



# Severe Weather

## STATE HAZARD PLAN

### RESPONSIBLE AGENCY

Department of Fire and  
Emergency Services

### APPROVED BY

State Emergency Management  
Committee

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## Contact Details

To provide comment on this plan, contact:  
 Department of Fire and Emergency Services (DFES)  
 20 Stockton Bend,  
 Cockburn Central WA 6164

## Amendments Table

| Amendment Date | Details  | Amended by                                    |
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| December 2021  | Interim Version 0.01 – Initial release of State Hazard Plan Severe Weather approved by SEMC (Resolution Number 52/2021) as per <a href="#">amendments table September 2021</a> . Amalgamation of Westplan-Flood, Westplan-Cyclone and Westplan-Storm, a new State Hazard Plan format, statement of fact changes, removal of duplication with the State Emergency Management (EM) Plan.                       | DFES Emergency Management Intelligence Branch |
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The SEMC acknowledges the Aboriginal peoples throughout the state of Western Australia as the Traditional Custodians of the lands where we live, work and volunteer. We recognise Aboriginal peoples' continued connection to land, waters and community, and pay our respects to Elders both past and present.

This document was designed to be viewed electronically and aims to meet the West Australian Government's accessibility and inclusivity standard, including meeting the World Wide Web Consortium's Web Content Accessibility Guidelines version 2.1 (WCAG 2.1) at level AA. If anything in this document is inaccessible to you, or you are experiencing problems accessing content for any reason, please contact the State Emergency Management Committee Business Unit at [semc.policylegislation@dfes.wa.gov.au](mailto:semc.policylegislation@dfes.wa.gov.au).

All of the State emergency management legislation and documents can be accessed via the [State Emergency Management Framework page](#) of the [State Emergency Management Committee website](#).

# Contents

## PART ONE: INTRODUCTION 5

|     |  |    |
|-----|--|----|
| 1.1 | Background                                 | 6  |
| 1.2 | Scope                                      | 6  |
| 1.3 | Hazard Definition and Impact               | 6  |
| 1.4 | Organisational Roles and Responsibilities  | 9  |
| 1.5 | Related Documents and Legislation          | 10 |
| 1.6 | Activities Informing the Assurance Process | 11 |

## PART TWO: PREVENTION AND MITIGATION 13

|     |  |    |
|-----|--|----|
| 2.1 | Responsibility for Prevention and Mitigation | 14 |
| 2.2 | Mitigation Strategies                        | 15 |
| 2.3 | Risk Treatment Strategies                    | 16 |

## PART THREE: PREPAREDNESS 18

|     |  |    |
|-----|--|----|
| 3.1 | Responsibility for Preparedness                  | 19 |
| 3.2 | Capability Baselines                             | 19 |
| 3.3 | Planning and Arrangements                        | 20 |
| 3.4 | Resources  | 20 |
| 3.5 | Community Education and Information              | 21 |
| 3.6 | DFES Regional Hazard Plans                       | 21 |
| 3.7 | Assistance Arrangements with Other Jurisdictions | 21 |

## PART FOUR: RESPONSE 23

|     |                                       |    |
|-----|---------------------------------------|----|
| 4.1 | Responsibility for Response           | 24 |
| 4.2 | Response Arrangements                 | 25 |
| 4.3 | Notifications                         | 25 |
| 4.4 | Public Warnings/Information           | 26 |
| 4.5 | Evacuation Arrangements               | 29 |
| 4.6 | Traffic Management During Emergencies | 29 |

## PART FIVE: RECOVERY 30

|     |          |    |
|-----|----------|----|
| 5.1 | Recovery | 31 |
|-----|----------|----|

## APPENDICES 33

|             |                            |    |
|-------------|----------------------------|----|
| Appendix A: | Distribution List          | 34 |
| Appendix B: | Glossary of Terms/Acronyms | 35 |

## Appendix C: Roles and Responsibilities of Organisations 39



**Part One:**

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**Introduction**

The State Hazard Plan for Severe Weather (the Plan) provides an overview of arrangements for the management of cyclones, floods and storms in Western Australia (WA) and contains information of prevention, preparedness response and recovery. Collectively these three hazards are referred to as severe weather.

The Plan refers to a range of existing acts, regulations, policies, plans and guidelines that support the management of severe weather events but does not duplicate the information contained in these, instead provides directions to websites or other sources where further information can be obtained.

The Fire and Emergency Services (FES) Commissioner, is the Hazard Management Agency (HMA) for cyclones, floods and storms.<sup>1</sup> The State Emergency Management Committee (SEMC), has delegated responsibility for the development, maintenance, review and exercising of the State Hazard Plan – Severe Weather, which incorporates these three hazards, to the FES Commissioner in accordance with the *Emergency Management Act 2005* (EM Act).<sup>2</sup>

## 1.1 Background

Western Australia is subject to severe weather systems that can cause loss of life and significant damage to communities, businesses and industry. These weather systems can include large scale features such as tropical cyclones and winter-time cold fronts or can be more localised such as severe thunderstorms. Each can produce their own set of phenomena which is described in more detail in section 1.3.

### Notes

<sup>1</sup> *Emergency Management Regulations 2006*, regulation 17(2).

<sup>2</sup> *Emergency Management Act 2005* section 20(1).

<sup>3</sup> <http://www.bom.gov.au/cyclone/tropical-cyclone-knowledge-centre/understanding/tc-info/>.

## 1.2 Scope

This Plan covers emergency management arrangements for the hazards of cyclone, floods and storms within the geographic boundaries of WA, including State waters as defined in the *Emergency Management Regulations 2006* (EM Regulations) (regulation 14). It describes risk reduction strategies, preparedness for, response to and initiation of recovery arrangements associated with these hazards.

## 1.3 Hazard Definition and Impact

### 1.3.1 Cyclone

Cyclones are low pressure systems that form over warm tropical waters and have gale force winds (sustained winds of 63 kilometres per hour or greater and gusts in excess of 90 kilometres per hour near the centre). They can continue for many days, even weeks, and at times their paths can be erratic. A cyclone will dissipate once it moves over land or over cooler oceans.

Dangerous phenomena associated with tropical cyclones are:

- Damaging, destructive or very destructive winds
- Heavy rainfall leading to flash flooding
- Storm surge
- Widespread, riverine flooding.

