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MANAGEMENT
VICTORIA

PRE-SEASON UPDATE
2015-16 SUMMER SEASON

EMERGENCY MANAGEMENT COMMISSIONER'S MESSAGE

To plan and prepare for the 2015-16 summer period, much has gone into establishing ourselves as a sector – the Victorian emergency management sector. This has involved communities, government, agencies and business coming together with a common vision of building safer and more resilient communities and a goal to work as one.

For a number of years now, Victorian fire, rescue and flood services have been moving in this direction. It is now about building upon what has been done so far and broadening out to all emergencies with community at the centre.

Last summer, emergency services responded to around 4,250 grass and bushfires and almost 8,650 storm and flood requests for assistance, requiring a joined up approach before, during and after to help our communities.

The state also faced challenges with hot and unstable weather in early January and throughout the season and assisted interstate with the deployment of aircraft and firefighting personnel.

Having been in the grip of El Niño for a number of months now, Victoria can again expect to see a significant summer in the way of heat and dryness. While some areas received much welcomed rain over the winter months, others, such as parts of north and western Victoria, continued to face drought-like conditions.

There are ways in which we can improve and we take these lessons away after each summer to be better at what we do and, in turn, be better for the community.

Emergency management, of course, extends beyond summer and we know that it is a year-round and round-the-clock job. But it is by working as one, and working with our Victorian communities, that we will get it right during these critical times of the year.

Craig Lapsley PSM
Emergency Management Commissioner

SAFETY

The safety of crews must be a primary consideration when responding to emergencies. The diversity that abounds the State of Victoria provides us with a range of environments we must consider when traversing the state. The increased risk of working in unfamiliar territory with greater mobility requirements needs to be carefully managed. We all have a part to play to ensure everyone comes home safely.

Dynamic Risk Assessment (DRA): When assessing risk at an incident, responder safety is paramount. For this reason, the DRA process has been streamlined to ensure consistency and provide clarity on whether to proceed with a decided course of action or to stop and re-evaluate.

The assessment process has not changed, as shown below in Figure 1, but there is now a clear indication to STOP, do not proceed with the planned action, as the risks outweigh the benefits. If a course of action is stopped because it is assessed to be too dangerous, the process returns to the start where an alternative course of action can be assessed against all aspect of the DRA process.

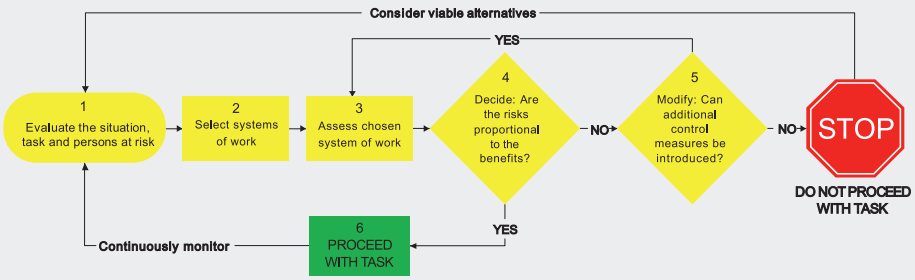

Figure 1: Dynamic Risk Assessment Process

For more information refer to Joint Standard Operating Procedure (JSOP) 8.02 – Dynamic Risk Assessment found on the Emergency Management Portal: http://portal.em.vic.gov.au >Functional Units (password – control)>EM Knowledge. In the EM Knowledge area, choose Doctrine>JSOPS.

Tree Hazard: Hazard trees are one of the most significant risks to emergency responders in a forested or treed environment. With safety being paramount, the revised *Tree Hazard – Bushfire Response (JSOP 8.03)* details the way to safely complete bushfire operations while mitigating the risk of identified and unidentified tree hazards.

JSOP 8.03 outlines the steps to be taken to reduce the risk of incidents caused by hazard trees. With a large number of factors involved in safe work around hazard trees, it's important personnel understand the standardised methods of identification, assessment, marking and treatment of hazard trees.

