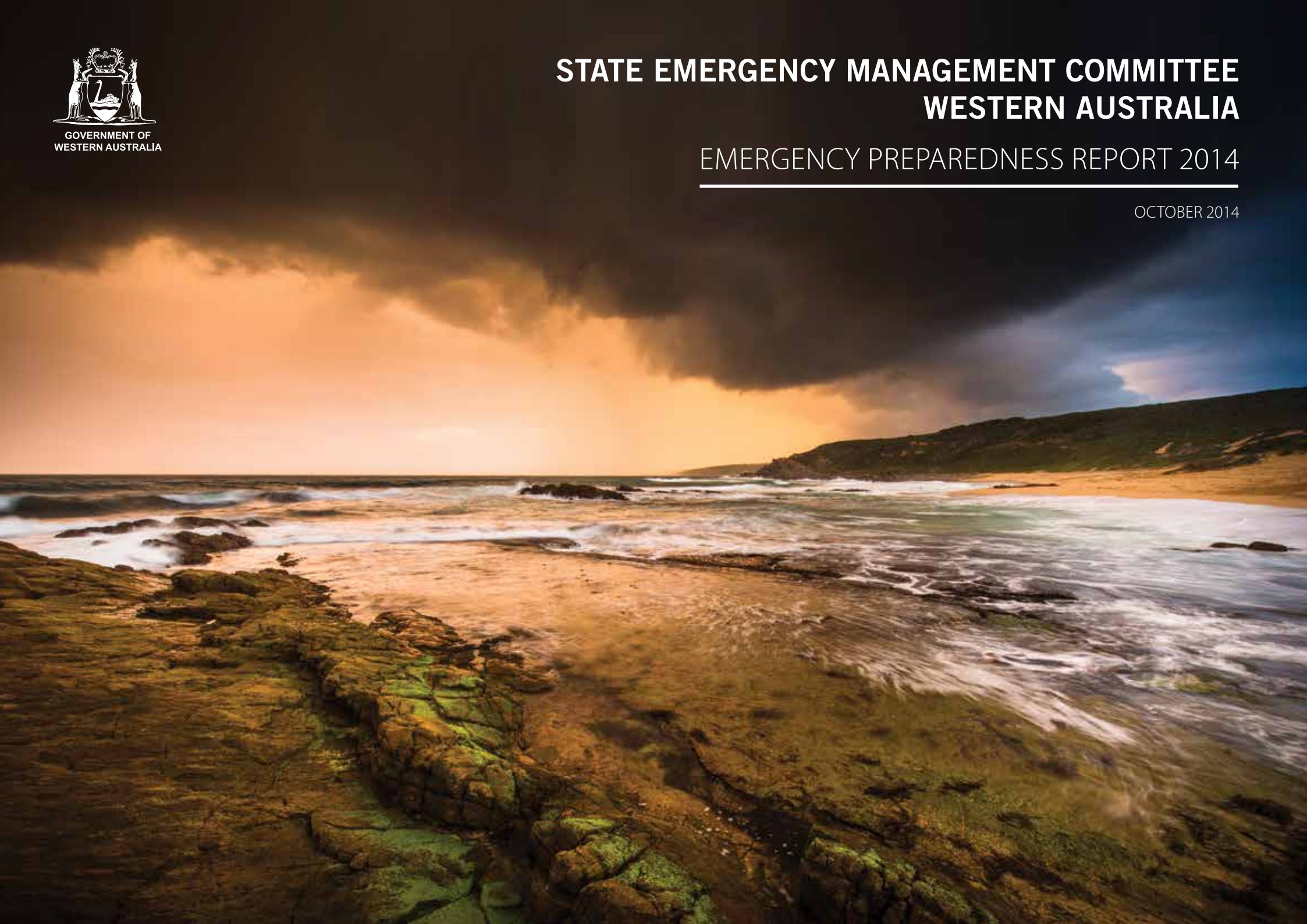
GOVERNMENT OF
WESTERN AUSTRALIA

STATE EMERGENCY MANAGEMENT COMMITTEE
WESTERN AUSTRALIA

EMERGENCY PREPAREDNESS REPORT 2014

OCTOBER 2014



Cover image:

Honeycombs Beach, Wilyabrup, Western Australia – Image courtesy of Daniel Tuoma

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FOREWORD

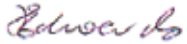
I have great pleasure in presenting the State Emergency Management Committee's (SEMC) 2014 Emergency Preparedness Report.

This report represents the culmination of a year-long process of data gathering, information analysis and synthesis. Underpinned by an increasingly sophisticated risk and capability framework, readers will be able to gain an appreciation of the State's readiness for large-scale emergencies.

It is clear that many agencies and individuals have taken on board the insights of previous Preparedness Reports. The extensive programs, activities and actions described throughout this report clearly illustrate that the State is gradually improving its ability to withstand the effects of emergency events, respond effectively to their impacts and recover rapidly. Though there are many challenges in this field – and there probably always will be due to rapid development and constant environmental changes – the State is no doubt better prepared than it was last year. Trends illustrated in the various graphs and statistics in the report reinforce this continuous improvement.

The Emergency Preparedness Report is dependent on the cooperation and input of a large community of emergency managers and organisations – their contribution is instrumental in producing the report. The SEMC would therefore like to acknowledge the extensive and often enthusiastic support from local government, State agencies, non-government organisations and the staff of the SEMC Secretariat.

I trust that readers will benefit from the insights this report brings to the sector.



Frank Edwards CSC

CHAIR

STATE EMERGENCY MANAGEMENT COMMITTEE

31 October 2014

EXECUTIVE SUMMARY

This is the SEMC's third annual Emergency Preparedness Report, prepared for the Minister for Emergency Services to provide advice on the State's preparedness to deal with large-scale emergencies.

The key theme to emerge from this report is the continued improvement in the approach to Emergency Management (EM) in Western Australia. This has been seen across the range of capabilities assessed under the State Emergency Management Capability Framework, both in relation to the achievements recorded in 2013-14 and in the work planned for the coming year. This continued improvement together with an increased focus on mitigation, which is likely to result from the State Risk Project, is very important because the incidence and severity of particular natural disasters has the potential to increase.

In the process of compiling this report it was also apparent that the use of the Capability Framework to assess the State's preparedness has the potential to put the focus on greater interagency cooperation and facilitate further improvement.

FOCUS AREAS

The SEMC has continued the trend of incorporating focus areas within the Emergency Preparedness Report. The three focus areas for this year are Heatwave, Recovery and Restoration of Essential Services. The latter two focus areas include observations and learnings from the Parkerville Stoneville Mt Helena Bushfire response.

The State Health planning framework encompasses the Prevention, Preparedness, Response and Recovery (PPRR) aspects associated with any major incident, disaster or emergency.

WA Health, as the Hazard Management Agency (HMA) for heatwave events, has developed the State Emergency Management Plan (Westplan)–*Heatwave* to manage the response to such an event. The heatwave focus area discusses the hazard, highlights the risk to the State and details the State EM arrangements.

The WA Health EM framework provides for situations which entail a multi-agency response, multiple casualties, major public health threat or need for humanitarian assistance. St John Ambulance (SJA) is a contractor of WA Health, and both organisations are prescribed 'Combat Agencies' within the *Emergency Management Regulations 2006* (Western Australia).

An issue that achieved prominence in 2014 because of the experience of the Parkerville Stoneville Mt Helena Bushfire in the Perth Hills district was the restoration of essential services following an emergency event. This was because the principal service network operators involved, Western Power, Telstra and Water Corporation, were considered to have restored services quickly and efficiently. The Essential Services Network Operators Reference Group (ESNORG) is a forum for the exchange of information to assist and improve the operation of essential service networks or network functions, which also provides advice and support to the SEMC. ESNORG members support all operational requirements of Emergency Management Agencies (EMAs) in an emergency. Selected members are signatories to the 'Mutual Assistance Policy and Principles' which is an agreement to provide assistance in emergencies that require their involvement or affects their infrastructure.

In relation to disaster recovery, it was noted in the 2013 Emergency Preparedness Report that the majority of local governments have arrangements in place to manage recovery following an emergency affecting their community. Support from the State and Commonwealth Governments is available both for local and broader disasters and is facilitated by a State Recovery Controller, appointed in December 2013. Clarification of recovery roles and responsibilities across all recovery environments continues to evolve. This includes issues such as assessment of impact, communication of recovery timeframes and the effectiveness of activities. In conjunction with an increased emphasis on recovery planning, the SEMC is working towards ensuring that all Local Emergency Management Arrangements (LEMAs) developed by local governments include a valid Recovery Plan. The SEMC Recovery Subcommittee oversees the planning and review of State-level recovery arrangements, providing a forum for promoting and supporting the development and maintenance of emergency recovery capability.

It is noted in the report that most HMAs and local governments consider that their plans and arrangements include sufficient provision for the restoration and recovery of infrastructure, the economy, the environment and local services. However, a number of EMAs did not report that they had State-level responsibilities in this area. This may present an opportunity to clarify the concerted effort across government which would be required for recovery in a large-scale emergency. Additionally, it would be beneficial to clarify with agencies the responsibility to have systems and processes in place to carry out impact and/or needs assessment on affected communities as part of the transition from response to recovery after a large-scale emergency.

Some HMAs, EMAs and local governments assess the effectiveness of their recovery activities in meeting the communities' needs and making them more resilient. The introduction of more formal processes may facilitate this in the future and reflects work currently being undertaken at a national level by the Recovery Subcommittee of Australia New Zealand Emergency Management Committee (ANZEMC).

CAPABILITY ASSESSMENT

The SEMC's 2013 Emergency Preparedness Report signalled that the next incremental step for the State, in terms of assessing preparedness and building capacity, was to progress towards a more quantitative form of assessment and reporting. The assessment tool used in 2014 was reframed to pose a series of generally binary data type questions relating to the capability objectives. A targeted assessment tool was designed for local government that facilitated quantitative responses.

This year the 10 capability areas remain unchanged. However the 30 core objectives were rationalised to 24 achievement objectives which cover the 10 capability areas to facilitate the quantitative reporting methodology. Key findings from the Capability Assessment have been summarised later in the chapter.

During 2013-14 a number of significant reviews were undertaken to ensure the ongoing relevance and effectiveness of EM legislation and policy in response to social, demographic and technological change. In particular, the completion of the review of the *Emergency Management Act 2005* (the EM Act) in 2013-14 provided the basis for proposed amendments to improve the ongoing relevance and utility of the EM Act. The SEMC Secretariat is also a participant in the Fire and Emergency Services (FES) Legislation review to ensure that the proposed FES Act and the EM Act complement one another.

Another significant review currently underway is the State Emergency Management Policy and Governance Framework review. This is the first review of the policy framework since the EM Act was established in 2005. It is envisaged that the revised framework will ensure that WA EM policy framework is contemporary and reflects best practice.

Effective avenues for participation by State agencies and local government in the review process were identified in the form of the reconstituted SEMC Subcommittees and newly formed Reference Groups and both local and District Emergency Management Committees (DEMCs). The emergence and growth of regional EM alliances in the local government sector, such as the South West and Mid West local government EM alliances, can also be expected to increase the range of opportunities for stakeholder participation in this process.

It is evident in this report that risk management and progression of the State Risk Project remains the SEMC's strategic focus. Opportunities exist to improve EMAs and local government understanding of and engagement in the risk management process. It is also notable that the Office of Bushfire Risk Management, Department of Fire and Emergency Services (DFES) and the Department of Planning have embarked on significant policy and regulation reform in the area of land use planning.

The report also highlights EM workforce planning and management of spontaneous volunteers as areas currently under development by EMAs and the SEMC through its subcommittees. The National framework for managing spontaneous volunteers will enhance the State's preparedness to respond to large-scale emergencies.

A final noticeable trend is the recovery sector. Although the concept of recovery is accepted by EMAs and local governments, the WA Recovery framework is yet to be finalised and embedded in the Western Australian EM ethos. This will facilitate better understanding of agency roles and responsibilities during the recovery phase.

Capability Assessment Key Findings

The main Capability Assessment Key Findings are presented below.

1. EMAs, including HMAs and local government, report a mostly positive response to monitoring their compliance of, being informed of, communicating changes to, and contributing to reviews of the State's EM policies and legislation. A majority of EMAs who responded also report that arrangements under their responsibility, including LEMAs, are current, relevant and appropriate. Responding agencies also indicate the State's EM legislation and other arrangements are relevant and appropriate to their agency's area of responsibility. The SEMC is continuing to review the State EM Policy framework in consultation with a representative stakeholder group.

2. Progress has been made by the State to achieve a consistent and comprehensive emergency risk management approach over these last 12 months. The endorsement by the SEMC in March 2014 of a policy that specifically addresses emergency risk management – State Emergency Management Policy (SEMP) 2.9–*Management of Emergency Risks* – and the launch of the State Risk Project have been significant achievements. As these larger efforts have been developed, agencies and local governments continue to work towards progressing their risk management capabilities.

3. The EM sector report that they have systems and processes in place and continue to work towards the development of a workforce that is well trained and capable of effectively performing EM roles in large-scale emergencies. This includes more robust training plans to support identified training needs. The identification and management of volunteer training remains a challenge. An assessment of the extent of volunteer involvement in EM roles would be beneficial to facilitate appropriate planning for the volunteer workforce.

   EMAs report a good level of equipment and infrastructure preparedness for major and moderate emergencies. Some agencies have agreements in place to access intra and interstate assistance with responses to catastrophic emergencies. Equipment requirements have been identified and are maintained in a 'response-ready' state. All EMAs report access to a primary or back-up functional operations centre with adequate resources, equipment and technical support needed to operate during emergencies.

   State and Federal grant programs are available to EMAs and local governments to enhance natural disaster resilience and to progress mitigation, response and recovery initiatives. The majority of EMAs and local governments report having processes in place, or under development, to capture and report on financial expenditure to manage large-scale emergencies. Depending on the final recommendations, the adoption of the Australian Government Productivity Commission's review of natural disaster funding arrangements may refocus national priorities towards mitigation strategies as opposed to response and recovery strategies.

4. HMAs and EMAs recognise their dependence on volunteers and seek to improve the sustainability of volunteering. By participating in the development and adoption of nationally agreed principles, HMAs and EMAs seek to address the challenges presented by the changing distribution and composition of the Western Australian population and the increasing use of 'fly-in-fly-out' work practices.

   EMAs have communication plans designed specifically to increase public awareness of hazards and the need for emergency preparedness. Local government has a central role in identifying and communicating risk to the community and in engaging the community in emergency preparedness.

   There are good networks and relationships across all EMAs and with industry. Agencies have established MoUs with key service providers to ensure business continuity in a major emergency.

5. Westplans are established under section 18 of the EM Act. These plans clearly document the roles and responsibilities of EMAs in the event of a specific hazard or activation of a support service during an emergency.
   There are currently 27 hazard Westplans and eight support Westplans, covering all prescribed hazards and some EM support functions; such as emergency public information, health, welfare and recovery. All EMAs with EM plans advise they are regularly reviewed and updated to accurately reflect current EM arrangements. All HMAs report that their Westplans are consistent with the EM Act and State Emergency Management policy and procedures.

   Regular testing of emergency plans is an effective way to demonstrate and evaluate the State's level of preparedness for emergencies. Many EMAs report a strong focus on regular testing of emergency plans, whether they are in-house, agency-specific, local or State-level plans. EMAs are required, under SEMC policy, to exercise their respective Westplans or LEMAs annually, and have raised concerns about the frequency of the required exercises that are resource intensive.

6. EMAs have communication protocols that align with Westplan–*Emergency Public Information* and SEMP 4.6–*Emergency Public Information*. EMAs operate in a cooperative and coordinated manner in accordance with agreed roles, responsibilities and procedures to ensure that relevant and timely information is available to the public using a wide range of tools and media.

   While EMAs are actively reviewing and seeking to improve their communications practices, opportunities exist to ensure that the communication needs of remote, culturally and linguistically diverse and vulnerable communities are addressed as part of this.

7. Command, Control and Coordination (C3) continues to be highlighted as an area pivotal to response activities during a large-scale emergency. EMAs report that their C3 procedures are consistent with SEMP 4.1–*Incident Management* and facilitate orderly tasking and command arrangements.
   Two incident management systems are used in Western Australia, namely Australasian Inter-Service Incident Management System (AIIMS) and Incident Command and Control System (ICCS). Although interoperable, the differences between the systems should be considered when developing State EM policy.

Although EMAs report access to effective and appropriate communication systems that are fit for use during large-scale emergencies, improvements to communications infrastructure, including interoperability, have been identified and are being progressed. The SEMC is working with other agencies on the Emergency Services Communications Strategy that sets strategic direction for the efficient management and coordination of emergency communication systems in Western Australia.

EMAs report that they have strategies in place to mobilise equipment and personnel in response to large-scale emergencies. This includes mechanisms to access resources from outside their organisations via intra and interstate arrangements. To assist with emergency response, the Minister for Emergency Services has announced that a second rescue helicopter is scheduled to be based in the South West within the 2015-16 period.

Agencies report that they have plans, processes, systems and technology that will adequately inform them of additional critical resources needed during large-scale emergencies. Where resource requirements exceed an agency's capacity, response plans, including business, industry and community plans, have been developed. However, opportunities exist to formalise these plans.

The SEMC Secretariat is investigating information sharing provisions in the absence of an emergency situation declaration. All HMAs and the majority of other EMAs report that their situational assessment systems are supported by processes that comply with the current information sharing provisions of the EM legislation.

8. There are strong relationships between HMAs, Department for Child Protection and Family Support (CPFS) and local governments. In emergency situations these relationships allow for close cooperation when managing evacuations and other activities undertaken for public safety. Development of formal evacuation plans and their alignment with SEMP 4.7–*Community Evacuation* is highlighted as an opportunity for improvement.

Ongoing development and improvement has occurred through the recent review of SEMP 4.7 and the launch of the Register.Find. Reunite service.

Fatality management planning is well established in Western Australia and is subject to ongoing development in the context of a national network to promote best practice and cross-jurisdictional support to increase surge capacity.

Westplan–*Health* sets out the State Health planning framework that guides the Prevention Preparedness Response Recovery (PPRR) aspects relating to any extraordinary incident that may be classified as a major incident, disaster or emergency. EMAs and combat agencies provide medical and health services, including provision of first aid and medical treatment and the management of environmental and public health issues associated with an emergency situation.

The three Westplans that relate to welfare and social services are the responsibility of CPFS for immediate support and services while also providing training to build capacity in partnering agencies and local governments.

As part of their responsibility, local governments must identify and provide access to suitable evacuation centres and work with CPFS to create Welfare Plans. Local governments support their communities to create a culture of emergency and disaster readiness, and to be more resilient to the effects of an emergency.

Good working relationships among EMAs ensure the timely resumption of critical services. HMAs prioritise response activities to ensure that expertise and resources are coordinated and promote a collaborative approach. EMAs report a range of comprehensive risk management strategies relating to essential services, including risk assessments to understand the impact of potential hazards and the consequences for the community of service delivery disruption.

9. The majority of local governments have local recovery arrangements in place to manage recovery following an emergency affecting their community. Support from the State and Commonwealth Governments is available and facilitated by the State Recovery Controller. Clarification of recovery roles and responsibilities across all recovery environments needs to continue to evolve. This includes issues such as assessment of impact, communication of recovery timeframes and the effectiveness of activities.

10. EMAs report that post-incident analysis is the method most frequently adopted to assess and review agency performance although such analysis may not take place after every event. One HMA reported that it has not conducted a significant post incident analysis because it has not yet responded to a major emergency for its assigned hazard. Incident debriefs are routinely conducted both within and between agencies. Post incident analysis or incident debriefs tend to focus on the response aspect of the event, and rarely cover prevention, preparedness, and recovery.

All agencies report sharing knowledge and information through formal and informal networks and platforms which include working groups and committees. Knowledge and information obtained through post-incident analysis and other data collection and research may be incorporated into training and exercising activities, which can be shared across agencies. EMAs are represented on, or have access to, national bodies and networks that facilitate sharing of information and knowledge across Australia.

All EMAs report pursuing continuous learning and improvement through adopting the findings or learnings derived from post-incident analysis, external reviews and inquiries. However, not all evaluate the improvement measures post-adoption.

CONCLUSIONS AND FUTURE ACTIONS

This year's report concludes with a summary of findings and highlights work that is either in progress or scheduled to commence during the next reporting period.

Prior to commencing data collection for next year's report, EM stakeholders will be surveyed in relation to the data collection processes and capability assessment tool used this year. This will facilitate a collaborative approach to enhance the tool for next year as we move towards a model that further integrates capability and risk.

BUSHFIRE UPDATE

Although this year's Emergency Preparedness Report does not include a bushfire-specific focus chapter, many issues that relate directly to the State's preparedness for bushfire have been highlighted using the capability framework and assessment tool and are incorporated in the Capability Assessment chapter. Increased bushfire preparedness is reflected in the increased adoption of a risk based approach to EM planning by local governments, especially those in bushfire prone areas. It also reflects the ongoing implementation of the recommendations contained in the report by Mr Mick Keelty AO, *A Shared Responsibility: The Report of the Perth Hills Bushfire February 2011* (Keelty February 2011). It is expected that a new regulatory and policy framework which incorporates these reforms will be in place by May 2015. Together with more extensive mapping of bushfire prone areas (see Figure 2.1), the framework will significantly advance the reduction of bushfire-related risk associated with new land and building developments.

The Bushfire Review Implementation Group (BRIG), established to oversee the implementation of the Keelty report recommendations, reported that 48 of the 55 recommendations were complete as at August 2014. The BRIG has since been disbanded and the SEMC is responsible to oversee the remaining recommendations. The Legislative Working Group of the former BRIG now also oversees the comprehensive review of emergency services legislation being undertaken by DFES. This will ensure that a high level of bushfire-related expertise and experience will continue to be available to inform the drafting of new emergency services legislation.

DFES, through its Office of Bushfire Risk Management, has developed a guideline for the development of local-government-based, tenure-blind Bushfire Risk Management Plans. The guideline has been piloted in the local governments of Augusta-Margaret River, Collie, Nannup and Boyup Brook. The guidelines and support system will be available for use in early 2015. It is intended that they will be progressively rolled out to all high risk local government areas.

A SEMC-led review of the Parkerville Stoneville Mt Helena Bushfire of January 2014 was able to identify many effective bushfire preparedness measures that were already in place in a representative section of the Perth Hills district as well as to identify further opportunities for improvement. These included clarifying the criteria for declaring emergency incident levels; improvements to public warnings and alerts and opportunities to enhance leadership expertise in rural – urban interface fire-fighting. The importance of C3 within and between agencies engaged in bushfire response was also reinforced by the review, including a recommendation to pursue unified command, between DFES and the Department of Parks and Wildlife (DPaW) in joint State Operations Centre, Regional Operations Centre and Incident Management Teams. Problems with radio and mobile telephone communication related to the topography of the district also led to recommendations to review the radio infrastructure of the Perth Hills to achieve better coverage.

Figure 2.1 – Sample map of a bushfire prone area

DPaW's management of large parts of the State's conservation estate and its role as a fire combat agency has particular relevance to bushfire preparedness. This year's Emergency Preparedness Report notes that DPaW has fully implemented four of the eight recommendations for which it has responsibility from the Keelty inquiry into the 2011 Margaret River bushfire and is well advanced on the remaining four. DPaW also reported that the improvement notices issued by WorkSafe in connection with the 2012 Black Cat Creek incident will be completely or significantly implemented within the agreed timeframes.

Previous preparedness reports have noted the very important role that the DPaW prescribed burning program performs in relation to reducing fuel loads on lands in the conservation and forestry estate. In managing significant tracts of land in the State, DPaW have a 3-year/6-season prescribed burn program with an annual burn target for the South West forest regions of 200,000 hectares. However, the conditions for the safe and effective implementation of prescribed burns are not consistently available as they depend on a critical balance between weather conditions and factors such as soil and vegetation dryness. As at 31 October 2014, DPaW reported that it had commenced or completed 57 burns in the South West of the State covering a total of 63,206 hectares. This represents a significantly better result in terms of meeting the broad target than an equivalent stage in the preceding season.

03

INTRODUCTION

The 2014 Emergency Preparedness Report provides the Minister for Emergency Services with an overview of Western Australia's capacity to deal with large-scale emergencies. It details the EM sector's progress concerning building, enhancing and improving capability across the full range of hazards and potential impacts. As in the past two reports, a range of focus areas and case studies have been included to better illustrate the growing awareness and action of public, private and non-government organisations.

Development and publication of the previous two reports (the inaugural being the 2012 report) has provided a foundation for the subsequent report. Feedback from successive contributors and users has provided a rich set of information on which to base this year's report. As a result, this year the report reflects the following improvements since the 2013 reporting period:

- Review and refinement of the capability assessment tool to provide a more quantitative assessment by rationalising the 30 State core objectives to 24 State achievement objectives.
- A move towards improved EM exercise coordination through the establishment of Exercise Management Advisory Group (EMAG).
- An increased focus on the State's emergency radio communications strategy through the meetings of the Emergency Services Communications Strategy Committee.
- Commencement of hazard research to develop comprehensive and easily accessible information in terms of hazard occurrence and intensity.
- Completion of a stocktake of local government risk assessments and risk plans that will inform planning of the State Risk Project.
- Rewrite of the WA Emergency Risk Management guide and development of associated tools to assist local governments undertake risk assessments.
- Drafting of a WA EM Geographic Information System (GIS) strategy by the SEMC, with a view of consulting stakeholders in the near future.

Another feature of this year's report is the inclusion of observations and findings from the 2013-2014 Season Review and the 2014 Parkerville Stoneville Mt Helena Bushfire review (the 2014 bushfire review). The Season Review is now an annual event hosted by the SEMC to examine, at a high level, the past season's major incident operations and agree on lessons learned and areas for improvement. The 2014 bushfire review examined the impact and operations of a serious bushfire in the Perth Hills and employed a collaborative approach in searching for continuous improvement rather than the more traditional adversarial approach. This was lauded by volunteers and agencies as a far more productive method of gaining support for real EM improvements.

This year's report comprises the following key parts:

- Focus areas: an in-depth review of three topics – Heatwave; EM aspect of Recovery; Restoration of essential services following a major emergency.
- WA SEMC Capability Assessment: a more quantitative assessment of the State's preparedness for large-scale emergencies.
- Conclusions and Future Actions: a summary of the key findings of the report which will provide additional focus for the SEMC and the EM sector's continued improvement over the next 12 months.

04

FOCUS AREAS

HEATWAVE

A heatwave is an abnormal pattern of heat exposure that has the potential to cause adverse health, social or economic impacts. Despite gaining little attention publicly, they have caused more deaths in Australia than any other natural hazard (Australian Government, 2013). Climate change is predicted to increase the frequency, duration and intensity of heatwaves and lead to a doubling of heatwave-related deaths in Australia over the next 40 years (Commonwealth Scientific and Industrial Research Organisation, 2014).