The severity of a cyclone is described in terms of categories ranging from 1 (weakest) to 5 (strongest). These categories are based on the maximum mean wind speed as shown in the below table. It is noted, gusts significantly stronger than the mean wind speed are common. Stronger gusts may be observed over hilltops, in gullies and around structures.<sup>3</sup>

### Cyclone Severity by Category

| Category | Max Mean Wind (km/h) | Typical Effects  |
|----------|----------------------|--|
| 1        | 63 – 88              | Damaging winds. Negligible house damage. Damage to some crops, trees and caravans. Craft may drag moorings.  |
| 2        | 89 – 117             | Destructive winds. Minor house damage. Significant damage to signs, trees and caravans. Heavy damage to some crops. Risk of power failure. Small craft may break moorings. |
| 3        | 118 – 159            | Very destructive winds. Some roof and structural damage. Some caravans destroyed. Power failures likely  |
| 4        | 160 – 199            | Significant roofing loss and structural damage. Many caravans destroyed and blown away. Dangerous airborne debris. Widespread power failures.                              |
| 5        | Greater than 200     | Extremely dangerous with widespread destruction.   |

### Notes

<sup>4</sup> <https://www.ga.gov.au/about/projects/safety/tcha> [ARI: "average recurrence interval" refers to the average or expected value of the periods between exceedances of a given rainfall total accumulated over a given duration. AEP: "annual exceedance probability" refers to the probability that a given rainfall total accumulated over a given duration will be exceeded in any one year].

Cyclones have been identified as a high-risk hazard with the potential to result in major adverse consequences for the State. On average five cyclones occur during each tropical cyclone season in the waters off the northwest coast. Of these it is expected that two will cross the coast, one of which will be severe. Although rare, they can sometimes impact the southwest of WA, bringing strong winds, flooding rains and hazardous bushfire conditions.

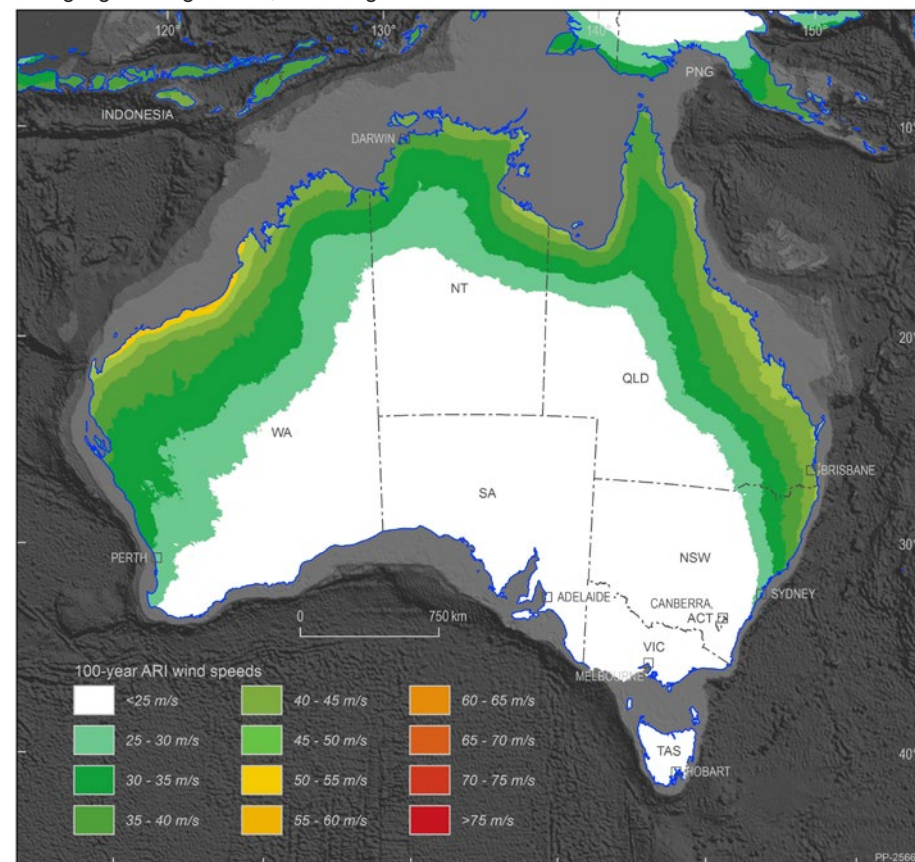


Figure 1: Tropical Cyclone Hazard Assessment 100-year ARI/1% AEP gust wind speeds.<sup>4</sup>

To understand the hazard, exposure and vulnerability associated with cyclones, Geoscience Australia (GA) conducts the Tropical Cyclone Hazard Assessment (TCHA), which provides an evaluation of the likelihood and intensity (“how big and how often”) of the occurrence of tropical cyclone winds across the Australian region, covering mainland Australia, islands and adjacent waters. The most recent TCHA was conducted in 2018. The 100-year average recurrence interval (ARI) wind speed map (Figure 1) shows the greatest hazard exposure is along the northwest Australian coastline between Exmouth and Broome.

Further hazard information for cyclones can be found on the [Bureau of Meteorology](#) (the Bureau) and [Geoscience Australia](#) websites.

While the winds and rain associated with tropical cyclones are potentially damaging, the most potentially destructive and deadly phenomenon associated with tropical cyclones that make landfall is the storm surge. A storm surge can be thought of as an abnormal rise in the water level over and above the normal (astronomical) tide and is caused by strong winds piling water up against the coast as the tropical cyclone approaches. Storm surges are at their most dangerous when they arrive at high tide - when the sea is already at its high point. This can result in extreme flooding of coastal areas, sometimes for kilometres inland.

Further information regarding storm surge can be found on the [Bureau's website](#).

### 1.3.2 Storms

WA is impacted by two distinct types of storms, one type occurring in the warm season and one occurring in the cool season.

#### Warm Season Storms

Warm season severe thunderstorms generally occur October to April and can occur anywhere in the state. Weather phenomena associated with warm season severe thunderstorms are:

- Wind gusts of 90 kilometres per hour or more
- Very heavy or intense rainfall that may lead to flash flooding
- Hail with a diameter of 2 centimetres or more
- Tornadoes.

These weather phenomena impact on residential, commercial, industrial and service sectors of the community. They disrupt lifelines, burden emergency services with an increased workload and can cause injury and death. Rainfall from severe storms can cause both riverine and flash flooding. Lightning is one of the most common bushfire ignition sources in Australia. Hail has resulted in cars being damaged, windows destroyed in homes, and livestock and wildlife deaths. Strong winds knock down trees, power lines, mobile homes and buildings not built or maintained to standard. Under the right conditions, tornadoes can also form with the potential to damage or destroy structures.