In addition, identification of known areas of high tree hazard must be contained in Local Mutual Aid Plans (LMAPs), showing areas of known

The Pre-season Update is developed by EMV, in consultation with agencies, to provide information about the season ahead, and key updates for emergency response front line personnel, specifically around safety and critical changes. The State Control Priorities identify that "Protection and preservation of life is paramount," and this update emphasises the safety of all emergency services personnel and critical areas that support the safety of community members.

increased tree hazard and indicate access roads that have been treated for tree hazard. While operational personnel must consider tree hazard as a risk in all treed environments, the identification areas of high tree hazard will help decision-making in initial response and extended attack. A tree hazard spatial layer will soon be available on eMap to help with this.

All emergency response personnel are urged to familiarise themselves with JSOP 8.03 found on the Emergency Management Portal: http://portal.em.vic.gov.au>FunctionalUnits (password – control)>EM Knowledge. In the EM Knowledge area, choose Doctrine>JSOPS.

Health and Fitness: In the lead-up to the summer period all emergency management personnel should prepare themselves physically. Maintaining physical fitness, weight management, hydration levels and implementing heat illness strategies help to reduce the risk of injuries, heat illness and promotes effective performance during an emergency. By preparing for the physical demands of emergency response, the severity and incidence of injuries and illness can be reduced.

All DELWP personnel will comply with the *Fit for Fire Business Rule.*

Sprain and strain injuries: Injuries such as sprains and strains are common in the field, often resulting from reduced flexibility and poor mobility. To reduce your risk of sprains and strains in the field, you can:

- warm up before undertaking physical task, this includes stretching and light exercise (i.e. walking)
- ensure appropriate manual handling principles are used
- avoid awkward postures and unnecessary lifting
- ask for help.

At times, the physically-demanding nature of emergency response activities can also exacerbate existing injuries. If you have any existing injuries you should consider whether or not there are activities or actions that you should avoid.

Hydration and heat illness: To reduce your risk of dehydration and heat illnesses you should aim to drink at least two litres of water during the day, every day, while also maintaining a healthy diet with plenty of fruit and vegetables to ensure that electrolyte levels are maintained.

The risk of dehydration and heat-related illnesses is increased by:

- being overweight and physically inactive/unfit
- drinking alcohol or diuretics such as caffeine
- eating food high in saturated fat
- some medications and medical conditions.

Sweat loss from physical activity and/or exposure to heat may trigger the need for an electrolyte replacement product to further manage electrolyte levels. Use the *What colour is your urine?* chart as a guide for water and electrolyte replacement consumption. For every 600ml of agency-approved electrolyte replacement drink/powder, you should consume 1,200 ml of water.

At an incident, active mitigation strategies should be implemented to further reduce the risk of heat-related illnesses, including:

- task rotation
- seeking shade
- removing or loosening excess clothing
- lower arm cooling
- continued hydration.

Your safety and the safety of others is paramount and should be considered at all times.

SEASONAL OUTLOOK

Three-year rainfall history: Over the past three years a firmly-established pattern of long-term rainfall deficit is emerging from the South Australian border and reaching into the foothills of north-east Victoria and South Gippsland, including Wilson's Promontory. Far East Gippsland has received above-average falls over the same period. See Figure 2, overleaf, for Bureau of Meteorology (BOM) data.

Areas with very much below-average rainfall need significantly wetter-than-average conditions over winter and spring to reduce rainfall deficits. The outlook indicates this is not likely.

El Niño and Southern Oscillation outlook: On 12 May, the National Climate Centre updated its El Niño – Southern Oscillation (ENSO) tracker to an El Niño status. The El Niño in the tropical Pacific continues to strengthen, and international climate models surveyed by the BOM indicate sea surface temperatures will remain well above El Niño thresholds at least to the end of 2015.

El Niño is often associated with below-average winter and spring rainfall over eastern Australia, and above-average daytime temperatures over the southern half of the country.

However, many other factors, such as the state of the Indian Ocean, also influence Australia's climate. The Indian Ocean Dipole (IOD) is currently neutral. Of the five international models that provide IOD outlooks, three suggest a positive IOD is likely during the southern hemisphere spring which is associated with reduced winter and spring rainfall over parts of southern and central Australia.