There are several examples of well documented episodes of heatwaves that have impacted heavily on societies around the world. The event that attracted the most attention was the heatwave that affected Europe in the summer of 2003. During this period more than 44,000 additional deaths were recorded in 12 European countries (Matthies and Menne, 2009). Heatwaves with large-scale effects also occurred across southern Australia in late January and early February of 2009. The cities of Adelaide and Melbourne experienced widespread difficulties. Some emergency services experienced service demand beyond capacity and major disruptions to infrastructure, such as electricity and transport. It is estimated that 374 excess deaths occurred in Melbourne and between 50 and 150 excess deaths in Adelaide, with more than 3000 reports of heat related illnesses in Adelaide alone. Large increases in ambulance dispatches and presentations to Emergency Departments were experienced (Reeves et al., 2010).

The deaths and mortality from less dramatic and more common heatwave events are not always so obvious. Heatwave related mortality and morbidity are rarely directly attributed to the heatwave and, instead, manifest generally as an increase in mortality and morbidity from a number of factors that commonly cause ill health. Heatwave has therefore become known as the silent killer (Price Waterhouse Coopers, 2011).

In response, a number of jurisdictions around Australia have developed heatwave response plans. Strategies range from media warnings, information for health services, suggested additional services for mass gatherings through to active follow up of vulnerable people in communities and the establishment of cooling centres. There is some variation in the response to heatwave across jurisdictions with evidence of efficacy currently lacking in this relatively new area of concern (Price Waterhouse Coopers, 2011).

An area of difficulty for all heatwave response plans is the method used to predict the appropriate periods to activate the response plans. Identifying a period of abnormal heat which may produce adverse impacts is challenging. Unlike many other natural disasters, which may be easily identified, predicting when a heatwave, which will cause health impacts, will or even has occurred is difficult. The maximum temperature for the day is not the only factor in predicting periods that may result in greater health impacts. Heat discharge at night (the minimum temperature) may be even more important than maximum temperature (Nairn and Fawcett, 2013). Acclimatisation is also important in predicting if a period of heat will have adverse health impacts. Sudden increases in temperature appear to cause greater health impacts than events that occur later in summer after a slow increase in temperature. Increasingly sophisticated formulas,

such as the Excess Heat Factor developed by the Australian Bureau of Meteorology (BoM), now factor in these additional components (Nairn and Fawcett, 2013). This recently developed formula was introduced by BoM for the summer of 2013-14, with forecasts or warnings including whether a heatwave, severe heatwave or an extreme heatwave is predicted based on the forecasted temperature data.

Heatwaves in Western Australia

Simply having a warm climate does not necessarily predispose an area to having a greater impact from heatwaves. Firstly, populations can adapt through such changes as altered lifestyle, air-conditioning and heat appropriate buildings. Secondly, at the individual level, people physiologically adapt to heat over a period of weeks (Koppe et al., 2004). The variability of temperature is, therefore, also of importance. Areas that are consistently hot can have less heatwaves, as defined by the Excess Heat Factor, than areas that are generally cooler with occasional hotter days. Because of these effects, all areas of Western Australia can be affected by heatwaves.

On average, all areas of Western Australia experience at least one severe heatwave per year, as defined by the Australian BoM. The areas affected by the largest number of these events include the inland Mid West region (Figure 4.1). Although many of the more populated areas of WA are in less affected areas, the majority of centres experience two to three severe heatwaves each year.

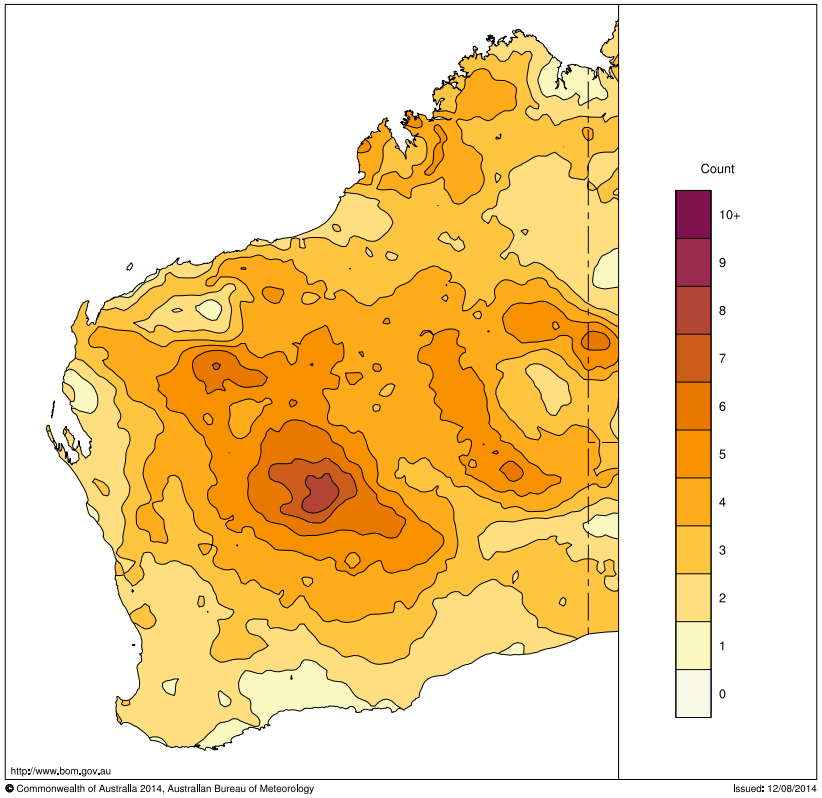
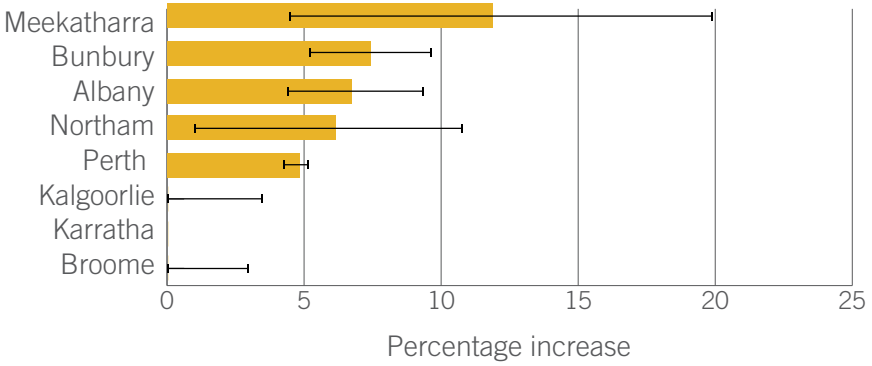


Figure 4.1 – Areas of Western Australia by average frequency of severe heatwaves per year (2004 to 2014)

Source: National Climate Centre, Australian Bureau of Meteorology [http://www.bom.gov.au/cyclone/about/]

WA Health has begun to characterise the health impact of these events. Emergency departments in Perth experience 8.4 per cent more presentations in the week following a severe heatwave than they would normally. Importantly, even milder heatwave events produce an increase in presentations, with a 4.8 per cent increase in emergency department presentations. This effect is repeated across many regions of Western Australia. Analysis of a selection of State centres showed that emergency department presentations were increased in many areas. Meekatharra, Bunbury, Albany, Northam and Perth all had statistically significant increases during heatwaves. Despite their generally hot climates, Kalgoorlie, Karratha and Broome did not have a statistically significant increase in presentations during heatwaves (Figure 4.2).



Error bars represent 95 per cent confidence intervals

Figure 4.2 – Rate of increase in emergency department presentations during a heatwave by location

CASE STUDY: HEATWAVE DURING THE 2012 TO 2013 SUMMER

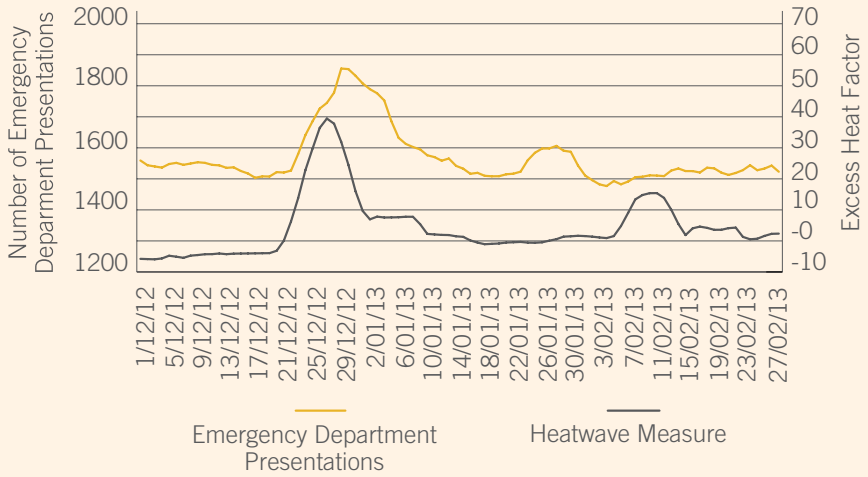
The worst recent heatwave in Perth occurred during the summer of 2012-13. A severe heatwave was experienced from 25-30 December 2012. During this period, the maximum temperature was greater than 37.5 °C each day and the minimum temperature did not fall below 20.2 °C. In the month preceding the event, the average daily maximum temperature had been a more moderate 27.9 °C. This event was particularly notable, as it coincided with Christmas and New Year celebrations. WA Health responded by activating the newly endorsed Westplan–*Heatwave*.

WA Health instigated a range of media and public health messaging that specifically targeted the most vulnerable, including the elderly, young children, pregnant women and those living alone. Messaging also covered specific environmental health issues that were important for a broader audience, such as pool and food safety, mosquito avoidance, and information on working in the heat.

WA Health held regular briefings with key agencies and utility providers that have identified responsibilities under Westplan–*Heatwave*. This included the Department of Housing, Department of Sport and Recreation and Western Power. WA Health also liaised with organisers of major sporting and social events, which coincided with the heatwave, to ensure their risk management and emergency medical plans adequately provided strategies for extreme heat. Agency advisories were regularly distributed to all public sector agencies to raise awareness of the heatwave, and provide advice for those working in the heat.

WA Health also instigated a process called 'syndromic surveillance' which involved monitoring emergency department presentations for increases in attendances in relation to the heatwave. This process allowed WA Health to detect and respond to emergent issues.

During this period, emergency department presentations across Perth increased from a baseline average of 1520 in the week prior to the event to a peak of 2036 presentations per week.



Data smoothing applied to Emergency Department and Heatwave data

Figure 4.3 – Emergency Department presentations and Excess Heat Factor during the 2012 to 2013 summer

Heatwave planning in Western Australia

In 2012, WA Health, as the HMA for heatwave, finalised Westplan–*Heatwave*. This plan triggers when a predicted 3-day average temperature (including maximum and minimum temperatures) of 32 °C is reached. The principal response strategies of this plan involve building on community resilience, identifying and supporting vulnerable populations, coordinating EM and supporting agencies, and establishing an Incident Support Group (ISG) or Operations Area Support Group, as required.

Heatwave is a newly emerging area of concern. Further research is needed to improve the identification of periods of concern and to determine the appropriate responses. WA Health is responding to this need with ongoing research. Additional information provided by the Australian BoM's Excess Heat Factor is now being considered and used along with the Westplan–*Heatwave's* current trigger point. This plan is primarily focused on the Perth metropolitan area, but future planning will extend this response to rural and regional areas to enable a State-wide response. Additionally, the plan will need to adapt to relatively frequent mild events, which cumulatively produce a large effect, and increase the response to more severe events. These considerations will need to be addressed as we respond to heatwave events in the future.

RECOVERY

Changes in Western Australian Recovery Arrangements

In 2011, the SEMC commissioned a review of recovery arrangements in Western Australia. A number of changes in the recovery arrangements for the State were made following the review. The most significant was the removal of the operational functions of the then SEMC Recovery Services Subcommittee and the creation of a State Recovery Controller position.

Under the Chair of Ms Sue Ash AO, the newly constituted SEMC Recovery Subcommittee held the first of its quarterly meetings in August 2013. The Recovery Subcommittee oversees the planning and review of State-level recovery arrangements, providing a forum for promoting and supporting the development and maintenance of emergency recovery capability. Agencies and organisations with a role in recovery are well represented on the subcommittee. The subcommittee has met with local governments that have experienced major recovery efforts, in order to understand and incorporate learnings into policy and planning arrangements.

Westplan–*Recovery Coordination* was reviewed to recognise the role of the State Recovery Controller and an interim plan endorsed by the SEMC in December 2013. The State Recovery Controller is the Deputy Chair of the Recovery Subcommittee. An officer from DPC was appointed to the role on 1 January 2014.

The State Recovery Controller supports a holistic, whole of government approach to recovery preparation through the SEMC Recovery Subcommittee and the operation of recovery coordination through the State Recovery Coordination Group. The position plays a key role in coordinating the maintenance of State recovery arrangements and plans; liaising with and supporting local recovery coordinators; determining the level of State involvement required; considering the need to establish a State Recovery Coordination Group and recommending the appointment of a State Recovery Coordinator, if required, to coordinate the recovery efforts following a large-scale emergency.

Learnings from the Parkerville Stoneville Mt Helena Bushfire

The Parkerville Stoneville Mt Helena Bushfire occurred on Sunday 12 January 2014, after a private power pole on a property fell, causing sparking and ignition of vegetation.

A subsequent review of the incident was detailed in the 'Parkerville Stoneville Mt Helena Bushfire Review Report June 2014' (State Emergency Management Committee, June 2014), which concluded that the early stages of the recovery process, including the critical period during which recovery efforts coincided with the incident response, generally went well. The SEMC is providing oversight of the implementation of the recommendations from the 2014 bushfire review.

Some of the learnings and recommendations from the 2014 bushfire review related to:

- the role of the State Recovery Controller
- processes to communicate changes to Westplans, State Emergency policies and procedures
- impact assessment and consultation with local governments.

The importance of a comprehensive impact assessment for informing the recovery process and identifying any remaining risks was highlighted as the Shire of Mundaring undertook the process of determining the recovery resources needed. The 2014 bushfire review recommended

that recovery handover documents be completed in consultation with the local government to ensure that it has all of the information that it needs. The role of the State Recovery Controller in overseeing the collection, collation and distribution of impact/damage assessments also required greater clarification in Westplan–*Recovery Coordination*.

The 2014 bushfire review noted that it appeared that there was insufficient awareness of the creation or responsibilities of the State Recovery Controller position, that came into effect 12 days prior to the incident. The 2014 bushfire review suggested that more effective processes to communicate internally the changes to Westplans, State Emergency policies and procedures be adopted.

The 2014 bushfire review explored a range of issues that feature in the recovery process associated with most disaster situations. The restoration of lifeline services such as water, power and telecommunications is an important feature of the early recovery stage. The experience of restoring these services is discussed in the Restoration of Essential Services focus area.

Other matters common to the disaster recovery process were also examined by the review team. Some of the most significant of these are listed below, including aspects which worked well and the opportunities for improvement that were identified in the 2014 bushfire review.

Financial Support

Prompt and efficient delivery of targeted financial support for community members who have suffered loss or dislocation reduces personal distress and supports the affected community. Financial support creates conditions that assist the implementation of further recovery measures.

Both State and Federal Governments were quick to announce a number of financial support measures for those affected by the Parkerville Stoneville Mt Helena Bushfire. The State government announced a Bushfire Emergency Relief Payment of $3,000 for those who had lost their homes and $1,000 for those whose homes were damaged but still habitable. The State government also announced that it would donate $1 million to the Lord Mayor's Distress Relief Fund, which is administered by an independent board and supported by the City of Perth.

The fire was proclaimed an 'eligible disaster' under the Western Australian Natural Disaster Relief and Recovery Arrangements (WANDRRA), allowing immediate financial assistance to those people affected by the fire through joint State and Federal disaster relief and recovery arrangements.

The 2014 bushfire review highlighted the important role that State agencies can play in facilitating and expediting the recovery process in a given situation, even when arrangements are already in place. In the Parkerville case, following negotiations between DPC and the Federal Attorney General's Department, the State and Federal Governments announced that they had agreed to fund clean-up costs jointly through WANDRRA. Together, DPC and DFES developed criteria for the payments, with subsequent issues quickly addressed by the two departments.

DPC also requested that the Department of Local Government and Communities liaise with the Shire regarding emergency arrangements that may be invoked to assist in the coordination of demolition and debris removal services. This included debris removal from contaminated sites, by appropriately licensed persons.

The Shire coordinated the payment of financial assistance, including the Bushfire Emergency Relief and clean-up payments. The Shire also liaised with the Salvation Army, Rotary and Lions Australia, each of which conducted their own appeals for people affected by the fire.

The Finance subcommittee of the Local Recovery Coordinating Committee received and assessed claims for financial assistance from individuals making applications to the Lord Mayor's Distress Relief Fund.

The 2014 bushfire review noted the important work of the Shire of Mundaring in coordinating financial assistance. However, the Shire also identified areas for improvement in relation to the clarity of roles during the operation of the Lord Mayor's Distress Relief Fund, which would ease the Shire's administrative burden during critical times.

Other learnings identified included the management of cash donations and private appeals. The 2014 bushfire review noted that Westplan–*Recovery Coordination* requires cash donations from public appeals to be directed to the Lord Mayor's Distress Relief Fund. However, private support organisations are not compelled to follow this practice, and frequently choose to undertake independent appeals. Inconsistencies between the criteria applied by the different support organisations providing financial assistance can cause confusion among applicants.

As part of the learnings from the Parkerville experience, it was identified that to achieve efficiencies in the management of appeal funds and to reduce duplication, software could be developed which outlines the available financial assistance, relevant templates and application forms and does not require multiple applications.

Other Support

There was significant positive feedback regarding the work of various welfare agencies. Agencies including Australian Red Cross, Volunteering WA, Adventist Relief Agency and Youth Care provided a wide range of support services including accommodation, reunification, counselling and chaplaincy and general community outreach. The Red Cross, for example, had more than 120 staff and volunteers on the ground at some point during the incident.

A learning following the Parkerville Stoneville Mt Helena Bushfire was about unsolicited donations, including donations of prepared food, which were not able to be accepted due to stringent food handling or electrical safety requirements. Many unsolicited household and clothing items were delivered to the evacuation centres. Staff and volunteers working on welfare needs had great difficulty sorting the volume of goods. Volunteering WA arranged for all donated goods to be boxed and relocated to the nearby Salvation Army shop for allocation to residents as needed. The 2014 bushfire review identified that agencies and organisations engaged in emergency welfare provision need to communicate the preference of cash donations to an appropriate relief fund, as non-cash donations require significant logistics coordination to manage the goods.

Insurance

As with financial support, the prompt resolution of insurance issues following a disaster assists with the long term recovery process. The 2014 bushfire review identified that there can be an important role for State agencies in assisting this process.

The Insurance Council of Australia rated the Parkerville Stoneville Mt Helena Bushfire at an 'Insurance Catastrophe' level, which resulted in the Insurance Council coordinating the industry response to the incident, collecting relevant data, setting up an '1800' Insurance Assist Hotline and providing relevant information to householders. The State Recovery Controller and DPC played a significant role in liaising with the Insurance Council to address issues that arose. For example, following discussions with the Insurance Council, it confirmed that clean-up costs for which property owners had received Government assistance would not be deducted from the payouts by insurance companies.

Evacuation Centre

Similar to the provision of financial support, the management of evacuation arrangements can be critical to the progress and long term outlook for recovery from a disaster. Historically in Western Australia, once the emergency has subsided, evacuation shelters transition into welfare centres. These provide a 'one-stop-shop' for the affected community to obtain information on relevant essential services including health, psychological support, relief payments and reconnection of essential services.

In the Parkerville case, an initial evacuation centre was established based on a perception of ease of access. Within a relatively short period of time, it became evident that it was necessary to relocate to a larger evacuation centre, which led to disruption and confusion for evacuees and first responders and a fragmented recovery process. As identified in the 2014 bushfire review, relevant policies and Westplans have been amended to reflect the engagement of CPFS when making decisions regarding the location of the evacuation centre in a bushfire incident.

Review of Recovery Coordination Policy and Plan

Recovery learnings associated with recent emergency incidents, including the above mentioned Parkerville Stoneville Mt Helena Bushfire, have been taken into account during the current review of the Recovery Coordination Policy and Westplan.

The following issues are being addressed in the revised plan:

- the inclusion of criteria to be considered as triggers for escalation of recovery activity
- recognition of local government arrangements
- clarification of impact assessment requirements
- clarification of the role and title of the State Recovery Controller
- reference to evaluation of effectiveness of recovery activities.

Extensive consultation and communication will occur in relation to the revised Plan and the role of the State Recovery Controller to ensure understanding of the facilitation and coordination of recovery arrangements.

Lessons Learnt Methodology

In May 2014, the Recovery Subcommittee conducted a workshop to consider the recovery experiences of previous emergency incidents in the State. From this, common issues and learnings were identified to inform recovery planning and activities in the future. Consideration was given to an appropriate methodology to learn from specific incident recovery experiences, through capturing lessons learnt and sharing information.

Short and longer term recovery from the following incidents was considered:

- 2014 Parkerville Stoneville Mt Helena Bushfire
- 2011 Perth Hills fire
- 2011 Augusta-Margaret River fire
- 2011 Warmun floods
- 2003 Tenterden fire
- 1996 Gracetown cliff collapse

A number of common issues were identified across the different recovery experiences including:

- the importance of engaging with the community and communicating effectively
- providing easily accessible advice on financial support and insurance challenges
- recognising and supporting the individual grieving process
- streamlining clean up processes; and ensuring business continuity for the local government.

The recovery case studies published on the UK Cabinet Office website and the potential to apply the same methodology in Western Australia was considered. Case studies provide a summary of experience within a specific context. While the situations described will not replicate new recovery situations faced, they provide insights, suggestions and contacts which may be useful. Given the complexity and differing contexts of recovery, a review of case studies may help to determine what can usefully be applied to a new situation to optimise available resources.

The case studies approach will be piloted with the Shire of Mundaring to document the lessons identified in the Parkerville Stoneville Mt Helena Bushfire. The information will be shared, via the SEMC knowledge hub, with local governments which may need to undertake recovery for the first time in the future.

National Recovery Initiatives

At a national level, the Recovery Subcommittee of the ANZEMC is currently overseeing the further development, through testing, of the National Impact Assessment Model. The model will facilitate the aggregation of data into established recovery domains (social, built, economic and environmental) and data and information across jurisdictions. It will provide an indication of the level of impact for an incident, which will be further validated with information on context. This may lead to a more accurate representation of a community's unique environment and specific vulnerability and resilience profile. The subcommittee is also scoping the development of a recovery Monitoring and Evaluation Framework by evaluating existing jurisdictional methodologies and recent developments in program evaluation, such as emphasis on up-front evaluation and outcomes.

Further focus is being given to the relationship between mitigation and recovery funding, by recognising the benefits of initiating mitigation actions as a part of recovery. The Productivity Commission is currently undertaking a public inquiry into the efficacy of current national natural disaster funding arrangements, and has focussed on effective natural disaster mitigation and the reduction in the impact of disasters on communities.

Key learnings from other jurisdictions, and in particular the report on Tasmania's recovery from the January 2013 bushfires, 'Transition to Long-Term Recovery' (Tasmanian Government May 2014), provide opportunities for Western Australia to plan more effectively for recovery. Issues identified in the Tasmanian recovery included the need to recognise and respond to the use of social media by the community, the benefits of co-location of all core agencies to provide information and services and the importance of facilitating the process of rebuilding.

CASE STUDY: THE FLOOD OF WARMUN 13 MARCH 2011

The devastating effects of the flood at Warmun on 13 March 2011 and the recovery effort have recently been captured in a book commissioned by the Department of Housing and the Kimberley Development Commission, 'Warrambany of Warrmarn' (Western Australian Government, 2014).

One of the largest Aboriginal communities in the East Kimberley, Warmun was devastated by a flood which destroyed or significantly damaged 80 per cent of the buildings, significant artworks and a large percentage of vehicles and household goods. With no power, sewerage or road access, 275 residents were airlifted to the nearest large town, Kununurra. With their deep connection to country, the Gija people's shock and loss was compounded by their evacuation from Warmun (Western Australian Government, 2014).

With the formation of the Warmun Re-establishment Taskforce, the focus of the recovery was to return residents to their community as soon as possible. Temporary facilities were installed to provide essential services.

Figure 4.4 – Warmun is a village located on the Great Northern Highway north-east of Western Australia

Image courtesy of Department of Housing

The Department of Housing coordinated the re-establishment of essential services and provided a 200-bed Warmun Temporary Village, eight refurbishments and 17 new houses. Over 200 Warmun residents returned on 5 July 2011.

Due to the flood zone, houses could not be rebuilt on their old sites and extensive consultation was undertaken with the community in determining where people would live. Traditional owners worked with the Kimberley Land Council to ensure that heritage sites were properly protected during the clean-up and restoration process and began planning new areas for the town. Over 600 art works from the Warmun Art Centre were lost in the flood. The Warmun Community Collection, although wet and muddied, was conserved by Melbourne University and has been returned to the township.

Significant challenges were faced in rebuilding a remote Aboriginal settlement, including the delivery of infrastructure services to areas not previously serviced, the need to bring significant contractor resources into Warmun, and for houses that could to withstand future flooding. The town's new infrastructure, including houses, schools, community buildings, roads, water and communications, is now able to better withstand extreme weather events.

RESTORATION OF ESSENTIAL SERVICES

A community's ability to effectively recover from an emergency depends on the prompt restoration of essential services, including, but not limited to, electricity, gas, water, roads and telecommunications. It is vital that essential services network operators are appropriately prepared for emergencies and can work together effectively to get a community back on its feet.

In Western Australia, the Essential Services Network Operators Reference Group (ESNORG) has been established as a reference group of the SEMC. Membership of the ESNORG includes: Water Corporation, Western Power, WA Gas Networks, Telstra, Main Roads WA (MRWA), Horizon Power and Dampier Bunbury Pipeline. The ESNORG, which meets quarterly and reports to the SEMC, has a strong focus on networking. The ESNORG is also well represented on other SEMC Subcommittees and Working Groups.

The ESNORG itself provides a forum for essential services network operators to familiarise themselves with current EM best practice. Member agencies are kept up-to-date on and contribute to the review of SEMPs and Westplans. For example, to ensure operational alignment with other EMAs, essential services network operators are familiar with SEMP 4.1–*Incident Management*, which documents the structure for incident response in the State.

A number of essential services network operators are signatories to a Mutual Assistance Policy and Principles document, which formalises the agreement between the parties for assistance in an emergency that requires their involvement or affects their infrastructure. The parties to the document (Water Corporation, Western Power, WA Gas Networks, Main Roads WA, Horizon Power and Dampier Bunbury Pipeline) agree to cooperate in the most effective way possible, in any emergency that affects the safety of persons or risk to property.

In terms of prevention and preparedness, the Mutual Assistance Policy and Principles document notes that all parties have, and maintain, individual crisis and emergency response plans. These include planning for the provision of mutual assistance, up-to-date contact information for key personnel and links between companies to ensure uniform public information in any emergency.

Furthermore, to prepare for emergencies, a number of ESNORG members have well trained and resourced emergency crews that are available 24/7. These crews are trained to operate within the State's EM framework; including familiarity with AIIMS and participating in Operations Area Support Group, ISG and the State Emergency Coordination Group (SECG). The capabilities of these crews are further refined through their involvement in EM exercises at local, District and State level.

Essential services network operators enhance their preparedness by maintaining emergency equipment stores across the State. Water Corporation, for example, keeps a store of equipment in each region of the State. This equipment includes, but is not limited to, large water tanks, pumps and bottled water.