#### Cool Season Storms

Cool season storms (generally May to September) are mostly associated with the passage of cold fronts and are usually confined to the South West Land Division, particularly coastal parts. Damage may be very localised and caused by weak tornadoes associated with a cold front or damage may be widespread and associated with the passage of a very intense cold front. Weather phenomena associated with cool season severe storms are:

- Mean winds in excess of 62 kilometres per hour or wind gusts of 90 kilometres per hour or more over land
- Very heavy or intense rainfall that may lead to flash flooding
- Tornadoes
- Storm surge.

The passage of strong winter-time cold fronts can produce a storm surge,



which can cause abnormally high tides along the west and south coasts. This can cause inundation of low-lying areas including the Swan River Foreshore area in the Perth Central Business District and Geographe Bay. Large swells and wave action can cause severe coastal erosion during these events.

Further information on severe storms can be found on [the Bureau](#) website.

### 1.3.3 Flood

A riverine flood occurs when water levels rise over the top of riverbanks due to excessive rain from weather systems producing widespread heavy rainfall. The flooding of rivers, creeks, lakes and basins following heavy rainfall is the most common form of flooding in WA.<sup>5</sup> Historically, floods have tended to be seasonal, with those in the north of the State more likely to occur in the summer wet season while floods in the south more likely to occur during the winter.<sup>6</sup> At present, however, summer rainfall is likely to cause almost as many flood emergencies in the south as winter rainfall.<sup>7</sup>

Riverine flooding in parts of WA can spread for thousands of square kilometres and may last for weeks. In contrast, flash flooding, is generally defined as flooding occurring within approximately six hours of rain, usually results from relatively short intense bursts of rainfall, commonly from thunderstorms, and is characterised by rapid rises in water-levels.

While flash flooding can occur in any part of Australia, urban areas with poor drainage systems are particularly vulnerable. Flash floods are typically localised, rapid onset events and difficult to forecast. It is therefore difficult to provide effective warnings against this type of hazard. The flood warning services described at section 4.4.7 refer to riverine flooding.

#### Notes

<sup>5</sup> <http://www.bom.gov.au/water/floods/floodWarningServices.shtml>.

<sup>6</sup> Water and Rivers Commission, Flooding in Western Australia, 2000, page 2.

<sup>7</sup> Advice provided by WA Senior Hydrologist – Flood Preparedness and Response, Community Services Group, Bureau of Meteorology, March 2020.

<sup>8</sup> *Emergency Management Regulations 2006* regulation 17(2).

Further information on the flood hazard can be found on the [Bureau](#) and [Department of Water and Environmental Regulation](#) (DWER) websites.

## 1.4 Organisational Roles and Responsibilities

The FES Commissioner is the HMA for cyclone, flood and storm and is responsible for the management of the adverse effects of a severe weather emergency across the full prevention, preparedness, response, and recovery spectrum.<sup>8</sup>

A coordinated response to a severe weather emergency requires emergency management agencies and support organisations to undertake a variety of agreed and statutory roles and responsibilities. It is recommended that each agency with a role or responsibility under this Plan has appropriate operational procedures in place in accordance with this Plan. These would be in addition and complementary to the agency's operational procedures that enable them to carry out their roles and responsibilities under the State EM Plan.

Agencies involved in severe weather response or have roles and responsibilities to provide essential services to the community should maintain a Business Continuity Plan to ensure they maintain capabilities in a major severe weather event.

Information regarding the roles and responsibilities of relevant agencies under this plan are detailed in Appendix C.

### 1.4.1 Flood Warning Consultative Committee

The WA Flood Warning Consultative Committee (FWCC) serves as the primary vehicle for achieving coordination among key stakeholders in WA. These consultative committees were established in the late 1980s by the Bureau,

are chaired by the Bureau State/Territory Manager and do not have an operational role. The terms of reference for the FWCC are to:

- undertake planning for warning systems and process improvements
- establish requirements for new and upgraded flood forecasting and warning systems that are based on best practice
- provide strategic guidance on the overall development of flood warning services in WA.

The FWCC also promotes close liaison and effective coordination between meteorological and hydrological forecasting groups to create an environment in which the formulation and presentation of warnings are based on the best available technical and scientific knowledge.

The FWCC comprises representatives from the Bureau: (Chair), DFES, Department of Water and Environmental Regulation (DWER), Main Roads WA, Water Corporation, Western Australian Local Government Association (WALGA) and other agencies as seconded by the Chair. The FWCC meets at least two times per year, with additional meetings scheduled as considered necessary

## 1.4.2 Australian Tropical Cyclone Advisory Group

The Australian Tropical Cyclone Advisory Group (ATCAG) is a national forum established to support tropical cyclone hazard management and response agencies across northern Australia (primarily DFES, Northern Territory Emergency Services (NTES), Queensland Fire and Emergency Services (QFES), and New South Wales State Emergency Service (NSW SES)) to help mitigate the impacts of tropical cyclones. ATCAG provides a forum to coordinate public education, services and warning processes across the HMAs in the relevant jurisdictions, the Bureau and emergency broadcasters such as ABC Emergency.

### Notes

<sup>9</sup> Intergovernmental Agreement on the Provision of Bureau of Meteorology Hazard Ser-

vices [https://federation.gov.au/sites/default/files/about/agreements/intergovernmental-agreement-provision-bureau-meteorology\\_0.pdf](https://federation.gov.au/sites/default/files/about/agreements/intergovernmental-agreement-provision-bureau-meteorology_0.pdf)

<sup>10</sup> Service Level Specification for Flood Forecasting and Warning Services for Western Australia – Version 3.2, 2013 [http://www.bom.gov.au/wa/flood/WA\\_SLS\\_current.pdf](http://www.bom.gov.au/wa/flood/WA_SLS_current.pdf)

## 1.4.3 Other Severe Weather Advisory Groups

While there is no formal advisory group for storm, DFES maintains regular liaison with the Bureau, GA, universities and other institutions to maximise the considerable expertise that exists within Australia on weather conditions likely to endanger life.

Where required, DFES may establish advisory groups, working groups or committees at state, regional/district or local level to examine and advise on various aspects of severe weather planning.

## 1.5 Related Documents and Legislation

This Plan is to be read in conjunction with the State Emergency Management Framework including the *Emergency Management Act 2005*, the *Emergency Management Regulations 2006*, State Emergency Management Policy, plans and procedures.

