within participating agencies to manage fatigue and ensure the safety of personnel.
- Observations indicate that there were challenges with staffing the Safety Officer function impacting the timely, tailored and targeted safety messaging during incidents. The multiple role accreditation requirements to be a certified Safety Officer likely impacts resourcing of the role at the incident and regional control centre levels.

Where can I get more information?

- Section 1 > Operational Activity > Significant Incidents
- Section 3
  - Anti-Theft Fog Machines Case Study
  - Doncaster Balcony Collapse: Transition to Recovery Case Study
  - Learning from Smoke Management Case Study
  - Portland High Angle Rescue Case Study



Smoke Management

EM-Share Insights: 0

Where can I get more information?

- Section 1 > Operational Activity > Significant Incidents
- Section 3 – Learning from Smoke Management Case Study

Transfer of Control

EM-Share Insights: 0

Where can I get more information?

- Section 1 > Operational Activity > Significant Incidents
- Section 3
  - Doncaster Balcony Collapse: Transition to Recovery Case Study

Traffic Management Points

EM-Share Insights: 10

What worked well?

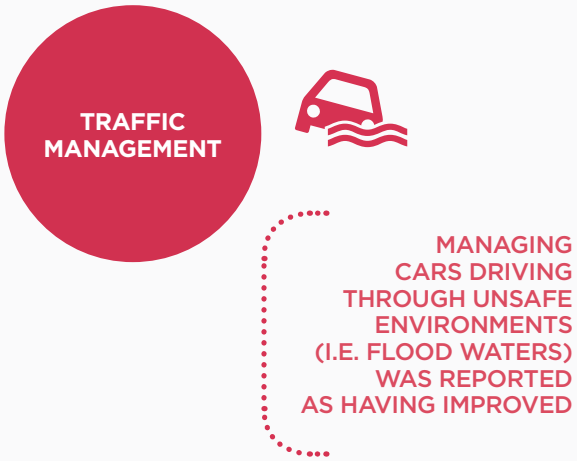
- Traffic management and specifically managing cars driving through unsafe environments (i.e. flood waters) was reported as having improved since the previous season.
- In instances where pre-determined traffic management locations were established with signage positioned and arrangements in place, agencies were able to provide more effective and timely traffic management.

What could be improved?

- Observations indicate that there were times when the ability to acquire intelligence was impacted due to inconsistencies in communication and engagement between operational facilities, relevant agencies and councils regarding road closures and openings.
- A number of municipalities experienced times when they did not have access to enough resources/signs resulting in the inability to support pre-planning and delays in physically closing roads.

Where can I get more information?

- Section 1 > Operational Activity > Significant Incidents
- Section 3
  - Timbarra-Sunny Point Bushfire Case Study
  - Truck Tipper Incident Case Study



Relief and Recovery
(formally Transition to Recovery)

EM-Share Insights: 29

What worked well?

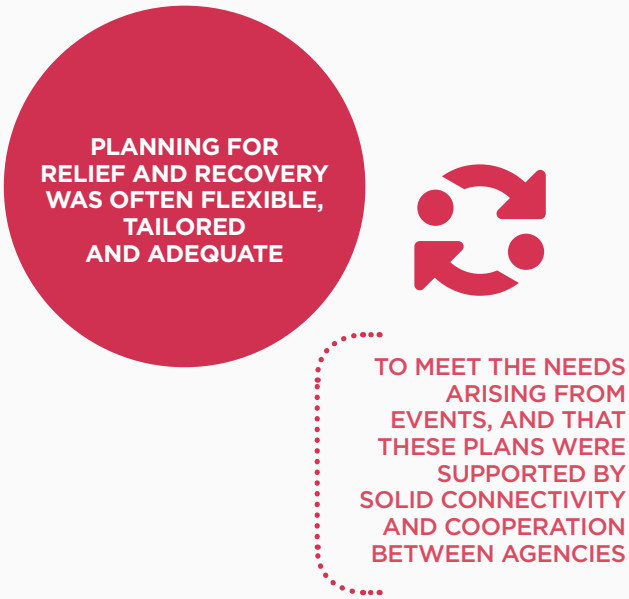
- Observations indicate that when lessons from transitioning to recovery in previous incidents were applied during subsequent/ similar events this assisted with improved operations.
- It was noted that there is a strong understanding of the Relief and Recovery governance arrangements through the establishment of recovery environments, with a willingness to adapt the governance structure to meet the needs of the community.
- Observations indicate that planning for Relief and Recovery was often flexible, tailored and adequate to meet the needs arising from events, and that these plans were supported by solid connectivity and cooperation between agencies, particularly when recovery was integrated early.
- It was demonstrated through communication and doctrine that community-centred recovery was a principle which emergency management agencies supported and encouraged resulting in early consideration and activation of relief and recovery activities.

What could be improved?

- There were occasions when discrepancies in relief centre activation, naming and locations occurred which resulted in potential confusion within the community.
- Observations indicate that there were times when there was limited resourcing in relief and recovery roles, at incident, region and state, particularly for long duration major emergency events impacting personnel BAU expectations and ability to manage fatigue.
- Challenges were noted around the coordination and distribution of material and financial donations including the use of unofficial arrangements, timeliness, decision making and identification of recipients resulting in occasions of confusion within the community.
- Observations indicate that not all affected community members will request assistance, and a significant challenge for the emergency management sector and the community is identifying and assisting these community members to recognise what they need and ensure they are connected with appropriate services.

Where can I get more information?

- Section 1 > Readiness > Relief and Recovery
- Section 3
  - Doncaster Balcony Collapse: Transition to Recovery Case Study



Lessons

Background

There are currently arrangements in place (Operational Assurance and Learning Guidelines), which details how the SRT and State Coordination Team will manage state level/multi-agency trends based on assurance and learning outcomes within EM-Share to ensure lessons are identified and learned. In November 2017, Victoria's first state level/multi-agency lesson identified was released to the sector.

These lessons can be a reference for all emergency management personnel to consider when briefing, exercising, training, updating doctrine and conducting any continuous improvement. These two lessons will be the focus of the SRT and the Assurance and Learning Unit over the next 12–18 months, monitoring the sector for evidence of change through monitoring and measuring activities.

Emergency Management Teams (EMTs)

This Lesson was identified in the following context:

The SRT has identified a state level/multi-agency trend across storm and flood incidents over the past 18 months relating to engagement with agencies whose primary focus is not emergency management.

This lesson was based on 6 insights across 3+ events and 27 observations.

What can I do?

1. Think about this lesson in the context of your local risk and critical infrastructure.
2. Ensure you communicate and engage with representatives on your committees/teams.
3. Identify and engage before, during and after emergencies with others engaging with non-emergency management agencies within your municipality/region to ensure appropriate stakeholders are engaged and connections are established.
4. Consider the case studies within section 3 of this report.

NEW: Intelligence

This Lesson was identified in the following context:

The SRT has identified a state level/multi-agency trend across events over the past 6 months relating to IT systems functionality and personnel capability to utilise the systems.

INFORMATION FLOW AND TIMELY INTELLIGENCE IS SUPPORTED WHEN EMERGENCY MANAGEMENT SYSTEMS SUCH AS EM-DRIVE AND EM-COP ARE UTILISED TO THEIR FULL POTENTIAL AND FUNCTION EFFECTIVELY

PERSONNEL WOULD BENEFIT FROM ONGOING SUPPORT AND CAPABILITY BUILDING FOR AN IMPROVED USER EXPERIENCE

This lesson was based on 4 insights across 5+ events and 27 observations

What can I do?

1. Understand how to get IT system support, especially after hours.
2. Build emergency management IT system refresher sessions into ongoing planning and preparation.
3. Use emergency management systems during exercising and functional unit group sessions.
4. Establish the intelligence function at incident and regional control centres to ensure systems are utilised and decisions are supported by reliable information.
5. Complete the 'Fundamentals of Emergency Management', and 'EM-COP' online training modules through your agency's learning management system.

SECTION 3: Case Studies

This section provides a selection of case studies that were developed over the financial year, and demonstrate the variety of incidents and events managed by Victorian emergency management personnel. Where relevant and possible, case studies were developed as soon as practicable after an incident and event to capture learnings on what went well and what could be improved.

Learnings from large scale or complex incidents can be ongoing for months or even years following an incident. An example of this is the epidemic thunderstorm asthma event case study, that refers to learnings from implementing recommendations from the Inspector-General for Emergency Management's (IGEMs) review of response to the thunderstorm asthma event of 21–22 November 2016.

Where case studies were originally published elsewhere, the content has been replicated and the source document has been referenced. A comprehensive set of case studies is available on the Emergency Management – Common

Contents

Aerial view of smoking peat during the South West Complex Fires

The evolution of Learning and Smoke Management

In the time since Hazelwood Mine Fire in 2014, Victoria has experienced significant smoke events with long lasting effects annually. The learnings from these unfortunate events have created the opportunity to evolve the combined capability and capacity of agencies to better handle smoke emergencies of this nature and minimise community exposure.

Learnings from Significant Events

2017–18 was another challenging year for emergency management, particularly as a result of the significant and complex South West Fires (see section one for more information) generating major disruption and impact upon the communities involved. The subsequent peat fires burnt for months afterward and posed potential health risks from smoke in the affected areas. Over the past five years, smoke events such as this have led to extensive learning and change in how smoke events are managed and Victoria has also significantly progressed the implementation of lessons management across the sector. This case study explores the evolution of learning over the past year through the lens of significant or prolonged events that generate smoke or other emissions.

Hazelwood Mine Fire

The Hazelwood Mine Fire on 7 February 2014 was ignited by embers spotting into the site from nearby bushfires. The incident remains to be Australia's largest and longest burning mine fire that posed a major complex fire and a serious public health emergency. The fire was extinguished after 45 consecutive days and required over 200 resources and 7,000 personnel to manage. The subsequent Inquiry acknowledged that agencies managed the incident to a high standard and there were a number of recommendations to inform continuous improvement. A range of policy documents, standards (carbon monoxide and particulate matter – PM2.5), joint standard operating procedures and communication tools to help the community prepare

for and respond to smoke events were developed and released following this incident including Victoria's first State Smoke Framework in July 2015. The Framework was further revised in September 2015 and November 2016.

Many of the recommendations from the Hazelwood Mine Fire Inquiry related to challenges associated with integration and coordination of all agencies involved in responding to a major emergency of this nature. This was particularly important in relation to the control and coordination of emergency events that generate smoke or other emissions, in particular where carbon monoxide and particulate matter may be the primary health hazard. Closely linked to this was Victoria's limited Compressed Air Foam Capability, which was critical to suppressing smoke emissions on site. It was also identified that a formal arrangement between firefighting agencies and the Environment Protection Authority Victoria (EPA) should be agreed, to further support EPA's capability to deploy air monitoring equipment to inform recommended precautionary actions to protect public health during smoke events. Another key outcome of the Inquiry was the establishment of the State Smoke Working group to support the Interdepartmental Committee (IDC) overseeing the Inquiry's Implementation and Monitoring Plan.

At this stage Victoria had experienced a number of significant fire events and this had further highlighted the importance of implementing a consistent approach to lessons management. It was evident that challenges with learning included:

- 'Black holes' existing where personnel felt they contributed to monitoring, debriefing and reviews but were unsure what impact their contribution was having,
- Silos of knowledge transfer were apparent between those involved in the event and inconsistent ways of sharing across agencies and the sector,
- Lack of evidence of change and how learnings were being embedded to inform continuous improvement, and
- There was a risk of losing engagement of learning champions across the sector if the 'black holes' couldn't be resolved.

To assist with the challenges with learning, a team dedicated to lessons management was established within Emergency Management Victoria (EMV) to support the sector with establishing a framework for lessons management and coordinating a multi-agency approach to learning.

45
CONSECUTIVE DAYS TAKEN TO EXTINGUISH THE FIRE

200
RESOURCES REQUIRED

7,000
PERSONNEL TO MANAGE

Somerton Tip Fire

In November 2015 the Somerton Tip Fire occurred as a result of 10,000m^3 of illegally stockpiled building waste in Somerton. The blaze required 100 firefighters and took 13 days to extinguish. This was the first fire of this scale and complexity since the release of the State Smoke Framework in July 2015 and subsequent revision in September the same year. It was considered an important opportunity to assess the application of the documents that support the State Smoke Framework, namely standards (carbon monoxide and particulate matter) and joint standard operating procedures (JSOPs) which were activated at the beginning of the fire.

Amongst the learnings Somerton Tip Fire generated, the subsequent review noted that the State Smoke Framework greatly improved cooperation and common understanding throughout the response. During the Somerton event a Real Time Performance Monitoring Team was deployed eight hours into the incident to provide real time feedback, capture what was working well and opportunities for improvement and therefore assist with real time learning.

Real Time Performance Monitoring – RTPM (now Real Time Monitoring and Evaluation – RTM&E) provides the Emergency Management Commissioner and the State Coordination Team with confidence in incident and/or regional management by monitoring activities and providing rapid constructive feedback to the personnel involved to support the identification and implementation of learnings where appropriate; and the ability to escalate any critical issues that need to be addressed through the line of control.

The Emergency Management Commissioner requested that EMV engage an independent consultant to review the operational application of the State Smoke Framework to the Somerton Tip Fire. An analysis of five supporting documents that constitute the State Smoke Framework identified 112 requirements of emergency management personnel. Of the 112 requirements for full implementation/application of the State Smoke Framework and its supporting documents, 88 were met in full and only two were not. The remaining requirements were either unknown, outside the control of the emergency and support services or were not applicable to the event.

The Somerton Tip Fire both directly and indirectly resulted in a number of continuous improvement activities. Firstly, the three JSOPs covering incident air monitoring for community health, managing significant community exposures to fine particles and carbon monoxide in response to smoke events were reviewed. Secondly, a multi-agency and industry exercise was conducted in October 2015 to assess the preparation for and response to a major incident in the Latrobe Valley in accordance with local plans and arrangements. Thirdly, the State Review Team (SRT), a group of passionate people who saw the benefit of learning together, was formalised within Victoria's operational committee structures. A terms of reference was established and the SRT now has representation from 17 agencies across the sector. The EM-LEARN Lessons Management Framework was also released in 2015, the first piece of policy material for multi-agency lessons management.