In emergency response, it is critical that essential services network operators work closely with the controlling agency/HMA to ensure the emergency area is safe, before infrastructure can be fully restored. The Water Corporation's Incident Management personnel, for instance, work with a view to ensuring that an uninterrupted water supply to the emergency area is maintained. Western Power's Crisis Management Team's first priority will also be safety which, in this case, is likely to involve disconnecting power to an affected area and removing or making safe fallen power poles and lines.

It is also important that essential services network operators work together effectively during the response phase of an emergency. For example, Water Corporation, who is responsible for 95 per cent of the State's water, including waste water, relies on a continuous electricity supply to run their pumps. If electricity to this equipment is interrupted, it can have serious consequences for the community, including the risk of sewage contaminating the drinking water supply. The Water Corporation works closely with Western Power to promptly restore electricity supply.

During recovery, essential services network operators will focus on restoring services to the affected community. Most essential services network operators will place Liaison Officers at the Welfare Centre to directly assist those community members affected by the emergency. Telstra, for example, make public phones, mobile phones and chargers available to affected community members, and can even redirect home phone numbers to a mobile phone.

The work of Western Power and Telstra, amongst other essential services network operators, across response and recovery, was highlighted positively in the Parkerville Stoneville Mt Helena Bushfire, which occurred in January.

CASE STUDY: PARKERVILLE STONEVILLE MT HELENA BUSHFIRE (WESTERN POWER AND TELSTRA RESPONSE)

The Parkerville Stoneville Mt Helena Bushfire occurred on Sunday 12 January 2014, after a power pole on a property fell causing sparking and ignition of vegetation.

Before they could start rebuilding the network, Western Power worked closely with DFES to make the area safe and ensure burnt trees and debris in danger of collapsing was cleared. In addition, Western Power crews individually inspected around 400 homes to identify if an electrician was needed to ensure the household connection was safe.

Subsequently, more than 200 Western Power employees replaced 155 poles and nearly nine kilometres of powerline conductor in less than a week to ensure those people who could, were able to return safely to their homes. This remarkable achievement, in extremely challenging conditions and terrain, reflected a team effort and demonstrated Western Power's role as an essential service provider to Western Australia.

Western Power also provided additional logistical support through their community engagement and operational teams. These teams attended the daily community forums to answer any questions customers had around restoration of power supply; even stationing their Community Engagement Mobile Unit at Brown Park to provide up-to-date information to affected residents.

The disruption to telecommunications was another significant impediment to community recovery in the Parkerville Stoneville Mt Helena Bushfire. Telstra implemented a number of strategies to alleviate the community's telecommunications issues. These strategies included, but were not limited to:

- Arranging for a consumer's home number to be diverted to their mobile service, regardless of whether they were with another carrier or Telstra for their landline or their mobile.
- Providing pre-paid phones with a credit of $50 or more to people who had lost their mobile phones in the fire.
- Providing mobile pre-paid phones with a credit of $50 or more to people (especially seniors) who have never owned a mobile, so they could receive their landline calls on a mobile phone.
- Arranging for a an interim service to be placed on Telstra mobile phones associated with a landline service account so that any calls made out from this phone are charged at landline rates.
- Providing mobile chargers for people who had to leave their homes in a hurry and forgot to take their phone chargers with them.
- Assisting people with their BigPond email being accessed via webmail.

The Water Corporation staff were deployed to the Parkerville Stoneville Mt Helena Bushfire at around 2:00 pm on Sunday 12 January. They remained there for 48 hours and were later available to attend on an on-call priority basis. While water meters were damaged, there was no major damage to critical infrastructure. On Monday 13 January, Water Corporation made available a team of people to take calls from affected community members. They also provided administrative support staff at the evacuation centres to assist with financial and concessional support packages for affected residents and property owners. Where possible, the Water Corporation also assisted non-scheme residents.

On Sunday 12 January and Monday 13 January, the Water Corporation provided two pallets a day of bottled water to evacuation centres and response and recovery staff, with a total of approximately 14 pallets provided over the period of the incident.

The effectiveness of the close relationship between essential services network operators was highlighted in the 2014 bushfire review.

> 'Discussions by the Review team with representatives from the Water Corporation, Western Power and Telstra highlighted the fact that, as a result of the personal relationships developed through various forums, the utilities work well together during major bushfires.

Figure 4.5 – Fire affected residents were able to communicate with relatives through mobile phones donated by Telstra

Image courtesy of Shane Kinnear

This was demonstrated at the Parkerville Stoneville Mt Helena Bushfire. Some of the forums attended by these utilities include Local and DEMCs; the Essential Services Network Operations Reference Group (a subcommittee of the SEMC); the annual Darling Escarpment Water Strategy briefing; the Fire Danger Rating Liaison Group; presentations to bushfire brigades and fire incident exercises'. (State Emergency Management Committee, June 2014)

Figure 4.6 – Western Power crews assessing damage to their infrastructure following the Parkerville Stoneville Mt Helena Bushfires in January 2014

Image courtesy of Western Power

CAPABILITY ASSESSMENT

The SEMC's 2013 Emergency Preparedness Report signalled that the next incremental step for the State, when assessing preparedness and building capacity, was to progress towards a more quantitative form of assessment and reporting. Research was conducted on the systematic approach adopted by other national and international jurisdictions in using a self-assessment capability tool.

Following the 2013 Preparedness report, a review of the capability assessment tool was undertaken. Agencies reported that:

- the Framework (Figure 5.1) with its 10 elements was appropriate and supported;
- the tool needed to be more quantitative for the results to be easier to analyse; and
- scenario based questions would provide context for responses.

This led to the West Australian assessment tool used in 2014 being reframed to pose a series of generally binary data type questions relating to the 24 achievement objectives across the 10 elements of the Framework, as opposed to the 30 core objectives in the previous iteration of the tool. Additionally, assessments against consequence levels (Appendix 3) were introduced to provide context for agency responses.

Capability Framework

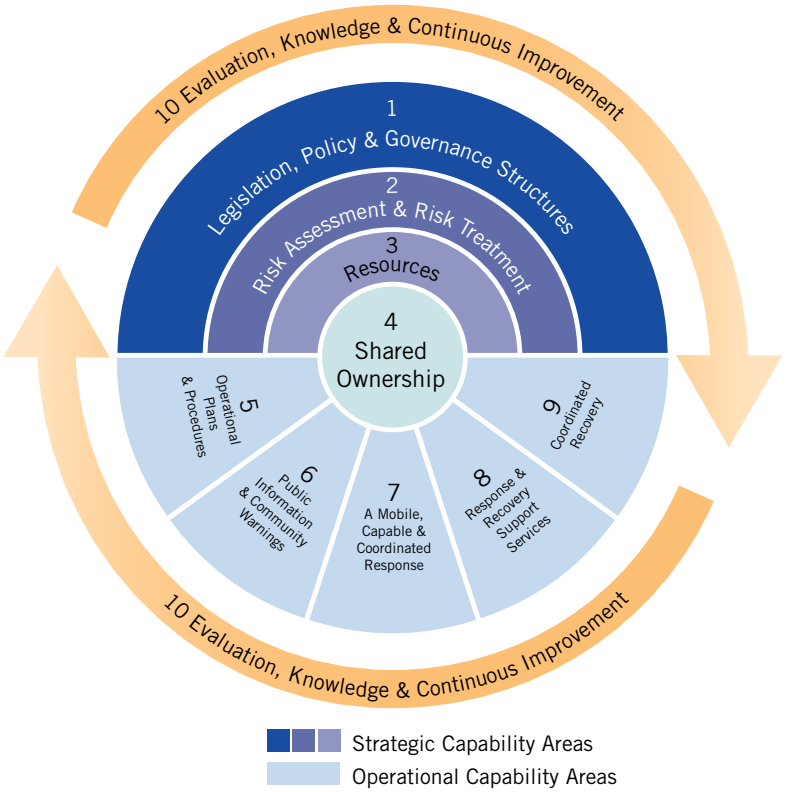


Figure 5.1 – WA Emergency Management Capability Framework

The refined assessment tool was designed to provide more targeted, comprehensive and explicit responses, improving the ease of response for the EMAs and the quality of the data received. Consequently, this year some of the capability areas are supported by graphs, which illustrate agency responses.

Agencies were asked to assess their capability based on their EM responsibility and were separated into three groups: HMAs, other EMAs and local government. For the purposes of this report, EMA means HMAs, Combat Agencies, Support Organisations and other agencies with roles in EM. Where HMAs are referenced separately, the remaining agencies are referred to as 'other EMAs'.

This year, all HMAs, the majority of other EMAs and a significant number of local governments self-reported using the capability assessment tool. A list of agencies and local governments that provided a response to the SEMC's Capability Assessment Tool is included in Appendix 4.

Agency and local government responses have been analysed in this chapter, with an overarching summary of key findings included in the Executive Summary. Key findings derived from the Capability Assessment are summarised against a broader backdrop in Conclusions and Future Work.

In future reports, to better quantify the State's preparedness for large-scale emergencies and to define capability levels based on risk, the SEMC Secretariat will work with key stakeholders to further integrate capability and risk. This is discussed in more detail in Conclusions and Future Actions (Chapter 6).

CAPABILITY AREA 1

LEGISLATION, POLICY AND GOVERNANCE STRUCTURES

Achievement Objective 1.1: Legislation, Policy and Governance Structures

Emergency Management legislation, governance structures and policies (EM instruments) are current, used, documented and facilitate effective preparedness for large-scale emergencies in Western Australia.

Key Finding

EMAs, including HMAs and local government, report a mostly positive response to monitoring their compliance of, being informed of, communicating changes to, and contributing to reviews of the State's EM policies and legislation. A majority of EMAs who responded also report that arrangements under their responsibility, including LEMAs, are current, relevant and appropriate. Responding agencies also indicate the State's EM legislation and other arrangements are relevant and appropriate to their agency's area of responsibility. The SEMC is continuing to review the State EM Policy framework in consultation with a representative stakeholder group.

Detail

For the State's EM arrangements to be appropriate and effective, it is essential that EMAs are continuously and actively involved in the development, maintenance, exercising and review of those arrangements, as well as monitoring the compliance to all their responsibilities under those arrangements. It is also important that the State's EM legislation,

policies and plans are current, relevant and appropriate and all EMAs are informed of any policy or legislative changes and those changes are communicated to their stakeholders. The SEMC is undertaking a review to comprehensively examine the SEMC policy framework to ensure it remains contemporary and fit for purpose. This review is being undertaken in consultation with the Policy Review Advisory Group, which is a representative stakeholder group.

All HMAs and the majority of other EMAs responded positively to the question of whether they were given the opportunity to contribute to relevant EM legislative or policy reviews. Through their membership of SEMC Subcommittees and Reference Groups or one of the SEMC Working Groups, most EMAs consider that they are well represented in this area.

HMAs overwhelmingly report a strong focus on monitoring compliance to their obligations under EM policy and legislation. WA Health, for instance, has an internal committee structure in place that regularly reviews the Department's obligations under EM legislation.

On the issue of compliance, the majority of other EMAs, including local government, report that they have systems in place to monitor their compliance to EM policies, plans and legislation. A number of local governments, for instance, have internal audit procedures in place to ensure compliance with all legislation, including the EM Act.

Most HMAs have processes in place to be informed of and to communicate with stakeholders, changes to EM policy, plans and legislation. A number of HMAs have committees in place; such as WA Health's, Health Emergency Management Committee, to achieve this.

Many local governments report that they are kept abreast of any changes to EM policy, plans and legislation through their respective Local Emergency Management Committees (LEMCs) and DEMCs.

The majority of HMAs report that Westplans under their responsibility are current, relevant and appropriate. Any Westplans that are out-of-date are in the process of being reviewed. Local governments have a responsibility under the EM Act to ensure that they have LEMAs in place for their District. Most local governments report having current, relevant and appropriate arrangements in place.

Are Westplans under your responsibility current, relevant and appropriate?

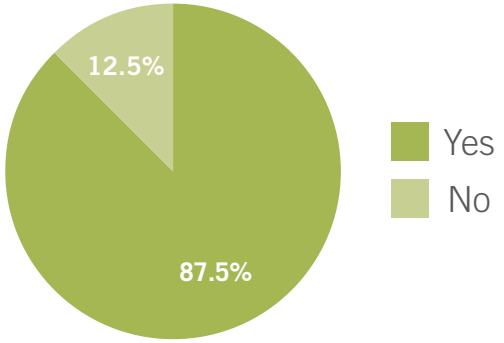


Figure 5.2 – Percentage of HMA Westplans that are current and relevant

HMAs and other EMAs overwhelmingly report that the State's current EM legislation and EM arrangements are still relevant and appropriate within their agency's area of responsibility. Where gaps have been identified, work is being undertaken to address those gaps. For example, Public Utilities Office (PUO) have engaged Western Power during the development of the new Westplan–*Electricity Supply Interruption*, which will outline responsibilities for their agency and eliminate any gaps.

In assessing the relevance and appropriateness of the State's EM arrangements, it is important to consider other legislative instruments that fall outside the EM framework. Do they have impact or do they have the potential to impact, on EM legislation, policies or plans? The suite of statutes referred to as emergency services legislation, which includes the *Fire Brigades Act 1943*, *Bush Fires Act 1954* and *Fire and Emergency Services Act 1998*, has an impact on the State's EM arrangements; especially in regard to a number of the State's Westplans.

DFES is responsible for administering the emergency services Acts and is currently reviewing those Acts, with a view to creating a single, comprehensive Emergency Services Act. It should be noted that the proposed Emergency Services Act and the EM Act are two very separate statutes. The SEMC Secretariat is represented on the Interagency Working Group, to ensure that there is no confusion or conflict between the proposed Emergency Services Act and EM legislation, policies or plans. The Legislative Working Group of BRIG also provides oversight of the Emergency Services Act project to oversee the implementation of the Keelty report (Keelty February 2011). The Legislative Working Group provides progress reports directly to SEMC.

CASE STUDY: REVIEW OF THE EMERGENCY MANAGEMENT ACT 2005

The EM Act, including the Emergency Management Regulations 2006, forms the cornerstone of the State's EM arrangements. As such, it is vital that the legislation is current, relevant and appropriate, and represents best practice.

In 2009, a statutory review, required by section 103 of the EM Act, was commenced by the Fire and Emergency Services Authority of Western Australia (now DFES) and, in 2011, the review was handed over to the SEMC Secretariat. The review sought to address any matters that might affect the operation and effectiveness of the EM Act.

For this purpose, an EM Act Review Working Group was established, comprising representatives from all key EM stakeholders. The review saw comprehensive consultation with all HMAs and EMAs, including local government.

The issues raised during the review were presented to the Minister in the 'Report of the Review of the EM Act', along with a list of eight recommendations to address those issues identified. This report was tabled in Parliament in December 2013 and the SEMC Secretariat continues to review appropriate actions to address these issues.

CAPABILITY AREA 2

RISK ASSESSMENT AND RISK TREATMENT

Achievement Objective 2.1: Risk Assessment and Risk Treatment

A consistent and comprehensive Emergency Risk Management (ERM) approach aids in decision making, facilitates appropriate resource allocation, and allows for a proactive approach towards emergency management, including greater emphasis toward prevention and preparedness.

Key Finding

Progress has been made by the State to achieve a consistent and comprehensive emergency risk management approach over these last 12 months. The endorsement by the SEMC in March 2014 of a policy that specifically addresses emergency risk management (SEMP 2.9 –*Management of Emergency Risks*) and the launch of the State Risk Project have been significant achievements. As these larger efforts have been developed, agencies and local governments continue to work towards progressing their risk management capabilities.

Detail

State Emergency Management Policy (SEMP) 2.9–*Management of Emergency Risks*

The development of a policy framework for risk management was introduced in the 2013 Emergency Preparedness Report. At the time of publication, SEMP 2.9–*Management of Emergency Risks* was undergoing a consultation process, and was subsequently approved by the SEMC in March 2014. This approval set a standard for a consistent approach for emergency risk assessments in the State, namely AS/NZS ISO 31000:2009.

In addition to this standard, SEMP 2.9 outlines the roles and responsibilities of agencies and lists benchmark guidelines and risk criteria for the ERM process which will enable a comprehensive approach. These responsibilities include the requirement that all HMAs and DPaW contribute to the development, implementation and maintenance of an ERM plan for all the hazards for which they are responsible at the State and district level. The collective risk assessment and plan development will be done on a prioritised basis as led and administered by the SEMC and DEMCs, respectively for State and district level.

For the ERM plans to be truly successful, the involvement of a broader spectrum of agencies, such as EMAs, is required. As such, SEMP 2.9 requires local government to develop and maintain an ERM plan for the hazards that are relevant to their locality. The process is to be led and administered by local government in collaboration with relevant LEMCs. Local government acknowledge that further work is required to increase the capacity and participation of local governments in the risk management process.

For the 2014 Emergency Preparedness Report, agencies were asked if they had identified and documented all hazards and vulnerabilities in accordance with SEMP 2.9. Responses indicate that although agencies are moving towards embedding risk management, their processes are yet to be fully aligned with SEMP 2.9, with about 50 per cent of HMAs reporting that this is scheduled to occur in the next year or two. Some HMAs report that this will be undertaken as part of the State Risk Project.

Many of the other EMAs report the use of risk management strategies, but these generally pertain to their own individual corporate or operational risks rather than the State's emergency risks. Given these particular agencies are not currently specified in SEMP 2.9, their responses are not unexpected. The responses from these other EMAs indicate some confusion over the desired outcomes of the State's emergency risk management activities. The question is not how individual agencies deal with risks to their businesses or operations, but whether their activities reduce the risks to the State and its Core Objectives.

Bushfire Risk

On the back of the Keelty report, *A Shared Responsibility: The Report of the Perth Hills Bushfire February 2011*, the Office of Bushfire Risk Management, DFES and the Department of Planning have embarked on significant policy and regulation reform in the area of land use planning. The initiatives include:

- The development of a standard by Office of Bushfire Risk Management that outlines the State's approach to mapping Bushfire Prone Areas.
- The designation of the DFES Commissioner as the position that declares Bushfire Prone Areas.
- The development, by the Department of Planning, on behalf of the WA Planning Commission, of a regulatory and renewed policy framework encompassing land use planning and building control within designated Bushfire Prone Areas.
- The development of an accreditation scheme for bushfire professionals to gradually build greater expertise and uniformity in the application of bushfire regulations and policy.

It is expected that the new regulatory and policy framework will be in place by May 2015, along with the bulk of Bushfire prone area maps. These new arrangements will significantly advance the future reduction of bushfire-related risk in land development and building.

DFES, through its Office of Bushfire Risk Management, has developed a guideline for the development of local-government-based, tenure-blind Bushfire Risk Management Plans. In addition, DFES is developing a software system in support of the guideline. The guideline has been piloted in the local governments of Augusta-Margaret River, Collie, Nannup and Boyup Brook with very positive outcomes. The guidelines and support system will be available for use in early 2015, and subject to resourcing, will be rolled out to all high risk local government areas over the next few years.

State Risk Project

In order to gauge whether risks from hazards are increasing or decreasing, it is necessary to establish baseline data. The State Risk Project is endeavouring to do this by gaining a comprehensive understanding of the risks from all 27 prescribed hazards using a consistent approach at multiple levels, that is, State, District and local. The goal of the project is to enable objective decision making for the prioritisation of resource allocation and treatment strategies.

The following outcomes and benefits are expected from the project:

- An increased understanding of the major risks and associated impacts on a State, District and local level.
- Objective information to assist resource allocations at all levels, with emphasis towards prevention and preparedness activities.

- Substantial data to evaluate mitigation activities including assessing the benefits to the cost and to support risk management strategies.
- Improved basis for development of LEMAs and Westplans.
- Increased awareness of risk across Western Australia and knowledge of the State, district and local framework for managing risk.

Two key outputs have been achieved to date. The first is the completion of the assessments of seven sudden-onsets natural hazards at the State level. The preliminary results for five of seven natural hazards were published in the 2013 Emergency Preparedness Report. Subsequently, workshops for flood and cyclone were held in December 2013. The combined results of these assessments were reported to the Commonwealth in December 2013 and can be found in the Western Australian State-Level Risk Assessment Seven Sudden Onset Natural Hazards report.

The assessment revealed that the State's top risks stem from cyclone and flood (see Figure 5.3). Storm, earthquake and bushfire form the next set of higher risks. An analysis of the top quartile of the risk data revealed that flood and cyclone pose significant economic risks while bushfire and cyclone show significant risks to the social setting, particularly to the psychology of communities (see Figures 5.4 and 5.5).

Additionally in 2014, risk assessments were conducted for two worst case telecommunications disruption scenarios affecting the Perth CBD and the South West of the State and for the Parkerville Stoneville Mt Helena Bushfire. The highest impacts from a telecommunications disruption are anticipated to be economic in nature (see Figure 5.4). Conversely, the Parkerville Stoneville Mt Helena Bushfire event shows more prominent impacts in the human categories, that is, people and social setting (see Figure 5.5). The analysis seems to indicate that the impacts from a bushfire to the human element remain the same regardless of the size of the event.

State-Level Average Risks (logarithmic scale)
All impact Categories Combines – All Data

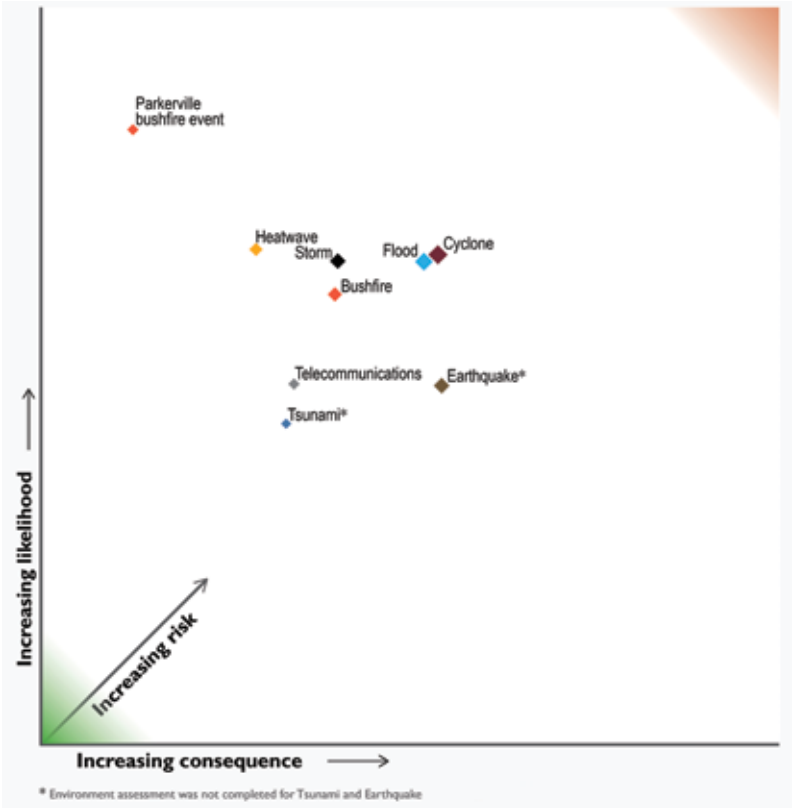


Figure 5.3 – Average consequence against average likelihood per hazard. Each hazard combines worst and near-worst case scenarios. The Parkerville Stoneville Mt Helena Bushfire event information is also included for comparative purposes.

State-Level Average Risks (logarithmic scale)
Economic/Infrastructure Impact Categories Combined – Top Quartile Data

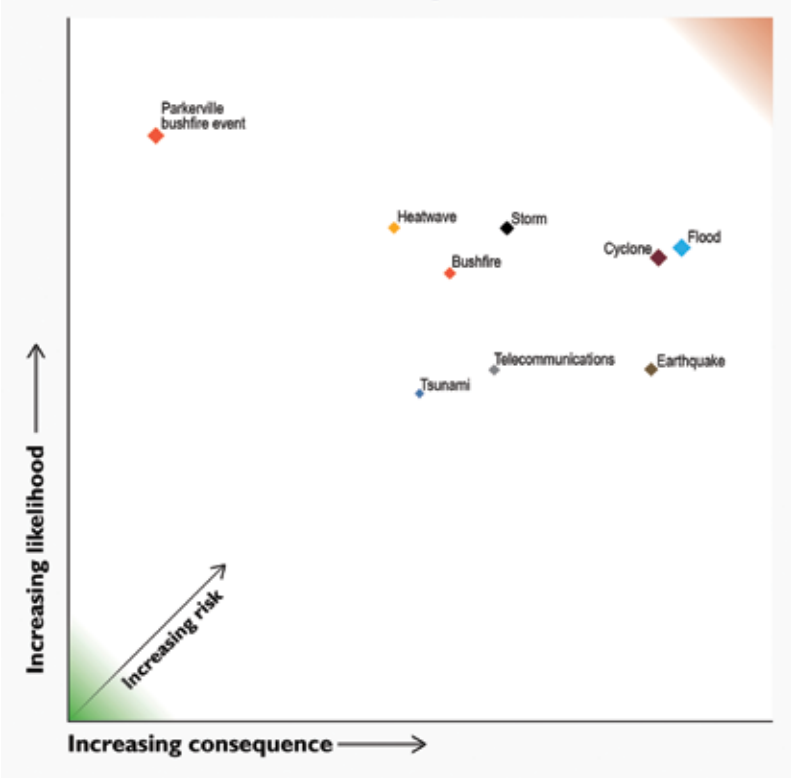


Figure 5.4 – Statements involving the Economy and Infrastructure categories were selected and ranked by risk level. The top 25 per cent of statements for each hazard were then selected and averaged.

State-Level Average Risks (logarithmic scale)
Human Impact Categories Combined – Top Quartile Data

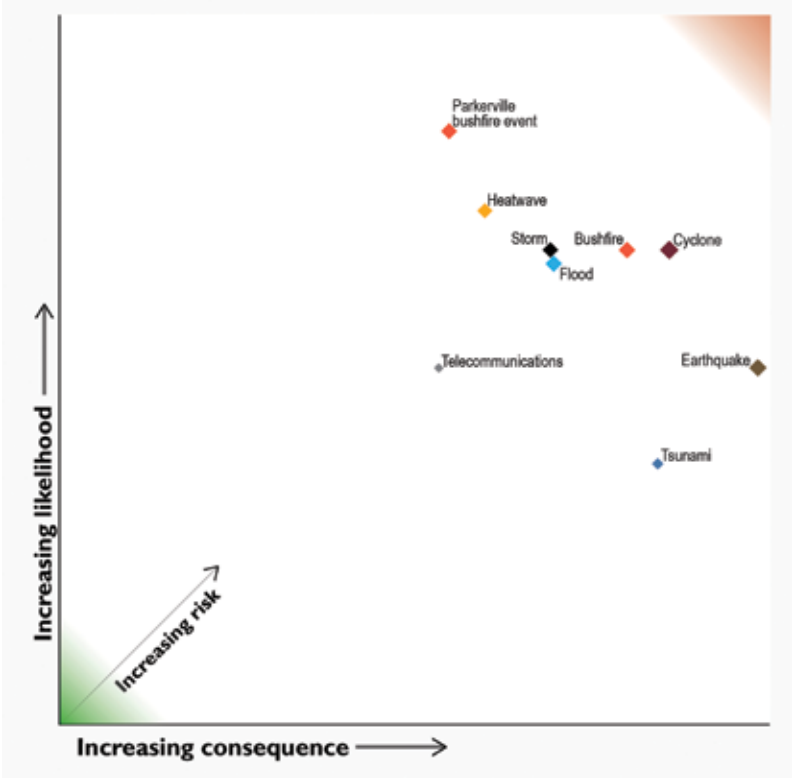


Figure 5.5 – Statements involving the People, Social Setting and Public Administration categories were selected and ranked by risk level. The top 25 per cent of statements for each hazard were then selected and averaged.