This Plan is to be read in conjunction with the following documents:

- Building Code of Australia (updated annually)
- National Construction Code of Australia
- *State Planning Policy 34 Natural Hazards and Disasters*
- Intergovernmental Agreement on the Provision of Bureau of Meteorology Hazard Services to the States and Territories<sup>9</sup>
- National Arrangements for Flood Forecasting and Warning. Service Level Specification for Flood Forecasting and Warning Services for Western Australia (version 3.2)<sup>10</sup>
- Department of Health WA State Health Emergency Response Plan
- DFES Western Australian Fire and Emergency Services Manual

- Local Emergency Management Arrangements.<sup>11</sup>

Legislation and codes relevant to this plan include but are not limited to:

- *Building Act 2011*
- *Building Regulations 2012*
- EM Act
- EM Regulations
- *Fire and Emergency Services Act and Regulations 1998*
- *Local Government (Miscellaneous Provisions) Act 1960*
- *Local Government Act 1995*
- *Mines Safety and Inspection Act 1994*
- *Main Roads Act 1930*
- *Meteorology Act 1955 (Commonwealth)*
- *Metropolitan Water Authority Act 1982*
- *Metropolitan Water Supply, Sewerage, and Drainage Act 1909*
- *Planning and Development Act 2005*
- *Water Agencies (Powers) Act 1984*
- *Water Services Act 2012*
- *Work Health and Safety Act 2020.*

## Notes

<sup>11</sup> Under section 41(1) of the *Emergency Management Act 2005*, a local government is to ensure that local emergency management arrangements are prepared for emergency management in the local government's district.

<sup>12</sup> DFES Operational Lessons Management Policy 2020.

<sup>13</sup> DFES Directive 3.19 Operational Lessons Management.

## 1.6 Activities Informing the Assurance Process

The HMA engages with the Bureau, GA and other subject matter experts to ensure ongoing awareness and a contemporary understanding of the hazard.

The HMA ensures aspects of operational performance are reviewed and that a consistent and structured approach is applied to all aspects of operational performance that:

- complies with relevant State Emergency Management Policy and plans
- ensures that identified lessons and opportunities for improvement are actioned
- ensures that the HMA's service delivery meets community expectations.<sup>12</sup>

DFES will undertake operational lessons management activities after all incidents in accordance with DFES' Operational Lessons Management Policy and directives. DFES has adopted three types of After Action Reviews. The relevant Assistant Commissioner or Command Head will determine which After Action Review is utilised.

DFES Operations applies lessons management principles in the following manner:<sup>13</sup>

- Observations made during operations or in support of operations are analysed to develop insights and identify lessons for consideration by DFES Operations management.
- Approved lessons are validated by relevant personnel.
- Approved lessons are implemented and tested to ensure operational improvements are embedded.

## 1.0 | INTRODUCTION

- Lessons learned and operational successes are sustained by sharing with all DFES personnel and relevant emergency management partners.

The Operational Area Manager (OAM)/Incident Controller (IC) will ensure that all agencies involved in a multi-agency emergency are able to provide input to any post operation analysis. DFES will work towards a collaborative multi-agency debrief, analysis and lesson development process that informs DFES operations.

DFES reviews operational lessons management activities to ensure ongoing effectiveness.

Post Operation Reports must be provided to SEMC in accordance with State EM Policy section 5.11 and State EM Plan section 5.7.



# Part Two:

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# Prevention and Mitigation

By proactively reducing the presence and effects of a hazard, it is possible to reduce the financial and social costs to communities over time, reduce impact on the built and natural environments, and thereby improve the resilience of the broader community. In WA, a range of prevention and mitigation strategies and projects have been developed and implemented to enhance planning and reduce the risk associated with severe weather events.

## 2.1 Responsibility for Prevention and Mitigation

As the HMA, the FES Commissioner is responsible for risk reduction aspects of cyclone, flood and storm events, within the limitations of legislation,<sup>14</sup> resource capabilities and capacity.

Local governments are responsible for planning in their local communities by ensuring appropriate local planning controls, which must be consistent with objectives and requirements set by the Western Australia Planning Commission (WAPC).<sup>15</sup> The WAPC is responsible for approving subdivision applications and has delegated powers for the determination of development applications to local governments and development assessment panels.

Building construction standards are set by the State, usually in accordance with the National Construction Code of Australia. Local governments and registered building surveyors are responsible for ensuring adherence to construction standards.

The combined area of each of the local government districts listed below is designated under section 16 of the EM Act to be a cyclone area:<sup>16</sup>

- Ashburton
- Broome
- Carnarvon
- Derby-West Kimberley
- East Pilbara
- Exmouth
- Karratha
- Port Hedland
- Shark Bay
- Wyndham-East Kimberley.

The EM Act sets out powers given to local governments regarding preventing and mitigating cyclones within this designation.<sup>17</sup> The *Local Government Act 1995* empowers local governments to conduct mitigation activities such as earthworks or other works on land to prevent or reduce the impact of floods.<sup>18</sup> DWER also has risk treatment responsibilities related to the development of floodplain management strategies which are empowered by the *Water Agencies (Powers) Act 1984*.

The responsibility for dam safety lies with the dam owner.<sup>19</sup> The Australian National Committee on Large Dams (ANCOLD) has created guidelines to disseminate best practices in Australia for both large and small dams, as well as water and tailings dams.

### Notes

<sup>14</sup> *Emergency Management Act 2005, Fire and Emergency Services Act 1998.*

<sup>15</sup> WAPC State Planning Policy 34 Natural Hazards and Disasters, <https://www.dplh.wa.gov.au/spp3-4>.

<sup>16</sup> Government Gazette of Western Australia number 59 of 2018. 27 April 2018.

<sup>17</sup> *Emergency Management Act 2005* section 44-s49.

<sup>18</sup> *Local Government Act 1995*, Schedule 3.2, number 2.

<sup>19</sup> Department of Water and Environmental Regulation, Water quality protection note number 53 September 2019, page 2.

## 2.2 Mitigation Strategies

Mitigation strategies contribute to the increased resilience of our communities. Cyclones, floods and storms cannot be prevented, but strategies to reduce their impacts on communities can be developed and implemented to reduce their impacts on communities.

Key strategies include land use planning and design decisions that avoid developments and community infrastructure in areas prone to hazards; institutional strategies, such as the development and enforcement of building codes; design improvements to infrastructure or services such as roads and telecommunications; early warning systems; awareness campaigns to enhance knowledge of how to prepare for disaster events; and engineering solutions (such as the building and maintaining of levees, sea walls, etc).

Key mitigation strategies specific to the prescribed hazards incorporated within this plan are set out below.

### 2.2.1 Cyclones

Research is ongoing to better understand building performance in cyclonic conditions. While enforcing current national construction codes for cyclone-prone areas, it is critical to build on current understanding to better advise local communities ahead of tropical cyclones.