17

AGENCIES ACROSS THE SECTOR FORMED A TERMS OF REFERENCE

AS A RESULT OF

A GROUP OF PASSIONATE PEOPLE WHO SAW THE BENEFIT OF LEARNING TOGETHER

Broadmeadows Tyre Fire

In January 2016 the Metropolitan Fire Brigade (MFB) responded to a tyre stockpile fire in densely-populated Melbourne suburb of Broadmeadows. The incident quickly gained immense media and (including social media) attention due to the plume of black smoke cast over northern suburbs of Melbourne. The broader public health emergency was managed by 10 agencies who produced timely, relevant messages for the community throughout the four days of smoke event. At the scene the Incident Controller quickly implemented an Incident Management Team incorporating learnings from the 2014 Hazelwood Mine Coal Fire and the 2015 Somerton Tip Fire. This had clearly improved in metropolitan Melbourne for an event of this scale.

During 2015/16 RTPM as well as the relief coordination program of Real Time Evaluation (RTE) were deployed a number of times for various events. RTPM was again deployed during this event to capture and provide feedback to support real time learning in the early stages of the incident. The number of RTPM and RTE deployments in 2015/16 provided an opportunity to explore the similarities, differences and potential benefits and challenges if the programs were to merge. The SRT initiated an independent review into real time learning processes and recommended that the real time programs should be consolidated into a single process.

Multi-agency debriefing occurred and a number of internal agency reviews were conducted as a result of the Broadmeadows Tyre Fire. This was focused particularly on public information, air monitoring and how new and improved processes and procedures had been applied during this event.

During 2016, learnings from the Broadmeadows tyre fire and previous smoke related events were incorporated into version three of the State Smoke Framework to reflect a more strategic approach than versions one and two. Version three of the State Smoke Framework was published on EMV's website in November 2016.

In 2017 the Real Time Monitoring and Evaluation (RTM&E) program was revised bringing together both RTPM and the relief coordination program of Real Time Evaluation.

The Emergency Management Operational Review was also being utilised to share learnings from these smoke related events. The Operational Review was the next iteration in sharing operational learnings after previously having a fire season focus. The SRT supported the expansion of the scope which now includes an overview of the emergencies experienced during the financial year, case studies and themes and insights identified during debriefs, reviews and monitoring. The 2015/16 edition included a case study on the Somerton and Broadmeadows fire events.

The Coolaroo Fire ignited in July 2017 and burned approximately 30,000 tonnes of recycling material over 21 days. It attracted significant media attention and community angst, particularly amongst those who live in close proximity to the site who have experienced smoke and other perceived toxins emanating from the site over previous years. The Coolaroo Fire provided the opportunity to test new state air quality monitoring and smoke plume modelling arrangements, including the increased roles and responsibilities now assigned to EPA.

The decision to evacuate local residents was based on the assessment of air quality in the community and in homes, plume modelling forecast, and visibility assessment, rather than the air quality reaching pre-defined trigger levels for fine particles. The ability to make this decision outside of the trigger levels and remove the community from the risk of smoke was consistently noted as the right decision by stakeholders from DHHS, Country Fire Authority (CFA), EPA, Department of Environment, Land, Water and Planning (DELWP), EMV and MFB.

The Emergency Management Commissioner in consultation with MFB's Chief Officer and State Control Team, requested multiple operational reviews into the Coolaroo Fire including:

1. Incident narrative led by EMV to document a shared whole-of-government understanding of the key incident milestones and decisions in a short summary.
2. Operational debriefs led by agencies involved at the fire to explore the response, relief and early recovery of the Coolaroo Fire through the standard debriefing processes at the incident, region and state tiers.
3. Public information review led by EMV to explore the public information during the Coolaroo Fire, particularly considering the factors that contribute to the ability to issue timely, relevant and tailored information to the community.

On 15 August 2017, the Victorian Government requested the Inspector-General for Emergency Management (IGEM) to conduct a review of the Coolaroo Fire. IGEM's review presented an opportunity to provide assurance to government and the community that the lessons from past emergencies, such as the 2014 Hazelwood Coal Mine Fire, have been turned into sustainable improvements. The IGEM report was published in December 2017.

As a result of these continuous improvement activities and the implementation of lessons management across the state;

1. Joint Standard Operating Procedures relating to incident air monitoring for community health and management of significant community exposures to fine particulate matter within the smoke were reviewed.
2. The Real Time Monitoring and Evaluation (RTM&E) program doctrine was released to support the new integrated process. Personnel were trained to build a pool for potential deployments and during the 2017–18 financial year the program has been deployed four times.
3. EM-Share, Victoria's lessons management IT system was released to support the capture, analysis and dissemination of learnings using the national lessons management approach to identifying and learning lessons.
4. A process to identify and learn state level/ multi-agency lessons was established and utilised to identify Victoria's first state wide/ multi-agency lesson in November 2017 using this coordinated process. This was the next step towards evidence based identification and learning lessons as a sector.

THE COOLAROO FIRE PROVIDED THE OPPORTUNITY TO TEST NEW STATE AIR QUALITY MONITORING AND SMOKE PLUME MODELLING ARRANGEMENTS

South West Fires

The South West Fires were a significant incident in 2017–18 (refer to significant incidents in section 1). Amongst the 26 homes lost and thousands of livestock that perished from the bushfires there was around 100ha of peat including three peat swamps which continued to burn for a long period of time and released smoke that contained contaminants including carbon monoxide and fine particles in the vicinity of nearby residents, especially around Lakes Cobrico and Elingamite.

Overall this fire event affected nearly 2,000 local residents. The EPA and the Department of Health and Human Services (DHHS) developed a guide on the possible health impacts for community members, based on their proximity to the peat smoke plume. The guide and associated peat smoke proximity maps were available on www.emergency.vic.gov.au/relief for the duration of the event. Drawing on the learnings and experiences from the 2014 Hazelwood coal mine fire event a smoke suppression strategy and fire extinguishment plan was developed for the fires using resources from six fire agencies.

The South West fires took 42 days to extinguish and had a major impact on the local community and industry. Management of this event drew on the experiences and learnings from the entire sector to ensure that firefighter safety, public health, industry needs and livestock welfare were taken into consideration and addressed. A RTM&E Team was deployed to this event in the days after the initial fires to support real time learning.

The Assurance and Learning Unit was established 2015 within the State Control Centre to oversee lessons management operationally. The unit was positioned at the Barwon South West Regional Control Centre in Geelong and Incident Control Centre in Warrnambool during the South West Fires. The value of this was its ability to capture what had worked well and learning opportunities by incident and regional personnel in real time and still fresh in their minds.

While deployed, the Assurance and Learning Unit were able to work closely with the Incident Controller, Regional Control Team and State Coordination Team to develop a coordinated plan for debriefing the event at all levels-community, incident, region and state. The result of this process has been the identification of lessons across areas that worked well and learning opportunities to inform continuous improvement of the sector into the future. Throughout this process, EM-Share has been a key platform for personnel who do not attend debriefs to still contribute, and for all debriefing outcomes to be submitted to the team for analysis.

Conclusion

Evaluations and reviews of significant, complex and or prolonged smoke events have been an imperative part of Victoria's continuous improvement. By continuously monitoring and evaluating processes and systems across all parts of the sector, the goal of learning lessons based on evidence and trends is attainable. Emergencies across the state are analysed through observation sharing, highlighting insights and trends to support the development of evidence based lessons to continuously improve.

Source

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing

2,000

NUMBER OF RESIDENTS AFFECTED BY THIS FIRE EVENT

THE EPA AND THE DEPARTMENT OF HEALTH AND HUMAN SERVICES DEVELOPED A GUIDE ON THE POSSIBLE HEALTH IMPACTS FOR COMMUNITY MEMBERS

The burning waste and recycling material took three days for fire crews to control at SKM Recycling facility

Coolaroo Recycling Plant Fire

Incident Overview

At 08:44hrs on Thursday 13 July 2017, Metropolitan Fire Brigade (MFB) and Country Fire Authority (CFA) responded to a fire at SKM Recycling facility at Maffra Street, Coolaroo (Coolaroo Fire). The weather forecast was strong northerly winds of 35–45km per hour, gusting up to 60km during the day. The Fire involved large stacks of recycling material and took fire crews up to three days to control the fire, which produced clouds of smoke across the northern suburbs of Melbourne. MFB was involved in this incident for 21 days.

The fire burnt 100 metres x 250 metres of recycling material which consisted of multiple piles of paper, cardboards, plastics and other waste materials. The initial response included 54 appliances from MFB and CFA and 170 personnel. Potential adverse health impacts posed by the smoke required community evacuation. A total of 115 homes were doorknocked to action this and 22 people from 13 homes were relocated. This was supported by the issuing of a number of community messages including a Prepare to Evacuate and Evacuate Warning, as well as an Emergency Alert sent to mobile and landline phones. As part of the engagement strategy community and impacted business owner meetings were held by MFB and local Government. Victoria received interstate assistance comprising of 10 New South Wales (NSW), nine Australian Capital Territory (ACT) and nine South Australia (SA) personnel, particularly to provide Compressed Air Foam System (CAFS) units with operators.

What worked well?

Health Monitoring

MFB identified that due to the complexity of the Fire and large number of firefighters and incident management personnel involved that health monitoring was a high priority. On site health monitoring of 1,711 people was undertaken (included MFB, CFA, Environment Protection Authority Victoria (EPA), WorkSafe, Victoria Police, Parks Victoria, contractors and caterers) by Ambulance Victoria's (AV) and CFA's Health Monitoring Team (HMT). Health checks were conducted at the commencement of shifts, the commencement of breaks and the end of shifts. A Community Health Assessment Centre was established which assessed 31 people over a period of 12 days. The MFB Rehab Unit and Urban Search and Rescue cache created an environment away from operational areas for crews and other emergency services and agencies to be checked, monitored and rehabilitated.

Foam Strategy

The use of B Class foam in the early stages of fighting the fire reduced the volume of smoke impacting the northern suburbs. The application of A Class foam, via the CAFS, allowed emergency services to penetrate the deep seated fire.

Community Engagement

The use of Community Information and Warnings enabled MFB to engage with the community, local businesses and industry to ensure timely provision of information. This included a multi-faceted strategy of holding community meetings, using appropriate technology, door knocking and engaging with the media. The early appointment of a Business Continuity Commander assisted to enable the transition to recovery to occur in a timely manner.

Transfer of Control

The decision to transfer control to the Burnley Incident Control Centre (ICC) assisted in managing the incident and consequences. It also provided a facility for Emergency Management Team (EMT) members to actively and efficiently assist.

What could be improved?

- The identification and recognition of the different types of hazards found within recycling waste plant sites.
- The inclusion of the Regional Emergency Management Team (REMT) with the Incident Emergency Management Team (IEMT) at the Burnley ICC may have provided better engagement with the Incident Management Team (IMT) and reduced the impact on EMT agencies by reducing duplication.
- Consideration could be given to further development of the panel of providers for equipment that will service MFB needs in an urban environment.

Conclusion

The Coolaroo Fire was a complex long duration event that posed risks to responding agencies and the community. It highlighted the value of activating atmospheric monitoring and health monitoring early in an incident to decrease any risk of exposure to responding agencies and the community.

As more recycling plants are established in the metropolitan district, MFB and other agencies need to be aware of the risks associated with this type of facility in the event of a fire. All relevant agencies should explore different types of fire suppression techniques utilised during these types of incidents. There is a need to continue to work with EPA and the relevant site operators to establish best practice in managing emerging risks.

Victorian Avalanche Warnings

Incident Overview

An unusual weather event in August 2017 in the Victorian Alps dumped a large volume of snow. The snow fell under a predominant north west wind, such that the snow banked up into a series of cornices facing towards the south east. There was also a rain event forecast that would lead to an ice layer that would make avalanches more likely.

No readiness arrangements were put in place to respond to this event as the Bureau of Meteorology (BoM) had not issued a warning simply due to the rarity of the event and the lack of any preparedness process around avalanches. Note that the ski patrol may well have had readiness arrangements in place given their role, but no link existed between them and the emergency services at the time. Consequently a large volume of snow fell in a single direction, leading to excellent skiing conditions, but also a risk of avalanches. Ski patrol members suggested that inexperienced back country (cross country) skiers could inadvertently trigger avalanches through simply not being aware of the risk.

Ski resort areas are high use areas and are regularly patrolled by ski patrol staff – their key task is to reduce risk to skiers. If an avalanche scenario is detected, they will trigger them deliberately to remove risk to the area. Back-country areas are only sporadically patrolled and often not closely managed. Australian skiers in general don't have 'sensible back-country awareness' and have little knowledge of precautions to avoid avalanche creation/situations.

What happened?

An Avalanche Advice Message was required to be issued using EM-COP, however no Avalanche messages were available with the closest matching event option was Landslide. A meeting was convened in Benalla on the day of the snowfall event and concluded that Victoria State Emergency Service (VICSES) are to be the responsible agency for the warning of a landslide and should an avalanche occur, involving people or buildings, Victoria Police was to be the relevant response control agency. The responsibility on this particular day fell to the Regional Controller Hume (since the ski resorts all fall into the Hume region, except for Mt. Baw Baw).

What did we learn?

- There would be value in an Avalanche warning system similar to the New Zealand 5-point system.
- The responsibility for issuing Avalanche Warnings (VICSES) needs to be confirmed, and added to the Emergency Management Manual Victoria (EMMV).
- There is a need to define where ski patrols 'fit' into the scenario.
- It will be necessary to establish discussions with ski patrol to ensure they understand the role, expectations and are comfortable they can deliver what's required.
- It is suggested that if ski patrol detects a similar risk in future, they contact the VICSES Duty Officer at Benalla to issue warnings.
- The Country Fire Authority (CFA) have a formal Memorandum of Understanding with the ski patrol about ski lift rescue and having a similar arrangement for avalanche warnings could be a good avenue to explore.
- The potential impact on tourism must be balanced with sufficient warnings to the travelling public about real risk to their safety, and messaging about resorts being well managed and safe regarding avalanche scenarios.

What could be done next time?

Suggested methodology for dealing with avalanches:

- Land manager websites (i.e. Department of Environment, Land, Water and Planning (DELWP) and Parks Victoria) and Ski Resort Boards websites to display minor warnings as appropriate (as per the normal snow season).
- A level of consistency of information between websites and protocols including suggested format and content needs to be developed.
- In the event of a 'heavy dump of snow' (to be defined), confirmation that VICSES are to manage the issuing of warnings as appropriate to the level of the event.
- If an avalanche occurs and people are affected, Victoria Police are the responsible agency for mountain search and rescue operations.
- Courses/training about back-country snow areas by resorts or ski patrol staff may prove beneficial.
- Discussions with BoM could be held to ask that monitoring for large snowfall events be undertaken and communicated to the Regional Controller Hume, and Rostered Duty Officer VICSES Hume.