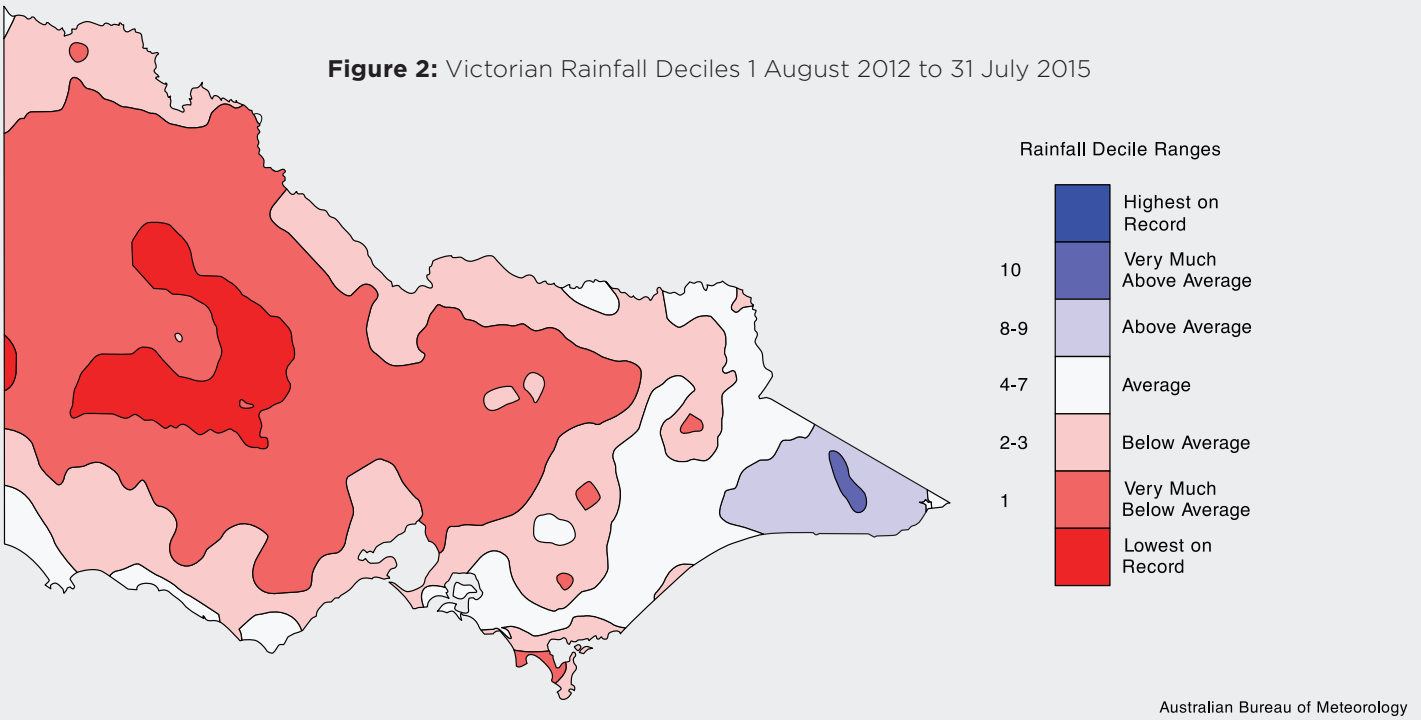

Figure 2: Victorian Rainfall Deciles 1 August 2012 to 31 July 2015

Rainfall outlook: The National Climate Centre rainfall outlook predicts drier conditions in the south-west and Gippsland over the coming three months; further north the signal is neutral. The current outlook reflects unusually warm sea surface temperatures in the Indian Ocean and El Niño in the Pacific. Outlook accuracy at this time of year is moderate.

Temperature: Warmer-than-average conditions are likely in southern areas from July to September, possibly downplaying the importance of moderating coastal influences.

Fire operational considerations: Damaging fires are always a result of predisposing factors combined with chance events that can be difficult to predict in advance (heatwaves, pre-frontal troughs, thunderstorms). On current trend, Victoria is facing an above-average fire season in 2015-16. We have:

- clear signals in the rainfall history and in the outlook
- altered forest landscapes predisposed to easy ignitions and rapid escalations
- fire-killed and weakened trees.

Grassland growth levels are unable to be determined at the time of writing, but the cyclical and seasonal nature of this fuel should not be underestimated in pre-summer preparedness.

The outlook for warmer and drier conditions will be monitored over the coming months.