Recent research has demonstrated that houses built pre-1980s (pre-code) are vulnerable to TC events and offer lesser protection compared to those houses built to code post-1980s, irrespective of the maintenance level.

The only way to increase performance of these older residential buildings is to retrofit to modern standards. It is also understood that even if built to code, a house's performance under extreme wind loads is reliant on being maintained during its life so that its resilience is retained.

Further, the collection of debris will reduce the impact of a cyclone on communities as these materials can be potential missiles during an event.

Conveying cyclone risk and what may be done to mitigate impacts through products such as preparedness and maintenance guides, annual seasonal briefings, and online and traditional media outlets are critical strategies adopted by the emergency management sector to reduce community impact.

### 2.2.2 Floods

Impacts from riverine flooding can be largely mitigated by restricting the construction of dwellings and other buildings in flood prone areas. Where this is not possible due to factors such as commercial activity such as farming, engineering solutions, such as the building of levees can significantly reduce the risk of flood impact.

Understanding flood history, roads vulnerable to flooding, and evacuation areas are key mitigation strategies for communities. This understanding can be enhanced through sources such as the DFES website and the local government.

### 2.2.3 Storms

Mitigation strategies for storms are similar to those outlined for cyclone-prone regions. Key mitigation strategies include maintaining structures to existing building codes and communicating to the community via websites and other media the importance of removing items that may become projectiles in high winds, such as trees or branches and outdoor furniture.

### 2.2.4 Research

As highlighted above, DFES actively collaborates with the Bureau, GA, other State government agencies and universities to build a stronger understanding of the potential impacts of severe weather events on social, built, economic natural environments. This research feeds directly into state, regional and local risk workshops and planning, and forms the basis for a range of decision support and operational tools.

### 2.2.5 Community Information and Engagement

DFES, local governments, GA and the Bureau provide a contribution to education programs developed to inform and educate the public on severe weather notification, risk and management. These programs focus on providing knowledge and skills that aim to encourage behavioural change and enhance community resilience.

#### Severe Weather Risk Reduction Strategies

| Type    | Strategy  | Responsible Organisations  |
|---------|---|--|
| Generic | Cyclone, flood and storm risk identification and mapping.   | DFES, the Bureau, GA, and DWER   |
| Generic | Application and enforcement of National Construction Code of Australia and informed land use planning for vulnerable areas.                       | Local governments and Department of Mines, Industry Regulation and Safety (DMIRS), DWER, and Department of Planning, Lands and Heritage (DPLH) |
| Generic | Participation in research and development programs directed towards risk treatment strategies.  | DFES, the Bureau, GA, DWER, DMIRS  |
| Generic | Promoting an improved state of resilience within communities to improve the management of future risks.   | DFES, local governments  |
| Generic | Developing resilience in the community and minimising the vulnerability of communities to effects of cyclone, flood and storm.                    | DFES in partnership with local governments   |
| Generic | Promotion of and participation in community awareness campaigns for 'at risk' communities.  | Local governments assisted by DFES   |
| Generic | Identification of suitable buildings for designation as evacuation centres.   | Local governments in consultation with Department of Communities   |
| Generic | Maintenance of a register of potential evacuation centres.  | Department of Communities in consultation with Local Emergency Management Committee (LEMC)   |
| Generic | Ensuring the sustainability of service delivery of critical infrastructure through design and maintenance standards.                              | Essential services and network operators   |
| Generic | Providing advice in relation to the design and maintenance status of critical infrastructure services and access routes in 'at risk' communities. | Essential services and network operators   |

## 2.3 Risk Treatment Strategies

The State has adopted several key risk reduction strategies associated with cyclone, flood and storm emergencies. These strategies are shown the table below.



| Type    | Strategy  | Responsible Organisations   |
|---------|---|---|
| Generic | Participate in research in social vulnerability models as they apply to cyclones, floods, and storms.                           | Relevant agencies and local governments   |
| Cyclone | Cyclone track and intensity forecasting   | The Bureau  |
| Cyclone | Provision of tropical cyclone advice to the community.  | DFES, the Bureau  |
| Cyclone | Structurally retrofit, where necessary, public buildings which provide essential services following any tropical cyclone event. | All relevant agencies   |
| Cyclone | Storm surge inundation mapping  | DFES, the Bureau  |
| Flood   | Flood mapping and provision of advice on floodplain management  | DWER  |
| Flood   | Management of local drainage networks   | Local governments in consultation with Water Corporation and DWER   |
| Flood   | Encourage the relocation of structures to areas outside of the floodplain.  | Local governments   |
| Flood   | Monitoring weather patterns to identify potential and or actual floods and issue warnings to the community.                     | The Bureau and DFES   |
| Flood   | Flood modelling and predictions mapping   | DFES and the Bureau, with support from DWER   |
| Flood   | Provision of advice to the community in the form of Flood Information Bulletins, Flood Watch and Warning Messages.              | The Bureau and DFES   |
| Flood   | Participation in the Flood Warning Consultative Committee.  | The Bureau (Chair), DFES, DWER, Main Roads Western Australia (MRWA), Water Corporation, Department of Communities (Housing), Department of Planning, Lands and Heritage and WALGA |



**Part Three:**

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**Preparedness**

## 3.1 Responsibility for Preparedness

As the HMA for cyclones, floods and storms, the FES Commissioner is also responsible for the preparedness of these hazards<sup>20</sup> Preparedness activities may include:

- Understanding hazard exposures, vulnerabilities, impacts and triggers
- Developing plans and arrangements based on risk assessments across the continuum of prevention, preparedness, response and recovery
- Establishing, maintaining and enhancing capabilities and whole-of-sector interoperability needed to cope with and recover from cyclones, floods and storms
- Supporting the resilience of communities by promoting activities to raise hazard awareness and strengthen core capabilities necessary to manage future risks.

## 3.2 Capability Baselines

The Australian Disaster Preparedness Framework has been developed and endorsed by the Australia-New Zealand Emergency Management Committee (ANZEMC) to support the national development of the required capability to effectively prepare for and manage severe to catastrophic disasters. The Framework acknowledges the responsibility of all jurisdictions to deal with disasters or emergencies within their existing arrangements.

It emphasises the importance of simulation and exercising to consider the capabilities required to effectively deal with the task at hand, and the capacity required to sustain this level of capability over an identified time.