New Zealand's 5-Point Avalanche risk scale has been unofficially, but universally adopted in Australia and utilised by ski patrol staff for back-country areas (not Resort areas). The risk scale is as follows:

1. Low
2. Moderate
3. Considerable
4. High
5. Extreme (note – this is an extremely-rare to never-seen condition in Australia).

However, due to the complexity of avalanche risk, even in an overall risk rating of Moderate or Low, pockets of back country would still have considerable or high risk; therefore back-country snow knowledge is imperative.

Conclusion

This is an example of an unusual and rarely occurring emergency that is not covered by the EMMV but a great example of using the fundamental principles behind emergency management to rapidly achieve an acceptable outcome.

While it is clear that there is always room to improve, the outcome in this case was successful in warning the public about the risk of avalanche in the high country of Victoria.

Source

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing

California Deployment personnel preparing for departure at Sacramento Airport

California Deployment

Summary

California experienced some of the largest and most deadly bushfires in history during 2017.

On 8 October 2017, nine fires started around Santa Rosa which then merged into three major fires known as the Central LNU Complex. The fire burnt over 45,000 hectares through some of California's richest wine regions in the Sonoma and Napa Valleys. The fire also heavily impacted on the rural/urban interface with over 31,000 people evacuated as the fires destroyed over 7,000 structures (including 6,500 houses) and tragically claimed the lives of 42 people.

Victoria has a strong and ongoing relationship with California, in particular Cal OES (the Governor's Office of Emergency Services) and Cal Fire. An agreement to support California has been in place with the Californian Governor's Office of Emergency Services since July 2015. This partnership allows the exchange of personnel, resources, knowledge, skills, and mutual support in the event of an emergency.

A contingent of 34 Victorian emergency management personnel departed on 18 October 2017 for a 21-day deployment to California. The team included personnel from CFA and Forest Fire Management Victoria (which includes the Department of Environment, Land, Water and Planning and Parks Victoria members). The contingent was known as AusVic Crew 1 for the duration of the deployment.

AusVic Crew 1 formed part of a contingent of over 10,000 firefighters from 384 fire agencies covering 14 US states. After the 21 days of deployment, Emergency Management Victoria had a formal debrief with AusVic Crew 1 to capture lessons from the preparation, deployment and post deployment experience.

31,000
PEOPLE EVACUATED

Successes identified

Preparation

- Expression of interest process
- Pre-deployment processes and arrangements
- VISA instructions provided
- Pre-travel briefing.

Deployment

- Training provided by Cal Fire
- Teamwork
- Facebook for family
- Pre-deployment briefings
- Accommodation and transport

Post deployment

- Timing of flights and transport
- Clear instructions and itinerary
- Formal debriefing
- Teamwork
- Exiting customs as a team
- Being allowed to see the country

Lessons identified

Preparation

- Understanding of fatigue management in country
- Removal of duplicate documentation
- Fitness test should be conducted at the time of the expression of interest.

Deployment

- Staying in the same motel as the entire contingent
- Provision of phone data or local SIM cards
- Field liaisons with prior deployment experience
- Fatigue management.

Post deployment

- Details about accommodation prior to departing base camp
- Same flights for all personnel
- Clearer information on timings
- Travel from base camp to accommodation.

Other notable observations that impressed our Victorian firefighters was the ability for field-based supervisors, such as our sector commanders, to be able to electronically record key observations and progress of work to help develop the incident action plan. Having two or three designated teams in fire sectors focusing on tree hazard identification and mitigation meant firefighters could focus on suppression, blackout and overhaul.

Drop points on the fireground were another key feature that crews used during their deployment. These were numbered, marked locations where crews met, collected resources, information or supplies, and where plant and equipment were stored.

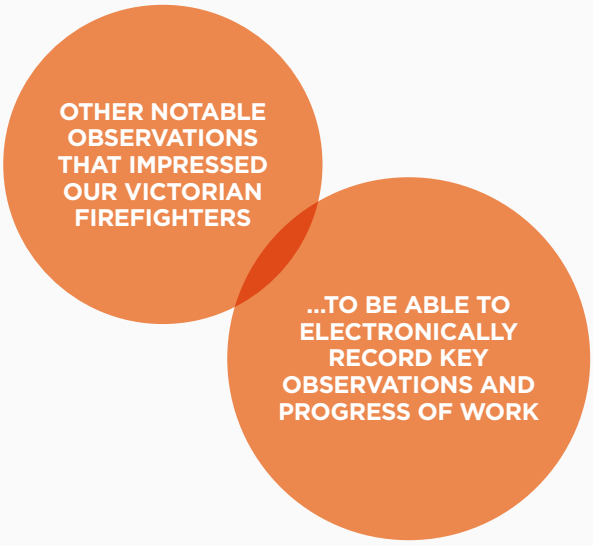
Conclusion

Victorian firefighters have long been regarded as capable of responding to emergencies outside Victoria. The 34 personnel deployed to California once again showed the strength of our relationship with the US, allowing the exchange of personnel, resources, knowledge and skills.

Source

Adapted from CFA Brigade Magazine Learning from Experience – Autumn 2018

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing



Six to eight trucks filled with tyres left the site six days a week and were sent to Melbourne for shredding

Stawell Tyre Stockpile Removal

Summary

Environment Protection Authority Victoria (EPA) identified a large tyre stockpile on Saleyards Road, Stawell that was posing significant risk to the environment and local community. EPA instigated and led a Whole of Victorian Government Strategic Oversight Group (WoVG) that was formed to manage the risk posed by the stockpile to the Stawell community and surrounds. EPA began works in early August 2017 to remove the tyres from the site.

Incident Overview

EPA had concerns about the risks to the environment and the local community posed by a tyre site in Saleyards Road, Stawell that stockpiled an estimated one million tyres. The site was also assessed by the Country Fire Authority (CFA) as an extreme fire risk that would have presented social, health, environmental and economic consequences for the people of Stawell and its surrounding communities if it were to catch fire. For 10 years, various owners of the stockpile were given opportunity to comply with legal and regulatory obligations but failed to take material steps to properly manage the site's risks to the community.

Many unacceptable economic and social risks would have potentially impacted the community if the tyre stockpile was to have caught fire. These included the likely evacuation of 7,000 people from the township of Stawell and surrounds and a negative impact on Grampians tourism in areas such as the Great Western, the Pyrenees and Grampians wine regions. Stawell region's largest employer (a local abattoir), was located 300 metres away from the site and employs 450 people. A fire in this proximity may have closed the company for an unspecified period of time and affected local economy. There would been additional agricultural impacts, waterway impacts from fire water and contamination, and a likely closures of major highway and railway connections.

On 2 August 2017, it was decided that little to no effort had been made by the stockpile's owner to comply with a CFA Fire Prevention Notice (FPN) or any of three EPA notices issued on the site. These

notices required the stockpile owner to reduce the risk of fire at the site by segregating tyres into smaller, manageable piles. EPA then gave notice to the stockpile's owners, advising it was considering taking action under Section 62 of the Environment Protection Act 1970 to conduct a clean-up as unacceptable environmental and community risks remained and there had been no obvious activity at the site for an extended period of time.

It was EPA's view that the stockpile appeared to have been abandoned or was being handled in a manner that was likely to cause an environmental hazard. With the support of Victoria Police (VicPol) and partners, EPA used its powers under the Environment Protection Act 1970 (the Act) to access the site for the purposes of reducing the environmental hazard. This was the first time EPA had undertaken works of this nature using its powers under Section 62 of the Act. On August 10, the owner of the site took EPA to the Supreme Court in an attempt to stop works proceeding; the Supreme Court ruled in favour of EPA and works proceeded as planned.

The works commenced in early August 2017 to remove the tyres and transport them to Melbourne for shredding. This action was seen as a last resort and EPA will seek to recover costs from current and/or previous owners and occupiers of the site. As the exact number of tyres on the site was unknown, it was difficult to determine how long it would take to reduce stockpile. The removal was completed mid-October 2017.

IT WAS EPA'S VIEW THAT THE STOCKPILE APPEARED TO HAVE BEEN ABANDONED OR WAS BEING HANDLED IN A MANNER THAT WAS LIKELY TO CAUSE AN ENVIRONMENTAL HAZARD

What worked well?

Removal of the stockpile would not have been possible without a WoVG approach, which included input from EPA, Northern Grampians Shire Council (Council), CFA, VicPol, Victorian Government Solicitor's Office, Department of Environment, Land, Water and Planning (DELWP), Grampians Wimmera Mallee Water, Emergency Management Victoria (EMV) and Department of Health and Human Services (DHHS). EPA also engaged private sector partners including Tyrecycle, Cardno, Greencap and many local subcontractors to remove the stockpile.

Everyone played a role with a common goal in mind:

Northern Grampians Shire Council

Played a main role in the overall project; a couple of the major areas were the construction (including required approvals) of the roads into the Stawell tyre stockpile, sediment controls and preparing the site to allow tyres to begin being removed in early August 2017. Council also provided vital local knowledge into community and engagement planning. Council officers were on the ground daily while the clean-up works occurred to provide any further assistance required.

Country Fire Authority

Provided expert advice and assessments around the very high fire risk posed to the Stawell community and the environment by the stockpile of tyres if it were to catch fire. The CFA also issued a Fire Prevention Notice that set out clear steps required for the duty holder to comply with the Outdoor Storage of Tyres Guidelines, which would have reduced the risk of fire.

Victorian Government Solicitor's Office (VGSO)

It was agreed by members of the group that a legal strategy was required to reduce the fire risk posed by the tyre stockpile prior to fire season. All members agreed to the process of allowing the VGSO to develop a robust legal strategy. The VGSO was the main source of legal advice with regards to the project and has reviewed all regulatory actions.

Victoria Police

Provided ground support when EPA officers were required to go onsite to inspect the stockpile. VicPol also assisted when EPA took control of the site to ensure operations went to plan. VicPol patrols the site every two hours as part of its standard patrols.

With the support of VicPol, EPA accessed the site for the purpose of reducing the environmental hazard that was present

Department of Environment, Land, Water and Planning

Provided the required approvals that allowed EPA to utilise adjoining Crown land to install access roads and establish an operations base for the purposes of the tyre removal.

Emergency Management Victoria

Provided leadership and guidance through the emergency planning requirements at all levels (see further below).

Department of Health and Human Services

Provided health advice around impacts from tyre-related fires and input into emergency planning.

Grampians Wimmera Mallee Water

Assisted with water management onsite by permitting and monitoring the discharge of wastewater from within the Stawell tyre stockpile into the sewer network. This was then treated at its wastewater treatment plant.

Because of the risks posed to the environment and the surrounding communities, emergency management agencies developed incident response plans and built on existing arrangements to manage risks and consequences associated with a potential fire at the Stawell tyre stockpile. The comprehensive plans covered processes for managing communications, evacuation, relief centres, traffic management, smoke impacts, health and medical response requirements and environmental impacts.

Key agencies involved included CFA, EMV, DHHS, DELWP, VicPol and Council also developed a regional consequence plan and updated operational response plans. Other agencies including EPA, VicRoads, Ambulance Victoria, Metropolitan Fire Brigade, Bureau of Meteorology, Wimmera Catchment Management Authority, Powercor, Grampians Wimmera Mallee Water, Department of Economic Development, Jobs, Transport and Resources (DEDJTR), Aboriginal Victoria and Tourism Victoria provided input into the plans as required.

Around six to eight trucks filled with tyres left the site six days a week and were sent to Melbourne for shredding. Once tyres were shredded, they could be recycled for use throughout the construction, manufacturing and automotive industries. Some uses include athletics tracks, brake pads, new tyres and road surfaces. A portion of these shredded tyres were used as tyre derived fuel, which is often shipped overseas to destinations that have the technology to use it.

What could be improved?

Once the statutory tools of EPA were nearing exhaustion, the development of the WoVG working group drove the attention of the issue into respective agencies from a higher level, which gave it traction for the on-ground actions that took place. In general, the collaboration between both government agencies and contractors was excellent and allowed the work to continue seamlessly on the ground.

However, there were some difficulties with the tyre estimations onsite because of the condition of the tyres. For example, whole tyres vs shred and contaminated tyres vs clean tyres. This had huge project variables when it came to costings. Further time to develop the project scopes for each of the contractors to ensure that all areas were well thought out would have been beneficial. More time would also have assisted in considering the finer details around security requirements, responsibility for onsite hiring and arrangement of facilities and the installation of critical site infrastructure.

A key learning is that agencies operate in increasingly complex environments where the big issues for community and environment require a highly coordinated and committed response from all areas and levels of government. This allows teamwork to occur to 'make the case' for change and enrol partners in a collective effort to achieve beneficial community outcomes. The community must be kept informed at each step of the process as it has daily effect on the lives of residents. Overall the reaction from the community was overwhelmingly positive and showed the importance of community engagement throughout the entire journey.

Conclusion

The removal of Stawell's tyre stockpile required the successful cooperation of multiple agencies. The WoVG approach was effective and enabled the risks it posed to be managed appropriately and the tyres to be removed and recycled. This was the first time EPA had undertaken works of this nature using its powers under Section 62 of the Environment Protection Act 1970 (the Act) to access the site for the purposes of reducing the hazard. Through identifying the economic, social and environmental risks of this fire hazard EPA were able to prevent an incident occurring. Engagement of the Stawell community ensured a positive response to the works and highlighted the importance of a committed response from all agencies and levels of government involved.

Source

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing

Anti-Theft Fog Machines

Summary

Country Fire Authority (CFA) crews have identified a new type of security alarm found in residential houses known as portable anti-theft fog machines or smoke security devices. They are hired to generate smoke/fog to deter potential burglars. The units expel dense fog in the protected area in a matter of seconds, forcing the intruder to exit the premises empty-handed. There are many such devices on the market and they are being used more frequently across the metropolitan and outer metropolitan areas.

The use of these devices has led to safety concerns for emergency services responders. Two recent incidents that highlight these concerns are described below.

Incident overview

On 20 August 2017 at 3.46pm, Officer and Pakenham brigades responded to a reported house fire which was under construction in Officer. The Pakenham pumper was first on scene and the crew observed smoke issuing from the house through the roof.

The incident controller requested an extra brigade to respond. When the Officer pumper arrived, it was tasked to provide two more breathing apparatus (BA) operators and help the Pakenham crew enter the house. Within a couple of minutes, the Pakenham BA crew discovered there wasn't a fire and that the smoke was coming from a security device placed inside the house. The smoke made its way through the roof because of holes in the ceiling meant for heating/cooling ducts.