BUREAU OF METEOROLOGY WEATHER PRODUCTS

The BOM offers a range of forecast information that can help fire agency personnel who are managing an ongoing incident, from online forecast and observation data to customised spot fire weather forecasts (spot forecasts).

The BOM prepares and disseminates a wide range of forecast information, most of which is available on FireWeb (fireweb.depi.vic.gov.au), EM Portal (portal.em.vic.gov.au) and the BOM's website (bom.gov.au). You should familiarise yourself with these and consider which of the following tools will be the most use to you.

SCC briefings: Prepared each morning by the meteorologist on duty at the State Control Centre (SCC), these briefings are tailored for agency personnel and include an overview of the day's forecast conditions.

Observations: In the short term, current weather near the incident site and further upstream are often the best indicators of what to expect within the next one to two hours. The BOM's observations include reports from automatic weather stations (AWS) as well as satellite and radar imagery. A forecaster or fire behaviour analyst can help to interpret observations.

MetEye: This is an online mapping tool used to visualise Australian weather observations and forecasts. This information is the basis for all BOM forecast products, including those for fire weather. It is an excellent way to

get weather guidance for the fire site, although local topographic influences may still need to be considered. MetEye is available at bom.gov.au/australia/meteye.

Spot forecast: A spot forecast should only be considered when other readily-available information doesn't supply the necessary detail. This is a forecast for a specific location, focusing on weather parameters that affect fire behaviour. It typically covers 24 hours and includes a table of forecast temperature, relative humidity, wind direction, speed and gust strength at three-hourly intervals, as well as upper level winds and fire danger index. A written description of the expected weather is also supplied, along with a comment about any assumptions or uncertainties associated with the forecast.

Phone call: For operational purposes Incident Management Team (IMT) or Duty Officers can call the BOM. A two-minute phone conversation with one of the forecasters could give personnel an appreciation of the finer details of the current situation and may be enough to satisfy their needs.

INTEGRATED INITIAL ATTACK

During the 2014-15 summer period, the integration of multi-agency resources was used when responding to new fires, irrespective of land tenure (who's patch it is), resulting in the quick containment of many new fires.

In the 2015-16 summer emergency season, agencies will again use this method of integrated initial attack and to establish effective command on the ground. This increases efficiency and effectiveness of the initial attack and improves the safety of personnel and the community through the rapid coordination of multi-agency resources. The success of these attacks has been attributed to:

Relationships and planning: Establish strong relationships at each tier with personnel who are likely to be involved in the response to local incidents. Use opportunities such as liaison meetings and exercises to plan and discuss how integrated initial attack will work in your area.

Emergency management personnel: Monitor activity that may require a rapid response from resources and be prepared to respond in support of partner agencies. Ensure appropriate communications and notifications occur.

Aircraft pre-determined dispatch (PDD): Jointly discuss with partner agencies how to best use PDD to achieve the outcome of keeping fires as small as possible. Recognise early if the operation is likely to extend and whether additional aviation resources such as air attack supervision (AAS), Aircraft Officers (AO) and additional aircraft need to be requested.

Communicate early and often: Ensure that regular quality situation reports are provided. Ensure responding personnel understand the communications plan and know who they report to (regardless of agency). Leaders of each agency (Incident Controllers/Commanders/Crew Leaders) should get together on the ground at the first opportunity and establish a common operating picture and ensure that Duty Officers and Agency Commanders are kept in the loop.

Know and use the expertise of partner agencies: Appreciate and show respect for the skills, local knowledge and experience that each agency brings to the incident. Understand that, while an agency may have a slightly different approach to response, it is the collective contribution of all agencies that improves outcomes for Victorian communities.

Use of staging areas: Consideration should be given to the use of staging areas to ensure that the resources can be safely and effectively deployed on the fireground. Ensure command structures in the field are adequate to supervise the resources online.

LOGISTICS

Changes to incident catering: The Australian Red Cross will no longer provide catering services to agencies responding to emergencies from 1 January 2016. Red Cross will continue to support affected communities by providing emergency food and water, including at emergency relief centres. Response agencies that use Red Cross for local incident catering are required to update their local arrangements with other suppliers, businesses and organisations. To help with local planning, the Statewide Logistics Leadership Development Group has developed guidance and a template, which will be circulated to the agencies.