A State level response is initiated for any incident that will or is likely to cause a severe and widespread impact on industry, the community or the environment. It usually requires a response being managed primarily at

### Notes

<sup>20</sup>Emergency Management Act 2005 section 3.

a State level. To assist with planning and preparedness for a State level response to a severe weather emergency, supporting agencies are to consider the following scenarios as indicative baselines.

### 3.2.1 Cyclone

A category 5 cyclone impacting a regional centre causing significant impact on infrastructure and residential buildings (Slight 1,604; Moderate 1,091; Extensive 1,221; and Complete 1,128). This capability baseline is based on TC Vance 1999, TC Damien 2020 and Category 5 scenario modelling.

### 3.2.2 Flood

Widespread flooding across one or more of the following catchments:

- Significant flooding across the Kimberley region resulting in a number of communities being isolated
- Significant flooding occurs in the Onslow Coastal Rivers catchments resulting in the cutting of the North West Coastal Highway
- Major flooding occurs in the Gascoyne River catchment, including the township of Carnarvon, with upstream catchment areas significantly impacted. The Great Northern Highway is cut at multiple locations
- Significant overland flooding in the Goldfields district catchment results in major infrastructure damage. Significant impacts to East-West rail and road transport routes
- Significant overland flooding in the South East Coastal catchments results in major infrastructure damage
- Major flooding occurs in the Avon River catchment including the townships of Beverley, York, Northam and Toodyay
- Major flooding occurs in the Swan River catchment

- Major flooding is expected in the Blackwood catchment at Bridgetown and Nannup several days after peaks are observed in Avon and Swan Rivers.

This capability baseline is based on the 2017 South West Land Division flooding event, the 2020 Tropical Cyclone Veronica and the 2017 State Risk Project scenario conducted in 2019.

### 3.2.3 Storm

A strong cold front through Perth and the South West Land Division with coastal tornadoes, hail, wind damage and minor flooding.

This capability baseline is based on the 2005 Perth and South West storms and the 2010 Perth hailstorm event.

## 3.3 Planning and Arrangements

A successful response operation to a severe weather event depends on sound planning, effective resource utilisation and a coordinated response which is timely, efficient and effective.

The concept of this Plan is to employ and coordinate the resources of State and Commonwealth government departments, authorities and agencies; resources available to private industry; and resources available to volunteer groups for severe weather operations.

This concept is based on:

- availability of the DFES 24-hour State Operations Centre (SOC) for receipt and actioning of weather alerts and warnings
- establishment of operational facilities at three levels (State, regional and local), from which management of severe weather emergency management operations take place

### Notes

<sup>21</sup> *Emergency Management Act 2005* section 41(1).

- deployment of emergency service personnel
- provision of expert technical advice on severe weather impact modelling by State and Commonwealth agencies when requested by DFES
- provision of expert technical advice on roadways and transport routes by Main Roads Western Australia (MRWA), when requested by DFES
- provision of expert technical advice on critical infrastructure by relevant agencies, when requested by DFES
- tasking of agencies in a coordinated manner in support of DFES. Agency procedures are then employed to carry out tasks
- delivery of coordinated, accurate, timely and actionable information to the community.

Local government is responsible for the development of local emergency management arrangements.<sup>21</sup> The LEMC is to provide advice to local government in this regard.

## 3.4 Resources

Identifying and securing access to critical response enabling resources and expertise is an essential component of severe weather preparedness. The response effort will be compromised if these resources cannot be sourced or deployed into the impacted regions. Planning at all levels should reference resource identification, prioritisation, sourcing, acquisition, maintenance and management arrangements.

As the HMA, the FES Commissioner is responsible for the overall provision and management of resources and personnel required to physically respond to a severe weather event, including acquisition, pre-positioning and inventory management. Specific responsibilities include:

- establishing, equipping, training and maintaining a Urban Search and

Rescue Task Force

- prioritising, procuring and allocating specialist equipment and vehicles
- safely storing equipment and vehicles in locations that provide ease of access but protection from damage from hazards such as fires and structural collapse.

Emergency management agencies and support organisations are required to provide their own resources in the first instance and request additional resources from DFES if required.

When the total resources of the State (government or commercial) cannot reasonably cope with the needs of the operation, a request for assistance from other jurisdictions may be made in accordance with section 3.7, Assistance Arrangements with Other Jurisdictions

### 3.5 Community Education and Information

DFES, the Bureau, and local governments contribute to education programs developed to inform and educate the public on severe weather notification, risk and management.

DFES conducts a series of community engagement programs and campaigns focused on providing knowledge, skills and behaviour change to achieve a greater level of community capacity and preparedness to respond to an emergency. These programs are generally conducted at a particular time of the year and while they have a Statewide focus, they encourage staff and volunteers to deliver content relevant to the local community where possible.

Before the expected commencement of the wet season, DFES coordinates a visit to communities by representatives from DFES, the Bureau, local government and the Department of Communities. Representatives are available to discuss the cyclone and flood seasonal outlook, community safety and welfare. These visits are combined with appropriate targeted information on the importance of preparedness and personal responsibility in making the necessary preparations.

As part of these education programs, DFES aims to make the community aware that storm surge is not included by many general insurance policies in Australia. DFES also encourages individuals to become familiar with their insurance policies and are aware of what is and is not covered.

During severe weather events, DFES will provide community information in a coordinated manner through the IC and/or OAM (if an Incident Management Team (IMT) is not established).

Media and public information strategies are reviewed annually by DFES to ensure appropriate communication of severe weather information to the community.

### 3.6 DFES Regional Hazard Plans

Where areas susceptible to severe weather are identified as a risk to the community, DFES may develop regional severe weather plans to address the prevention, preparedness, response and recovery activities for severe weather.

### 3.7 Assistance Arrangements with Other Jurisdictions

Should the scale of a severe weather event be such that the total resources of the State cannot reasonably cope with the needs of the operation, DFES and/or the WA Government may seek assistance from other states and territories, the Australian Government or from overseas as outlined in section 5.10 of the State EM Policy.

#### 3.7.1 National and International Assistance Arrangements

The Australian Government Disaster Response Plan (COMDISPLAN) (activated by the Deputy Coordinator General, Emergency Management and Response Group, National Emergency Management Agency (NEMA)) facilitates the

provision of non-financial Commonwealth assistance to states and territories following a formal request. This assistance can include but is not limited to air and maritime border control, traffic management and communications capabilities; satellite imagery capabilities; Australian Medical Assistance Team deployment and disaster victim identification.<sup>22</sup>

In accordance with State EM Policy section 5.10, State EM Plan section 5.6, all requests for Australian Government Physical Assistance must be made through the State Emergency Coordinator to NEMA for consideration by the Director Coordinator General, NEMA.