The fog machine was unplugged and taken outside by the crew. A thorough search of the house was conducted in case there was anyone inside. Victoria Police was requested to attend because of the suspicious circumstances. Brigade members spoke with a representative from the building company, who could operate the smoke machine remotely. The machine was reset after the brigades left. Although it turned out to be a false alarm, the brigades didn't know this when they arrived.

The second incident took place in similar circumstances two weeks later on 8 September, next door to the house of the first incident.

Lessons identified

- When it has been identified that one of these devices is in use and is the cause of the smoke, it's important that Victoria Police is notified immediately.
- Crews should be aware there may be intruders in the area and the safety of firefighters is paramount.
- There should be signs on the outside of the building alerting people that an anti-theft fog machine is being used. During size-up keep an eye out for them.
- If available, use a thermal imaging camera to check for fire.
- The smoke produced by these devices is very dense and visibility is poor, so follow normal search procedures and be especially careful when using stairs.
- Bear in mind that these devices are common in new homes at lock-up stage prior to sale, and in display homes.

How anti-theft fog machines work

Smoke security devices are designed to fill the protected area with a dense cloud of smoke to significantly reduce visibility – you can't steal what you can't see. A device can fill a 10 metre x 10 metre room with an impenetrable wall of fog within 10 to 20 seconds. The triggers for the device to activate are a break-in, when a door is opened, or when movement is detected by sensors in the building. Most products are harmless, using a glycol vapour to produce the 'smoke'. A similar substance is used in theatres and discos. They leave no residue and are safe for humans, animals, food, clothing, furnishings, computers and electrical equipment. Standard practice by companies installing a smoke security alarm is to provide warning signs on entry/exit doors to alert people.

Safety actions

- If CFA crews are inside a building and a smoke security device activates, they must exit the building immediately via the entry route and wait for the security company to arrive.
- CFA crews attending Triple Zero (000) calls for smoke issuing from a commercial/industrial or residential property should consider the possibility that a smoke device has been activated (before entering the building to investigate or before forcing entry).
- If a crew is responded by Victoria Police to investigate smoke issuing from a building and a smoke device is identified as the cause, CFA members mustn't enter the building.

CFA attendance at smoke security alarms

- When a smoke security device has been identified, CFA crews must request Victoria Police to attend immediately.
- If CFA crews are on scene before the security company or police arrive, and there are signs of a break-in, CFA crews mustn't enter the building.
- CFA crews mustn't undertake salvage operations to attempt to extract smoke from the premises.
- For more information read Safety Alert No 24.

Health concerns

Skin contact and inhalation of the smoke/fog shouldn't affect a healthy person. However, it may cause mild eye and skin irritation. Wash the skin with water and soap and flush eyes with water. People with pre-existing respiratory conditions may be prone to respiratory irritation when exposed to this smoke. If irritation persists or recurs, seek medical attention. Bear in mind that the biggest risk is the possibility that an armed intruder could still be inside the property when the crews arrive. This could pose a threat to firefighters working to ventilate the structure or determine the cause of a false alarm. It's even difficult at times for the police to ensure that the building is clear due to the limited visibility.

Conclusion

As more anti-theft smoke devices are sold and hired to deter theft, CFA members may also see an increase in call-outs for smoke coming through roof tiles or from houses. The smoke from the house definitely looks like the real deal and, as a firefighter, you will never know until on scene if it's a real job or not. A better understanding of these machines will mean better firefighting.

Source

Adapted from CFA Brigade Magazine Learning from Experience – Summer 2017

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing

Terrain at Timbarra Central campground after the Timbarra-Sunny Point bushfire

Timbarra-Sunny Point Bushfire

Summary

The Timbarra-Sunny Point bushfire ignited on 23 September 2017 and burnt 8,120 hectares over 20 days. It was the larger of two fires in the Buchan area, the other being the Buchan South-Quire Road fire. This incident was managed through collaboration between agencies and community and displayed the utility of a strong foundation of community resilience.

Incident Overview

The bushfire burned in steep, heavily forested terrain north of Buchan and was fuelled by strong northerly winds. The Buchan Township is spread across a number of settlements including landholders and extensive farming country, creating challenges for agencies to manage the fire and damaging potential impact to residents across the many settlements. It was the larger of two fires in the area, the other being the Buchan South-Quire Road fire which burnt 816ha.

Community interest in the fire was pronounced from the beginning. The collaboration between agencies and community throughout this event was the result of many years of engagement and joined efforts to build resilience. Many generations living in the Buchan area have experienced fire impact for over 15 years in their community.

A Safer Together Workshop, an initiative being led by Forest Fire Management Victoria (FFMVic) in collaboration with Country Fire Authority (CFA), was held in Buchan and had a high community attendance. Local incident management plans were discussed and updated to include details such as phone trees. The fire history, workshop and use of pre-summer briefings resulted in the community being well-positioned to provide local knowledge to support agency response. Actions performed by the agencies to mitigate the level of risk posed by the fire were well understood and supported by residents.

What worked well?

Traffic management

Road closures were reopened to the community with pecuniary interest as soon as possible to give people a sense of confidence that they could access their homes and properties to assess stock and damage. This was commended by the community and developed a strong relationships between Victoria Police and the community.

Staging area

The incident management team made the decision to stage firefighters and equipment at the division command centre, which was located at the local Buchan CFA Fire Station/Victoria State Emergency Service (VICSES) Unit. This was done with the community in mind, particularly for briefings, as it allowed resident to visually see the staging taking place with fire fighters, dozers, and equipment all coming through the town to be briefed before attending the fire ground.

Community Liaisons

The staging area also became a hub for cross transparency with residents where people could attend and see maps, road closure information and ask questions from Community Liaison Officers (CLOs). The CLOs also took a trailer around to key locations within the settlements providing information from the staging area and encouraging community connectedness.

Aircraft

A helibase was situated on the outskirts of town where it was visible to the community and residents were aware that aircraft would be responding to the fire.

The helibase for Timbarra-Sunny Point bushfire was positioned on the outskirts of Buchan

Smoke from the fire spread to the Buchan township and its surrounding settlements and farming country

Community meetings

The incident management team (IMT) acknowledged early-on the necessity of a community meeting. The IMT waited 24 hours to complete the control strategy before conducting the meeting, so they could relay relevant and reliable up to date information on their fire management actions. This approach worked well.

The first meeting had 60–70 community members present and the Incident Controller led the meeting wearing the tabard (rather than a representative). This provided transparency early into the response, particularly indicating that the fire would require at least three weeks of effort to control. It also provided opportunity for resident's questions or concerns to be addressed immediately. The outline of the meeting was a success, with the Incident Controller providing an update on the situation, planning and any risks to the community. The community were engaged during the meeting and understood the risks and challenges the fire presented. An example of this was a number of community members expressing that grass in the paddocks was very green, and that burning out should occur while the paddocks were still green.

60+

COMMUNITY MEMBERS AT FIRST MEETING

PROVIDED OPPORTUNITY FOR RESIDENT'S QUESTIONS OR CONCERNS TO BE ADDRESSED IMMEDIATELY

Bush Nursing

This is community based health service which provides a broad range of healthcare services to rural communities and was particularly critical during this event as they are a trusted network within the community. Bush nurses have a good understanding of the demographics and vulnerability within the community and were able to help the Incident Controller with disseminating key information, newsletters and worked with the community to ensure they had the right information.

What could be improved?

Phone trees

The phone tree process took a few days to establish which delayed the community's ability to disseminate information effectively. This was not helped by the fact that the fire during its first run burnt one of the key phone boxes which removed a section of the community who didn't have landlines. Once the phone tree was working it assisted greatly with communication efforts.

Communication

At times there was some confusion within the community about the number of fires present.

Resourcing

This event was a no-notice event, close to community, outside of the summer emergency management season, and during AFL Grand Final weekend. These factors accumulated to create a significant strain on resourcing, particularly problematic as there were no rosters in place.

Conclusion

This incident was a great example of the utility of planning and implementing control strategies, transparency and collaboration between community and agencies. As a result, the fire was under control within the predicted three-week time period of its ignition. Local emergency management personnel have utilized the event as an example during pre-summer emergency season briefings to embed learnings quickly.

Source

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing

Staging area held at Buchan CFA/VICSES during the Timbarra-Sunny Point bushfire

VICSES and CFA high angle rescue personnel performing the rescue in Portland

Portland High Angle Rescue

Incident Overview

On Tuesday 21 November at 0027hrs a Mitsubishi four-wheel-drive drove through a wooden barrier at the end of Hanlon Parade, Portland. The incident was called in by a member of the public via Triple Zero and the Acting Sergeant Portland Highway Patrol was the first on scene. Once arriving at the scene the Acting Sergeant noticed that the vehicle hadn't gone off at speed and the vehicle was at least a 15m down the cliff face. Two other members from Victoria Police (VicPol) walked along the Great South West Walking track, trying to gain access to vehicle. The initial Page sent to Portland State Emergency Service (SES) unit was for a 'Road Crash Rescue possible persons trapped' at 0028hrs. Portland Rescue Truck was the first emergency service appliance on scene.

Portland Police Station Officer In Charge (OIC) was also now on scene and was the incident controller. Once the details of the incident were established the incident was reclassified as a High Angle Rescue and this was paged out to the Portland SES and CFA units at 0031hrs.

Once SES crews arrived on scene the VicPol Incident Controller (IC) began briefing Portland SES on the details on the incident, and was tasked to start setting up a ropes system. An experienced VICSES member was informally made Deputy IC in charge of the rescue while VicPol remained in the commander role. VICSES then briefed incoming Country Fire Authority (CFA) and SES crews.

Once the ropes system had been set up, Portland SES was the first person over the edge. The initial task was to conduct a scene assessment and provide first aid. There was significant difficulty in clearing a path to the vehicle; the vegetation was thick coastal scrub. While making his way to the vehicle the VICSES member made contact with the driver. They reported that the driver was loud and disorientated; he was able to move his arms and legs when asked.

The vehicle had landed on its roof and was crushed, trapping the driver inside the car.

Once reaching the vehicle they kept in constant contact with the driver, they also made an assessment about what equipment would be needed for the rescue. Due to the weight of the equipment required to conduct the rescue (air cylinder, airbags, fire extinguisher, additional first aid supplies) a litter was used. The advantage of using this was that it allowed for the weight of the equipment to be used as a plough which allowed for a quicker route through the vegetation. An additional two responders came down as well, from SES and CFA. Once at the scene CFA took over the causality handling the SES crew members started setting up for the rescue.

At the incident scene an emergency management team (EMT) had been established with members from VicPol, CFA, SES. The first paramedic on scene assumed a Health Commander type role and was able to provide a wilderness response trained paramedic to attend to the Patient. HEMS-4 aircraft was requested by AV with the initial plan for them to land at the hospital and attend the scene to assess the best approach.

When HEMS-4 arrived they moved to approach the scene directly to facilitate a winch from overhead; however this was not communicated to any of the ground crews. This raised a number of safety concerns. SES Crews used two airbags to lift the four-wheel drive to free the trapped male. The male was flown to the Alfred Hospital with serious injuries to his upper body. Two dogs and two parrots were also rescued however one dog was found to be deceased in the vehicle. The surviving dog is in the care of RSPCA and a member of the SES rescue crew is caring for the parrots.

THERE WAS SIGNIFICANT DIFFICULTY IN CLEARING A PATH TO THE VEHICLE; THE VEGETATION WAS THICK COASTAL SCRUB

VICSES was the first agency over the edge once the ropes system was established

What worked well?

Under the Emergency Management Manual Victoria (EMMV) VicPol is the control agency for land based rescue including high angle rescue. VicPol while on route to the job called Victoria Police Search and Rescue Unit and received their clearance for SES to conduct the rescue. Portland SES and Portland CFA are part of the Multi Agency Technical Rescue Team and undertake joint training in High Angle Rescue. Their combined technical ability is highly regarded by VicPol. Once on scene VicPol assumed the role of IC, once SES crews arrived they were briefed and advised that they would be running the technical rescue. CFA also responded both with Hamilton and Warrnambool CFA Technical Rescue Specialist to support the Portland Team. Hamilton SES were responded to support with a specialist lighting Trailer.

An EMT was established and a meeting was held before anyone was sent down the cliff face. A safety officer was appointed early and VicPol personnel assisted in this function throughout the incident.

Joint training by both Portland SES and Portland CFA Technical Rescue Team in High Angle Rescue had occurred prior to the incident. Crews all had pre-existing relationships established with each other and with the VicPol which meant that the crew understood their roles and VicPol had full confidence

to allow CFA and SES to conduct the rescue. VicPol stated that the comment from VicPol Search and Rescue was that '(we) trust our guys down there to do the job'.

This joint training program means that combined SES and CFA Portland Technical Rescue Team is currently leading in the South West in relation to the Draft Tech Rescue Strategy. The Wilderness Rescue capabilities of AV also proved beneficial in providing a paramedic with capabilities of accessing the patient and providing direct medical attention. After action reviews were conducted at the scene as a hot debrief before crews left the scene. Additional debriefs have been held at unit and brigade level, and a combined multiagency AAR held 11 December at Portland Fire station.

What could be improved?

Initially there was shortage of experienced crew members to operate the ropes system. This meant that the safety officer role had to be reassigned to free up a member to undertake ropes work. Once further crews arrived from Hamilton to operate the belay line, this problem was resolved.

There was a delay in briefing crews as no one had knowledge of who or what equipment was en-route to scene and had been requested. This meant resources had to be assigned though the event as well as leading to a chaotic impression when crews initially arrived at the incident. A VICSES Operational Officer arrived on scene at approximately 0200hrs. He identified numerous personnel on scene, however had some trouble locating the Incident Controller and the rest of the EMT as the scene was busy and they not wearing vests. The EMT structure for this event was informal and wasn't formalised through the duration of the event. This lead to communication difficulties, as radio communications were sectorised, this was further exacerbated by two separate radio networks.

There are no formal policies and procedures in relation to the response of Portland Technical Rescue Team (made of members for both CFA and SES). Currently the system relies on manual intervention; a process further complicated where there is no joint paging in place. Given the incident size and location a Safety Officer was appointed early on. VicPol provided assistance keeping crews from the edge due to the broad scope of the area. Given the complexity of the incident, it was difficult for the single Safety Officer to be across all issues at the scene. As a result the Safety Officer was overworked throughout the night.