DELWP first-aid external service providers: The previous panel contract for external providers of first aid services has expired. It is anticipated that the new panel contract will be in place by 1 November 2015. Until a new contract is in place, contact the previous panel vendors via a Request For Quote (RFQ) if first-aid services are needed at an emergency.

Base camp: There is state-owned infrastructure to set up three base camps to support 200 to 300 personnel. Components can be used individually or as a set (e.g. kitchen and kitchen support, laundry, supply cache, base camp support, camping 75, camping 100, showers, and toilets). Requests for base camps are approved through the line of control. When considering establishing a base camp, ensure:

- appropriately trained logistics personnel are available to plan and implement accordingly
- planning is undertaken incorporating the size, scalability, costs, duration, location and adequate resourcing for set up, maintenance and demobilisation
- it has been considered that this is the best option, as a base camp is a resource-intensive and expensive service. The appropriately-trained personnel must be requested for all stages of a base camp.

As a guide, mobilisation for a small camp (under 200 pax) can occur within 24 to 72 hours with meals available after 24 hours.

For more information refer to the IMT Tool Box and Altona Warehouse Management System (AWMS) on Fireweb.

Aircraft: On behalf of the state, the DELWP Aviation Services Unit (ASU) procures the Fire and Emergency Aviation fleet, used for all emergency responses including Class 1 Emergencies, and assists with the procurement of aircraft for Class 2 Emergencies and land management activities. The ASU also facilitates the provision of specialist aviation advice and the training of all specialist aviation roles.

Procedures: The State Aircraft Unit Procedures (SAUP) will transition to the Interagency Aviation Operating Procedures (IAOPs) during 2015. These procedures will govern the operation of aircraft for emergencies and land management activities. They have been produced to ensure the safety and effectiveness of agency aircraft operations by providing one source of agreed procedures, which are available and relevant for all agency aircraft operations.

Deployments: The State Air Desk (SAD) will only action requests for aircraft made by someone performing an approved role as stated in IAOP AM1.06. To avoid delays in processing aircraft deployments, approved personnel should provide the following information:

- Fire Location (e.g. distance and direction from closest town)
- Information regarding the fire behaviour, fire size, fuel type (e.g. grass/forest) and potential assets at risk, etc
- Aircraft type and quantity required
- Tasking of aircraft and equipment required
- Dispatch channels/Simplex fireground channels and/or trunk radio numbers to be used
- Aviation functional roles are in place (e.g. AAS, AO).

PDD: PDD is the dispatch of aircraft from various regional locations by pager when specific conditions are met, often concurrently with the dispatch of ground resources. This will sometimes result in aircraft operating at fires prior to, or very soon after, the arrival of ground resources.

Regions have the ability to turn off PDD when conditions would make strategic deployment of aircraft through the SAD more appropriate.

Working safely with aircraft: It's important that communications are established and maintained between the aircraft and ground resources to ensure both the safety of aircraft and ground resources, together with the effective tasking of aircraft. In some instances, aircraft may undertake initial attack without an AAS. IAOP SO4.07 outlines when this can occur and the Incident Controller's responsibilities.

PRIVATE EQUIPMENT

After the 1939 Black Friday fires, the responsibility of land holders to fight fires on their own land was recognised as a traditional and essential firefighting practice in Victoria. Commissioner Stretton recommended that when a fire breaks out on private land, "it should be made the duty of the landholder to take immediate steps to check and suppress such fire". Today this is formally legislated under section 34 of the CFA Act.

With land holders (owners/occupiers) formally recognised as playing a role in fire suppression, the need for privately-owned and maintained firefighting equipment is required. Private equipment is considered to be equipment or machinery (including tankers) owned or operated by a private individual, or body, that may be used to help contain, suppress or reduce the effects of a fire – including burn-off activities.

When an incident requires intervention or support by a fire agency, the private equipment operators may be tasked by the Incident Controller to provide support on less intense activities. Where possible, the fire agency will keep the private equipment operators informed of operational safety issues.

CFA's *Guidelines for Operating Private Equipment at Fires* identifies CFA's expectations of private equipment operators' capabilities and equipment, to ensure tasks undertaken are appropriate and safely performed.

For more information refer to the CFA website www.cfa.vic.gov.au/plan-prepare/private-fire-fighting-equipment.