The second key output from the State Risk Project is the development of the interim ERM guide, targeted for use by District and local stakeholders. The development of this guide by the SEMC Secretariat has been driven by two principal factors. The previous 2005 AUSTRALIAN ERM guide was written using AS/NZS 4360, as such an update to the AS/NZS ISO 31000:2009 standard was necessary. Additionally, it was identified that the State would benefit from its own easy-to-use document, based on the National Emergency Risk Assessment Guidelines, for which items unique to the State can be included. Consequently, an interim ERM guidebook was released in June 2014, and will be finalised following stakeholder feedback and the release of the 2014 edition of the National Emergency Risk Assessment Guidelines. The WA ERM guidebook and a series of helpful tools can be found on SEMC's website.

It is anticipated that the interim ERM guide and tools will assist local governments in meeting their emergency risk assessment and management requirements and contribute to State-wide consistency. While most local governments report that they undertake risk management activities in line with SEMP 2.9, the accompanying commentary appears to contradict these statements and, as such, it is not possible to determine the consistency of assessments across the State.

Looking forward, the State Risk Project is developing two further outputs. At a State level, risk assessments will begin to focus on man-made and integrated hazards, for example, animal and plant biosecurity. District-level risk assessments are anticipated to commence in 2015 by way of workshops that are currently being planned by the SEMC Secretariat. A trial workshop is scheduled prior to the end of December 2014. Preparation for the district-level workshops includes the development of a knowledge hub which will host essential information for the risk assessments, including hazard information, educational videos, risk criteria and tools. Another significant component of the State Risk Project is the development of a spatial system for the hazard information generated from the workshops and a central data collection point for all relevant spatial data in the State.

CASE STUDY: STATE LEVEL 'WORSE CASE SCENARIO' WORKSHOPS

In 2013, the SEMC coordinated risk assessment workshops to analyse the risks posed from seven natural hazards to six key areas fundamental to the wellbeing of the State, namely the potential impacts to the People, Economy, Social Setting, Governance, Infrastructure and Environment of Western Australia. The seven natural hazards were bushfire, tropical cyclone, earthquake, flood, storm, tsunami and heatwave.

The workshops assessed the credible worst-case and near worst-case-scenarios for the State as determined by science experts. For example, the cyclone scenario was a category 5 Tropical Cyclone making landfall to the west of Karratha. The scenario trajectory created significant storm surge and high winds in the port of Dampier.

A range of stakeholders with a combination of operational response, planning, science research, technical, social, economic and administrative capacities were brought together to assess the risks from the hazards. The workshops typically engaged between 30 and 40 people from a range of State Government, local government and private industry who collectively worked through the risk issues.

Across the seven scenarios over 1200 risk statements, which are sub-scenarios, were investigated for the six key theme areas. For each risk statement, a Likelihood, Consequence and Risk level was established by the workshop participants. A risk register was established with the highest risks prioritised. From the risk register graphical plots of the average risk levels were established to assess the State's highest risk areas and compare the risk levels.

The information was published in the Western Australian State-Level Risk Assessment Seven Sudden Onset Natural Hazards report in December 2013.

The State has also conducted three 'ground-truth' workshops, analysing three actual events that occurred in 2014: Parkerville Stoneville Mount Helena Bushfire, Tropical Cyclone Christine, and the Kununurra flooding. These workshops have been useful in evaluating the accuracy of the scenario-based exercises and providing a basis to assess the State's ability to respond to larger events. In addition to these workshops, the same risk assessment process was applied to a potential telecommunication disruption and the results proved useful in forward planning.

The State is continuing to assess its prescribed hazards at the State-level and is about to focus on man-made and integrated hazards (for example, human epidemic). In addition, similar workshops will be carried out at the district level, commencing in 2015.

CAPABILITY AREA 3

RESOURCES

Achievement Objective 3.1: People

Organisations have appropriate levels of capable, well trained and supported people who effectively perform their role in large-scale emergency management.

Key Finding

The EM sector report that they have systems and processes in place and continue to work towards the development of a workforce that is well trained and capable of effectively performing EM roles in large-scale emergencies. This includes more robust training plans to support identified training needs. The identification and management of volunteer training remains a challenge. An assessment of the extent of volunteer involvement in EM roles would be beneficial to facilitate appropriate planning for the volunteer workforce.

Detail

Organisations use processes and systems such as relevant job descriptions and role documentation, workforce planning, training programs and skills assessments to develop appropriate levels of capable, well trained and supported people who effectively perform their EM role in large-scale emergencies. The importance of workforce planning to maintain this capability has been acknowledged by EMAs and local government. Six HMAs, thirteen EMAs and the majority of local governments report having workforce plans in place, or in various stages of development. Some organisations indicate that, to ensure a sufficiently skilled future EM workforce, further opportunities exist to incorporate EM requirements within existing workforce plans.

Most organisations report that EM responsibilities associated with individual roles are either in the process of or already reflected in the relevant job descriptions. Some EMAs and local governments report that relevant responsibilities are detailed in EM role descriptions as opposed to job descriptions as EM responsibilities are often transferred between employees when staff leave.

Training continues to be an integral part of EM preparedness. Fifty per cent of HMAs and forty per cent of other EMAs report that all employees with EM responsibilities have undergone recent training needs assessments and have training plans in place to address identified needs. An agency stated that although no specific training needs assessment was undertaken, comprehensive training in EM roles and responsibilities is provided to all staff at a local level. Some local governments state that training needs are assessed during individual annual performance reviews. Other local governments acknowledge the importance of EM training, including succession planning, and have scheduled reviews and training accordingly. There appears to be an increased awareness amongst local government of the importance of EM planning.

The provision of EM training is an agency responsibility. EMAs in Western Australia are supportive of the training provided by the Australian Emergency Management Institute, which includes the Advanced Diploma of Public Safety (Emergency Management). In July 2014, the Australian Government announced that the Australian Emergency Management Institute will be centralised and restructured to allow greater flexibility in the delivery of EM education and training. The benefit to Western Australia is that the Australian Emergency Management Institute's services could be delivered locally, allowing more personnel to access specialist training.

At a State level, State EMAs have undertaken important training initiatives. For example, Public Transport Authority (PTA) has thoroughly examined their EM training programs and developed mandatory online courses to educate staff about EM generally, as well as their role in Westplan–*PTA Rail Crash*. DFES have introduced Pathways[1] through the Professional Pathways Design and Implementation Project that commenced with the development of pathways for DFES Incident Management Roles. Volunteer firefighter and SES pathways have now been developed and were released on 4 October 2014. Additionally, the SEMC Secretariat has recently employed a Senior EM Development Officer who will assist with the development and evaluation of EM awareness, capacity building and assessment tools.

The effectiveness of performance remains a difficult criterion to assess within the EM sector. Some agencies have moved towards skills based assessments. An example is HMA assessment of the number of AIIMS (or equivalent) trained people that can perform the role of Level 2 or Level 3 Incident Controller. Seven out of eight HMAs report sufficient numbers of trained people to perform this role for moderate or major emergencies.

Catastrophic emergencies will understandably challenge emergency services. Fifty per cent of HMAs report sufficient numbers of staff to perform the role of Incident Controller in a catastrophic emergency. One HMA reports that, for catastrophic emergencies, arrangements are in place to hand over to a control agency that has sufficiently trained staff. Although the IC role is not applicable to other EMAs, four agencies report that they provide their staff with AIIMS awareness training to ensure interoperability with HMAs. Additionally, the Western Australian Local Government Association has developed an online AIIMS course for local government as part of its EM eLearning training program.

Volunteers remain important contributors to EM in WA. Although seven HMAs report that they do not engage volunteers to undertake EM roles, DFES and SJA significantly engage the volunteer workforce. WA Police reports the use of volunteers from DFES to undertake roles in Marine or Land Search emergencies. The Department of Transport (DoT) states that it maintains a core State Response Team comprising employees volunteered from stakeholder agencies to undertake EM roles during oil spill emergencies.

Eight of the other EMAs and 54 local governments report the use of volunteers. Thirteen local governments report that processes to manage volunteers are currently under development or being reviewed, and two local governments refer their volunteers to Volunteering WA for assessment and screening.

Training of volunteers remains a challenge. A systematic approach to volunteer training, based on a needs analysis, is not evident across all agencies. A few EMAs report that an assessment of volunteer training needs is difficult, with one agency reporting that this is due to the transient nature of roles within volunteer units.

The SEMC is currently considering the potential to develop a framework for managing spontaneous volunteers. This work will align with the Australian Government's commissioned report 'Spontaneous Volunteer Management Rescue Kit' (Australian Red Cross, 2012).

[1] First reported in the 2013 Emergency Preparedness Report as an IBMC initiative, Pathways is a model for the development, accreditation and maintenance of currency of all Level 3 Incident Controllers who operate in bushfires in the State.

Achievement Objective 3.2: Equipment and Infrastructure

Organisations have access to the equipment and infrastructure required to effectively manage large-scale emergencies.

Key Finding

EMAs report a good level of equipment and infrastructure preparedness for major and moderate emergencies. Some agencies have agreements in place to access intra and interstate assistance with responses to catastrophic emergencies. Equipment requirements have been identified and are maintained in a response-ready state. All EMAs report access to a primary or back-up functional operations centre with adequate resources, equipment and technical support needed to operate during emergencies.

Detail

The majority of HMAs and EMAs report that functional equipment has been identified and is accessible to effectively manage moderate, major and catastrophic emergencies. Where gaps exist, EMAs report contingencies are in place, such as intrastate and national support arrangements. DAFWA report that although it is difficult to predetermine all equipment requirements given the broad nature of Animal and Plant Biosecurity, major items required by DAFWA to manage emergencies have been identified. The DoT report that, in preparation for a Marine Oil Pollution event, two of the five national response stockpiles are positioned in Western Australia. WA Police report that facilities and equipment used in day to day events can be diverted to EM response activities. This strategy ensures that assets remain in a response-ready state.

From a State perspective, SEMP 4.9–*Australian Government Physical Assistance* applies to Western Australian authorities during emergencies when the State's resources are insufficient and physical assistance is required from the Australian Government. This includes linkages to COMDISPLAN, the Australian Government Disaster Response Plan for the provision of Australian Government non-financial assistance to Australian States and territories in an emergency or disaster.

Other organisations also acknowledge the importance of ensuring that the identified equipment is accessible and maintained. Six HMAs report that clearly defined asset management programs (including asset replacement programs) are in place to maintain the response-ready state of all equipment for large-scale emergencies. The majority of EMAs report that they have asset management plans in place. Some report that these programs are linked to Business Continuity Planning and existing asset management programs. The PUO report that the Coordinator of Energy has a coordination role and as such, there was no requirement for an asset management program, as the required assets are managed by private industry, that is, electricity, gas and the liquid fuel sector.

Ready access to functional and appropriate emergency operations centres on a 24-hour basis is integral to the management of large-scale emergencies. All HMAs have access to operations centres for moderate and major emergencies. An HMA stated that, for catastrophic emergencies, a backup location would be used. The majority of EMAs have operations centres with relevant equipment including power redundancy, or have arrangements in place to access alternative facilities should their operations centres be rendered unusable. The PTA report that it has a purpose built Emergency Coordination Centre and a Central Monitoring Room at the Public Transport Centre. An alternate train control facility has recently been commissioned, which will be used as a back-up coordination facility. WA Police report that the Maylands Incident Control Centre is available for use by any HMA as required, for which some HMAs report having agreements in place.

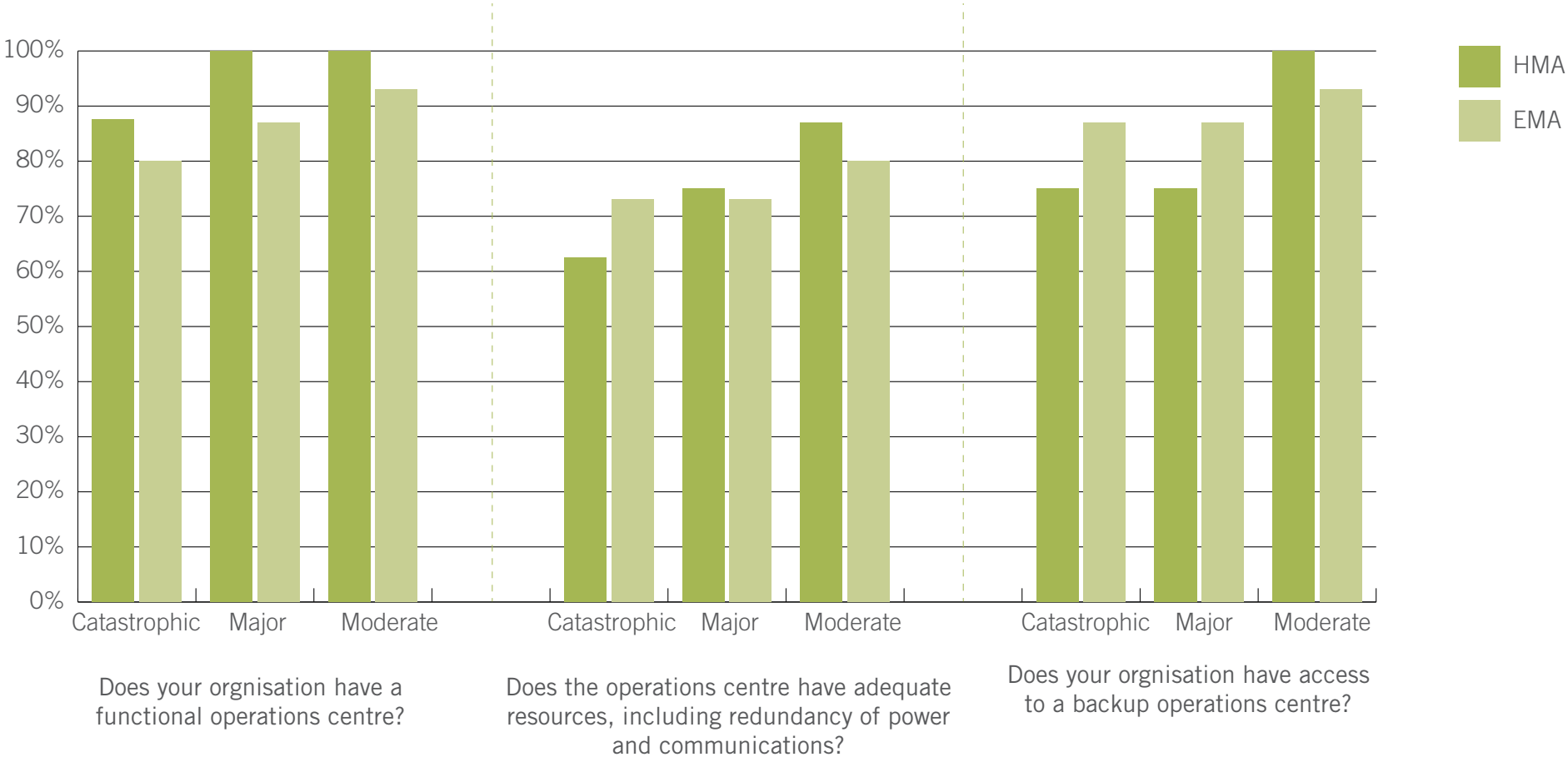


Figure 5.6 – Operation Centre preparedness by consequence category

Achievement Objective 3.3: Finance and Administration

Robust financial and administrative processes and adequate funding arrangements exist to manage large-scale emergencies.

Key Finding

State and Federal grant programs are available to EMAs and local governments to enhance natural disaster resilience and to progress mitigation, response and recovery initiatives. The majority of EMAs and local governments report having processes in place, or under development, to capture and report on financial expenditure to manage large-scale emergencies. Depending on the final recommendations, the adoption of the Australian Government Productivity Commission's review of natural disaster funding arrangements may refocus national priorities towards mitigation strategies as opposed to response and recovery strategies.

Detail

Australian State and Territory governments have prime responsibility for disaster mitigation, response and recovery. In Western Australia, section 36(b) of the EM Act assigns local government the responsibility to manage recovery following an emergency affecting the community in its district. Grants are available from Australian Government and State and Territory levels to prepare for, respond to and recover from disasters.

Funds for mitigation can be accessed nationally though the National Partnership Agreement on Natural Disaster Resilience (NPANDR) and at a State level through the All West Australians Reducing Emergencies program. NPANDR provides approximately $27 million per year to States and Territories to enhance the resilience of communities against the impact of natural disasters. The NPA works to meet the requirements of local communities threatened by disaster in the strategic context of their risk priorities. This allows funding to target activities, via the National Disaster Resilience Program (NDRP), that enhance disaster resilience in accordance with the National Strategy for Disaster Resilience.

Western Australia has been allocated $3.132 million of the NPANDR funds, which is administered via the NDRP by the SEMC Secretariat. These grants provide funds for mitigation and resilience projects relating to natural disaster hazards. Eligible recipients include local government, non-government and not-for-profit organisations and the funds support projects that have:

- primary regard for the public interest
- key benefits being the improvement of EM capability and/or community resilience
- consistency with national resilience agenda.

Stakeholders are informed on how to access the NDRP grants via Ministerial press releases, emails and the SEMC website. The State Government has committed to improving local capability through the All West Australians Reducing Emergencies program, which is administered by the SEMC Secretariat. In 2013-14, this program was expanded to include LEMC and DEMC activities. Of the 28 applications, 23 (19 local governments and four DEMCs) were approved for funding, with the value of the agreed projects totalling the available funds of $380,000.

Disaster relief for the response and recovery phases of a disaster is available at both national and State levels through the Australian Government Disaster Recovery Payment (AGDRP), the Disaster Recovery Allowance and the Natural Disaster Relief and Recovery Arrangements. The AGDRP is a one-off, non-means tested payment of $1000 for eligible adults and $400 for eligible children who are adversely affected by a major disaster.

The Disaster Recovery Allowance is an ex-gratia payment to individuals including employees, small business people and farmers who can demonstrate loss of income as a direct result of a disaster.

The Natural Disaster Relief and Recovery Arrangements fund provides financial assistance to communities whose social, financial and economic wellbeing has been significantly affected by an eligible natural disaster event. This is managed at a State level through WANDRRA, which is now administered by DPC. Information on the WANDRRA program and eligibility criteria is available on the DPC website. Should WANDRRA be activated during or after a major emergency, relevant EMAs and local governments are advised, directly and through joint State and Australian Government media statements, of the claim process for reimbursement of eligible costs.

For the financial year 2013-14, 109 WANDRRA claims totalling $58,787,957 were processed, as outlined in Table 5.1. Notably in the year 2012-13, there were 165 WANDRRA claims totalling $122,394,774. The difference is attributed to significant recovery costs following major flooding events in the towns of Carnarvon (December 2010) and Warmun (March 2011).

The financial burden and complexity of natural disaster funding arrangements has been recognised nationally. The Council of Australian Governments asked the Commonwealth Treasurer to commission a Productivity Commission review of the major contributions to and benefits of disaster mitigation expenditure, with recommendations for improvement aimed at containment of the projected growth in response and recovery expenditure.

In Western Australia, SEMP 4.2–*Funding for Emergencies* details the principles and criteria for meeting costs associated with the response and recovery activities to emergencies in Western Australia. It discusses ways to assist EMAs to effectively manage these costs by identifying appropriate funding processes. All HMAs and the majority of other EMAs and local governments report having processes in place, or under development, to capture and report on financial expenditure to manage large-scale emergencies. Most report that their processes are consistent with SEMP 4.2–*Funding for Emergencies*, OP 19–*Management of Public Fundraising and Donations*. Some HMAs report that cost recovery for their hazard occurs at a Federal level or from private industry, for example, Animal and Plant Biosecurity and Marine Oil Pollution.

Table 5.1 – WANDRRA expenditure for 2013-2014 by hazard category

HAZARD	$
BUSHFIRE	5,074,684
CYCLONE	14,021,148
FLOOD	9,738,933
STORM	29,953,192
TOTAL	58,787,957

CASE STUDY: THE PUBLIC TRANSPORT AUTHORITY - BUILDING STAFF CAPABILITY TO HANDLE THE CHALLENGES OF A GROWING SYSTEM

In the last 10 years, PTA's train patronage has doubled. This is due, in part, to the commissioning of Mandurah Rail Line, which included Perth's first underground station. While this growth is exciting, there are risks with operating bigger, more complex services. PTA's challenge is ensuring that all their systems grow with the network. Arguably, the most important PTA systems are the safety systems that ensure the safety of patrons and the public's trust of the system.

The PTA's Emergency Management Manual (EMM) details the procedures for handling a range of emergency situations. Previously, the EMM has been enhanced following practical exercises with staff, which have provided valuable insights into the PTA's capability to respond to a major emergency.

A recent review of the EMM presented opportunities for the PTA to improve staff capability. The PTA's Safety and Strategy Directorate and the Learning and Development Branch reviewed the EMM and found structured competency based learning would best prepare PTA staff for emergencies.

To ensure the right staff were trained and competent, every job within the EMM, identified as having EM responsibilities, was reviewed to assess the training needed to maintain competency in responding to emergency situations. Training modules for each chapter in the EMM were developed, which included an assessment of competence.

To support the new competencies, two online courses have been developed. The first is for senior managers identified as having roles in Westplan–*PTA Rail Crash*, to ensure they understand their responsibilities in the State's EM arrangements. The second course is for PTA office staff to ensure they are familiar with the EMM and how the PTA needs to respond in emergencies.

CAPABILITY AREA 4

SHARED OWNERSHIP

Achievement Objective 4.1: Volunteering

Organisations have a clear strategy for promoting and maintaining emergency management volunteering, with a focus on developing ready responders. Strategy addresses recruitment, retention, motivational aspects and barriers to volunteerism.

Key Finding

HMAs and EMAs recognise their dependence on volunteers and seek to improve the sustainability of volunteering. By participating in the development and adoption of nationally agreed principles, HMAs and EMAs seek to address the challenges presented by the changing distribution and composition of the Western Australian population and the increasing use of 'fly-in-fly-out' work practices.

Detail

The ability of Western Australian communities to manage the impact of disasters relies on the availability of well trained, prepared and equipped volunteers. As reported in the 2013 Emergency Preparedness Report, the number of registered operational volunteers in the sector is approaching 30,000. However, a range of factors challenge the recruitment and retention of EM volunteers. These include declining and/or aging populations in many rural and remote areas of the State and the impact of 'fly in fly out' work arrangements on the ability of community members to commit to sustained engagement in volunteer training and operations.

DFES manages the involvement of large numbers of volunteers in different hazard settings and is preparing a Volunteer Sustainability Strategy which will address the priorities outlined in DFES New Beginnings 2024, the agency's key strategic planning document. The Strategy will embrace all the volunteer-based State Emergency Services (SES) such as Volunteer Fire and Rescue Service, Bush Fire Service, SES, Volunteer Marine Rescue Service, Volunteer Emergency Services and Volunteer Fire Services. The strategy will incorporate the requirements of the National Emergency Management Volunteer Action Plan 2012 and support the Strategic Directions for Fire and Emergency Services in Australia and New Zealand 2014-16 produced by the Australasian Fire and Emergency Service Authorities Council.

EMAs that use volunteers depend on them for effective emergency response and recovery operations. EMAs that use volunteers report that their volunteers include agency responders and partnerships as well as community volunteers (Table 5.2). Additionally, these agencies report that they have numerous strategies in place, such as strong volunteer support mechanisms; processes for communicating with and tracking volunteers; plans to ensure the sustainability of volunteer-reliant programs; and the development of policies to manage spontaneous volunteers.

Table 5.2 – Different types of volunteering

VOLUNTEER TYPE	DESCRIPTION
READY RESPONDER – AGENCY	Much of the work done by EMAs in emergencies needs to be completed by highly trained and qualified individuals. In this situation agencies call upon their workforce to act as ready responders. These responders are coordinated through the agency's usual workforce practices and organisational structure.
READY RESPONDER – PARTNERSHIP	Long-term partnerships with stakeholder agencies or industry. These other employees attend regular training with the EMA and have the support of their employer to be released to support an emergency event.
AFFILIATED VOLUNTEER	Long-term volunteering by members of the public. These volunteers are trained by the host EMA to provide professional and coordinated EM services. These individuals volunteer their time and services to the EM sector and perform activities related to prevention, preparedness, response and recovery (Australian Government 2012).
SPONTANEOUS VOLUNTEER	Members of the public who come forward to offer their time and skills when there is a disaster. These volunteers may have valuable skills and knowledge but they have no long-term relationship with any EMA. A range of factors, including the complexity of the tasks to be completed, the level of supervision required and the skill and experience of the spontaneous volunteers will determine whether or not an EMA can make use of these volunteers (Spontaneous Volunteer Management Resource Kit 2012).

Recognising the importance of volunteering to the EM sector is not limited to organisations that currently rely on volunteers to supplement or support the work of career officers. For example, although PTA does not use volunteers in day to day activities, it uses volunteers to undertake EM exercises. During the EM exercises, the volunteers remain under the direct supervision of safety officers and are provided detailed briefings and instructions.

Of the EMAs that do not currently use volunteers, many do not have policies in place to manage spontaneous volunteers. Several agencies indicate that they would refer spontaneous volunteers to Volunteering WA.

Nationally, the Australian Government is considering a strategy to manage spontaneous volunteers, and at least one HMA has indicated that it would consider incorporating a strategy into guidelines for the use of untrained public volunteers. Figure 5.7 shows that although the majority of agencies don't use volunteers, shown as N/A, those that do are confident that they have sufficient numbers to deal with large-scale emergencies. One agency, shown as the 'no' response below, acknowledged that, although it does not currently use volunteers, a future catastrophic event may require volunteer support. The agency further reported that it does not currently have policies or resources in place to manage volunteer engagement.

Do you have sufficient volunteers, including active ready responders, for a large-scale emergency?