HEMS-4 aircraft arriving overhead to support ground crews

The main concern identified at the debrief was the arrival of HEMS-4 overhead without any communication with the ground crews. HEMS-4 is an Augusta Westland AW139, which is larger, heavier and produces considerable rotor downwash compared to previous HEMS helicopters. This is a known safety issue and a safety alert has been issued by EMV stating this. The initial plan was for HEMS-4 to land at the hospital and then attend the scene to make an assessment. This did not occur and they flew straight to the incident scene and lowered a paramedic without waiting to be called in. Crews on scene had no time to undertake preparation for its arrival. Whilst HEMS-4 was over head personnel on the ground couldn't hear any communications at all and couldn't move due to the strength of the rotor downwash. A number of items were blown around by the downwash, including items from vehicle lockers, (e.g. tarp) and could have been better secured if HEMS-4 intentions were communicated. Directly following this incident an emergency EMT was held which raised all of these issues. The EMT was also used to refocus crews, given the safety issues that arose.

What could be done next time?

A hot debrief was conducted on the night with additional debriefs taking place at a unit and brigade level. A joint multiagency after action review was held Monday, 11 December 2017 at Portland CFA Station which produced insights. Whilst it was clear under EMMV who was in control the physical control point was difficult to locate. There was considerable discussion about how this could be rectified at the

multiagency AAR. The major consideration to come out of this was that the event should have been sectorised with an IC – Road Rescue and an IC-Tech Rescue. This would have enhanced communication and formalised the incident EMT. VicPol have taken on board this feedback to provide a clear command point to all when arriving on the scene.

The joint training program already in place was widely praised by VicPol, CFA and SES regional staff. The need for procedures, as well as a training calendar to be developed by the Portland Tech Rescue team was recognised by all agencies at the multiple agencies after action review.

During the initial stages of the incident there was considerable rope rescue equipment but a shortage of qualified operators. It was a 'cart before horse' approach according to those on scene. In future, consideration should be given to sending specialist personnel in a forward operation vehicle (FOV) or unit vehicle ahead of the equipment and the truck to ensure an efficient operation.

The initial arrival and setup of emergency service vehicles, including the positioning of the SES and CFA trucks was not uniform with to the working space requirements for the hauling line. In future, at an incident where the vehicles are being utilised as an anchor point for rope rescue, vehicles should be positioned to allow for best space functionality to ensure the working area is maximised.

A focus on responder safety is a key aspect to any emergency incident and the implementation of policy, procedures and strategies to ensure that this is sustained. A Safety Officer was appointed for this incident but given the size, number of responders involved and complexity of the rescue there should have been another Safety Officer appointed and the Safety Officer role sectorised.

Additional discussion centred on the non-communicated approach made by HEMS-4 and the need for the formal appointment of a Health Commander. AV have taken this on board and will review procedures.

The vegetation at the incident 'over the edge' was thick coastal scrub with numerous cacti like plants. Responders who went down to the incident site reported multiple thorns in their hands and legs, with some still removing them several days post the incident. Personal Protective Equipment (PPE) provided to responders from CFA and SES is made to provide protection against sharps, not needles. Future consideration needs to be given to what PPE can be provided to crews to protect against these hazards. This rescue required hydraulic equipment, including the use of cutting and spreading tools. If this was not the case it would have been a very different rescue scenario, possibly requiring more people to be lowered to the incident site.

Conclusion

This incident highlighted the complex nature of response to a complex incident involving multiple agencies. It emphasised the skills and expertise of the Portland Technical Rescue Team and the need for continued communication and collaboration between agencies. Multiagency cooperation across those on site was excellent and showed the prior advantage of multiagency training conducted by CFA and SES as part of Portland Technical Rescue Team. It was this prior relationship and respect for their ability that allowed VicPol to have confidence in the Portland Technical Rescue Team that is made up from both SES and CFA members.

Source

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing

IT EMPHASISED THE SKILLS AND EXPERTISE OF THE PORTLAND TECHNICAL RESCUE TEAM AND THE NEED FOR CONTINUED COMMUNICATION AND COLLABORATION BETWEEN AGENCIES

Mt Cottrell – Dohertys Road grassfire

Summary

Firefighters battled a large grass and scrub fire in Mt Cottrell, the first large incident of the summer for CFA's Mt Cottrell Group. The weather conditions during this incident led to abnormal fire behaviour, and affected the shape and front of the fire. The incident controller and her team were able to adapt to the changes and reduce the impact of the fire on the community. Following this significant incident, the group openly discussed what happened, and the lessons learned were used by crews to improve throughout the fire season.

Incident overview

On 29 November 2017, Triple Zero (000) received calls at 5.30pm reporting of an out-of-control large grassfire about 34 kilometres west of Melbourne's CBD.

The fire started as a result of roadside dumping that may have ignited on Shanahan's Road, and a north-easterly wind pushed the fire towards Dohertys Road. CFA issued an early 'Watch and Act' alert for surrounding areas including health warnings because there was a significant amount of smoke in the area.

The terrain affected by fire was open grassland, and relatively flat with some rocky areas.

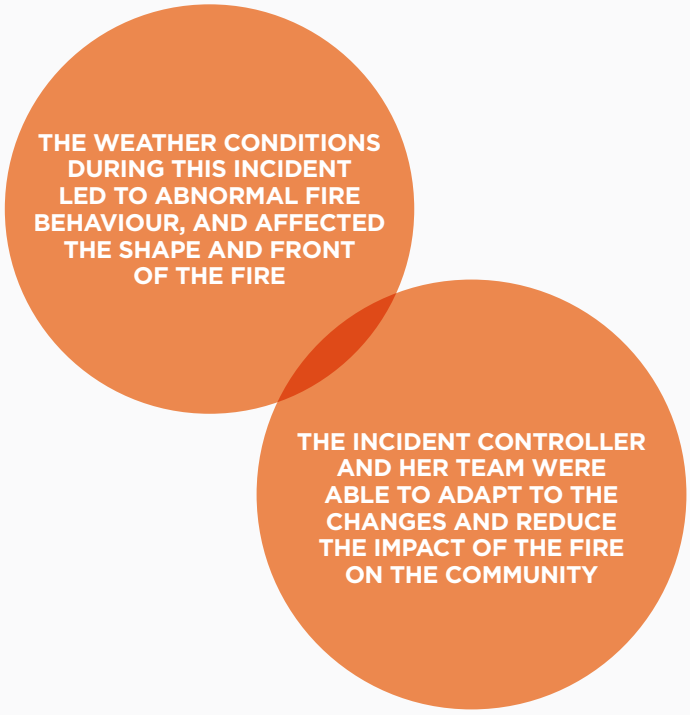
Standard preparedness arrangements were in place at district, group and brigade level for the Fire Danger Rating on the day, even though the Fire Danger Period hadn't begun.

Twenty minutes into the incident, a wind change occurred which was peculiar as winds normally change from north to south-westerly. In this case, it turned to a south-easterly.

45 vehicles from western Victoria brigades were on scene including: command vehicles (FCVs and Group FOV), 20 tankers (including three ultralights), three pumper tankers, a strike team from MFB, a bulk water carrier and the Mernda rehab unit. CFA and MFB firefighters worked together, with help from aircraft dispatched from Bacchus Marsh and Essendon airfields – including an air attack supervisor. By the time the fire was declared under control at around 9pm, it had burned 128 hectares.

What worked well?

- Mt Cottrell Group, District 14 and the group field operational vehicle recognised the seriousness and potential of the incident, and quickly requested additional resources to support the incident controller.
- Crews operated in a safe and effective way while combating the fire, resulting in minimal injuries and minimal damage to vehicles.
- Interoperability and having a multi-agency approach to the incident was crucial. MFB and CFA crews worked well together. MFB crews left with a positive experience and were very complimentary about the CFA crews they worked alongside.
- The incident controller quickly assessed the fire and requested appropriate resources, and adapted well to the abnormal weather conditions and unusual fire shape.
- The Mernda rehab unit gave excellent support to firefighters.



What could be improved?

Self tasking

It's important to ensure crews check in at the operations point. Self-tasking at this incident led to confusion about who was performing what role.

Water refilling

Some crews left the fireground to fill up vehicles at hydrants rather than draughting from available dams. This was raised at the after action review session and the group's crews have improved and continue to access the most appropriate water source to reduce turnaround times.

Communications

The radio towers at the incident unexpectedly impacted the ability of personnel on the fireground to communicate. In turn, this affected the appropriate tasking of crews. Given the grassfire risk, consideration is now being given to fuel reduction burning in and around the towers. Also, radio testing is now occurring at a group level to establish the exact area where communications become impacted.

Control points

Due to the communication difficulties, the control point struggled to receive key intelligence from the field. In the future, it might be worth tasking someone to provide intelligence to the control point. The use of ground observers is also an option.

Conclusion

The impact of this fire was dramatically reduced as a result of the interoperability, and the initiative and quick thinking of those involved.

Source

Adapted from CFA Brigade Magazine Learning from Experience – Spring 2018

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing

Emergency services at Balinga Court, the night of the incident

Doncaster Balcony Collapse: Transition to Recovery

Incident Overview

On 16 December 2017, a balcony collapsed in Doncaster East under the stress of 36 people gathered for a Christmas celebration.
This unfortunate incident resulted in two fatalities and multiple hospitalisations, requiring a multi-agency response and producing several recommendations as part of the After Action Review. The efficient coordination of recovery services ensured that the wellbeing of those who experienced the collapse was kept at the centre of all decision making

Summary

On the evening of 16 December 2017 the resident renting the premises in Balinga Court, Doncaster East, hosted a Christmas party for work colleagues at this address. At 2230hrs the group of attendees moved to a rear balcony to take a group photograph. In total there were 36 persons present amongst furniture items, a barbeque and a refrigerator on the deck. As all party goers were standing together the structure gave way, causing the balcony to partially collapse. A large number of persons were thrown to the ground from the balcony which was approximately three metres above ground level. Multiple persons were caught beneath the deck and under debris.

Calls were received at Emergency Services Telecommunications Authority (ESTA) for emergency assistance however an off-duty Victoria Police Detective (from Eastern Region Division 3) was at a neighbouring address and coordinated the chaotic scene until first responders, in particular, Victoria Police arrived. Country Fire Authority (CFA), Victoria State Emergency Services (VICSES), Metropolitan Fire Brigade (MFB) and Victoria Police were first on scene and proceeded to removed injured persons and perform Cardiopulmonary resuscitation (CPR) on those critically injured. Ambulance Victoria (AV) attended and established a medical triage point at the intersection of Balinga Court and Larnoo Drive, Doncaster East (approximately 150 metres east of incident at the base of a steep decline). Patients were assessed and a total of 18 people were transported to hospital.

A deceased female remained within the incident scene and the female conveyed to Royal Melbourne Hospital died later. A Media Point was created and holding lines provided after consultation with the Media Unit in liaison with AV and MFB media representatives. Despite an initial incursion into the warm zone by main stream media representatives this aspect was managed by a Media Liaison. The Eastern Region Duty Superintendent managed the media response and was supported by AV and MFB Media.

The following notifications were made:

- Eastern Region Duty Superintendent/State-wide Duty Superintendent
- Coroner's Office (attended morning on 17th December, 2017)
- Worksafe (not attending due to work related incident at a private address)
- Manningham City Council
- Department of Health and Human Services (DHHS) – via Ambulance Victoria
- Next of Kin Death and Serious Injury notifications
- Victoria Police Monitoring and Assessment Centre (VP MAC)
- Tupperware Management Company

The Coroner attended the scene and investigation primacy was designated to Manningham Criminal Investigation Unit (CIU) who processed the scene. In consultation with the City of Manningham Building Surveyor (MBS) an independent Structural Engineer confirmed the integrity of the premises before control of the building was transferred to the owners. The City of Manningham Municipal Emergency Resource Officer (MERO) subsequently coordinated the rehabilitation of the scene and removal of debris. As part of the handover the following considerations were progressed:

- Victim management including referrals
- Community reassurance
- Victim and witness management
- Police welfare management

Subsequent management of the incident was approached in a collegiate manner moving beyond the response phase. At the point where the response agencies had completed their activities the need to transition formally to recovery was identified. The cornerstone of this process was an initial recovery planning meeting for relief and recovery agencies with a focus on victim welfare.

The meeting was led by the Municipal Recovery Manager (MRM) with the following agencies in attendance:

- Victoria Police (Manningham CIU and Response Coordination)
- Council (Municipal Recovery Manager, Municipal Emergency Resources Officer and Municipal Building Surveyor)
- Department of Health and Human Services (relief/recovery services and regional recovery coordination if escalation required)
- Doncare (psycho social/debrief lead)

Other agencies documented in the Municipal Emergency Management Plan (MEMP) were placed on standby pending the outcome of the planning meeting. Key outcomes of the initial planning meeting were:

- The need to urgently conduct a group debrief session for those affected, led by Doncare
- The sharing of the circumstances with neighbouring local government areas as their relief/recovery resources may be required or called upon due to the volume of people affected
- Key messages for affected individuals on how they could access further medical services or information developed for the debrief
- Victoria Police victim and witness management information used to inform affected individuals of the debrief before a handover of this role at the group debrief for ongoing support.

A debriefing process with those impacted was facilitated by Doncare, a provider of support for traumatized persons as outlined in the MEMP. The debrief had a larger than expected attendance, a total of 35 affected persons and was serviced by six psychological counsellors. This aspect of the emergency attracted high praise in the manner in which Victoria Police (Manningham CIU) investigators closely liaised with the MRM, DHHS and the Chief Executive Officer (CEO) Doncare in the facilitation of contact details, transport to the meeting and the compassion shown to the victims and relatives. Through the actions of the recovery planning team, the recovery process is well underway and advanced with regards to the victim healing process. A critical component as to why this was possible was Manningham CIU's management of the victims and the compassion shown through the relationships developed through this incident. This example is the subject of a great deal of discussion within the Manningham Municipal Emergency Management Planning Committee (MEMPC) and the Eastern Metropolitan Regional Emergency Management Planning Committee (REMPC) as 'leading practice'.

35

AFFECTED PESONS ATTENDED A DEBRIEFING FACILITATED BY DONCARE

THIS ASPECT OF THE EMERGENCY ATTRACTED HIGH PRAISE IN THE MANNER IN WHICH VICTORIA POLICE (MANNINGHAM CIU) INVESTIGATORS CLOSELY LIAISED WITH THE MRM, DHHS AND THE CHIEF EXECUTIVE OFFICER (CEO) DONCARE

The CFA Operations Officer was first on scene and assumed the Incident Controller role, the rescue of those injured being paramount. They were supported by the VICSES, MFB and Victoria Police. Removal of all persons from the scene to the medical triage point was coordinated by AV. The 18 patients were removed from the scene and transported by ambulance to hospital within a 40 minute period. All injured persons removed from the property were recorded by both Victoria Police and Ambulance Victoria with witness statements obtained from uninjured persons where feasible.