IMT RELOCATION

When considering IMT relocation, there is often an emphasis on relocating to the most suitable pre-established Incident Control Centre (ICC). In December 2014, the IMT managing the Creightons Creek fire took an innovative and well-considered approach to relocation; by locating control much closer (50km) to the Euroa Local Command Facility (LCF). With the incident contained and relocation required on the fourth day of the incident, it was thought to be the most appropriate location given it had been functioning as a Division Command Point since the fire started, and local knowledge was readily available and accessible by local liaisons with Victoria Police and the local shire. The relocation of this IMT occurred in line with JSOP 3.15 *Transfer of Control and IMT Relocation for Class 1 Emergencies.*

MANAGING MULTIPLE INCIDENTS

The key to managing multiple incidents is good preparation. This includes having trained and qualified personnel in appropriate roles in the best possible location to manage the incidents. Forming strong relationships with partner agencies before the incident occurs will allow teams to work effectively in the early stages of managing multiple incidents and beyond.

Communication is vital; there must be clear command and control structures in place and a communications plan that is disseminated through the chain of command and line of control. Communications start from the initial Incident Controller all the way through the line of control and through command structures within agencies. Information at all levels must flow freely, be informative, clear and concise. This information is important so that timely, tailored and relevant information and warnings, which are imperative to the safety of the community, can be given.

Emergency management personnel need the flexibility to make decisions on the best possible information they can source, the capacity of response capabilities, situational awareness and to ensure that resources are managed appropriately.

Maintaining situational awareness will allow the flexibility to allocate resources where they are going to be of maximum benefit. Crew Leaders and Strike Team Leaders are in the best position to provide information about what's happening on the ground. It's important that this information is communicated through the line of control. Additional planning throughout the incidents is vital, to ensure there are sufficient resources to support the operations over a lengthy period.

TRAFFIC MANAGEMENT POINTS – DEACTIVATION

Traffic management is a vital aspect of incident and emergency management. Over recent years, traffic management activities have improved significantly. Incident management personnel must consider and plan for the establishment and ongoing management of traffic management points (TMP) and for the important activity of their deactivation. The most important considerations in the plan must be the safety of the community, minimising community disruption and those emergency services and support personnel working beyond the TMP to make the road safe.

Planning should take into consideration appropriate documented consultation with those involved both at and beyond the TMP. The personnel included in each consultation may be slightly different, but may include the Incident Controller or delegate, the Traffic Management Manager and/or other Victoria Police representative, VicRoads, Access Safety Assessment Teams and local government representatives. Meetings to discuss deactivation need to be considered, planned and effective. They don't need to be drawn-out processes, but they must have considered outcomes that are easily communicated to agencies and the community.

Remember:

- Planning and consideration of potential TMP deactivation starts the moment the incident occurs
- Safety of people both sides of the TMP is the paramount consideration
- Consult effectively with the agencies involved
- Minimisation of community disruption is very important. Limit this disruption but never at the expense of safety
- Personnel at the TMP must know the current plan for deactivation in order to effectively manage the face-to-face interactions leading up to the actual deactivation.

The IC facilitates the assessment and treatment of roadside hazards, which will mean either diverting resources or seeking additional resources to clear the road.

For more information refer to the Guidelines for the Operation of Traffic Management Points during Class 1 Emergencies found on the IMT Tool Box and JSOP 3.10 – Traffic Management found on the Emergency Management Portal: http://portal.em.vic.gov.au >Functional Units (password – control)>EM Knowledge. In the EM Knowledge area, choose Doctrine>JSOPS.

CONSEQUENCE MANAGEMENT

Under the Emergency Management Act 2013, the Emergency Management Commissioner is responsible for managing the consequences from major emergencies. Putting this into action is one of the practical challenges for us as incident management personnel. The State Control Priorities provide a framework to guide our decisions, especially where there are concurrent or competing tasks. As emergency responders and Incident Controllers, it is important to think about how we can limit the impact of an incident on communities.