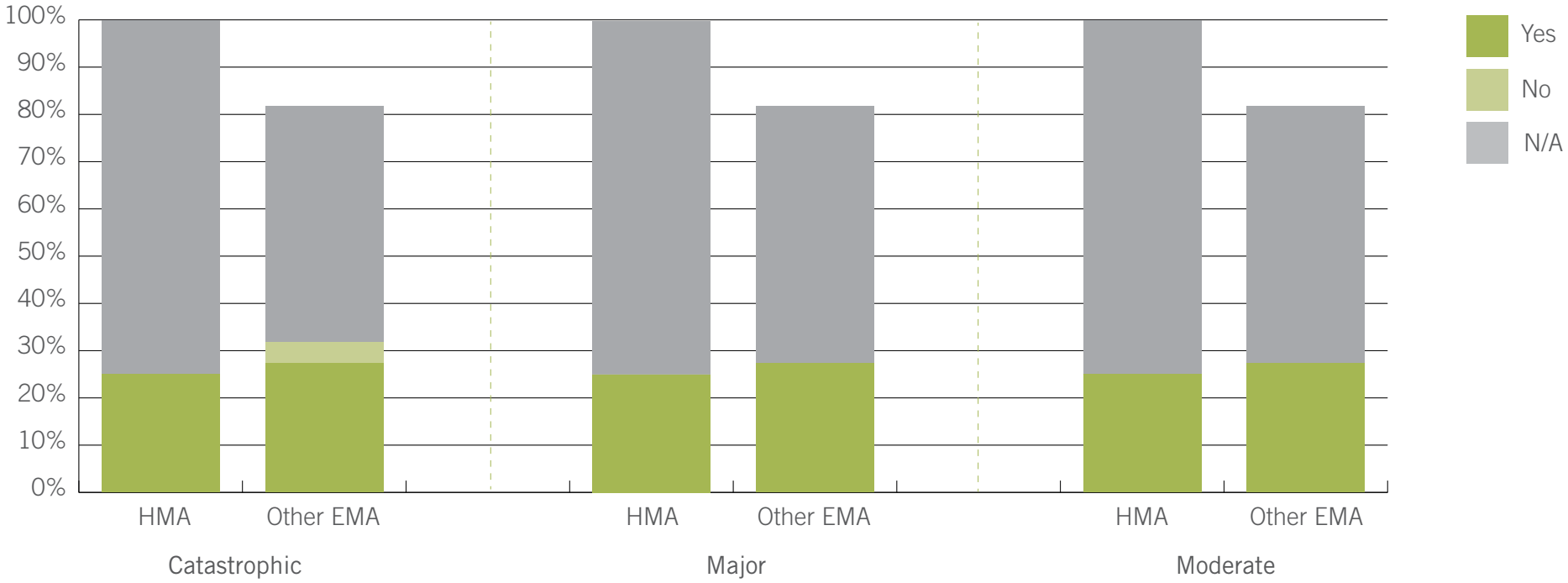


Figure 5.7 – Agency use of and preparedness of volunteers

Several of the EMAs that use volunteers rely on transport infrastructure such as roads, rail and airports to move volunteers around the State in response to emergency situations as the majority of volunteers reside in the Perth metropolitan area. This is especially pertinent where EMAs may need to use interstate or overseas volunteers, as may be the case in large-scale catastrophic events. In regional Western Australia, volunteer capacity varies and isolation occurs in some circumstances due to time and distance factors. In some regional areas the same individuals volunteer for a range of organisations, for example, fire and ambulance, effectively limiting the actual resources available to each organisation in a major incident.

Achievement Objective 4.2: Community Engagement

The community has an understanding of and takes responsibility for hazard related risks they may be exposed to, and strategies to treat those risks, and are engaged with the response and recovery process.

Key Finding

EMAs have communication plans designed specifically to increase public awareness of hazards and the need for emergency preparedness. Local government has a central role in identifying and communicating risk to the community and in engaging the community in emergency preparedness.

Detail

Most EMAs have a communications plan to increase public awareness of hazards and the need for emergency preparedness. EMAs that do not have a communication plan refer the public to the relevant HMA website during an incident. Some EMAs are working towards an integrated, multi-agency public risk communication plan.

Most EMAs have good strategies in place to ensure that the public has the knowledge and skills to respond appropriately in an emergency. Public communication strategies employed by EMAs to increase public knowledge of hazards and emergency preparedness include: workshops; social media; publications; education through frontline service providers; live-to-air updates; television, radio and static advertising; call centres; freeway sign messaging and public address systems. A good example of a communication strategy is the Australian Red Cross/Shire of Augusta-Margaret River preparedness program, which is explored in the attached case study. It is considered that more work is required to monitor the effectiveness of the communication strategies generally.

Most local governments report that they have an EM communication strategy for use with their community. Although an explicit all hazards approach is not always adopted, the key risks for a local government district are usually addressed, often in collaboration with HMAs. Several local governments report that they do not have a formal strategy in place. However, they are developing or reviewing their policies. It is evident that the role of the LEMCs in developing a communications strategy is important to local governments across the State. While many local governments have identified vulnerable and transient groups, they do not all have specific EM communication strategies in place to engage with them. Local governments report that more work is required to communicate effectively with remote and culturally and linguistically diverse communities.

The majority of local governments leverage their normal communication channels in times of emergency. For example, the Shire of Yilgarn uses Telstra's Whispir communications software. This is an 'opt-in' service that sends an email, voicemail or SMS to subscribers. Although primarily used for community events, the tool will be used for emergencies, and has been used to advise of road closures and similar situations. Uptake of the subscription to the service is increasing over time.

All EMAs and almost all local governments report that they have strong networks in place. EMAs report that significant time is spent maintaining relationships across agencies, non-government organisations, local governments, industry and industry groups and volunteer groups with respect to EM. Some local government districts report that where networks are supported by an active LEMC, they have become more robust due to the opportunities for exercises and information exchange. Several smaller rural communities report that they have very strong and reliable local networks, even if they are not always formalised. In these communities, EM is enhanced through the increased connectedness and mobility of people through use of social media, mobile phones and the internet.

Aligned to your responsibilities, do you have in place a public communication awareness strategy on hazards and emergency preparedness?

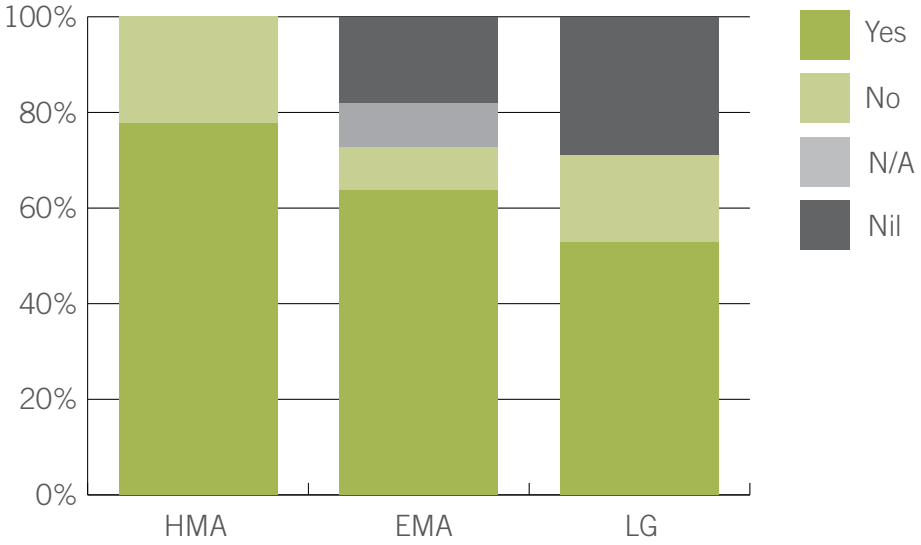


Figure 5.8 – EMA responses to Achievement Objective 4.2

Achievement Objective 4.3: Business and Industry

The State stands resilient to the consequences of an emergency (or emergencies) through the existence of strong stakeholder relationships and support, business continuity planning, integrity of structures and systems and a holistic approach to emergency management.

Key Finding

There are good networks and relationships across all EMAs and with industry. Agencies have established MoUs with key service providers to ensure business continuity in a major emergency.

Detail

The Australian Government Annual Preparedness Briefing, jointly hosted by the SEMC and the Commonwealth Attorney-General's Department, is an example of the holistic approach to EM in Western Australia. At this forum, representatives from a wide range of EMAs meet to share information for the coming year. There are also national presentations, with one of the key aims being to foster networking and relationship building between EMAs at a State and Federal level.

Reflecting the varying roles of the EMAs, the majority of the networks and relationships of the HMAs are based on operational incidents or the recovery of essential services. Some other EMAs have strategies with industry to look at mitigation, response and recovery efforts. The networks and relationship take a variety of forms: from formal industry liaison officers and membership on industry groups, providing training and information through to commercial agreements and MoUs.

The mining, oil and gas industries in particular are actively engaged with a range of EMAs including SJA, Main Roads Western Australia (MRWA), ATCO Gas, WA Police and PUO.

Numerous activities were coordinated by EMAs in the past 12 months to increase business and industry preparedness for large-scale emergencies. For example, the PUO regularly engages with major stakeholders and has made presentations to industry groups in relation to the following:

- proposed electricity EM arrangements (Chamber of Minerals and Energy – June 2014)
- activation and alert warning determination (Woodside duty managers – June 2014)
- gas supply disruption arrangements (North West Shelf Gas – July 2013)
- various LEMCs.

DoT has released an Oil Spill Response Atlas Web Map Application for use by industry for preparedness and response and to promote collaboration and coordination. Additionally, DoT provides training for operational personnel from organisations and associated agencies that have a responsibility to respond in accordance with the National and State Plans to Combat Pollution of the Sea by Oil or other Noxious Substances and focuses on oil spill response equipment. People who have successfully completed the training can then be called upon in an emergency situation. DoT also works with industry by providing support and advice on matters of preparedness and response, including attending exercises.

MRWA reports good engagement with business and industry, particularly in regional areas. For example, it worked closely with the Exmouth community to establish and maintain closure of the Exmouth – Minilya Road near the townsite due to flooding in April 2014. The community assisted in establishing and maintaining the road closure, and in monitoring and providing information to motorists on the flood conditions on the road.

CASE STUDY: RED CROSS AND SHIRE OF AUGUSTA-MARGARET RIVER COMMUNITY PREPAREDNESS PROJECT

In August 2013, the Australian Red Cross received funding from the NDRP to work with the Shire of Augusta-Margaret River on a coordinated multi-hazard approach to community preparedness. The main objective of the 9-month project was to meet the specific information needs of targeted communities, using a community centered approach, and to strengthen the capacity of the community to cope with and respond to future emergency events by building on existing social capital.

Figure 5.9 – Left to Right – Local Australian Red Cross volunteer Gail Montgommery; community representative Ian Ladyman; Bush Fire Ready and Local Volunteer Community Preparedness Facilitator Georgina Theile; Australian Red Cross Project Officer Karen Edmeades; Local Volunteer Community Preparedness Facilitator Mary Elton; and Augusta-Margaret River Shire Community Engagement Officer, Katie Taylor. Absent: Local Volunteer Community Preparedness Facilitator Lydell Huntly.

Image sourced from the Shire of Augusta-Margaret River

Using information gained by reviewing the Red Cross outreach program (conducted in October 2012), the results of a Community Bushfire Recovery Survey (Shire of Augusta-Margaret River, 2013) and consultations with key agencies to discover gaps in the existing preparedness strategies, the project established a network of Community Preparedness Facilitators to run Community Preparedness forums (Figure 5.9). The aim of the sessions was to empower residents by equipping them with the information they needed to better prepare themselves to cope with future emergencies.

With the help and guidance of the Community Engagement Officer, the facilitators shared vital preparedness information through the workshops and activities (Figure 5.10). The sessions also gave residents the opportunity to learn from and share their experiences of the Augusta-Margaret River bushfires in November 2011. During the sessions, the facilitators also encouraged local residents to create ongoing preparedness networks and initiatives focused on the needs of their communities.

Additional preparedness focused programs included Emergency Preparedness displays at the Margaret River Agricultural Show, Farmer's Markets and Senior's Week Expo; permanent resource displays in various accessible locations; weekly preparedness tips from community members promoted through the local paper; and the creation of a local emergency contacts flyer distributed to all homeowners, including absentees and overseas travellers on working visas.

Throughout the project, the Community Engagement Officer monitored and supported the ongoing implementation of community preparedness activities within the shire. They also kept in close contact with the network of Community Facilitators and the DFES community engagement officer and bushfire ready coordinators.

One of the real strengths of this project was that it brought together a number of agencies, including the shire, DFES, CPFS and Red Cross to work in partnership to guide and support community preparedness activities.

The shire is working with the LEMC to investigate external funding to continue the Community Preparedness Program into the future.

Figure 5.10 – The Rosa Brook Community Get Ready! Session

Image sourced from the Shire of Augusta-Margaret River

CAPABILITY AREA 5

OPERATIONAL PLANS AND PROCEDURES

Achievement Objective 5.1: Emergency Management Plans

Comprehensive, documented and pre-determined processes and procedures exist that are employed in response to and recovery from a large-scale emergency.

Key Finding

Westplans are established under section 18 of the EM Act. These plans clearly document the roles and responsibilities of EMAs in the event of a specific hazard or activation of a support service during an emergency.

There are currently 27 hazard Westplans and eight support Westplans, covering all prescribed hazards and some EM support functions; such as emergency public information, health, welfare and recovery. All EMAs with EM plans advise they are regularly reviewed and updated to accurately reflect current EM arrangements. All HMAs report that their Westplans are consistent with the EM Act and State Emergency Management policy and procedures.

Detail

The SEMC is responsible for ensuring the preparation of Westplans it considers necessary (section 18(1) EM Act). Under section 20(1)(a) of the EM Act, the SEMC has delegated the responsibility to ensure the development and review of hazard and support Westplans to a specific HMA or EMA as detailed in Appendix 6.

A HMA is defined in the EM Act as '… a public authority or other person who or which, because of that agency's functions under any written law or specialised knowledge, expertise and resources, is responsible for emergency management, or the prescribed emergency management aspect, in the area prescribed of the hazard for which it is prescribed' (Emergency Management Act 2005, s4(3).

It is the responsibility of the nominated HMA to develop the Westplan in consultation with all stakeholders who would have a role under that plan. Further, all Westplans must be consistent with the SEMP 2.2–*Development and Review of State Emergency Management Plans*. HMAs, such as WA Police, DFES, WA Health, DoT and PUO, to name just a few, all report a strong internal governance process to ensure that the hazard management plans under their responsibility are regularly reviewed and are consistent with all SEMC policy and procedures.

SEMP 2.9–*Management of Emergency Risks* is the overarching SEMC policy on ERM. SEMP 2.9 outlines the principles of attaining and sustaining a consistent and comprehensive approach to ERM in Western Australia. There is an increasing recognition among EMAs, that plans need to be better aligned with risk management principles in accordance with SEMP 2.9.

The SEMC Secretariat is responsible for ensuring the currency of State Emergency Management Policies and Plans. The SEMC Secretariat works closely with HMAs to ensure that Westplans are reviewed in a timely manner. Appendix 6 show the current status of all 27 hazard Westplans and eight support Westplans.

Achievement Objective 5.2: Training and Exercising of Plans

Plans, processes and procedures are regularly and appropriately exercised to assess and improve capability.

Key Finding

Regular testing of emergency plans is an effective way to demonstrate and evaluate the State's level of preparedness for emergencies. Many EMAs report a strong focus on regular testing of emergency plans, whether they are in-house, agency-specific, local or State-level plans. EMAs are required, under SEMC policy, to exercise their respective Westplans or LEMAs annually, and have raised concerns about the frequency of the required exercises that are resource intensive.

Detail

Exercising an emergency plan can take many forms, from in-house, table-top discussion exercises, to full scale, multi-agency coordinated exercises in the field. The testing of plans ensures that they are maintained as best practice and the operational personnel who will most likely be required to activate the plan in an emergency are familiar with the plan's operation. SEMP 3.1–*Emergency Management Exercises* details the State's policy in relation to EM exercising. SEMP 3.1 requires EMAs with responsibility for Westplan development to ensure that those plans are exercised annually.

Exercising of emergency plans also applies at the local government level, for example, the requirement to exercise LEMAs. Under section 36 of the EM Act, local governments are required to ensure that '… effective LEMAs are prepared and maintained for its district' (Emergency Management Act 2005, s36). Further, it is a requirement under SEMP 2.5–*Emergency Management for Local Government* that these local arrangements are exercised annually.

Where a Westplan is activated or arrangements drawn upon during an emergency, such as the response to the fires in Kwinana in January 2014 (see case study), the activation of the plans and use of the arrangements may satisfy the EMAs exercise requirement.

Most EMAs have conducted annual exercises of their arrangements during 2013-14, or have plans to undertake them in 2014-15, with the majority of these undertaking post exercise evaluations to identify areas for improvement.

In accordance with SEMP 3.1, exercise reports are tabled at the Response Subcommittee; however, recommendations are only noted, not tracked or monitored. It was reported in the 2013 Emergency Preparedness Report that 'Exercising of the plans is deemed of high importance and arrangements for improving exercise coordination across all agencies are proposed for 2014' (Emergency Preparedness Report, 2013 p. 12).

The SEMC has undertaken a review of EM exercising in Western Australia. During the review, agencies reported concern with the required frequency to exercise Westplans, that is annually, and raised concern in relation to the resources required to undertake exercising.

The Response Subcommittee has established the Exercise Management Advisory Group (EMAG) to provide a forum to coordinate and monitor a State-level exercise program in order to ensure that:

- exercises are prioritised to facilitate change and improvement in preparedness in line with the overall strategic direction of the SEMC
- exercises deliver improved preparedness outcomes
- recommendations from exercises are tracked and monitored by the EMAG member agencies.

The EMAG are in the process of developing a 3-year, risk-based, State-level multi-agency exercise program and will participate in a review of SEMP 3.1–*Emergency Management Exercises* and TP1–*Exercise Management* that will include a review of the frequency requirement of State-level exercises. Additionally, the EMAG will assist with the development of a database to track exercise recommendations or 'lessons identified'.

CASE STUDY: THE DEPARTMENT FOR CHILD PROTECTION AND FAMILY SUPPORT

Under the EM Act and Western Australian EM arrangements, the CPFS is responsible for coordinating the provision of welfare support services to people affected by an emergency or disaster. A CPFS support role to provide welfare services is outlined in Westplans–*Welfare*, *Registration and Reunification* and *Reception*.

Additionally, the CPFS Emergency Services Unit supports staff at the local level to coordinate appropriate responses to disaster situations, liaise with EMAs and ensure staff are trained and appointed to participate in LEMCs and coordinate Local Welfare Emergency Committees.

On 23 January 2014, the CPFS Emergency Services Unit was activated to respond to a bushfire that was impacting Kwinana and surrounding suburbs. The recently reviewed Westplan–*Welfare* and Westplan–*Registration and Reunification* were both activated for this event.

After contact with the local CPFS Rockingham Office, an evacuation centre was established at the Kwinana Council Building with Rockingham staff members attending the centre to provide welfare assistance. The Early Response Team leader was deployed to the evacuation centre, along with nine CPFS staff and two Red Cross volunteers. Further to this, the local government opened up the 'Recquatic Centre' to accommodate evacuated residents from an aged care facility, and organised catering from two local restaurants. Feedback indicated services were very well received by the community.

On arrival to the evacuation centre, CPFS staff initiated the registration process as this is a priority during an emergency. Red Cross volunteers assumed management of the registration process on their arrival, allowing CPFS staff to be re-tasked to provide personal support to the evacuated residents. This service continued until the centre was closed later in the evening, as per directions from the HMA.

A total of 87 people were registered during the event, with 52 people registered at the Kwinana Local Council Building and 35 at the Kwinana Recquatic Centre.

A formal operational debrief was held at the City of Kwinana on 7 February 2014. Evaluation of the incident response indicates that Westplan–*Welfare* and Westplan–*Registration and Reunification* were successful in providing the required framework to effectively coordinate the welfare support services for this emergency.

Ongoing training by way of debriefs and exercises are crucial to providing appropriate services to disaster affected communities. CPFS facilitates this through programs like the State Welfare Emergency Exercise Training package, which was funded by the NDRP. This exercise training package assists agencies, their staff, volunteers and the community to prepare for the provision of welfare services in an emergency.

CAPABILITY AREA 6

PUBLIC INFORMATION AND COMMUNITY WARNINGS

Achievement Objective 6.1: Public Information and Community Warnings

Systems and processes are in place that allow the broader community to be warned of impending danger and actions to be taken prior to, during or after a large-scale emergency.

Key Finding

EMAs have communication protocols that align with Westplan–*Emergency Public Information* and SEMP 4.6–*Emergency Public Information*. EMAs operate in a cooperative and coordinated manner in accordance with agreed roles, responsibilities and procedures to ensure that relevant and timely information is available to the public using a wide range of tools and media.

While EMAs are actively reviewing and seeking to improve their communications practices, opportunities exist to ensure that the communication needs of remote, culturally and linguistically diverse and vulnerable communities are addressed as part of this.

Detail

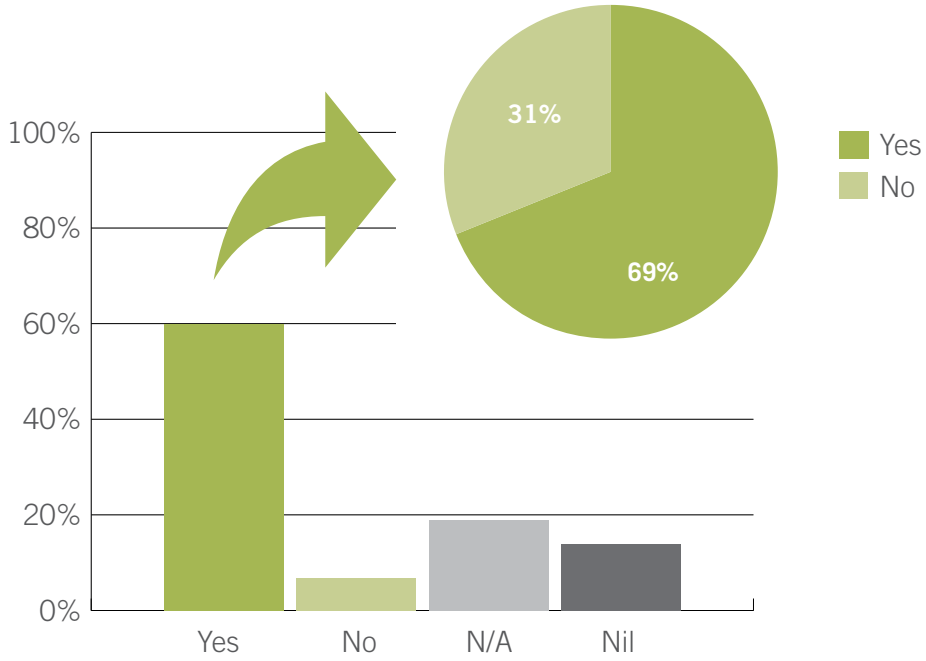
Westplan–*Emergency Public Information* defines the emergency public information function as a response and recovery activity where the community is given information relating to a specific emergency. This includes information on how to get assistance to protect health, safety and property, and what actions the public need to take in an emergency situation.

Emergency public information is also a key preparedness activity, as it establishes protocols and procedures that apply prior to an emergency. In December 2013 the Public Information Reference Group and WA Police organised a training and information session for Western Australian Government personnel that may be tasked with media liaison and public information duties during an emergency.

Relevant EMAs have established communication protocols that align with the Westplan and SEMP 4.6–*Emergency Public Information*. While many EMAs review and seek to improve their communications practices, more work needs to be done on ensuring that the communication needs of remote, culturally and linguistically diverse and at risk communities are addressed. The SEMC Community Engagement Subcommittee will consider this matter as part of its 2014-15 project on National Strategy for Disaster Resilience priorities that relates to working with vulnerable communities.

The PIRG is providing oversight to the combined DFES/DPaW 'Single Source, Critical Messaging' project. This project aims to streamline and synchronise simultaneous emergency messages from DFES and DPaW during bushfires.

Do you have established public information and public warnings communication protocols, systems and processes for Culturally and Linguistically Diverse communities, people with disabilities and isolated communities?



Does your agency have established communication protocols that align with the Westplan and SEMP 4.6–*Emergency Public Information?*

Figure 5.11 – Graph depicting communication work being undertaken in relation to the Culturally and Linguistically Diverse Communities

It is interesting to note that 19 per cent of respondents report that having communication protocols that align with SEMP 4.6 is not applicable (N/A) for their agency. This would indicate an area of further work to investigate the N/A responses in more detail, which will be considered by the SEMC Community Engagement Subcommittee in connection with its project to advance National Disaster Resilience Strategies. Thirteen per cent of respondents did not answer the question.

To ensure that the public has adequate and timely information and instructions, EMAs operate in a cooperative and coordinated manner in accordance with agreed roles, responsibilities and procedures. This cooperation is demonstrated when HMAs take the lead communication role in emergency situations and are supported by other EMAs. For example, although CPFS is not a HMA, it supports the HMA by providing information to its stakeholders about what to bring to an evacuation centre and refers them to the relevant HMA for situational information. Local governments document their community based communication method, such as in house SMS systems, hotlines and newsletters in their LEMAs, and work to ensure that HMAs have ready access to this information.

In the area of preparedness and recovery, the burden of public information is more evenly spread, and once again most EMAs have good communication protocols in place. In November 2013, the Education Department media team completed EM communications training based on their recently streamlined media and website processes.

Emergency Alert is the national telephone warning system used by emergency services to send voice messages to landlines and text messages to mobile phones within a defined area about likely or actual emergencies. In the past year, Emergency Alert has been used for a range of emergency events (Table 5.3) primarily fire-related but also for chemical hazards and storm surges.

As foreshadowed in last year's report, upgrades to the Vodafone and Optus 3G mobile telephone networks were officially launched on 15 October 2013. Mobile phones operating on their respective 2/3G mobile phone networks will now receive a Location Based Solution (LBS) SMS. As telecommunication technology improves and 4G networks are rolled out across Australia, Emergency Alert continues to work with mobile phone networks to ensure it is effective for all members of the public. Telstra has completed an enhancement to its network ensuring that mobile phones operating on 4G receive Location Based Solution (LBS) SMS from Emergency Alert and a program of works is currently underway with Optus and Vodafone to provide the connection to their 4G mobile telephone networks.

Table 5.3 – Messages sent via Emergency Alert in Western Australia

	LBNS VOICE (FIXED LINE)		LBNS SMS (MOBILE)		LBS SMS (MOBILE)		TOTAL	
	CAMPAIGN	TOTAL	CAMPAIGN	TOTAL	CAMPAIGN	TOTAL	CAMPAIGN	TOTAL
2013	25	115,401	25	260,575	20	150,390	45	526,366
YTD (24 OCT 2014)	15	77,542	15	104,870	13	148,953	28	331,365

LBNS = Location Based Number Store
LBS = Location Based Solution

CASE STUDY: WESTERN POWER CRISIS COMMUNICATION

Although Western Power is not a HMA and does not have formal public information responsibilities, it has a comprehensive Crisis Management Plan and EM Plan. The plan includes the role of media and stakeholder communications. Western Power provides information regarding power interruptions and restoration to the relevant HMA and to the community via various communications channels during an emergency. These processes are subject to continuous improvement reviews.

The Electricity Supply Emergency Notification system enables authorised users to send out emails and SMS messages to identified groups to inform them of what is happening during warning and emergency conditions (for example, storm conditions, bushfires, generation shortfalls). If the Electricity Supply Emergency Notification is not available, a backup 'RedRock' messaging system at Network Operations and Control Centre can be used to send messages. The Electricity Supply Emergency Notification system is used many times every day.

Templates to support communications are available and adapted for a specific event. Western Power uses multiple tools to communicate with the public during events, including media templates and protocols for television, radio and print media and active social media accounts. During emergencies Western Power's website is updated with information on a regular basis. Western Power's Customer Service team is a key contributor to the agency's ability to keep the public informed during major events. Customer Service staff answer calls 24 hours a day, seven days a week. Information is provided to call centre employees through a fault tracking system, IVR Fault Cast, which also provides real time updates to customers.