Upon the removal of all persons from the immediate scene, the property was cleared by CFA and VICSES and control of the incident was transferred to Victoria Police. An Incident Command and Control System (ICCS) structure was established.

What worked well?

Throughout the incident all agencies worked collaboratively and co-operatively. Regular Emergency Management Team (EMT) and Incident Management Team (IEMT) meetings (led by Victoria Police) were highly effective in establishing objectives, coordinating tasks and information flow across all agencies. This aspect of the emergency response was highlighted as 'best practice' amongst the agencies.

All AIIMS/ICCS roles were appropriate in the circumstances with all roles filled individually. A crime scene was established once all persons were recovered from the house. The scene was aligned the Integrated Response Model and structured with hot, warm and cold zones. Each area was controlled by Victoria Police. The Rescue teams (Police, Fire services and VICSES) with the injured evacuees and uninjured evacuees were moved from the hot zone through the warm zone into the cold zone effectively. This worked efficiently with the medical triage point and casualty clearing point moving seventeen patients in 40 minutes from the cold zone to respective hospitals. During the debriefing process there was discussion of the use of 'crime scene' tape creating confusion between response agencies. Some emergency personnel were unsure if they were allowed to access the site due to the fact it was segregated as a 'crime scene'.

A safety officer was appointed for the CFA and SES during the rescue process and Victoria Police had a safety officer nominated and engaged. There were no identified issues of concern beyond those that were structural. The scene was locked down pending a structural engineer attending on the morning of the 17 December 2017. First responders from all agencies were exposed to a highly traumatic incident and each agency managed their own welfare structures that were implemented. An inter-agency welfare gathering occurred in early February, 2018 coordinated by Victoria Police with all emergency services.

What could be improved?

- The contents of the debrief report to be shared with key stakeholders of the Eastern Metro Emergency Management Team.
- A case study and other developmental opportunities in collaboration with Centre for Incident and Emergency Management, Victoria Police and Emergency Management Victoria relating to inter-agency response and utilisation of the Integrated Response Model, role clarity and IERC responsibilities.
- All agencies to continue support tabard utilisation in the field at emergencies.
- Appropriate utilisation by Victoria Police of Mobile Police Facilities (MPF) as Command Post (Victoria Police, Eastern Region HQ
- Terminology relating to 'crime scene' had potential to inhibit response from other agencies due to their trepidation to contaminate incident scenes (hot zone) when managing welfare of victims. Concerns raised by three supporting agencies (SES, CFA and AV).
- Financial delegation and liability carried by Manningham City Council relating to the structural engineer and whether there were other avenues (beyond the Council) to obtain an engineer and carry that liability.

Conclusion

This unfortunate event required delicate and empathetic management due to its tragic, unexpected nature and the fatalities that occurred. The multi-agency response and subsequent transition to the recovery phase were able to be enacted in an effective manner due to the prioritisation of victim's wellbeing and the wellbeing of emergency personnel who responded to the event.

Source

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing

Cheltenham Park Scrub Fire

Summary

At 1413hrs on 27 December 2017, Metropolitan Fire Brigade (MFB) appliances responded to a scrub fire at Park Road, Cheltenham Park. The incident quickly escalated to a 5th Alarm (15 appliance response) Non-Structure Fire due to the fire's size, strong winds and the potential risk it posed to the community. Sixteen appliances from MFB and CFA stations responded. Victoria Police determined that the cause was a camp fire ignited by a group of teenagers.

Incident Overview

Cheltenham Park Scrub Fire consumed three hectares of scrub in Cheltenham Park. The park is bordered by residential properties to the south, a golf club, a cemetery and a school. The potential for a fire to impact residential properties in a short timeframe was identified as high risk.

Three appliances were dispatched initially and a request for two additional appliances was made by a responding officer who could see significant smoke. The first MFB appliance (Water Tanker 34) arrived at the incident three minutes and thirty one seconds after the initial call was received from a resident. Upon arrival a 'wordback' was given to escalate to a 2nd Alarm Non-Structure Fire (six appliance response).

A Senior Station Officer of a different appliance assumed the role of Incident Controller (IC) and undertook a size-up which provided good situational awareness. At this stage the fire was burning one acre, growing rapidly and crowning in tree tops with flame heights of twenty metres. It spread rapidly to the adjacent golf course and cemetery. At this point its proximity to a primary school and residential properties was increasing and the IC escalated to a 5th Alarm response (15 appliance response).

The arrival of two Operational Commanders quickly identified critical areas of risk, including the potential loss of residential properties and directed responding appliances to undertake asset protection tasks. The IC, now an Operational Commander, requested the assistance of air support for water bombing and to gain better situational awareness.

Evacuation of nearby residents and the golf course commenced. Due to the windy, hot weather conditions, there was a significant risk to life. The strategy implemented by the IC was a resource-heavy, fast attack in an attempt to cut the fire off from the properties under threat.

A water bombing helicopter was requested early, given the location's limited accessibility. This enabled a fast knock-down. As a result, ground crews were able to safely cut off and extinguish the fire.

What worked well?

The first appliance arrived on scene three and half minutes after the initial call and the rapid escalation in the number of appliances and command staff ensured adequate resources to bring the fire under control quickly, minimising damage to properties and the environment.

MFB utilised its electronic operational mapping tool, which allows Incident Controllers to see the location of MFB appliances in real time. The software provides visibility of appliances and assists with resource deployment, effective use of resources and accountability of crews at all times.

The early deployment and implementation of air support was effective to assist with fighting the fire in areas that were restrictive and difficult to access, whilst protecting crews and the public.

The fire occurred in a densely populated area of Melbourne and the community engagement plan worked effectively. Victoria Police assisted in evacuation and the State Emergency Warning System (SEWS) was used in conjunction with the MFB District Command Centre manager issuing community warnings and information. Forest Fire Management Victoria (FFMVic) was requested to attend to assist MFB with hazardous trees. Several trees were identified and exclusion zones were established. Other areas of the fire ground were deemed low risk and safe for crews to black out and mop up. A dynamic risk assessment on each identified tree was undertaken and FFMVic, using chainsaws and a D4 bulldozer, ensured the scene was made safe before the community returned to regular activity within the park.

What could be improved?

Requesting Air Support

The initial request for air support was made using an outdated procedure via communication centre radio. Identifying this opportunity for improvement, MFB reviewed its procedure with assistance from the State Air Desk (SAD), and issued a bulletin to Senior Command staff reiterating the current procedure. This procedure is in line with MFB – CFA Joint Operational Activities (MOU) 11.1.4 Request and Use of State Fleet Aircraft by MFB.

Communications

Communication between the aircraft and Incident Management Team (IMT) was adversely affected due to confusion around use of radio channels. MFB should have adhered to MOU 11.1.4. In those circumstances, the SAD would have advised the IC of the appropriate CFA channel and all crews would have been able to monitor this with the CFA radios carried on all MFB appliances.

Communication between the aircraft and the firefighters on the ground was adversely affected due to MFB crews identifying appliances by station numbers as their call sign. Appliances display large numerals depicting the vehicles car number (known as the aerial identification) on the roof. The roof top number is different to the identified call sign. This led to crews not being made aware they were being called by the helicopters when they were located in the path of an intended water drop. MFB has undertaken a program to place reflective stickers depicting the appliance's car number in five prominent locations on all appliances so that crews can easily identify their appliance by car number as well as its call sign.

Community Warnings and Information

When the SEWS was utilised the resulting enquires from media outlets impacted the MFB Fire Services Controller (FSCC). MFB has updated its workflow procedures to ensure that when a SEWS is transmitted the media line is to be redirected to the on-call media department phone to handle enquires. An initial Emergency Alert was sent utilising the telephone network, targeting residents south of the park. An internal review later determined that the alert was not sent to all residents due to an error while using the program. The evacuation of the affected area was successful because Victoria Police had completed the evacuation in a timely manner.

Further training has been conducted for all staff responsible for creating Emergency Alerts.

Conclusion

While the use of air support in the metropolitan district is infrequent, it is important to maintain knowledge of procedures to ensure effective communications and use of resources at events requiring their use. This event served as a timely reminder of the risks associated with areas where the urban fringe meets scrub land. MFB's response of quickly upgrading the alarm response based on situational awareness, deploying appropriate resources, and MFB crews responding in an agile and nimble manner provided positive firefighting results.

Source

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing

THIS EVENT SERVED AS A TIMELY REMINDER OF THE RISKS ASSOCIATED WITH AREAS WHERE THE URBAN FRINGE MEETAS SCRUB LAND

A WATER BOMBING HELICOPTER WAS REQUESTED EARLY, GIVEN THE LOCATION'S LIMITED ACCESSIBILITY. THIS ENABLED A FAST KNOCK-DOWN. AS A RESULT, GROUND CREWS WERE ABLE TO SAFELY CUT OFF AND EXTINGUISH THE FIRE

A section of Amboyne Monument track, post incident

Amboyne Monument Track Fire

The Amboyne Monument Track fire presented a significant challenge for firefighters as it was located in a remote, harsh region of the Alpine National Park. As a result, the incident lasted several weeks and was declared safe on 1 March 2018. The response to the fire produced learnings on sentiments in the local community, its preparedness and the importance of ongoing landscape fire safety and awareness education.

Incident Overview

The Amboyne Monument Track fire occurred in far east Gippsland, 15km north-west of Tubbut, a secluded region in the Alpine National Park. The fire was ignited by remote lightning strikes and reported to Forest Fire Management Victoria (FFMVic) at 1217hrs on 23 January 2018.

The incident presented a major challenge for crews due to the rugged terrain and isolated location. Aircraft assisted with reconnaissance work in conjunction with ground fire crews and heavy machinery which constructed control and fallback lines. As a result of these efforts, the fire was declared safe on 1 March 2018. Approximately 45 hectares were burnt over several weeks.

A Public Information Section (PIS) was established, and four Community Engagement (CE) Officers worked in the nearby communities, reporting to the Public Information Officer. The PIS responsibilities included providing information to the local and broader community about the fire situation using a range of media, social media and direct community engagement options.

What worked well?

The local community and visitors received timely information via local community social media networks and through direct engagement from CE Officers. This was consistent throughout the incident and worked in with mainstream media.

The community received content on daily firefighting efforts, and information on the strategies and tactics involved, including photos and maps.

As a result of the impact from significant fires in 2014, the community was concerned as the incident progressed due to a perception that agencies at the time didn't provide adequate information. This sentiment drove the Incident Management Team (IMT) for the Amboyne Monument Track fire to ensure that community information needs were well-serviced this time through multiple channels.

Through the 2014 experience, local FFMVic personnel realised that communities required a level of support they hadn't anticipated. The assumption was that long term, multi-generational families living in the area would have been prepared for large fire emergencies. The reality was that community members had varied viewpoints (pro and anti-fire in the landscape agendas) and this resulted in inconsistencies in information and understanding of landscape fire, firefighting and current health and safety expectations. This knowledge ensured that public information and updates were a priority to ensure residents were well informed about the incident and their safety.

What could be improved?

We have improved the way we communicate with communities during emergency incidents. However, generally (outside emergency response) communities still need to remain informed in relation to fire and its role in the landscape. The complexity of constraints faced by fire management teams is not general knowledge. These include environmental, weather, operational, health and safety restrictions among other variables. Often it is common perception that fire incidents have simple solutions and abundant resources when this isn't always the case.

In the communities near the Amboyne Monument Track fire there are many 'rural resilient' residents who know and understand landscape fire. However there are also residents who have outdated knowledge or misinformation. It is important to continue to improve the connections between public land managers and the community by ensuring ongoing, widespread and credible community-wide campaigns and information to help public education and understanding of landscape fire, planned burning and fire management.

Aerial perspective of Amboyne Monument track during the incident

Conclusion

There was a positive outcome from timely, adequate and effective resourcing of the PIS during emergency response. The model at Amboyne Monument Track where FFMVic and CFA were both represented within the CE team was beneficial. Face to face interactions with the residents and visits that the CE team made to individuals, camp sites, neighbourhood houses and halls were beneficial to distribute information and gauge community sentiments. The range of multi-platform media, social media and personal contact methods to access and inform the community was a success. This ensured a broader reach and enabled recipients to be self-reliant and inform themselves.

Timely, relevant and tailored community information and engagement during emergency response is critical for community safety. Community preparedness for and resilience to the increasing potential for bushfires is also critical. Community engagement at individual incidents needs to be complemented by an ongoing, widely dispersed program to bring the public to a better understanding of fire and its important role in maintaining the landscape.

Broader education about fire management, firefighting methods, technologies and operational, legal and health and safety constraints always goes a long way to support better informed, better prepared and more self-sufficient communities. An understanding of the context of fire in the landscape will lead to more resilience in the face of future incidents. A resilient, informed and prepared community experiences an event rather than an emergency.

Source

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing

Crews performing a high angle rescue in Slocombes Cave Reserve

Slocombes Cave Reserve High Angle Rescue

Summary

On Saturday 24 January at 12.27am, a call came through Triple Zero (000) reporting a man had fallen down a sink hole about 20 metres down a cliff off Jamieson Track, in Slocombes Cave Reserve.

The man was exploring the caves with a group of friends. They had entered a small cave opening in a paddock and climbed in approximately 20 metres to a ledge. The man then dropped his torch and, while trying to retrieve it, he lost his footing and fell around 15 metres and landed on another ledge about three to four metres above the cave floor. The man lost consciousness for a period of time, but was conscious and talking with his friends when emergency services arrived.

Incident Overview

As the rescue crew from Lakes Entrance Fire Brigade arrived on scene, they were met with Ambulance Victoria (AV), Victorian Police (VicPol) and the group of cavers with Victoria State Emergency Service (VICSES) attending later who provided lighting and emergency management team (EMT) support.

The rescue crew first of all:

- established reliable communications (as this was limited due to the location)
- determined a safe path to and from the cave entrance
- provided initial lighting and secured the cave opening
- liaised with AV and VicPol to gather information and make an assessment of the incident and determine resource requirements.

Following this, a situation report was passed onto the technical rescue crews and VicPol Search and Rescue who were on the way to the scene. A safety line was secured to allow initial medical assessment of the man by AV and to provide information about potential further requirements. The paramedic stayed with the man until Melbourne-based rescue services arrived at the scene.