Further detail on Australian Government Physical Assistance can be found in State EM Response Procedure 4.20.

### 3.7.2 Interstate Assistance Arrangements

The Australasian Arrangement for Interstate Assistance (AIA) provides a framework for mutual assistance between Australasian fire services, emergency services and land management agencies. It supports the timely and meaningful exchange of fire and emergency management capability between Australian states and territories, and between Australia and New Zealand. It does not replace any existing bilateral agreements that may exist between jurisdictions. It caters for occasions when significant resource deployments are requested for response to large scale events.

The AIA was developed and is maintained by the [National Resource Sharing Centre](#) (NRSC), in consultation with the Commissioners and Chief Officers Strategic Committee (CCOSC). The CCOSC of the Australasian Fire and Emergency Service Authorities Council (AFAC) has endorsed the AIA as the basis for sharing fire and emergency service resources across state boundaries and between Australian states, territories

and New Zealand. Through NEMA, the Commonwealth co-chairs CCOSC and is integral to this arrangement. The CCOSC and NRSC are primary points of contact for any request made through the AIA for an interstate deployment.<sup>23</sup>

#### Requesting Interstate Assistance

Requests for interstate deployment support can be made by the FES Commissioner directly to the relevant jurisdiction, as required. Deployment must be undertaken according to each agency's policy and directives.

#### Providing Interstate Assistance.

In accordance with agency policies and directives, DFES will consider requests for assistance from other jurisdictions via the DFES State Operations Centre. Any requests for assistance will be subject to conditions agreed upon between the WA Government and the requesting state or territory and/or the Australian Government.

Deployment must be undertaken according to each agencies policy and directives. The Minister must be notified prior to any deployment of any agency personnel.

#### Notes

<sup>22</sup> <https://www.homeaffairs.gov.au/emergency/files/plan-disaster-response.pdf>.

<sup>23</sup> Australasian Arrangement for Interstate Assistance, AFAC National Resource Sharing Centre (2019) <https://www.afac.com.au/initiative/nrsc/article/principles-of-arrangement-for-interstate-assistance>



# Part Four:

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# Response

## 4.1 Responsibility for Response

As the HMA, the FES Commissioner is responsible for the coordination of a response to cyclone, flood and storm events. To facilitate the effective execution of these responsibilities, DFES has established the following strategic control priorities and guiding principles.

### 4.1.1 Strategic Control Priorities

The Strategic Control Priorities for severe weather events are:

- Protection and preservation of life: This is the fundamental overarching priority for the State and includes prioritising the safety of:
  - emergency services personnel and
  - community members, including at-risk community members and visitors/tourists located within the incident area.
- Provision of community warnings and information.
- Protection of critical infrastructure and community assets.
- Protection of residential property.
- Protection of assets supporting the livelihood of individuals and the financial sustainability of communities.
- Protection of places of environmental and heritage significance.

Where there are concurrent risks or competing priorities, the overarching principle of the Protection and Preservation of Life must drive the identification and the prioritisation of all roles, decisions and actions associated with the emergency management response.<sup>24</sup>

#### Notes

<sup>24</sup> State Emergency Management Committee, "SEMC Bulletin Number 2 2017: The State Strategic Control Priorities for All Hazards Are:"

<sup>25</sup> State EM Plan section 2.3.

<sup>26</sup> *Emergency Management Regulations 2006* regulation 17(2).

<sup>27</sup> State EM Policy section 5.2 and State EM Plan section 5.1.

### 4.1.2 Principles

In accordance with the State Emergency Management Framework, the management of a severe weather emergency is based on a graduated approach<sup>25</sup> using the following guiding principles:

- The FES Commissioner is the HMA for cyclones, floods and storms in WA<sup>26</sup>
- DFES is the Controlling Agency for cyclones, floods and storms in WA<sup>27</sup>
- DFES is responsible for activating and controlling the response to a cyclone, flood or storm emergency within WA
- DFES will use arrangements which employ identified emergency management agencies and support organisations to provide an effective and coordinated response
- Responsibility for resourcing and responding to an emergency initially rests with the IC at the local level
- An emergency beyond the capability of local resources will receive support from district resources
- State resources will be provided if district resources are inadequate
- The State, through the State Emergency Coordinator (SEC) will seek assistance from the Commonwealth, State and Territory Governments if State resources are inadequate
- Communication between local, district, State, Interstate and Commonwealth authorities is essential to ensure the intelligent and timely application of resources to manage the emergency.



## 4.2 Response Arrangements

If the severe weather event is likely to result in significant impacts on WA and attract national attention, DFES will send Situation Reports to the Australian Government National Situation Room (NSR) regarding actions taken for this event. This will assist in providing whole-of-Australian-Government situational awareness.

If another hazard occurs as a consequence of a severe weather event and, if FES Commissioner is not the HMA or DFES the Controlling Agency for the consequential hazard then the provisions of State EM Plan section 5.1.2 will apply. DFES shall remain responsible for managing the severe weather event.

### 4.2.1 Levels of Response

The declaration of an incident level is a critical component of emergency management in terms of triggering the responsibilities and actions of emergency management stakeholders to ensure a response in which the size of both the IMT and the coordination structure are proportional to the size of the emergency.

State EM Response Procedure 4.2 enables one of three operational levels to be declared by the IC depending upon the characteristic 'factors' of the emergency. Level one is the lowest level, typically a routine incident that has a single or limited multiagency response. Level three is the highest level, typically the most complex, requiring the coordination of a multi-agency response and recovery and significantly impacting the routine functioning of the community and infrastructure.

This procedure is aligned with State EM Plan section 5.1.5 and is reflected in the Western Australian Fire and Emergency Service Manual:

#### Notes

<sup>28</sup> *Fire and Emergency Services Act 1998* section 18B.

<sup>29</sup> *Emergency Management Act 2005* section 50.

<sup>30</sup> *Emergency Management Act 2005* section 56.

<sup>31</sup> *Meteorology Act 1955* [Commonwealth] section 6(1)(c).

<sup>32</sup> [http://www.bom.gov.au/weather-services/severe-weather-knowledge-centre/WarningsInformation\\_SW\\_SWW.shtml](http://www.bom.gov.au/weather-services/severe-weather-knowledge-centre/WarningsInformation_SW_SWW.shtml).

Part 5 Incident Management Teams, section 3 Incident Level Declaration.