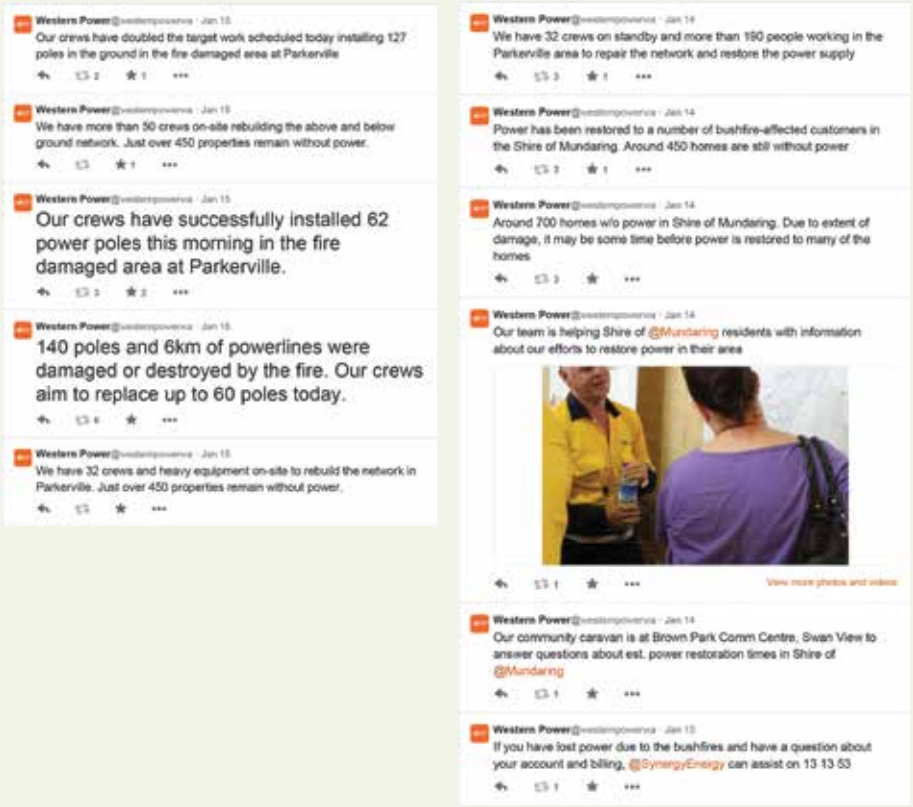


Figure 5.12 – Western Power Twitter feed during the Parkerville Stoneville Mt Helena Bushfire response

CAPABILITY AREA 7

A MOBILE, CAPABLE AND COORDINATED RESPONSE

Achievement Objective 7.1: Command, Control and Coordination

Pre-established and well-understood protocols and structures exist that define the inter-relationships between stakeholders during an event and facilitate the orderly giving of directions, undertaking of key tasks and reporting arrangements.

Key Finding

Command, Control and Coordination (C3) continues to be highlighted as an area pivotal to response activities during a large-scale emergency. EMAs report that their C3 procedures are consistent with SEMP 4.1– *Incident Management* and facilitate orderly tasking and command arrangements. Two incident management systems are used in Western Australia, namely AIIMS and ICCS. Although interoperable, the differences between the systems should be considered when developing State EM policy.

Detail

The importance of C3 within and between agencies in response activities was recognised in the 2013 Emergency Preparedness Report. This was reinforced during the review of the Parkerville Stoneville Mt Helena Bushfire of January 2014, in which a recommendation was made to pursue unified command (between DFES and DPaW) with a joint State Operations Centre, Regional Operations Centre and Incident Management Teams as an overarching goal.

All HMAs and the majority of other EMAs report that they have policies, processes and procedures in place that are consistent with SEMP 4.1– *Incident Management*, and clearly define command, control and coordination structures. These arrangements are used to facilitate orderly direction tasking and reporting during large-scale emergencies. DFES has implemented the C3IS project that will enhance the organisation's C3 capacity and ensure that the supporting information systems are of the highest standard. DFES reports that enhancements have been made to its State-level arrangements through the C3IS project to develop multi-agency, all-hazard Level 3 incident management teams. WA Health reports that C3 structures have been updated in the latest iteration of Westplan– *Human Epidemic*.

An emerging consideration in relation to C3 is the two types of Incident Management Systems used by Western Australian agencies, namely AIIMS and ICCS. While Fire and Emergency Service jurisdictions throughout Australia, including DFES and DPaW through AFAC, have adopted the AIIMS 4 system, police jurisdictions, including WA Police through the Australia New Zealand Policing Advisory Agency, are adopting the ICCS Plus command and control system. Users of each system have identified that although they can readily adapt to either system, the available systems and their differences need to be considered in the development or review of State policy.

The SEMC Secretariat has scheduled a review of SEMP 4.1 during the 2014-15 period. This review will consider the appropriateness of aligning EM policy with a particular Incident Management System, lessons learnt from the Parkerville Stoneville Mt Helena Bushfire of January 2014, for example, the assembly and frequency of SECG meetings, and clarifying the requirements for declaring an incident at level 2 or level 3.

Achievement Objective 7.2: Effective and Interoperable Communication Systems

Effective and interoperable communication systems exist to allow emergency responders to communicate seamlessly during a large-scale emergency.

Key Finding

Although EMAs report access to effective and appropriate communication systems that are fit for use during large-scale emergencies, improvements to communications infrastructure, including interoperability, have been identified and are being progressed. The SEMC is working with other agencies on the Emergency Services Communications Strategy that sets strategic direction for the efficient management and coordination of emergency communication systems in Western Australia.

Detail

Achieving seamless communication during a large-scale emergency continues to be a challenge. The review of the Parkerville Stoneville Mt Helena Bushfire of January 2014 identified that 'The effect of the topography led to limited radio and mobile phone coverage within a clearly identifiable shadow area where the fire was burning.' An additional finding was the difficulties in communication between aircraft and the Ground Control, which limited the opportunity for these aerial assets to assist with establishing better operational awareness. The 2014 bushfire review team recommended the review of radio infrastructure in the Perth Hills to assess the feasibility of improving mobile phone and 2-way radio communications to achieve better coverage across the area.

Despite the location specific issues mentioned above, the majority of EMAs report adequate access to effective and appropriate communication systems that are fit for use during large-scale emergencies. PTA reports that it owns and maintains a private mobile radio system for train operators, which covers all of PTA's electrified passenger railway system in the Perth and Peel regions.

Improvements have been made to Western Australian communications infrastructure over the last 12 months. The Department of Commerce reports that work continues on the WA Regional Mobile Communications Project, which will improve mobile phone range between towns along major highway routes. This 3-year project commenced in January 2012 and as at 19 September 2014, 109 of the planned 113 towers have been commissioned. The remaining four towers are scheduled to be commissioned in October 2014. Telstra report that this project has improved mobile coverage across more than 95,000 square kilometres in WA. The project has now been expanded into the Regional Telecommunications Project. The expanded project has been allocated $45 million over four years from the Royalties for Regions funding.

Additionally, WA Police report that the Community Safety Network – Regional Radio Network Project is being managed and implemented by WA Police under the Communications Infrastructure Programme. The Trunked Radio Network, consisting of 27 radio sites, has been commissioned in the following regional WA districts:

- Goldfields – Kalgoorlie
- Mid West Gascoyne – Geraldton
- Great Southern – Albany
- Pilbara Coast – Karratha and Port Hedland

The next steps from WA Police will include the completion of the Conventional Digital Radio Network to provide 'in-fill radio coverage' to remote and regional WA sub-districts not covered by the Trunked Radio Network.

DFES reports that it has established a dedicated operational communications position to identify and address communications capability gaps. DFES also reports that it is working collaboratively with DPaW to develop regional communication planning strategies that will leverage investment in communications infrastructure to ensure greater coverage.

To communicate with personnel, agencies use a variety of methods to notify their staff of an emergency and activate response crews. Western Power reports that the Electricity Supply Emergency Notification system enables authorised users to distribute emails and SMS messages to pre-identified groups to provide initial notification that an incident has occurred and distribute ongoing agency situation reports during emergency conditions, for example, severe weather, bushfires and electricity operation shortfalls.

Further to effective communications systems being in place, it is important to have redundancies in the systems to ensure an effective response to large-scale emergencies. The majority of EMAs report effective redundancy mechanisms. WA Police reports that their redundancy incorporates the use of WebEOC® and various other communication mechanisms, such as the digital and 'LifeLines' 2-way radio networks, satellite phones, Australian Secure Network, and mobile telephones. PTA reports that their private mobile radio system, although developed for exclusive PTA use, has been used by other agencies during large-scale emergencies in the past, such as the Kwinana Freeway broken water mains incident in May 2005, severe storms, the Mandurah derailment incident in 2010 and two ship vs. Fremantle rail bridge incidents in May 2011 and August 2014.

Agencies report a good level of communications preparedness and most EMAs report interoperable communications. DPaW operates on VHF high band that is compatible with WA Emergency Radio Network and has common channelling across DFES, SES and the volunteer bushfire brigades, and can communicate on selected channels with WA Police. It is recognised that the infrastructure of some systems has limited compatibility with current available technologies. The SEMC is facilitating the WA Emergency Services Communications Strategy, which sets the strategic direction for the information and communications environment for the efficient management and coordination of emergency operations within Western Australia. DFES reports that its communication planning will align with the SES Communications Strategy.

Additionally, to ensure that Western Australia aligns with national strategies, the Department of Commerce represents the State on the National Coordinating Committee for Government Radio-communications, which is coordinating arrangements under the National Framework to improve Radio Communications Interoperability ('the framework') and the Australian Communications and Media Authority 'The Way Ahead' strategy'. The Australian Communications and Media Authority is in the process of replanning the national 400 MHz spectrum band, to incorporate sections specifically available to government land mobile radio users. This development will create a Government Band that is interoperable within and across jurisdictions, in line with the Council of Australian Governments' agreement endorsed in 2009. The PTA reports that it has made a significant financial commitment to ensure compliance with the Australian Communications and Media Authority mandated milestones, and that the ability to provide effective communications into the future relies on investment in radio infrastructure.

Achievement Objective 7.3: Mobilisation

The effective mobilisation of a response effort, including the transportation of personnel, equipment and services, in response to a large-scale emergency.

Key Finding

EMAs report that they have strategies in place to mobilise equipment and personnel in response to large-scale emergencies. This includes mechanisms to access resources from outside their organisations via intra and interstate arrangements. To assist with emergency response, the Minister for Emergency Services has announced that a second rescue helicopter is scheduled to be based in the South West within the 2015-16 period.

Detail

The response to a large-scale emergency relies not only on efficient C3 and communications. The mobilisation of resources in response to a large-scale emergency is time critical and can be difficult due to logistics and complex human and material resources requirements.

The majority of EMAs report that they have identified and arranged access to mobilisation methods to deploy personnel and equipment to an incident to deliver vital resources, combat the hazard and service the needs of the community during a large-scale emergency. For example, the Water Corporation and its contractors maintain a large fleet of vehicles and equipment in a 'response ready' state as part of their normal business response to a large-scale emergency. WA Police report that they have surge plans in place for rapid acquisition and deployment of Police Officers, and have a standing response plans to deploy an additional 100 Police personnel within 1 hour of activation, and 400 Police within 24 hours. Where WA Police capacity and capability is exhausted, access to additional resources would be from the Australian Government in accordance with SEMP 4.9–*Australian Government Physical Assistance* or from the Defence Force via the Defence Aid to the Civil Community system.

For emergencies that impact regional and rural areas, agency personnel may need to be pre-deployed and equipment pre-positioned ahead of a known hazard such as a severe tropical cyclone. The Water Corporation and CPFS maintain contingency plans for the pre-deployment of staff, plant or equipment in such events.

Some agencies report that due to limited internal resources they would use, or are developing plans to use, the services of other agencies to deploy personnel and equipment. For example, DER reports that it has commenced discussions with DFES for the deployment of personnel to regional areas by air. Similarly, the deployment of SJA personnel to regional areas would be organised through WA Health or relevant HMA.

In the 2013 Emergency Preparedness Report, funding for a second rescue helicopter in the South West to assist in the mobilisation of rescue personnel was reported. On 1 July 2014, the Hon. Joe Francis, MLA announced that '… as part of State Government's commitment to community safety, a second helicopter rescue service will be based in the South West from 2015-16'.

Achievement Objective 7.4: Situational Assessment and Acquisition of Critical Resources and Services

Situational assessments are undertaken to accurately inform decision makers about the nature and extent of a hazard, and what critical resources and services are needed, or may be needed, at different stages of a response and recovery effort.

Key Finding

Agencies report that they have plans, processes, systems and technology that will adequately inform them of additional critical resources needed during large-scale emergencies. Where resource requirements exceed an agency's capacity, response plans, including business, industry and community plans, have been developed. However, opportunities exist to formalise these plans.

The SEMC Secretariat is investigating information sharing provisions in the absence of an emergency situation declaration. All HMAs and the majority of other EMAs report that their situational assessment systems are supported by processes that comply with the current information sharing provisions of the EM legislation.

Detail

In order to fully appreciate the extent of the requirements needed to combat a large-scale emergency, a thorough situational assessment must inform decision making. This may require the sharing of information between agencies.

All HMAs and the majority of other EMAs report that their situational assessment systems are supported by processes that comply with the information sharing provisions of the EM legislation, such as section 72 of the EM Act, part 4 of the EM Regulations and OP 22–*Exchange of Information*. WA Health reports the use of a Crisis Information Management System to communicate and exchange information with external agencies such as the Royal Flying Doctor Service and SJA. PTA reports that it shares a WebEOC® license with MRWA, which allows information sharing with MRWA and other response agencies in the event of an emergency on its network.

There are instances where agencies may need to share information prior to an emergency situation being declared. For example, CPFS may need to share the details of people in evacuation shelters ahead of a tropical cyclone, when DFES may have not yet have a need to declare an emergency situation. The SEMC Secretariat is currently investigating this issue in consultation with the Emergency Management Legislation Advisory Group.

The majority of EMAs report that they have systems and processes in place that will adequately inform the agency of additional critical resources needed in a large-scale emergency. These will also inform decision makers of the escalation and de-escalation of the incident. WA Police report the use of WebEOC® to provide effective real time situational awareness between the operational and strategic command elements of an emergency response. This enables continuous assessment of human as well as physical resource demand.

Once the requirement for critical resources has been identified, and to support resource deployment decisions, the majority of EMAs report that they have plans in place to acquire these resources and services to respond to large-scale emergencies. Where requirements exceed agency capacity, the majority of EMAs report that response plans include the use of business, industry and the community to assist with the delivery of critical services or resources. However, not all of these plans have been formalised.

CASE STUDY: COMMUNICATIONS CAPABILITY AND REDUNDANCY IN THE DEPARTMENT OF PARKS AND WILDLIFE

DPaW is responsible for managing over 83 million hectares of unallocated Crown land and unmanaged reserves as well as mitigation and suppression responsibility for a further 23 million hectares of national parks and reserves across Western Australia.

To effectively support their responsibilities, DPaW has invested in interoperable communications infrastructure. It can service remote areas across the State and is consistent with the State Communications Strategy. This equipment is available for 2-way radio communications use in emergency situations and includes:

- approximately 1,550 mobile radios fitted to vehicles, boats, aircraft and offices
- approximately 500 portable radios and 100 repeater sites across the State.

DPaW owns, maintains and manages a satellite-based communications network that is integrated State-wide to transmit information between offices and the field; and provides reliable and flexible communications for fire and other emergency operations as well as day-to-day business activities. Over 350 vehicles, appliances (including machines and marine vessels) and aircraft are tracked via satellite-based GPS systems, allowing near real-time online spatial web-based reporting.

For radio communications interoperability, DPaW operates on VHF high-band that is compatible with WA Emergency Radio Network. It has common channelling across DFES, SES and the volunteer bushfire brigades and can communicate on select channels with WA Police.

DPaW has established mobile communications facilities and portable technology caches to provide operational redundancy for radio communications, ICT and GIS. These include 2-way radios, portable repeaters and mobile communication facilities that can support a full incident management team.

In high risk forest areas, redundancy is created through the use of multiple channels and overlapping network coverage. All these facilities are supported by a team of rostered multi-skilled technical and operational staff who provide installation, maintenance and repair of telecommunications facilities to ensure year-round 24/7 operations.

Figure 5.13 – Satellite communications used during the Nilgen Nature Reserve bushfire, 2011

Figure 5.14 – DPaW mobile communications facility

CAPABILITY AREA 8

RESPONSE AND RECOVERY SUPPORT SERVICES

Achievement Objective 8.1: Evacuation and Public Protection Measures

Directed or voluntary evacuation of people and animals or other public protection measures protect lives in a large-scale emergency.

Key Finding

There are strong relationships between HMAs, CPFS and local governments. In emergency situations these relationships allow for close cooperation when managing evacuations and other activities undertaken for public safety. Development of formal evacuation plans and their alignment with SEMP 4.7–*Community Evacuation* is highlighted as an opportunity for improvement.

Ongoing development and improvement has occurred through the recent review of SEMP 4.7 and the launch of the Register.Find.Reunite service.

Detail

HMAs and all relevant EMAs have policies in place to lead or support evacuations as appropriate to their role. These plans reflect the requirements of relevant Westplans and SEMP 4.7–*Community Evacuation*. Among EMAs there is good understanding of their support role; there are strong relationships with the HMAs, other EMAs and local governments. In emergency situations this allows for close cooperation.

All EMAs have operational plans that include evacuation for their managed sites, and work with the relevant HMA. For example, DoT works with local authorities and the HMA if marine exclusion zones are needed, DPaW has

evacuation plans for managed campgrounds and facilities, MRWA has evacuation plans for selected enclosed public spaces, such as tunnels, and all hospitals are required to have and test evacuation plans in order to maintain accreditation.

In local governments across Western Australia, evacuation plans are sometimes interchangeable or incorporated with welfare plans. As a consequence, data collected for the 2014 Emergency Preparedness Report from local government on this topic demonstrates some inconsistencies. Many local governments report that they are in the process of reviewing evacuation plans, often in conjunction with periodic review of LEMAs. Evacuation plans are often integrated with the LEMA or listed as a 'sub-plan' of the local arrangements. While development of formal plans and their alignment with SEMP 4.7–*Community Evacuation* is highlighted as an area of improvement, many local governments have comprehensive plans with detailed and specific arrangements for vulnerable community members such as the residents of aged care facilities, and for the safety in evacuation and management of animals, including pets and livestock. The case study of the Kalamunda Emergency Trailer illustrates the ongoing work in this area.

The recent review of SEMP 4.7–*Community Evacuation* and creation of the WA Community Evacuation in Emergencies Guide should bring greater clarity to local government evacuation requirements. The SEMC Response Subcommittee assembled a working group to consider amending SEMP 4.7–*Community Evacuation* to be in line with the EMA Evacuation Planning handbook and to address issues identified by the Multi-Agency Working Group for Evacuation. The SEMC approved SEMP 4.7–*Community Evacuation* and the WA Community Evacuation in Emergencies Guide at its June 2014 meeting.

Agencies have policies in place to ensure that relevant information is shared, such as the whereabouts and welfare of persons, and welfare services, for example availability of emergency accommodation, food, financial assistance, and other services, as defined in section 72 of the EM Act. WA Police have standing appointments for HMOs which facilitates sharing of such information.

The Register.Find.Reunite service, launched in November 2013, allows people to register online or in person at evacuation and relief centres. This then allows friends and family to search the Register.Find.Reunite website for people who may have been affected by the emergency. Developed by the Australian Red Cross with funding from the National Emergency Management Projects and based on the previous National Registration and Inquiry System, the site is accessible from smart phones and tablet devices. Activation of the system is managed by CPFS as detailed in Westplan–*Registration and Reunification*.

Achievement Objective 8.2: Fatality Management Services

Appropriate management of fatalities in the event of an emergency occurring, including body recovery, victim identification, mortuary, burial and cremation services, the management of information between authorities and family members, and the provision of bereavement counselling.

Key Finding

Fatality management planning is well established in Western Australia and is subject to ongoing development in the context of a national network to promote best practice and cross-jurisdictional support to increase surge capacity.

Detail

Most EMAs refer fatalities directly to WA Police while also providing whatever support is required by the particular emergency situation. CPFS has plans in place to assist WA Police and/or another HMA to provide support to family members in accordance with principles set out in Westplan–*Welfare*.

WA Police are well prepared to respond to mass casualty events and to implement disaster victim identification processes. This preparation has been enhanced as a result of extensive experience in dealing with disaster victim identification and participation in the national disaster victim identification committee, which provides a strong resilience network that is able to provide surge capacity where needed. To complement these arrangements, WA Police are establishing a comprehensive contingency plan to cater for the surge capacity required for an incident resulting in fatalities beyond current state capabilities. The contingency plan has been refined and tested in conjunction with the response to the disappearance of Malaysia Airlines flight MH370, for example, to identify mortuary facilities in the event of the recovery of large numbers of deceased.

Training and skills enhancement for nationally endorsed capabilities is also provided through the Australia-New Zealand Counter-Terrorism Committee capability development program. This training builds on capability development activities provided by the State. There is also a training program to ensure a surge capacity for collection and processing of ante-mortem and post-mortem information.

Mass fatality management is a key component of the WA Health Management Plan for Pandemic Influenza. WA Health provides specialist staff and equipment for the conduct of multiple post mortems but do not provide storage or transportation of bodies.

Achievement Objective 8.3: Health and Medical Services

Emergency first aid and medical treatment are delivered in response to a large-scale emergency, including the management of environmental and public health to avoid additional injury and disease to the community.

Key Finding

Westplan–*Health* sets out the State Health planning framework that guides PPRR aspects relating to any extraordinary incident that may be classified as a major incident, disaster or emergency. EMAs and combat agencies provide medical and health services, including provision of first aid and medical treatment and the management of environmental and public health issues associated with an emergency situation.

Detail

Westplan–*Health* outlines health and medical support arrangements that are to apply during emergencies. The State Health planning framework encompasses the prevention, preparedness, response and recovery elements associated with any extraordinary incident that may be classified as a major incident, disaster or emergency. The framework provides for situations which entail a multi-agency response, multiple casualties, major public health threat or need for humanitarian assistance. WA Health has plans for surge capacity of up to 500 casualties associated with disaster events.

WA Health and SJA have a good working relationship and with other EMAs and HMAs in relation to the provision of first aid and health services for emergency incidents. During incidents, SJA and WA Health work closely to ensure that these goals are met. SJA is a contractor of WA Health, and both organisations are prescribed Combat Agencies within the *WA Emergency Management Regulations 2006*.

Other combat agencies may also provide medical and health services in line with the agency's functions under legislation or because they possess or control specialised knowledge, expertise and resources. For example, all WA Police officers are trained in Police Life Support. Several other EMAs have staff trained in emergency first aid for their operational crews and responders, and will engage SJA or other suitable medical service providers to attend major incidents and coordinate the delivery of first aid and medical care.

Cooperation and inter-agency support is demonstrated across the EMAs when it comes to responding to a large-scale emergency. Although SJA relies on its own resources to deploy medical support to an incident, and transport casualties to health care facilities, it can also transport hospital medical response teams to an incident. Health services support is also provided by other agencies: DER has arrangements in place to deploy to hazardous materials emergencies in order to provide monitoring services to aid the treatment of exposed persons; PTA is able to leverage its core business of urban mass transit to assist other agencies to deploy personnel and equipment to a hazard site during large-scale emergencies. Although these plans are scalable, PTA can also call for assistance from WA Police, DFES, SJA and other response agencies where the number of casualties is large.

A range of other measures is in place to cover other health related aspects of emergencies. For example, Water Corporation's contingency plans, processes and systems that would be engaged in connection with a major water contamination or wastewater incident are aligned with Westplan–*Health*. PTA has a MoU with suppliers for the provision of Personal Protective Equipment should it be required in an emergency.

Achievement Objective 8.4: Welfare and Social Services

Welfare and social services are delivered during or immediately following an emergency, including the provision of critical goods and services to individuals affected by disaster (for example, food, potable water and shelter) and critical support services that contribute to the wellbeing of the community (for example, psychological first aid and financial assistance).

Key Finding

The three Westplans that relate to welfare and social services are the responsibility of CPFS for immediate support and services while also providing training to build capacity in partnering agencies and local governments.

As part of their responsibility, local governments must identify and provide access to suitable evacuation centres and work with CPFS to create Welfare Plans. Local governments support their communities to create a culture of emergency and disaster readiness, and to be more resilient to the effects of an emergency.

Detail

CPFS has responsibility for the three Westplans that relate to welfare and social services: 1) Westplan–*Welfare* 2) Westplan–*Registration and Reunification* and 3) Westplan–*Reception*. In order to deliver the requirements under these plans, CPFS works closely with a range of EMAs, local governments and other organisations including SJA and The Salvation Army. After the initial emergency response is complete, CPFS continues to work on long term welfare and recovery plans with local governments.

EMAs work in consultation with CPFS to ensure that welfare and social services are provided to the public in the event of an emergency.

EMAs also have their own policies that are consistent with relevant Westplans. Importantly, EMAs widely report that they have policies and processes in place that caters for internal welfare and social services in the event of an incident, and in some cases this may be extended to the public. For example, the WA Police Chaplain would be available to the community if required.

Local governments identify and provide access to suitable evacuation centres in accordance with the provisions of LEMAs. CPFS then works closely with the local government during an evacuation. CPFS will staff and run the evacuation centre, often with on the ground support staff sourced from local government and other EMAs. For example, Australian Red Cross will usually provide the staff to register people using the Register. Find.Reunite program, although in remote or unusual situations local government or CPFS staff may assist.

CPFS focuses on providing inclusive and multi-agency welfare and social services, as demonstrated by its recent State Welfare Emergency Evacuation Training program. Funding for this program was received from the NDRP to create a modular training package based around evacuation requirements. The program, completed in December 2013, saw six sessions delivered to over 470 participants from a wide range of agencies and local governments. The training guided stakeholders through multiple scenarios. This not only built the skills and knowledge of participants around their responsibilities in evacuations, but also demonstrated how to fulfil those responsibilities. The training also encouraged a more inclusive and responsive welfare and social services network, allowing CPFS to clarify the roles and expectations of all agencies involved in a way that allowed them to take ownership of welfare in their communities.

CPFS applied their philosophy of continuous improvement to the program with the result that they now have a robust set of training modules for use by staff around the state.

Local governments support their communities to promote a culture of emergency and disaster readiness and to enhance disaster resilience. This includes encouraging community members to maintain an emergency pack with sufficient critical supplies (for example, food, communications devices, potable water, shelter) to survive for 72 hours in an emergency without assistance. Many local governments promote the message that, in an emergency, greater community self-reliance will allow limited resources to be directed to the most critical needs. Examples of this include the City of Bunbury's U472 program and the City of Cockburn's 'Can you do 72?'

Achievement Objective 8.5: Restoration of Essential Services and Critical Supplies

Essential services and supplies are delivered or returned to the community during and after an emergency, including access to power, mains water, gas, sewerage, telecommunications, food security and liquid fuel.

Key Finding

Good working relationships among EMAs ensure the timely resumption of critical services. HMAs prioritise response activities to ensure that expertise and resources are coordinated and promote a collaborative approach. EMAs report a range of comprehensive risk management strategies relating to essential services, including risk assessments to understand the impact of potential hazards and the consequences for the community of service delivery disruption.