An emergency management team (EMT) was established to ensure information was shared between all agencies and stakeholders involved. When the technical rescue crews arrived, they were briefed and subsequently conducted their own assessment and developed a plan which was then communicated to the EMT.

Technical rescue crews set up rope systems ready for the arrival of VicPol Search and Rescue. On their arrival they were briefed and final preparation and packaging was done to extricate the man. A CFA rope technician and Search and Rescue were lowered to the floor of the cave and secured the man onto a fall safe stretcher. The incident was called under control at 0418hrs.

The man was taken to hospital some eight hours later, after a rescue operation that was made complicated by the narrowness of the shaft.

What worked well?

The following contributed to the positive outcome:

- The initial dispatch of a multi-agency response that recognised the seriousness and complexity of the incident.
- The early escalation of additional emergency services resources.
- Establishing the EMT early and subsequent information sharing and collaborative decision making.
- Crews and agencies worked together and communicated their requirements and actions.
- The use of local knowledge.
- Rotation of crews, where possible, to reduce fatigue (due to the duration of the job and time of night).
- Crews carried out a debrief following the incident to capture immediate lessons learned.

What could be improved?

The following has been identified as areas for improvement:

- Provision of additional rope rescue equipment and training to Lakes Entrance Rescue crews to facilitate safer, more expedient initial access in order to assess and treat a patient until the technical rescue crews arrive.
- Improved provision of aircraft (helicopters) so that specialist teams can reach remote locations more quickly.
- Due to poor communications (only available via Dispatch channel and some SMR) the first crew to arrive wasn't able to send photos or video to incoming technical rescue crews to give them a heads-up before they arrived.
- Emergency Management Victoria states the control agency for a cave rescue is Victoria Police. However, in remote areas it may be beneficial to allow tech rescue crews to begin extrication without delay as long as they have sufficient resources, training and are a rescue provider. At this incident, there was a delay because crews had to wait for Search and Rescue to arrive.

Conclusion

The incident was a team effort across four emergency services. The good work from those involved resulted in the man being transferred to Bairnsdale by road then airlifted to Melbourne for further assessment.

Source

Adapted from CFA Brigade Magazine Learning from Experience – Autumn 2018

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing

Epidemic Thunderstorm Asthma 

Incident Overview

On 21–22 November 2016, Victoria experienced a rapid-onset epidemic thunderstorm asthma event of unprecedented scale and consequence, with record demand for the Triple Zero (000) service, ambulance services and the health system, including hospitals.

This emergency resulted in 3,365 more respiratory-related presentations to Melbourne and Geelong public hospitals than expected (based on the three-year average), which is a 672% increase. In addition, 524 more people than expected (based on the three year average) across the metropolitan Melbourne and Geelong areas required public hospital admission for asthma and tragically, the event is linked to 10 deaths.

Epidemic thunderstorm asthma events are thought to be triggered by an uncommon combination of high grass pollen levels and a certain type of thunderstorm, resulting in large numbers of people developing asthma symptoms over a short period of time. The Minister for Health and Minister for Ambulance Services requested that the Inspector-General for Emergency Management (IGEM) review the emergency response to the epidemic thunderstorm asthma event. The review report was published in April 2017.

The review made 16 recommendations, the bulk of which were directed to the Department of Health and Human Services (DHHS) and Emergency Management Victoria (EMV). The review identified opportunities to improve future preparedness and response arrangements and the performance of the public health and emergency management systems and processes in Victoria.

The Government accepted all 16 recommendations in-principle in April 2017 and continued a comprehensive program of work in response. A whole-of-government thunderstorm asthma working group was established in July 2017 to oversee this work, comprising members from the DHHS, EMV, Ambulance Victoria (AV), and the Emergency Services Telecommunications Authority (ESTA). Staff from the office of the IGEM attended as observers. Leadership at Deputy Secretary level of the working group ensured commitment and importance was maintained across all agencies. The working group published a whole-of-government response in October 2017.

What worked well?

The convening of the thunderstorm asthma working group was critical to the successful delivery of the whole-of-government response to the IGEM review following the epidemic thunderstorm asthma event of November 2016. As reflected in its terms of reference, the working group's purpose was to:

- Coordinate the activity, outputs and timelines to address the IGEM recommendations including the development and implementation of a whole-of-government response
- Ensure any variations from the whole-of-government response and implementation were considered in the context of IGEM's review findings and recommendations
- Identify and resolve any issues impacting the progress of implementation of the whole-of-government response
- Provide reports to the Security and Emergency Management Committee, State Crisis and Resilience Council and IGEM.

The working group, chaired by DHHS, focused on executing measures that would minimise the impact of future large-scale and fast-moving emergencies. Some of the activities achieved under the whole-of-government response include:

- Reforming the State Health Emergency Response Plan delivering a strategic plan for responding to health emergencies in Victoria.
- Implementing a Real-time Health Emergency Monitoring System to alert the department to demands on public hospital emergency departments
- Strengthened processes to utilise State Control Centre, including information and warnings platforms and to enable notifications to be issued across the sector.
- Implementing ESTA's 'one-click' system for real time notifications to emergency management sector partners
- Re-affirming the commitment of Victoria Police, Metropolitan Fire Brigade and the Country Fire Authority to provide additional capacity and capability to AV when practicable

- Implementing a thunderstorm asthma public health campaign and education programs for the Victorian community and health professionals
- Building and implementing the first Victorian epidemic thunderstorm asthma forecasting system.

The consultative approach of the Inspector-General's staff was invaluable in assisting the agency leads (DHHS and EMV) to establish and collect a strong evidence base for implementing the whole-of-government response to the review's recommendations. Live demonstrations of newly-developed or enhanced systems by the working group members to IGEM staff at DHHS and the State Control Centre greatly assisted in shared understanding of sector improvements to emergency preparedness and response. A robust chairing function for the working group, proactive agency leads and an open and collegiate relationship with the Office of the IGEM were critical to the group's success.

What could be improved?

Overall, the program of work overseen by the whole-of-government thunderstorm asthma working group has led to significant improvements in Victoria's preparedness and response capabilities for fast moving and geographically-dispersed events, such as epidemic thunderstorm asthma.

Going forward DHHS will seek continuous improvement in preparedness and operational responses to epidemic thunderstorm asthma by:

- Enhancing its understanding of the epidemic thunderstorm asthma phenomenon
- Continuing campaigns and education programs
- Continuing to evaluate the thunderstorm asthma program to inform improvements to the design and implementation of the program in future years.

The whole-of-government response to IGEM's 16 recommendations comprised 69 individual actions. The list of actions illustrated how the Government would fulfil its commitment to addressing the recommendations. A deliberate effort in defining the actions and aligning them to the recommendations fostered shared accountability and clarity among the working group members with respect to outputs, timelines and issues management.

Conclusion

The 21–22 November 2016 epidemic thunderstorm asthma event was the world's largest, unprecedented in scale and geographic reach. In response to the event, the Government implemented a program of work designed to empower and prepare the community for future events and to ensure that the Government is better able to understand, predict and respond to events like this in the future.

The convening of the multi-agency working group was instrumental in garnering the required collective expertise across the sector. The working group provided strategic coordination and oversight of risks and issues and ensured the benefits of this work were relevant for all types of emergencies. The lives that were tragically lost and the severe asthma suffered by many during the November 2016 event cannot be undone. However as a result of a sustained, collaborative effort across the emergency management sector, the working group partner organisations now have more robust systems that will protect Victorians into the future.

Source

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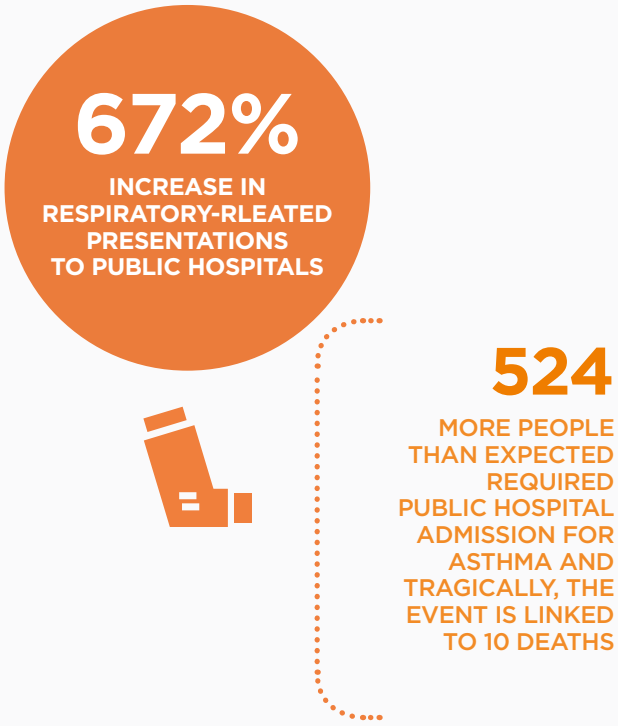

From left: Stuart McConnell GM Infrastructure and Development Murrindindi Shire Council, Jim Tullberg Senior Environmental Officer VicRoads, Casey Southurst Community Safety Officer Murrindindi Shire Council, Danielle Green MP, Norm Golgerth Emergency Management Coordinator Nillumbik Shire Council, Pat Carra Municipal Fire Prevention Officer City of Whittlesea, David Foster Municipal Fire Prevention Officer City of Whittlesea, Nick Mann Director City Transport and Presentation City of Whittlesea

Kinglake Ranges Municipal Fire Hazard Management Agreement

Summary

In response to issues raised by residents in the Kinglake Ranges, Municipal Fire Prevention Officers (MFPOs) from Murrindindi, Nillumbik and Whittlesea municipalities and VicRoads representatives came together to improve the consistency and available information around fire prevention. The result of this cooperation was the Kinglake Ranges Municipal Fire Hazard Management Agreement.

Incident Overview

In late 2016, CEOs and senior staff from Murrindindi, Nillumbik and Whittlesea Shire Councils and VicRoads received correspondence from the member of Yan Yean. This highlighted concerns some residents had within the broader Kinglake Ranges area regarding the timing of fire prevention slashing and a lack of general information available to them about slashing works and timetables. The email prompted a meeting between all involved parties to discuss avenues for improving the negative perception some residents of the Kinglake Ranges had toward fire prevention activities.

Following the initial senior management discussion, MFPOs from each of the municipalities and VicRoads representatives began working on a combined approach to better improve the consistency and available information around fire prevention. The parties also agreed to align the timing of fire prevention works in the Kinglake Ranges regardless of the agency, region or municipal area – works from all parties would take place when curing rates and therefore risk dictated, rather than being undertaken for any other reason.

THE PARTIES ALSO AGREED TO ALIGN THE TIMING OF FIRE PREVENTION WORKS IN THE KINGLAKE RANGES REGARDLESS OF THE AGENCY, REGION OR MUNICIPAL AREA

What was planned?

Initial discussions revealed common inconsistencies surrounding fire prevention activities, communication and access of information for residents. Within municipalities there were also varying requirements regarding Fire Prevention Notice compliance.

The team set about establishing a plan to address the issues which fell into one of the three overarching objectives of:

- Improving consistency of fire prevention activities regardless of municipal borders
- Improving communication between neighbouring authorities
- Improving communication between authorities and communities

After the key objectives were identified, the group commenced drafting an agreement and action plan that not only captured the purpose of the group but made a formal recognition of the commitment each Council and VicRoads had to the collaboration. As a result the agreement was signed by all involved Council CEOs and senior VicRoads staff to commit to resourcing at least two meetings per year aimed around fire prevention consistency in the Kinglake Ranges known as the Kinglake Ranges Municipal Fire Hazard Management Agreement (FHMA).

In addition to the agreement, there is a one-year action plan signed by the relevant MFPO's and VicRoads operational officers. The action plan consists of specific and measurable tasks aimed at addressing the overarching objective of improving fire prevention consistency across the Kinglake Ranges.

What worked well?

Councils and VicRoads broke down existing barriers by agreeing to share information through collaboration. Agencies agreed to unite in delivery of treatments and in broader communications to the community presenting a united front on both the timing of treatments and the communication methods.

A number of innovations were identified including all agencies agreeing to align treatments to risk, rather than other arbitrary concerns.

As a result of the action taken, there has been a significant drop in the number of complaints from the Kinglake Ranges residents. Positive communications about agencies working together have been received – the community is happier when they are presented with key information and see all agencies completing treatments at the same time.

What could be improved?

Future work may focus on the type of treatment and treatment location. Whilst it is a significant step to align treatment times and communications, there is still an element of unknown regarding treatment type and location. Potentially by accessing risk modelling developed by the Department of Environment, Land, Water and Planning (DELWP) Bushfire Risk Landscape teams, the group could begin to put some science behind treatment type and location.

A positive outcome was the level of engagement from VicRoads and their decision to sign up to the FHMA. Initially it was thought that the group would only include MFPOs from municipalities but the addition of VicRoads was a welcome one.

A dedicated resource to assist in bringing the project together would have been a great asset. Having a resource to prepare communications, meeting minutes and timetabling on behalf of the group would have freed up officer time to complete other tasks.

In order to address and sustain the lessons discussed, the group will examine the effectiveness of progress over the next few meetings and further fine tune treatment timing and communications. After its successful initial one year trial period, it is hoped that the group will continue to work together and collaborate into the future.

Conclusion

The group delivered all of its keys tasks and requirements and significantly raised the profile of the agencies in the Kinglake Ranges. Something that could be done in the future or in another trial of this type would be to assess community attitudes before and after the project. This would require dedicated resources but would allow measurement and verification of outcomes.

One important take-away was the virtue of breaking down silos between agencies delivering the same treatments. Positive learnings came from opening doors and allowing other professionals the opportunity to cross-examine the critical treatments and communications.

This was significant because it is the first time the three municipalities and VicRoads have sat down together to discuss the delivery and communication regarding fire prevention for a broader geographical area. Prior to this each agency and municipality was effectively working in a silo of its own creation, unaware of what each neighbour was up to.

Learning from both the successes and failures of agencies through working together more effectively is important. Networking and collaboration add significantly to the quality of fire prevention treatments and communications, as chief successes can be celebrated and other agencies can also be advised of treatments that don't work effectively in a geographical area. This group could perhaps encourage other agencies and municipalities to collaborate and share information and agency initiatives in fire prevention regardless of municipal boundary.