An example of learning about consequence management and limiting community impact through loss of access was the presence of burning trees on the Midland Highway, west of Benalla, during the Stewarton Fire in December 2014. After the fire front passed, a number of large red gum trees on the roadside caught fire, which led to an extended closure of the highway. This significantly affected local communities. While emphasis was rightly placed on controlling the perimeter of the fire (which was a long way from the burning roadside trees), feedback from the community following the fire was that controlling the fire on the roadside and limiting interruption along the highway should have been a higher priority.

When an IMT is operating, the Emergency Management Team (EMT) is a great point of reference for considering the consequences of the emergency and possible impacts on communities. Agencies represented (including local government, VicRoads, Victoria Police, emergency services, utilities and other government departments) need to work together with communities to address the issues identified. It's important to ensure all relevant agencies are represented on the EMT.

CRITICAL INFRASTRUCTURE

New arrangements aimed at building the resilience of Victorian critical infrastructure (CI) came into operation on 1 July 2015. CI includes Victoria's assets, systems and networks necessary to maintain social and economic wellbeing.

The new CI arrangements include a new model for Victoria, changes to the Emergency Management Act 2013 and transfer of responsibility for CI to the Minister for Emergency Services and EMV.

CI has a new definition, moving from a sole focus on terrorism, to an 'all-hazards' resilience model, including terrorism. The new broader focus helps owners and/or operators of CI to prepare for, respond to, and recover from the broader range of emergencies that may threaten continuity of supply.

CI is now assessed and categorised as either 'local', major', 'significant' or 'vital' (the highest category). CI assessed as 'vital' require the owners and/or operators to develop emergency risk management strategies and practices.

COMMUNITY ENGAGEMENT

The benefits of connecting with communities before, during and after emergencies are increasingly acknowledged by emergency service agencies.

As an example, during the Creightons Creek fire in December 2014, observations made by the incident Situation Officer and Public Information Officer suggest that the investment in connecting with the affected communities over the previous three years had paid off. It was acknowledged that during and after the incident:

- the community generally acted in accordance with warnings and advice provided during the incident
- those who were doorknocked during the incident to prepare for evacuation responded well and seemed to understand their risk
- significant numbers left their homes in a timely manner (120 to a relief centre In Euroa and 48 to a neighbourhood safer place located at Ruffy Recreation Reserve)
- firefighters didn't report concerns about community behaviours during the emergency, nor did community express angst about lack of preparedness.

The Victorian Fire Risk Register (VFRR) identified the communities impacted by fire, Longwood and Weibye, as an extreme risk of bushfire with the area prone to lightning strikes. As a result, education programs with community members have led to better community outcomes.

RECOVERY

Fireground rehabilitation: Fire agencies must undertake works where fire suppression activities have caused damage. This includes the reinstatement of any control lines and repair and replacement of fences damaged by firefighting. Essential water may also be required to be replaced when taken from private properties during operational procedures. The control agency for the incident is responsible for ensuring that the fireground rehabilitation is undertaken at their cost.

Control lines can severely damage private land by soil erosion. Cropping and grazing management can be impacted by soil disturbance and may take many years to recover. Fences are a valuable and essential asset to farmers and are an integral component of the landholders' ability to re-establish assets quickly after a fire.

Careful planning and consideration can help reduce the impact of suppression damage and help affected communities recover quickly from the devastation of fire.

Strategies to reduce suppression damage include:

- Plan rehabilitation as the suppression starts
- Plan control line construction and supervise machinery accordingly
- Consider alternative options to control lines in open grasslands. Is it really needed?
- Consider natural features such as waterways, existing roads and tracks as an alternative to control line construction
- Seek technical advice from catchment management authorities, water authorities, cultural advisers and other appropriate agencies
- Clearly identify and communicate where fences have been cut to gain access
- Remember fences are as important an asset as shearing sheds and machinery sheds
- Plan, document and seek appropriate approvals for all back-burning operations
- Identify and document where water has been taken from private properties.

Relief and recovery: The responsibility for state relief and recovery coordination will transfer from the Department of Health and Human Services (DHHS) to EMV on 1 September 2015, with EMV's Director of Relief and Recovery to assume the role of State Recovery Coordinator. DHHS will maintain responsibility for regional relief and recovery coordination, and local government for incident level. EMV and DHHS are working closely at state and regional levels to confirm the roles and responsibilities that will transfer to EMV, and develop arrangements to ensure clear information sharing and reporting protocols between the state tier and the regional tier.