Detail

Good working relationships among EMAs ensure the timely resumption of critical services. The HMA will prioritise response activities of all relevant EMAs to ensure that expertise and resources are coordinated and promote a collaborative approach.

The ESNORG is a forum to exchange information that will assist and improve the operation of essential service networks or network functions. ESNORG members are directed through the SECG, Operations Area Support Group and ISG to support all operational requirements of EMAs. Selected organisations are signatories to the 'Mutual Assistance Policy and Principles' which is an agreement to provide assistance in emergencies that require their involvement or affects their infrastructure.

The ESNORG maintains an understanding of the criticality and interdependency of essential services infrastructure: the group works together to build understanding and capability relating to prevention, preparedness, response and recovery with a focus on risks and resilience-building relating to the essential services of the State. The group also provides advice to the SEMC and its subcommittees on EM matters relating to the essential network services.

EMAs report a range of comprehensive risk management strategies relating to essential services, including risk assessments to understand potential risks of impact of disruption and impact of service delivery to the community. Examples include:

- ESNORG members conduct real time impact assessments during an emergency situation. This information is used by the SECG, Operations Area Support Group and/or ISGs to make final decisions regarding service restoration priorities. For electricity supply interruption Westplan–*Electricity Supply Interruption* formalises arrangements including an impact assessment.
- DPaW maintains GIS datasets that detail the location of fire sensitive infrastructure and engages infrastructure managers to provide for its protection from fire. An example is a biannual meeting with Telstra to update information pertaining to telecommunications infrastructure within DPaW-managed lands. Fire threat analyses include critical infrastructure as an input when determining the level of threat and appropriate mitigation strategies.
- PTA has business continuity strategies in place for core infrastructure and is well practiced in managing continuity and restoration actions for its transportation services. This includes an agreement with Western Power and Synergy to prioritise the supply of power to rail stations and substations if load shedding occurs. In the event of a major emergency the PTA can call in extra resources and reprioritise its services to maintain business continuity. The PTA would manage information in a major incident in accordance with SEMP 4.6–*Emergency Public Information* and in consultation with the Controlling Agency.

CASE STUDY: SHIRE OF KALAMUNDA EM TRAILER

Prior to 2013 the Shire of Kalamunda stored supplies needed to support EM activities in large boxes in the Rangers' office at the Shire Administration building. They held a range of materials such as stationery and forms, personal hygiene items, communication equipment and first aid supplies. The boxes were designed for use at welfare centres and to assist the Recovery Coordinator and other Shire officers in community liaison and support roles.

The Shire deployed the boxes to an incident in early 2013. During the incident review it was determined that, although the contents were suitable, quick deployment of the boxes was hampered by their size.

Following the review, the Shire purchased a trailer for future deployments. The lockable, weatherproof and manoeuvrable trailer enables a single person to transport EM supplies easily to any required location.

The trailer is stocked in a similar way to the boxes, with additional basic supplies for children such as nappies and wipes. Some of the boxes were retained in the trailer, so that if the Recovery Coordinator or Shire Incident Support Group Liaison Officer needs to relocate they can take a box with them while the bulk of the items remain at the central location.

The trailer was tested at the 2013 Annual State Bushfire Exercise where it was deployed to establish an evacuation centre. While the trailer performed well in this setting, after the exercise review the range of trailer supplies was expanded. Supplies now include items for the welfare and management of pets such as leads and bowls for dogs and cats, a small white board, laminated information signs, evacuation centre location signs and local government tabards.

To support recent changes to evacuation centres, Kalamunda Shire is installing lockable storage cabinets at the four nominated evacuation centres and the Operations Depot (the nominated Emergency Operations Centre). The storage cabinets will be stocked with supplies to enable the centre to open and operate quickly and will be supported by the deployment of the EM trailer.

Figure 5.15 – Shire of Kalamunda's EM trailer

Figure 5.16 – Shire of Kalamunda's EM trailer, showing the Evacuation Centre supplies and EM boxes

CAPABILITY AREA 9

COORDINATED RECOVERY

Achievement Objective 9.1: Coordinated Recovery

Coordinated recovery supports emergency affected communities in the reconstruction and restoration of physical infrastructure, the environment, psychosocial and economic wellbeing.

Key Finding

The majority of local governments have local recovery arrangements in place to manage recovery following an emergency affecting their community. Support from the State and Commonwealth Governments is available and facilitated by the State Recovery Controller. Clarification of recovery roles and responsibilities across all recovery environments needs to continue to evolve. This includes issues such as assessment of impact, communication of recovery timeframes and the effectiveness of activities.

Detail

Recovery management is the coordinated process of supporting 'emergency affected communities in the reconstruction and restoration of physical infrastructure, the environment and the community, and psychosocial and economic wellbeing' (*Emergency Management Act 2005*).

Under the EM Act, it is a function of local government to manage recovery following an emergency affecting the community in its district.

In some circumstances, it may be necessary for the State Government to have an increased level of involvement, through the State Recovery Controller or the establishment of a coordinating group or coordinator.

In fulfilling their responsibilities, local governments ensure the preparation and maintenance of local recovery arrangements. This includes the identification of a Local Recovery Coordinator and inclusion of a Recovery Plan within the LEMAs as detailed in SEMP 2.5–*Emergency Management for Local Governments* and Administrative Procedure (ADP) 5–*Emergency Management for Local Governments*.

Of the 138 local governments in Western Australia, 124 report that they have established a LEMC. This number includes individual or combined LEMCs (that is, LEMCs which cover more than one local government). Of the 119 LEMCs that provided information to the SEMC, 111 report having LEMAs and 90 have Recovery Plans for the local governments they represent (Figure 5.17). This is an improvement on the number of arrangements and Recovery Plans in place in the previous financial year, and the SEMC is working towards ensuring that all LEMAs include a valid Recovery Plan.

The appointed State Recovery Controller supports a holistic, whole of government approach to recovery preparation through the SEMC Recovery Subcommittee and the operation of recovery coordination through the State Recovery Coordination Group.

The Recovery Subcommittee oversees the planning and review of State-level recovery arrangements, providing a forum for promoting and supporting the development and maintenance of emergency recovery capability.

Most HMAs and local governments consider that their plans and arrangements include sufficient restoration and recovery of infrastructure, the economy, the environment and local services after a large-scale emergency in accordance with the State recovery plan and policy. As shown in Figure 5.18, a number of other EMAs did not consider that they had State level responsibilities in this area, which may present an opportunity to clarify the concerted effort across government and from all agencies which would be required for recovery in a large-scale emergency.

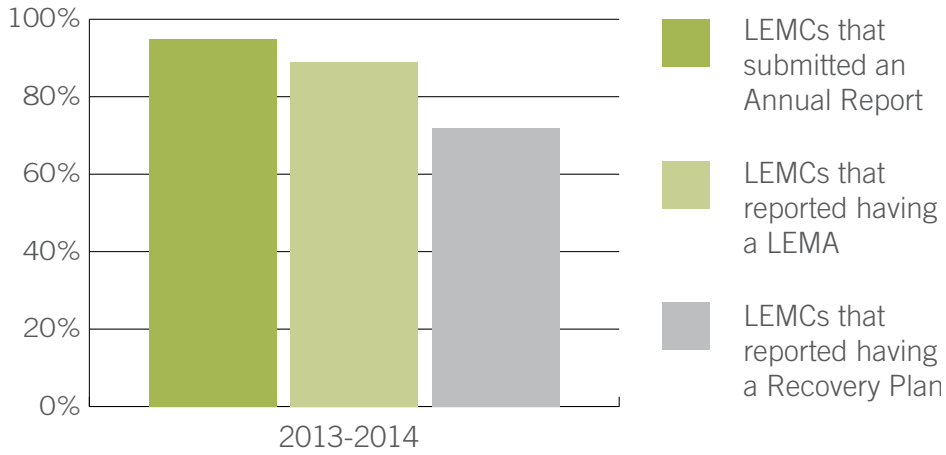


Figure 5.17 – Percentage of LEMCs with reported LEMAs and recovery plans in place

Source: SEMC 2013-14 Annual Report

Relevant to your agency's EM responsibilities, do your plans and arrangements include sufficient restoration and recovery of infrastructure, the economy, the environment and local services after a large-scale emergency in accordance with the Westplan–*Recovery Coordination*, SEMP 4.4–*State Recovery Coordination?*

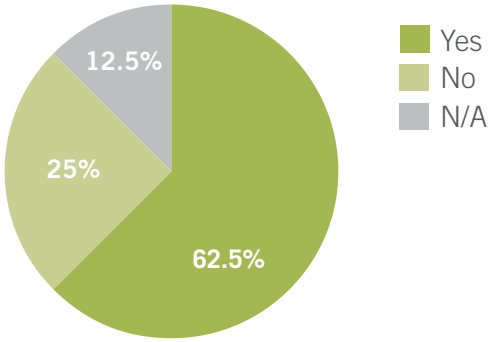


Figure 5.18 – Percentage of HMAs with plans that are consistent with State EM Policy and Plans for Recovery

A number of HMAs do not have, or did not identify as their responsibility to have, systems and processes in place to carry out impact and/or needs assessment on affected communities for the transition from response to recovery after a large-scale emergency. In light of the crucial nature of accurate and timely impact information for informing the recovery process, this is an area that would benefit from further clarification. Local governments indicate that they do not all have the systems and processes in place for impact and/or needs assessment for all recovery environments. There are similar concerns in relation to the management of the assessment data and the ability of agencies and organisations to access the information required to facilitate the performance of their role in providing recovery support.

Responsibility and coordination of communication of up to date and relevant information to the public and industry on recovery timeframes has the potential to be further progressed. The majority of local governments have indicated that they have processes in place to support recovery communication; and SEMC will arrange for further consideration in relation to the support required where there is State-level involvement in the recovery.

Some HMAs, other EMAs and local governments assess the effectiveness of their recovery activities in meeting the communities' needs and making them more resilient. The introduction of more formal processes may facilitate this in the future, and reflects work currently being undertaken at a national level by the ANZEMC Recovery Subcommittee.

CAPABILITY AREA 10

EVALUATION, KNOWLEDGE AND CONTINUOUS IMPROVEMENT

Achievement Objective 10.1: Evaluation

Rigorous, customary and transparent evaluation of all emergency management activities is undertaken, including post-incident analysis, to assess and improve performance.

Key Finding

EMAs report that post-incident analysis is the method most frequently adopted to assess and review agency performance although such analysis may not take place after every event. One HMA reported that it has not conducted a significant post incident analysis because it has not yet responded to a major emergency for its assigned hazard. Incident debriefs are routinely conducted both within and between agencies. Post incident analysis or incident debriefs tend to focus on the response aspect of the event, and rarely cover prevention, preparedness, and recovery.

Detail

Post incident analysis undertaken by the EMAs is driven by corporate risk management programs and/or the requirements of relevant Westplans, operating in conjunction with SEMP 4.3–*Post Operation Reports*. For example, the PTA has a reporting system for health safety and environmental risk management that enables the efficient capture and management of reported hazards, near-misses and incidents, for data analysis and trend identification.

WA Health, reflecting requirements that also apply to other HMAs, reports that Level 3 incidents are subject to post-incident analysis in accordance with the Westplans for which it is responsible, such as Health, Heatwave and Human Epidemic. HMAs are also required to act in accordance with SEMP 4.3, that stipulates that a 'Post Operation Report' be prepared following every Level 3 incident and forwarded to SEMC if the incident has entailed activation of the SECG. These post operation reports:

- provide a strategic overview of the response
- identify operational activities that were well executed and those that were not and make recommendations in order to improve future operations
- report on the effectiveness of interagency cooperation
- report on the performance and/or adequacy of communications and equipment
- determine the action needed to rectify any shortcomings, particularly those relating to the need to amend EM plans and the development and conduct of specific EM training
- clearly define the finalisation of the emergency response phase
- include 'lessons learnt' and recommendations for enhancing the State's EM arrangements.

These reports enable SEMC to identify matters that have impact or significance across the EM sector, or which may require the amendment of policy and procedure. The reports also provide significant guidance to the EMA internally in identifying continuous improvement opportunities.

An example of a more complex post-incident analysis was the review of the 2011 Perth Hills bushfires undertaken by Mr Mick Keelty AO.

The SEMC and WA EMAs have made significant progress in relation to the Keelty report *A Shared Responsibility: The Report of the Perth Hills Bushfire February 2011*. BRIG provided oversight of the implementation of the report recommendations. As at August 2014, 48 of the 55 recommendations of have been signed off by BRIG as complete. BRIG has since been disbanded, and the SEMC has agreed to continue oversight of the remaining recommendations.

While a Westplan may assign responsibility to a specific HMA to undertake post-incident analysis and provide a report to the SEMC, there is also an opportunity for agencies to cooperate and participate in such analysis conducted by an HMA under the SEMP 4.3 requirements. For example, Western Power notes that although it has no formal requirement to perform multi-agency debriefs it will contribute where it is invited to do so.

Where EMAs identify a need to conduct post-incident analysis, this may focus on the areas of greatest relevance to their role as a Support Organisation or Combat Agency. For example, the Red Cross reports that its emphasis in post-incident analysis is usually on the response and early recovery operations associated with an incident. In addition to post-incident analysis, many agencies report informal operational debriefs after less serious incidents.

In certain circumstances SEMC may lead a review of the lessons to be learned from an emergency incident such as the collaborative review undertaken to identify opportunities for improvement in disaster prevention, preparedness, response and recovery based on the experience of the January 2014 Parkerville Stoneville Mt Helena Bushfire.

The SEMC has undertaken to facilitate annual 'Season Reviews', whereby agencies present information and learnings from their involvement in incidents that have occurred in the preceding 12 months. Lessons identified are assigned to relevant SEMC Subcommittees or Reference Groups for consideration.

Achievement Objective 10.2: Knowledge Management

Knowledge and information is effectively captured, managed and shared in a way that contributes to effective and coordinated emergency management at a State and local level.

Key Finding

All agencies report sharing knowledge and information through formal and informal networks and platforms which include working groups and committees. Knowledge and information obtained through post-incident analysis and other data collection and research may be incorporated into training and exercising activities, which can be shared across agencies. EMAs are represented on, or have access to, national bodies and networks that facilitate sharing of information and knowledge across Australia.

Detail

EMAs report that they share knowledge and information at multiple levels. PTA is typical of HMAs in being able to share and exchange information through participation in State, District or local level committees under the Western Australian EM framework. PTA regularly exercises with other State agencies including WA Police, DFES, WA Health, SJA, Western Power and MRWA and shares information on rail safety matters and industry best practice through State and national regulators, the Office of Rail Safety WA and the Office of the National Rail Safety Regulator.

As an EMA, DPaW reports engagement at State, District or local level and nationally through entities such as the AFAC and the Bushfire and Natural Hazards CRC. The Australian Red Cross engages at multiple levels with partner EMAs, its own branches and partners within the State and elsewhere in Australia and in cross-jurisdictional forums such as the ANZEMC Subcommittees. The Australian Red Cross also provides training programs which are open to partner agencies and organisations in the EM sector.

Cooperation with the private sector is also demonstrated by PUO, as a HMA, which shares information and knowledge with industry stakeholder Woodside Energy in the context of emergency crisis testing and exercising. PUO also participates in national exercises to test capability, interoperability and collective decision making.

Some EMAs work especially with organisations that have closely aligned interests. For example, the Forests Products Commission works closely with DPaW in relation to fire preparedness and management.

The outcomes of post-incident analysis and review can be an important part of information sharing, particularly where there is an opportunity for EMAs to participate in reviews conducted by HMAs. The Water Corporation highlights the importance of lessons learnt from post-incident analysis and debriefs to the presentation of joint agency training and exercises. This importance has been recognised by the SEMC through the establishment of the Exercise Management Advisory Group, which will review, prioritise and monitor State-level, cross-sectoral exercise recommendations referred to it by the Response Subcommittee.

A knowledge hub currently under development by the SEMC Secretariat, as part of a website redevelopment project, will provide access to information gathered through reviews, post-incident analysis and exercises. It may be used in conjunction with hazard risk information and training materials tailored for the Western Australian context.

Achievement Objective 10.3: Continuous Improvement

Continuous learning and improvement is achieved through informal and formal mechanisms to strengthen the overall preparedness of the State to deal with large-scale emergencies.

Key Finding

All EMAs report pursuing continuous learning and improvement through adopting the findings or learnings derived from post-incident analysis, external reviews and inquiries. However, not all evaluate the improvement measures post-adoption.

Detail

All EMAs report having processes in place to implement recommendations that arise from reviews and inquiries, although not all subsequently evaluate the measures following their adoption or implementation.

Agencies may be subject to a particular compliance regime following an investigation or as a result of the acceptance by Government of specific review recommendations. An example is the improvement notices issued by the workplace occupational health and safety regulator WorkSafe to DPaW in connection with the 2012 Black Cat Creek incident. DPaW reports that these will be completely or significantly implemented within the agreed timeframes. DPaW also reports that it has fully implemented four of the eight recommendations for which it has responsibility from the inquiry conducted by Mick Keelty AO into the 2011 Margaret River bushfire and is well advanced on the remaining four. DPaW reports to the SEMC on its progress towards full implementation.

Other agencies, for example, the Forests Products Commission, proactively maintains and audits a log that documents all findings from internal and external audits, inquiries and reviews by the Auditor General and assigns responsibility for identifying and implementing appropriate improvements to a corporate executive member.

In addition to the improvements to individual agencies that might flow from measures such as post-incident analysis and the sharing of information, whole sectors may benefit from the coordinated communication and adoption of improvements. This opportunity is exemplified by the role that the Western Australian Local Government Association has in considering and making recommendations to members for the adoption of policies and procedures arising from incident and other reviews.

In the spirit of continuous improvement the Australian Government, through the Resilient Australia Awards, recognises that there are numerous projects and initiatives supporting communities to be better prepared and more disaster resilient. The SEMC is the Western Australian awards convenor on behalf of the Australian Government and Minister for Emergency Services. The 2014 Resilient Australia Awards were presented to West Australian recipients at a ceremony in Perth on 8 October 2014.

CASE STUDY: PARKERVILLE STONEVILLE MT HELENA BUSHFIRE REVIEW

The Parkerville Stoneville Mt Helena Bushfire started on the morning of Sunday 12 January 2014. Although contained by the same evening, the bushfire was not declared to be 'blacked out' for a further 21 days. Fifty-seven residential properties in the Shire of Mundaring were destroyed in the fire. Although no lives were lost or serious injuries reported, 1,386 people were registered as evacuees.

With leadership provided by a multi-agency Incident Management Team, the combined resources of DFES, the Shire of Mundaring, DPaW and volunteer brigades were employed. During the incident DFES and DPaW aviation services achieved a peak of operational activity not previously experienced by either agency.

On 13 January 2014 the Minister for Emergency Services, the Hon. Joe Francis MLA, announced that DFES and the SEMC would examine the incident. It was subsequently decided that SEMC would lead a collaborative review in order to capture learnings from the event including prevention/mitigation, preparedness, response and recovery aspects. A Review Steering Committee consisting of the SEMC Chair, the Fire and Emergency Services Commissioner and the Director General of DPC was convened in March 2014. A Review team was established, which included officers from the three agencies represented on the Steering Committee, together with two independent members with bushfire fighting expertise from other Australian jurisdictions and an independent consultant.

The approach taken was one that promoted open sharing of information, facilitated open discussions and obviated the need for the Controlling Agency to undertake a separate Major Incident Review.

The Review team conducted interviews with personnel from various response agencies and relevant volunteer groups. In addition affected residents and businesses were invited to submit information on their experiences either by email, letter, SMS or by telephone. Twenty-one email submissions and six telephone interviews were conducted with community members within the impact area.

The Review was able to identify many factors that had limited the impact of the fire or which otherwise demonstrated the benefits of the prevention and preparedness measures that had been adopted by the Shire of Mundaring and local community members. These confirmed the need to maintain and, where possible, extend local measures in bushfire hazard mitigation works or community education and outreach.

The Review also identified opportunities for improvement concerning the management of bushfires, in general and in the specific circumstances of municipalities located in the Perth Hills. These included clarifying the criteria for declaring emergency incident levels; improvements to public warnings and alerts; and opportunities to enhance leadership expertise in rural – urban interface fire-fighting.

The approach taken for this Review departed from the usual post-incident review and analysis format through its emphasis on collaboration and information sharing and in ensuring that all aspects of an event are examined to identify opportunities for improvement. The Review provides a model for future reviews of this kind which may be undertaken under SEMC leadership.

Figure 5.19 – Retired DFES Chief Superintendent Phill Cribb showing direction fire travelled

06

CONCLUSIONS AND FUTURE ACTIONS

Using a capability-based approach, this Emergency Preparedness Report provides an overview of the State's current preparedness to confront the natural and other hazards that threaten community safety, wellbeing and prosperity. A capability assessment tool has been developed to establish quantitative benchmarks for a collective assessment of the contribution of State agencies, local governments and non-government organisations to the State's overall level of emergency preparedness.

The concept of preparedness raises the question about what to be prepared for. The answer to this will be assisted by the work on risk which is underway. However it is apparent that there is a trend for some natural hazards to increase in frequency and severity, which means there is additional pressure to improve the level of preparedness. Agencies report a good level of preparedness for major and moderate emergencies. There is acknowledgement that catastrophic emergencies, concurrent major emergencies or protracted incidents would likely require additional national or international resources.

The report also identifies changes to the context in which EM arrangements are developed and maintained in Western Australia:

- a growing understanding of the State's risk profile
- changes in policy emphasis by State and national governments; developments that follow the need for national uniformity and other imperatives created by changes in sectoral standards, practices or technology.

CONCLUSIONS

Capability Assessment

Westplans continue to be assessed and reviewed for relevance and currency, and where necessary new plans are developed such as the new Westplan–*Electricity Supply Interruption*. To ensure EM arrangements remain contemporary, the SEMC Secretariat is undertaking a review of the existing EM policy and governance framework, scheduled to be completed in late 2014.

The 2013-14 year saw further bedding down of SEMP 2.9 which provides the architecture for the risk-based approach. It is noted, however, that further progress will be required to ensure the full adoption of SEMP 2.9, some of which will occur in conjunction with the next stages of the State Risk Project being undertaken by the SEMC Secretariat.

Under the State Risk Project, which commenced in 2013, baseline data has been established to enhance understanding of Western Australia's principal hazards at State, District and local level. In addition to resource allocation, State Risk Project outcomes will provide an improved basis for development of LEMAs and Westplans. Two key outputs have already been achieved: completion of the assessments of the seven sudden onset natural hazards at the State level and the development of the interim Western Australian Emergency Risk Management guide, which is targeted for use by local and district stakeholders. The State Risk Project, by bringing together subject matter experts with agency officers who have

knowledge of local conditions and responsibility for operations, policy implementation and community engagement at regional level is evidence of the collaborative approach being based on the pooling of knowledge and expertise at the respective scales and levels.

An important aspect of the Preparedness Report is the information collected on the resources available to the sector. This year's report identified a strong focus on human resources, particularly in relation to workforce planning, training and the development of career pathways. Training needs are increasingly linked to the growing awareness of the importance of EM planning among local governments. There is increasing support for accredited training provided by the Australian Emergency Management Institute and the awareness-based program of online and face to face training developed by the Western Australian Local Government Association.

HMAs and other EMAs recognise their dependence on volunteers and seek to improve the sustainability of volunteering. By participating in the development and adoption of nationally agreed principles, these organisations are dealing with the challenges of the changing distribution and composition of the State's population, technological change and changes to social organisation such as the increasing use of 'fly-in fly-out' work practices. Agencies have numerous strategies in place, such as volunteer support mechanisms; processes for communicating with and tracking volunteers; plans to ensure the sustainability of volunteer-reliant programs; and the development of policies to manage spontaneous volunteers. One area that has been identified as requiring further work is the need to provide training to volunteers which faces many of the same challenges as with the recruitment and retention of volunteers, that is, training that meets volunteers' expectations as well as changing lifestyle patterns.

Suitable equipment and facilities are an essential complement to human resources. Agencies report a good level of equipment and infrastructure preparedness for major and moderate emergencies. Some agencies have agreements to access intra and interstate assistance for human and material resources, for example, in response to catastrophic emergencies.

Developing this shared responsibility ethos depends wholly on effective engagement with the community. Most local governments report that they have an EM communication strategy. Although an explicit all hazards approach is not always adopted, the key risks for a local government district are usually addressed. While many local governments have identified vulnerable and transient groups, they do not all have specific communication strategies to engage with these groups. Local governments also report that more work is required to communicate effectively with remote and culturally and linguistically diverse communities.

Capability is maintained through regular testing of emergency plans. Many agencies report a strong focus on regular testing of these plans which range from in-house, agency-specific, local or State-level plans. Some local governments have raised concerns about the resource demands and scheduling of exercises. It was reported in the 2013 Emergency Preparedness Report that 'Exercising of the plans is deemed of high importance and arrangements for improving exercise coordination across all agencies are proposed for 2014' (Emergency Preparedness Report October 2013). Subsequently the SEMC has undertaken a review of exercising in the State. The SEMC Response Subcommittee has established an Exercise Management Advisory Group to provide a forum to coordinate and monitor a State-level exercise program.

A number of network and technology based improvements were noted in 2013-14 including the roll-out of the national Emergency Alert telephone warning system and upgrades to the mobile telephone networks.

Despite some location specific issues, the majority of EMAs report access to effective and appropriate communication systems fit for use during large-scale emergencies. Additionally, improvements to communications infrastructure, including interoperability, have been identified and are being progressed.

Pursuing the theme of cooperation, interdependence and shared responsibility, some agencies report that due to limited internal resources they use or are developing plans to use the services of other agencies to deploy personnel and equipment. Importantly, where hazard management capacity and capability may be exhausted, access to additional resources is available from the Australian Government in accordance with SEMP 4.9– *Australian Government Physical Assistance* or from the Defence Force via the Defence Aid to the Civil Community system.

Community engagement, public warnings and information sharing all have a bearing on evacuation planning for emergency events, which also featured strongly in the 2013 Emergency Preparedness Report. Many local governments reported that they are in the process of reviewing community evacuation plans, often in conjunction with periodic review of LEMAs. It is apparent that many local governments have comprehensive plans with detailed and specific arrangements for vulnerable community members such as the residents of aged care facilities and for the safety and management of animals in evacuation, including pets and livestock. Local governments identify and provide access to suitable evacuation centres according to the provisions of their LEMAs. Staff of CPFS work closely with the local government during an evacuation; CPFS will staff and run the evacuation centre, often with on the ground support from local government staff and other EMAs. For example, Australian Red Cross will usually provide the staff to register evacuees, which since November 2013 has been possible using the newly configured Register.Find.Reunite program.

Finally, there is increasing awareness in the EM sector of the value of embracing a philosophy and practice of continuous improvement, in which tools such as post-incident analysis incident reviews are of particular value. These tools can be especially important in identifying issues that have cross-sectoral impact or significance, or which may require the amendment of policy and procedure. Their information will also usually provide significant guidance to the EMA internally in identifying continuous improvement opportunities. While post-incident analyses may be considered routine, one HMA reported that it has not conducted a significant post-incident analysis because it has not yet responded to a major emergency for its assigned hazard. In addition to formal post-incident analysis, incident debriefs were found to be routinely conducted within and between agencies.