Source

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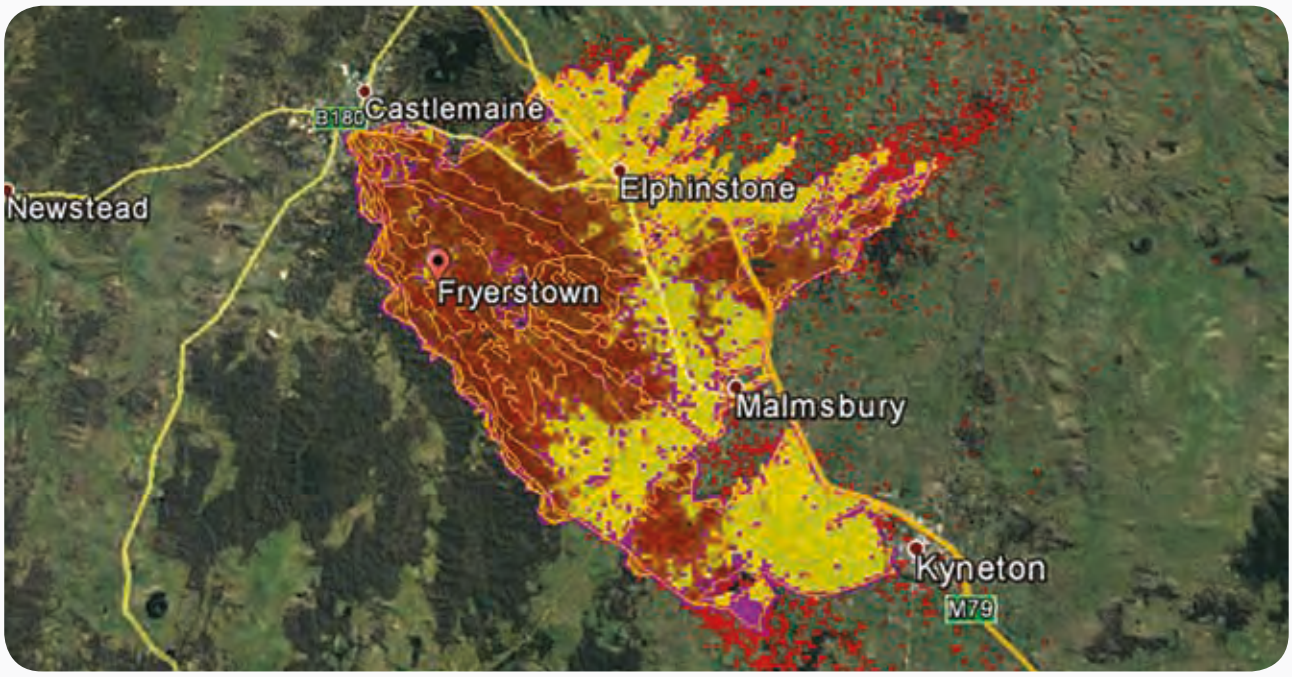

Phoenix Rapidfire modelling produced by DELWP, showing a simulation outlining what is predicted to occur should a fire have started in Castlemaine on a FDI 130

Fryerstown Antique Fair

Summary

Commencing in 1975, the Fryerstown Antique Fair has been operating in the small rural town of Fryerstown for 43 years over the Australia Day long weekend in the peak of summer. With over 200 stall holders, attracting around 6,000 visitors over the three day trading period each year. The Fair is organised by the Fryerstown Hall Trustees and Fair Committee (Trust).

Fryerstown, situated amongst the Fryers Range State Forest is rated as having an extreme bushfire risk. Evacuation of the township during the Fair would be catastrophic without considerable notice due to dense undulating bushland and limited road infrastructure providing limited access and egress to and from the township.

The Mount Alexander Municipal Fire Management Planning Committee (MFMPC) consisting of Mount Alexander Shire Council (Council), Country Fire Authority (CFA), Forest Fire Management Victoria (FFMV), Victoria Police (VicPol) and VicRoads held discussions with event organisers and Council officers about some concerns about the fair.

The main concern was that organisers did not have the capacity to develop and implement a satisfactory emergency management plan (EMP). Numerous attempts over the years had been made by the committee and Council officers to rectify and assist with the development of the plan.

Following the 2016 Fair, MFMPC notified the Trust that they were no longer able to support the event being held in Fryerstown during the Fire Danger Period post the 2017 fair.

EVACUATION OF THE TOWNSHIP DURING THE FAIR WOULD BE CATASTROPHIC WITHOUT CONSIDERABLE NOTICE DUE TO DENSE UNDULATING BUSHLAND AND LIMITED ROAD INFRASTRUCTURE

Overview

Following the 2017 Fryerstown Antique Fair, the MFMPC requested a debrief with the Trust to discuss feedback from Council officers and the CFA Strathloddon Group of Brigades, relating to:

- Attendance by stallholders at briefings
- Requests from CFA to event organisers to conduct emergency drills
- The capacity of event organisers to effectively implement the EMP in an emergency
- A survey that was meant to be conducted post the 2016 fair with stallholders regarding a change of date for the fair.
- The ability to effectively manage traffic.

Prior to the debrief occurring, the Trust wrote a letter to the MFMPC advising them that the Trust would not be seeking alternative dates or location for the 2018 Fair and requested official notification from the MFMPC as to whether they would support the 2018 fair operating in Fryerstown on the Australia day weekend.

The MFMPC responded with a letter to the Trust advising them that the event would not be supported in 2018 or beyond unless they agree to:

- Hold the event during a time outside of the Fire Danger Period when risk associated with the area is not as high or,
- Hold the event at an alternative location supported by the MFMPC outside of a high fire risk area on the weekend of Friday 26th – Sunday 28th January 2018.

Council officers had explored the impact of refusing permits to use Council owned/managed land but the impact was minimal as the land is predominately managed by the Department of Environment, Land, Water and Planning (DELWP). DELWP advised they do not hold authority to direct timing of events, but can request that the committee consider the fire danger risk, and have an adequate EMP in place.

What happened?

The aim of the MFMPC was for the event to be moved to a time or location that reduced to the risk to the public.

A debrief was held in August 2017 with the Trust, Council officers, VicPol, CFA and FFMV. The debrief included feedback from the 2017 event and reconfirmed that the MFMPC would not support the event in its current format due to public risk.

The MFMPC utilised a variety of methods to illustrate the significant risk including:

- Subject matter experts;
- Recent risk analysis products including Phoenix RapidFire simulations; and
- Fire management planning maps showing predicted house losses on Fire Danger Index (FDI) of 75,100,130 days.

The modelling pictured on the previous page identified over an 11 hour period the fire under a north westerly wind would spread rapidly from Castlemaine, south east to Kyneton. A south westerly wind change may cause a large fire front to move north east to Barfold. The township of Fryerstown would be heavily impacted.

Trial evacuation simulation modelling for Maldon indicated an evacuation would take approximately five hours. An evacuation of Fryerstown during the event would require significantly more time due to road conditions and limited egress and increased traffic numbers in the area.

The issue of liability and insurance was discussed along with possible implications if insurers became aware that the MFMPC did not support the event. Following the debrief, the Trust indicated that they were willing to investigate an alternative location.

What was the Outcome?

Following an onsite inspection of the Campbell's Creek Recreation Reserve by Council officers and the Trust, Council officers were advised that the Trust had unanimously voted to cancel the event indefinitely. This was predominantly due to liability concerns and the fact that the event would no longer be known as the Fryerstown Antique Fair if it was held in Campbells Creek.

The Trust indicated that the MFMPC caused the cancellation of the event however consistent messaging by the MFMPC and Council, based on the correspondence received from the Trust stating that it was their decision, significantly reduced community feedback to the MFMPC and Council.

Although the Trust chose to cancel the event, two other community groups took the opportunity to run two separate Antique Fairs in Campbells Creek over the Australia Day long weekend in 2018. These events were supported by the MFMPC and were attended by majority of stallholders from the former Fryerstown Antique Fair.

What worked well?

The strength of the partnership between Council, FFMV, CFA and VicPol developed a shared understanding of risks. It also provided support from each agency to Council officers who led the negotiations with the Trust.

The availability and use of newer risk analysis tools also assisted the negotiations by MFMPC. The tools were not previously available to the MFMPC However their use in the 2017 debrief session resulted in a change of stance and improved understanding of risk by the Trust after being shown fire spread and house loss modelling.

The media statement developed by Council and the nomination of a MFMPC spokesperson provided a consistent message from all agencies to the stakeholders, community and media.

Media interest was high with The Age, Weekly Times, Win News, Bendigo Advertiser, multiple local newspapers and local Facebook groups all running stories on the cancellation of the event. The majority of the articles outlined the risk of running the event during summer which resulted in minimal complaints and general support of the MFMPC based on public risk.

What could be improved?

Due to historical arrangements the requirements of permits to use DELWP land was not required. There was no requirement for a Place of Public Entertainment (PoPE) permit. The use of Council land was limited so the removal of Councils permit to use their land would not prevent the fair from occurring. Although it would have caused some disruption as a portion was used

Additional statutory requirements within Victoria for the operation of smaller events not requiring PoPE Permits would assist emergency management agencies in working with event organisers to plan for and deliver safer events in high risk areas.

There is also an overall lack of guidelines and protocols about events on Crown Land. The development of guidelines that clearly articulate general event use on crown land would assist in managing similar events in the future

Conclusion

The MFMPC understood the need for balance between economic and social benefit derived from events especially in rural municipalities, however the protection of life and property took precedence in this instance. The MFMPC recognised the limitations and capability of each agency to provide an appropriate response should a significant emergency event take place.

The approach taken by the MFMPC was to provide support and assistance to event organisers to implement changes to the event to ensure that it could continue to operate with minimal risk to the public.

Although the Trust chose to cancel the event, the community and stall holders came together to form two new Antique Fairs within Campbell's Creek. The success of the two new fairs and the feedback in local media about the new sites being much safer and accessible proves the intent behind the MFMPC's approach.

Source

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Truck Tipper Incident

A truck travelling west along the Princes Freeway on Friday 22 June 2018 caused massive outbound traffic congestion when it's raised tipper trailer struck the Doherty's Road overpass bridge at approximately 1209hrs. The incident was caught on dashcam by a passing motorist. City Link and Victoria Police (VicPol) attended the scene and immediately closed three outbound lanes to ensure the safety of travelling public and incident personnel. One outbound lane remained open to enable some traffic movement although there was still significant traffic congestion and delayed travel times.

The tipper trailer was removed from the bridge at 1618hrs. However, traffic remained congested into the evening peak with reports of traffic banked-up to High St on the Monash Freeway (25 km from the incident).

What worked well?

Metro North West (MNW) Region and Incident Response Service (IRS) were advised of the incident by the Traffic Management Centre (TMC) at approximately 12:09hrs. IRS Traffic 6 arrived on scene at approximately 1216hrs and the IRS Traffic Commander arrived at approximately 1300hrs.

Command, Control and Coordination arrangements for incident and emergency management were well understood and implemented by personnel on site. On scene VicPol (Control Agency) and VicRoads (Support Agency) quickly identified roles and responsibilities (assisted by wearing relevant incident vests). City Link assisted with traffic management.

A forward command post was established and objectives for the management of consequences related to the incident were determined based on the State's priorities (safety – public and personnel, information to the public and protection of critical infrastructure).

On initial notification of the incident, IRS had immediately requested Bridge Engineers attend the site to assess damage to the bridge structure. This early request greatly improved the opportunity for the bridge assessment team to access the site before the area became completely grid-locked with traffic. The team from Kew arrived within an hour of activation despite the heavy traffic using local knowledge to negotiate the road network. Their kit included relevant engineering drawings of the bridge to assist with their inspection.

The heavy haulage company was co-incidentally in the area and on scene almost immediately after the incident occurred.

They were engaged to tow the truck and also arranged for a cherry picker to be made available to assist with the tipper inspection. Opportunistically, the cherry picker was utilised by VicRoads Bridge Engineers at the same time to undertake the bridge inspection.

VicRoads Situation Report system automatically updates the external VicTraffic website and created a social media post (Twitter) to inform the community about incidents. Facebook posts and Traffic Alerts (via media broadcasts) were also initiated. Community had early advice about the potential impact of the incident on traffic congestion and travel delays in the afternoon.

TMC Media continued to brief relevant media outlets about travel delays which ensured up to date information was provided to the community.

Notification of the incident was provided internally and externally to relevant agencies.

What could be improved?

Consequence, Communication and Community Connection are areas where we could improve. Any incident of this significance on a major roadway on a Friday afternoon leading into the peak travel period will have significant impacts on the community.

Whilst some internal VicRoads communications worked well, there was a lack of clarity around the requirement to escalate notifications to other parts of VicRoads to ensure notification to the broader sector and government. Shared situational awareness is important to facilitate timely restoration of services to minimise impact on the community. Notification processes need to include relevant information such as photos, requests for resources, site maps and drawings, and equipment on site. This helps people to form a picture about what is required to undertake their role. As an example of shared situational awareness, knowledge that a cherry picker was onsite enabled engineers to make a quick assessment of the damage to the bridge.

Further guidance is required from VicRoads about how the Structural Technology and Assets team, with their asset specific expertise, can be better incorporated into incident response. This is currently being reviewed by VicRoads.

While this is VicRoads first formal debrief of a significant incident, implementation of debriefs for similar types of incidents would help the agency to identify good practice that should be continued, gaps in current processes, opportunity to share information and to improve our response. Social media has information about an incident that we can use to help us respond appropriately; to understand potential impacts and consequences; and as a source of evidence for more formal investigative processes. We all need to learn how to better use it to assist us in our work, including the following:

- Initiate early request for a structural engineer and cherry picker to assist in assessment of structural damage to bridge infrastructure.
- Support those involved in the incident by prompting specific resource requirements. Utilise VicRoads Incident and Emergencies Triggers guideline to classify an incident based on consequences and trigger relevant notifications.
- Ensure consequences are considered beyond immediate scene, monitored and managed. For example, impacts to those caught in a significant traffic disruption need to be considered, especially welfare needs.

Conclusion

VicRoads initiated a debrief to better understand what went well, what didn't go so well, what we could do better and what we will do next time. This approach is consistent with the sectors' Monitoring and Assurance Framework which highlights the importance of debriefing following a significant incident or emergency as a shared learning opportunity.

Applying the State's priorities for emergency management and the six Cs for incident management will ensure a more integrated response from all agencies. At VicRoads, we want to share our learnings with you about the role we play in providing for safer and more resilient communities.

Source

EM-COP Library > Reviews-Lessons > Learning Products > Case Studies and Lesson Sharing

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