In certain circumstances SEMC may lead a review of the lessons to be learned from an emergency incident such as the collaborative review undertaken to identify opportunities for improvement in disaster prevention, preparedness, response and recovery based on the experience of the January 2014 Parkerville Stoneville Mt Helena Bushfire.

In addition, the SEMC has undertaken to facilitate annual Season Reviews, when agencies present information and learnings from their involvement in incidents that have occurred in the preceding 12 months. Lessons identified are assigned to relevant SEMC Subcommittees or Reference Groups for consideration.

FUTURE ACTIONS

General

Throughout the report there are many instances of initiatives that have recently commenced or are planned to occur in 2015 as individual agencies continue to refine and adjust the commitment and use of their resources. Many of the initiatives are explicitly designed to identify opportunities for interoperability, sharing of resources, information and knowledge sharing and cooperation in planning and operations. The outcomes of these initiatives will be reflected in successive Emergency Preparedness Reports.

The SEMC Secretariat will continue its work on the SEMC Policy review project. It will consider ways in which the findings of collaborative reviews such as the Parkerville Stoneville Mt Helena Bushfire Review can inform the use and refinement of the capability assessment tool by encouraging a better understanding the factors that engender high levels of emergency preparedness. Following the successful adoption of an interagency collaborative review approach to the 2014 bushfire review, further reviews of that kind will be undertaken as the need arises.

Other tools under development will assist the State's preparedness. A knowledge hub (being developed by the SEMC Secretariat, as part of a website redevelopment project) will provide access to information gathered through reviews, post-incident analysis and exercises. It may be used in conjunction with hazard risk information and training materials tailored for the Western Australian context.

Capability Assessment

In line with the ethos of continuous improvement, EM stakeholders will be invited to provide feedback on the SEMC processes used to collect this year's data, and to comment on the capability assessment tool.

In 2015 work will continue on refining the capability assessment tool and on making the target agencies and organisations more familiar with its use and application, in order to enhance the rigour in data collection and interpretation. This approach may have substantial consequential benefits. For example, in at least one case in local government, the capability assessment tool is being formally adopted as a planning and reporting instrument and the potential for further adoption is being widely discussed.

One of the most exciting prospects for the sector arising from the State Risk Project is the potential to integrate risk and capability assessment based on a conceptual rethinking of the State's approach to risk and capability.

In the EM context, risk is established through an assessment process whereby a particular context (for example, State, District or local areas), the sources of risks (hazards) and the elements at risk (State Core Objectives: people, economy, social, government, infrastructure and environment) are identified and assessed. The assessment assigns a level of risk to the elements that could be impacted by a hazard and acts as a 'census' of emergency risks for the State, offering a baseline data against which to measure progress.

Once the level of risk is determined, it can be changed by calling upon different capabilities. Risk and capabilities therefore have an inverse relationship. That is, when the capabilities of the State increase, the risks the State face decrease.

The implementation of this concept in Western Australia requires further consideration. It encapsulates a long-term, forward thinking approach to EM in order to utilise scarce resources most effectively.

The methodology of the State Risk Project and its projected outputs will offer the State baseline measurements of risk against which the strength of the State's capabilities can be measured. It is not possible to create a metric directly linking capability to risk levels, but trends within each area can be correlated to gauge progress. Measurements of risks and capability would need to be taken over time to be able to track these trends.

The risk assessments generated from the State Risk Project will indicate which risks are highest and where mitigation efforts should be focussed. A cost-benefit analysis of potential treatments will enable decisions to be made about the feasibility of treatments. The implementation of viable treatments should generate a lower risk level in future risk assessments.

Horizon scanning

The Australian Public Service Commission defines horizon scanning as "a broad area that gathers evidence about future trends and possible situations that allow for the identification of challenges and opportunities. It is an area that can facilitate innovative thinking and policy development" (Australian Government, 2014). The SEMC embraces this concept, which is informed by national and international trends and research.

Events that will have a significant bearing on the State's preparedness will arise from developments at a national level, in recognition of the financial burden and complexity of natural disaster funding arrangements. The Productivity Commission draft report for example contains recommendations for improvement aimed at increasing expenditure on mitigation with a view to reducing the longer term impact of disaster.

The SEMC is currently considering the potential to develop a framework for managing spontaneous volunteers which will align with the Australian Government's commissioned report 'Managing Spontaneous Volunteers in an Emergency'. Developing a sustainable volunteering sector is a key element of the State's emergency preparedness and raises questions regarding recruitment, retention and training and the management of spontaneous volunteers.

Assessment of the effectiveness of EM programs is a national emerging trend. For example, work is being undertaken at a national level that focuses on the effectiveness of recovery activities in meeting the needs of communities and making them more resilient. The introduction of more formal processes may facilitate this in the future, based on work currently being undertaken at a national level by the Recovery Subcommittee of the Australian New Zealand Emergency Management Committee. Two further national best practice techniques are assessing the effectiveness of EM exercises at various levels, and the capture of learnings.

At a state-level, EMAs also undertake horizon scanning and monitor emerging threats. WA Health, for example, is currently monitoring the Ebola virus outbreak and are planning accordingly, and WA Police maintain situational awareness and respond appropriately to increased terrorist threat level. Westplan–*Terrorist Act* and Westplan–*Chemical, Biological, Radiological and Nuclear* (CBRN) were reviewed and approved by SEMC in 2014.

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APPENDICES

APPENDIX 1. EMERGENCY SITUATION DECLARATIONS

In 2013-14, one Emergency Situation was declared. The declaration was made by the Deputy Commissioner of DFES, as a delegate of the FES Commissioner under section 5 of the EM Act, as the HMA for EM of the hazard of flood.

The declaration was made on Saturday, 8 February 2014 at 1100 hr for the Shires of Derby-West Kimberley, Wyndham-East Kimberley and Halls Creek, in respect of the Tropical Low Kimberley. These local government districts were deemed to be in the path of Tropical Low Kimberley and it was deemed that the emergency powers of Part 6 of the EM Act were necessary to protect lives, property and the environment within these districts.

The emergency situation declaration was subsequently revoked on 14 February 2014.

APPENDIX 2. SEMC CAPABILITY FRAMEWORK

CAPABILITY AREAS	24 ACHIEVEMENT OBJECTIVES
LEGISLATION, POLICY AND GOVERNANCE STRUCTURES	1.1 Emergency management legislation, governance structures and policies (EM Instruments) are current, used, documented and facilitate effective preparedness for large-scale emergencies in Western Australia.
RISK ASSESSMENT AND RISK TREATMENT	2.1 A consistent and comprehensive ERM approach aids in decision making, facilitates appropriate resource allocation, and allows for a proactive approach towards emergency management, including greater emphasis toward prevention and preparedness.
RESOURCES	3.1 *People:* Organisations have appropriate levels of capable, well-trained and supported people who effectively perform their role in large-scale emergency management. 3.2 *Equipment and Infrastructure:* Organisations have access to the equipment and infrastructure required to effectively manage large-scale emergencies. 3.3 *Finance and Administration:* Robust financial and administrative processes and adequate funding arrangements exist to manage large-scale emergencies.
SHARED OWNERSHIP	4.1 *Volunteering:* Organisations have a clear strategy for promoting and maintaining emergency management volunteerism, with a focus on developing ready responders. Strategy addresses recruitment, retention, motivational aspects and barriers to volunteerism. 4.2 *Community Engagement:* The community has an understanding of and takes responsibility for hazard related risks they may be exposed to and strategies to treat those risks, and are engaged with the response and recovery process. 4.3 *Business and Industry:* The State stands resilient to the consequences of an emergency (or emergencies) through the existence of strong stakeholder relationships and support, business continuity planning, integrity of structures and systems and a holistic approach to emergency management.

CAPABILITY AREAS	24 ACHIEVEMENT OBJECTIVES
OPERATIONAL PLANS AND PROCEDURES	5.1 *Emergency management plans:* Comprehensive, documented and pre-determined processes and procedures exist that are employed in response to and recovery from a large-scale emergency. 5.2 *Training and Exercising of Plans*: Plans, processes and procedures are regularly and appropriately exercised to assess and improve capability.
PUBLIC INFORMATION AND COMMUNITY WARNINGS	6.1 *Public Information and Community Warnings:* Systems and processes are in place that allow the broader community to be warned of impending danger and actions to be taken prior to, during or after a large-scale emergency.
A MOBILE, CAPABLE AND COORDINATED RESPONSE	7.1 *Command, Control and Coordination:* Pre-established and well-understood protocols and structures exist that define the inter-relationships between stakeholders during an event and facilitates orderly giving of directions, undertaking of key tasks and reporting arrangements. 7.2 *Effective and Interoperable Communication Systems:* Effective and interoperable communication systems exist to allow emergency responders to communicate seamlessly during a large-scale emergency. 7.3 *Mobilisation:* The effective mobilisation of a response effort, including the transportation of personnel, equipment and services, in response to a large-scale emergency. 7.4 *Situational Assessment and Acquisition of Critical Resources and Services:* Situational assessments are undertaken to accurately inform decision makers about the nature and extent of a hazard, and what critical resources and services are needed, or may be needed, at different stages of a response and recovery effort.

CAPABILITY AREAS	24 ACHIEVEMENT OBJECTIVES
RESPONSE AND RECOVERY SUPPORT SERVICES	8.1 *Evacuation and Public Protection Measures:* Directed or voluntary evacuation of people and animals or other public protection measures will protect lives in a large-scale emergency. 8.2 *Fatality Management Services:* Appropriate management of fatalities in the event of an emergency occurs, including body recovery, victim identification, mortuary, burial and cremation services, the management of information between authorities and family members, and the provision of bereavement counselling. 8.3 *Health and Medical Services:* Emergency first aid and medical treatment are delivered in response to a large-scale emergency, including the management of environmental and public health to avoid additional injury and disease to the community. 8.4 *Welfare and Social Services:* Welfare and social services are delivered during or immediately following an emergency, including the provision of critical goods and services to individuals affected by disaster (e.g. food, potable water and shelter) and critical support services that contribute to the wellbeing of the community (e.g. psychological first aid and financial assistance). 8.5 *Restoration of Essential Services and Critical Supplies:* Essential services and supplies are delivered or returned to the community during and after an emergency, including access to power, mains water, gas, sewerage, telecommunications, food security and liquid fuel.
COORDINATED RECOVERY	9.1 Coordinated recovery supports emergency affected communities in the reconstruction and restoration of physical infrastructure, the environment, psychosocial and economic wellbeing.
EVALUATION, KNOWLEDGE AND CONTINUOUS IMPROVEMENT	10.1 *Evaluation:* Rigorous, customary and transparent evaluation of all emergency management activities is undertaken, including post-incident analysis, to assess and improve performance. 10.2 *Knowledge Management:* Knowledge and information is effectively captured, managed and shared in a way that contributes to effective and coordinated emergency management at a State and local level. 10.3 *Continuous Improvement:* Continuous learning and improvement is achieved through informal and formal mechanisms to strengthen the overall preparedness of the State to deal with large-scale emergencies.

APPENDIX 3. CAPABILITY ASSESSMENT TOOL CONSEQUENCE RATING

Some questions in the capability assessment tool are linked to consequence levels of an event: Catastrophic, Major or Moderate. Table 8.1 defines the impact levels on people, environment, economy, public administration, social setting and infrastructure for events of differing magnitudes. These have been sourced from the National Emergency Risk Assessment Guidelines. Agencies were asked to consider all six areas when responding to questions assessing capability against consequence.

Table 8.1 – Consequence Levels

CONSEQUENCE LEVEL	PEOPLE	ENVIRONMENT	ECONOMY	PUBLIC ADMINISTRATION	SOCIAL SETTING	INFRASTRUCTURE
CATASTROPHIC	Widespread multiple loss of life (mortality > 1 in ten thousand), health system unable to cope, displacement of people beyond ability to cope	Widespread severe impairment or loss of ecosystem functions across species and landscapes, irrecoverable environmental damage	Irrecoverable financial loss > 3 per cent of the government sector's revenues* asset destruction across industry sectors leading to widespread business failures and loss of employment	Governing body unable to manage the event, disordered public administration without effective functioning, public unrest, media coverage beyond region or jurisdiction	Community unable to support itself, widespread loss of objects of cultural significance, impacts beyond emotional and psychological capacity in all parts of the community	Long-term failure of significant infrastructure and service delivery affecting all parts of the community, ongoing external support at large scale required

CONSEQUENCE LEVEL	PEOPLE	ENVIRONMENT	ECONOMY	PUBLIC ADMINISTRATION	SOCIAL SETTING	INFRASTRUCTURE
MAJOR	Multiple loss of life (mortality > 1 in one hundred thousand), health system over-stressed, large numbers of displaced people (more than 24 hours)	Severe impairment or loss of ecosystem functions affecting many species or landscapes, progressive environmental damage	Financial loss 1-3 per cent of the government sector's revenues* requiring major changes in business strategy to (partly) cover loss, significant disruptions across industry sectors leading to multiple business failures and loss of employment	Governing body absorbed with managing the event, public administration struggles to provide merely critical services, loss of public confidence in governance, media coverage beyond region or jurisdiction	Reduced quality of life within community, significant loss or damage to objects of cultural significance, impacts beyond emotional and psychological capacity in large parts of the community	Mid to longterm failure of significant infrastructure and service delivery affecting large parts of the community, initial external support required
MODERATE	Isolated cases of loss of life (mortality > than one in one million), health system operating at maximum capacity, isolated cases of displacement of people (less than 24 hours)	Isolated but significant cases of impairment or loss of ecosystem functions, intensive efforts for recovery required	Financial loss 0.3-1 per cent of the government sector's revenues* requiring adjustments to business strategy to cover loss, disruptions to selected industry sectors leading to isolated cases of business failure and multiple loss of employment	Governing body manages the event with considerable diversion from policy, public administration functions limited by focus on critical services, widespread public protests, media coverage within region or jurisdiction	Ongoing reduced services within community, permanent damage to objects of cultural significance, impacts beyond emotional and psychological capacity in some parts of the community	Mid-term failure of (significant) infrastructure and service delivery affecting some parts of the community, widespread inconveniences

** As reported in the annual operating statement for the relevant jurisdiction, organisation and community.*

APPENDIX 4. AGENCY CAPABILITY ASSESSMENT TOOL RESPONSES

The following agencies provided a response to SEMC Capability Framework Assessment Tool:

Hazard Management Agencies

Brookfield Rail Pty Ltd
Department of Agriculture and Food Western Australia
Department of Finance, Public Utilities Office
Department of Fire and Emergency Services
Department of Health
Department of Transport
Public Transport Authority
WA Police

Other Emergency Management Agencies

ATCO Gas
Bureau of Meteorology
Department of Child Protection and Family Support
Department of Defence
Department of Education
Department of Environmental Regulation
Department of Housing
Department of Parks and Wildlife
Department of Planning
Department of the Premier and Cabinet
Forestry Products Commission
Horizon Power
Main Roads WA
Red Cross
St John Ambulance
Water Corporation
Western Power
Western Australian Local Government Association

The following **Local Governments** provided a response to the SEMC Capability Framework Assessment Tool:

City of Albany
City of Armadale
City of Bayswater
City of Belmont
City of Bunbury
City of Canning
City of Cockburn
City of Fremantle
City of Gosnells
City of Greater Geraldton
City of Joondalup
City of Karratha
City of Kwinana
City of Mandurah
City of Melville
City of Nedlands
City of Perth
City of Rockingham
City of South Perth
City of Stirling
City of Subiaco
City of Swan
City of Vincent
City of Wanneroo
Shire of Ashburton
Shire of Augusta-Margaret River
Shire of Beverley
Shire of Boddington
Shire of Brookton
Shire of Broome
Shire of Broomehill-Tambellup
Shire of Bruce Rock
Shire of Capel
Shire of Carnamah
Shire of Carnarvon
Shire of Chapman Valley
Shire of Chittering
Shire of Coolgardie
Shire of Coorow
Shire of Cranbrook
Shire of Cue
Shire of Cunderdin
Shire of Dalwallinu
Shire of Dandaragan
Shire of Denmark
Shire of Derby-West Kimberley
Shire of Donnybrook-Balingup
Shire of Dowerin
Shire of Dundas
Shire of East Pilbara
Shire of Exmouth
Shire of Gingin
Shire of Gnowangerup
Shire of Goomalling
Shire of Halls Creek
Shire of Irwin
Shire of Jerramungup
Shire of Kalamunda
Shire of Katanning
Shire of Kellerberrin
Shire of Kojonup
Shire of Koorda
Shire of Lake Grace
Shire of Manjimup
Shire of Meekatharra
Shire of Menzies
Shire of Mingenew
Shire of Moora
Shire of Morawa
Shire of Mukinbudin
Shire of Mundaring
Shire of Murchison
Shire of Narembeen
Shire of Northam
Shire of Northampton
Shire of Peppermint Grove
Shire of Perenjori
Shire of Quairading
Shire of Ravensthorpe
Shire of Sandstone
Shire of Serpentine-Jarrahdale
Shire of Shark Bay
Shire of Tammin
Shire of Three Springs
Shire of Toodyay
Shire of Trayning
Shire of Upper Gascoyne
Shire of Victoria Plains
Shire of Wagin
Shire of Waroona
Shire of West Arthur
Shire of Westonia
Shire of Williams
Shire of Wiluna
Shire of Wongan-Ballidu
Shire of Wyalkatchem
Shire of Wyndham-East Kimberley
Shire of Yalgoo
Shire of Yilgarn
Shire of York
Town of Bassendean
Town of Cambridge
Town of Claremont
Town of Cottesloe
Town of East Fremantle
Town of Mosman Park
Town of Port Hedland
Town of Victoria Park

APPENDIX 5. THE EMERGENCY MANAGEMENT FRAMEWORK

The EM Act provides the framework for the management of emergencies in Western Australia. The EM Act establishes a number of committees, groups and councils, including the SEMC and the State Emergency Coordination Group and prescribes that the SEMC will develop State Emergency Management policies and plans.

Westplans are prepared for each prescribed hazard. Hazards are defined both in the EM Act and in the Emergency Management Regulations 2006 (the Regulations) to include specific events. To date 27 hazards of natural and man-made origin have been included, as detailed in Table 8.2.

Table 8.2 – Hazards

1. COLLAPSE
2. CYCLONE
3. FLOOD
4. EARTHQUAKE
5. TSUNAMI
6. FIRE
7. STORM
8. HAZARDOUS MATERIAL – CHEMICAL
9. HAZARDOUS MATERIAL – RADIOLOGICAL
10. HAZARDOUS MATERIAL – BIOLOGICAL
11. HUMAN EPIDEMIC
12. ANIMAL AND PLANT BIOSECURITY
13. AIR CRASH
14. ROAD CRASH
15. LAND SEARCH AND RESCUE
16. MARINE SEARCH AND RESCUE
17. RADIATION ESCAPE FROM A NUCLEAR POWERED WARSHIP
18. SPACE DEBRIS RE-ENTRY
19. TERRORIST ACT
20. RAIL CRASH (PASSENGER NETWORK)
21. RAIL CRASH (FREIGHT NETWORK)
22. MARINE TRANSPORT EMERGENCY
23. MARINE OIL POLLUTION
24. ENERGY SUPPLY DISRUPTION (GAS)
25. ENERGY SUPPLY DISRUPTION (LIQUID)
26. HEATWAVE
27. ENERGY SUPPLY DISRUPTION (ELECTRICITY)

The hazards are managed by the following designated HMAs:

- Commissioner of Police
- Fire and Emergency Services Commissioner
- State Human Epidemic Controller
- Agriculture Director General
- Public Transport Authority
- Brookfield Rail Pty Limited
- State Health Coordinator
- Marine Safety, General Manager
- Coordinator of Energy

Each hazard Westplan documents the detailed arrangements, responsibilities and procedures for the various agencies or support groups involved in preparation for, response to and recovery from a prescribed hazard. There are also eight Support Westplans which although not hazard specific, provide for essential functions during an emergency event such as welfare and health services. For further effectiveness of EM, the State is divided into districts and local areas. There are 14 EM Districts State-wide (each with a DEMC) and 123 LEMCs, largely aligned with their respective local government authority.

APPENDIX 6. STATUS OF STATE EMERGENCY MANAGEMENT PLANS

Table 8.3 – Westplans

WESTPLAN	HAZARD	HAZARD MANAGEMENT AGENCY / AGENCY RESPONSIBLE	STATUS
WESTPLAN AIR CRASH	Air Crash	Commissioner of Police	Current
WESTPLAN ANIMAL AND PLANT BIOSECURITY	Emergency management of an animal or plant pest or disease	Agriculture Director General	Under Review
WESTPLAN BROOKFIELD RAIL EMERGENCIES	Brookfield rail crash emergencies	Brookfield Rail Pty Limited	Under Review
WESTPLAN CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR (CBRN)	Actual or impending spillage, release or escape of a chemical, radiological or other substance that is capable of causing loss of life, injury to a person, or damage to the health of a person, property or the environment Actual or impending spillage, release or escape of a biological substance that is capable of causing loss of life, injury to a person, or damage to the health of a person, property or the environment	FES Commissioner State Health Coordinator	Current
WESTPLAN COLLAPSE	Injury or threat to life of persons trapped by the collapse of a structure or landform	FES Commissioner	Current
WESTPLAN CYCLONE	Cyclone	FES Commissioner	Under Review

WESTPLAN	HAZARD	HAZARD MANAGEMENT AGENCY / AGENCY RESPONSIBLE	STATUS
WESTPLAN DAMBREAK	Dambreak	Water Corporation	Under Review
WESTPLAN EARTHQUAKE	Earthquake	FES Commissioner	Current
WESTPLAN ELECTRICITY SUPPLY INTERRUPTION	Loss of or interruption to the supply of electricity that is capable of causing or resulting in loss of life, prejudice to the safety or harm to the health of a person	Coordinator of Energy	Current
WESTPLAN FIRE	Fire	FES Commissioner	Current
WESTPLAN FLOOD	Flood	FES Commissioner	Current
WESTPLAN GAS SUPPLY DISRUPTION	Loss of or interruption to the supply of natural gas	Coordinator of Energy	Current
WESTPLAN HAZMAT	Hazardous Materials (including Radioactive Materials)	Department of Fire and Emergency Services	Current
WESTPLAN HEATWAVE	Heatwave	State Health Coordinator	Current

WESTPLAN	HAZARD	HAZARD MANAGEMENT AGENCY / AGENCY RESPONSIBLE	STATUS
WESTPLAN HUMAN EPIDEMIC	Emergency management of the hazard of human epidemic	State Human Epidemic Controller, Department of Health	Current
WESTPLAN LAND SEARCH	Persons lost or in distress on land, requiring significant coordination of search operations	Commissioner of Police	Current
WESTPLAN LIQUID FUEL SUPPLY DISRUPTION	Loss of or interruption to the supply of liquid fuel	Coordinator of Energy	Current
WESTPLAN MARINE OIL POLLUTION	Actual or impending spillage, release or escape of oil or an oily mixture that is capable of causing loss of life, injury to a person, or damage to the health of a person, property or the environment	Marine Safety, General Manager	Current
WESTPLAN MARINE TRANSPORT EMERGENCY	Actual or impending event involving a ship that is capable of causing loss of life, injury to a person, or damage to the health of a person, property or the environment	Marine Safety, General Manager	Current
WESTPLAN MARSAR	Persons lost or in distress on inland waterways within the limits of a port or in a fishing vessel or pleasure craft within the limits of a port or at sea	Commissioner of Police	Current
WESTPLAN NUCLEAR POWERED WARSHIPS	Radiation escape from a nuclear powered warship	Commissioner of Police	Current

WESTPLAN	HAZARD	HAZARD MANAGEMENT AGENCY / AGENCY RESPONSIBLE	STATUS
WESTPLAN RAIL CRASH (PTA)	PTA rail crash emergencies	Public Transport Authority	Under Review
WESTPLAN ROAD CRASH EMERGENCY	Road crash	Commissioner of Police	Current
WESTPLAN SPRED	Space re-entry debris	Commissioner of Police	Current
WESTPLAN STORM	Storm	FES Commissioner	Under Review
WESTPLAN TERRORIST ACT	Terrorist Act as defined in The Criminal Code	Commissioner of Police	Current
WESTPLAN TSUNAMI	Tsunami	FES Commissioner	Current

Table 8.4 – Support Westplans

WESTPLAN	SUPPORT FUNCTION	AGENCY RESPONSIBLE	STATUS
WESTPLAN EMERGENCY PUBLIC INFORMATION	State Public Information	State Public Information Coordinator	Current
WESTPLAN FREIGHT SUBSIDY	Isolated Communities Freight Subsidy	Department of Fire and Emergency Services	Under Review
WESTPLAN HEALTH	Health	Department of Health	Current
WESTPLAN RECEPTION	The reception of Australian citizens and approved foreign nationals evacuated from overseas	Department of Child Protection and Family Support	Current
WESTPLAN RECOVERY COORDINATION	State Level Recovery Coordination	Department of the Premier and Cabinet	Under Review
WESTPLAN REGISTRATION AND REUNIFICATION	Registration and Reunification	Department of Child Protection and Family Support	Current
WESTPLAN TELECOMMUNICATIONS	Telecommunications	Department of Fire and Emergency Services	Under Review
WESTPLAN WELFARE	The provision of welfare support	Department of Child Protection and Family Support	Current

APPENDIX 7. ACRONYMS

ACRONYM	TERM IN FULL
AIIMS	Australasian Inter-Service Incident Management System
AGDRP	Australian Government Disaster Recovery Payment
ANZEMC	Australia New Zealand Emergency Management Committee
BoM	Bureau of Meteorology
BRIG	Bushfire Review Implementation Group
C3	Command, Control and Coordination
CPFS	Department for Child Protection and Family Support
DEMC(s)	District Emergency Management Committee
DFES	Department of Fire and Emergency Services
DoT	Department of Transport
DPaW	Department of Parks and Wildlife
DPC	Department of the Premier and Cabinet
EM	Emergency Management
EMA(s)	Emergency Management Agency
EM Act	*Emergency Management Act 2005*
EMAG(s)	Exercise Management Advisory Group
EMM	Emergency Management Manual
ERM	Emergency Risk Management
ESNORG	Essential Services Network Operators Reference Group
FES	Fire and Emergency Services
GIS	Geographic Information System

ACRONYM	TERM IN FULL
HMA(s)	Hazard Management Agency
ICCS	Incident Command and Control System
ISG(s)	Incident Support Group
LEMA(s)	Local Emergency Management Arrangement
LEMC(s)	Local Emergency Management Committee
MoU	Memoranda of Understanding
MRWA	Main Roads Western Australia
NDRP	Natural Disaster Resilience Program
NPA	National Partnership Agreement
NPANDR	National Partnership Agreement on Natural Disaster Resilience
PPRR	Prevention Preparedness Response Recovery
PTA	Public Transport Authority
PUO	Public Utilities Office
SECG	State Emergency Coordination Group
SEMC	State Emergency Management Committee
SEMP	State Emergency Management Policy
SES	State Emergency Service
SJA	St John Ambulance Australia
WANDRRA	Western Australian Natural Disaster Relief and Recovery Arrangements
Westplan	State Emergency Management Plan

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