### 4.2.2 Declaration of an Emergency Situation or State of Emergency

The FES Commissioner has powers in relation to natural disasters under the *Fire and Emergency Services Act 1998*.<sup>28</sup> These powers are wide-ranging and are generally adequate to respond to severe weather emergencies.

If an incident occurs that requires extraordinary powers to protect life, property or the environment, the EM Act can be used to access emergency powers through the declaration of an 'Emergency Situation'<sup>29</sup> or a 'State of Emergency'.<sup>30</sup>

## 4.3 Notifications

The Bureau Regional Forecasting Centre (Bureau-RFC) will advise DFES via the District Officer State Situation (DOSS) if cyclonic weather, flooding or storms may occur. Alternatively, advice may be received from the Bureau Meteorologist embedded in the SOC.

The Bureau has a Commonwealth statutory responsibility for the issue of warnings of gales, storms and other weather conditions likely to endanger life or property.<sup>31</sup>

The Bureau issues Severe Weather Warnings to advise the community of the threat of severe weather events. As some severe weather events can be complex, it is common for Severe Weather Warnings to cover multiple phenomena within a single weather pattern.<sup>32</sup> The Bureau issues alerts through media outlets, email, internet, marine communications and aircraft communications.

## 4.4 Public Warnings/Information

### 4.4.1 Community Alerts for Cyclone, Storm and Flood

DFES is responsible for issuing alerts and warnings where severe weather poses a risk to the community.

Informed by the Bureau warning products, DFES will issue alerts based on the amount of time until the severe weather is expected to affect communities.

### 4.4.2 Emergency WA

Emergency WA ([emergency.wa.gov.au](https://www.emergency.wa.gov.au)) is Western Australia's official source for emergency information on cyclone, flood and storm. Managed by DFES, Emergency WA provides information on a range of emergency incidents, and warnings where there is a potential threat to life or property.

Warnings published on Emergency WA are simultaneously distributed to:

- DFES Emergency Information Line: 13 DFES (13 33 37)
- DFES Twitter at [www.twitter.com/dfes\\_wa](https://www.twitter.com/dfes_wa)
- DFES Facebook at [www.facebook.com/dfeswa](https://www.facebook.com/dfeswa)
- ABC radio and other media outlets for the purposes of emergency broadcasting.

Should high level coordination of public information across agencies and appointment of a support structure be required to issue warnings or information in a particular emergency, DFES may call upon the State Emergency Public Information Coordinator (SEPIC) to activate the State Support Plan (SSP) - Emergency Public Information.

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#### Notes

33 Directive 3.1 – WA Fire & Emergency Services, SAP 3.1.D – Telephone Warning System, May 2018.

### 4.4.3 Emergency Alert

The Emergency Alert Telephone Warning System (TWS) is a national web-based system designed to alert people within a specific location of any emergency where there is an imminent threat. The TWS provides warnings to fixed line phones (based on service address) and mobile phones (based on billing address and location based) in a defined area.

The IC or IC delegate can request activation of the TWS in support of incidents and emergencies.<sup>33</sup>

### 4.4.4 Standard Emergency Warning Signal (SEWS)

The Standard Emergency Warning Signal (SEWS) is a distinctive siren sound to alert the community to the broadcast of an urgent safety message relating to a major emergency. SEWS is intended for use as an alert signal to be played on public media such as radio, television and public address systems to draw listeners' attention to the emergency warning that follows. SEWS should only be used when issuing critical warnings where there is a need to warn people to take urgent and immediate action to reduce the potential for loss of life or property from emergency events. Note that SEWS is not required for all emergency warnings. The use of SEWS must be done in accordance with State EM Response Procedure 4.3.

## 4.4.5 The Bureau Cyclone Warning System

The Bureau has responsibility for the issue of warnings of gales, storms and other weather conditions likely to endanger life or property.<sup>34</sup>

The Bureau Tropical Cyclone Warning Centres (TCWC) issue forecasts and warnings for tropical cyclones as shown below and detailed on the Bureau website.

## 4.4.6 DFES Cyclone Alerts

DFES has developed an Alert System for throughout the State where cyclones pose a risk to the community.

DFES Cyclones Alerts (Blue, Yellow, Red and All Clear) complements the Bureau advice and related warnings to encourage those at-risk to take action.

The aim is to warn the community of danger and provide safety advice at various stages during the approach of a cyclone. DFES Alerts are issued in four stages and are decided by the appointed IC in consultation with the ISG and the appointed DFES OAM. The alert level is communicated to the Public Information State Operations team who then issue the alerts to community, media and stakeholders.

As part of the cyclone alerts system, DFES will work with the Bureau to determine if there is a threat of storm surge to the community. If there is a threat, the Bureau will issue a warning and DFES will then issue either a Prepare to Evacuate or Evacuate Now community alert, with the IC to determine which action is most appropriate. DFES also has the ability to publish predicted storm surge inundation maps where suitable.

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<sup>34</sup> *Meteorology Act 1955* (Commonwealth), section 6(1)(c).

The following table details the DFES Cyclone Alert System:

### Cyclone Alerts

| Alert            | Meaning   | Keyword          | HMA Usage   |
|------------------|---|------------------|---|
| <b>BLUE</b>      | Start preparing for cyclonic weather.                                   | <i>PREPARE</i>   | Used when a cyclone may produce gales within 48 hours (such as when first Bureau Cyclone Watch is issued).  |
| <b>YELLOW</b>    | Take action and get ready to shelter from a cyclone.                    | <i>ACT</i>       | Used when a cyclone has moved closer and there is a significant risk of destructive winds.  |
| <b>RED</b>       | Go to shelter immediately.  | <i>SHELTER</i>   | Considered for use when a cyclone is likely to produce destructive winds. Only Emergency Services as identified by DFES in consultation with the LEMC should remain functional. |
| <b>ALL CLEAR</b> | The cyclone has passed but take care to avoid dangers caused by damage. | <i>TAKE CARE</i> | Used when the wind and any storm surge danger from a cyclone has passed. However, ground hazards such as fallen power lines, structural debris and road hazards may exist.      |

### 4.4.7 Bureau Flood Warning Services

The Bureau has historical and statutory responsibility for flood forecasting and the issue of flood alerts and warnings in WA.<sup>35</sup> The Bureau issues alerts through media outlets, email, internet, marine communications and aircraft communications.

State Government agencies have a responsibility to provide the Bureau with relevant flood information that are in their possession or control and required by the Bureau in order to discharge its responsibilities. In practice,

#### Notes

<sup>35</sup> *Meteorology Act 1955* (Commonwealth), section 6(1) (b)-(c).

<sup>36</sup> Intergovernmental Agreement on the Provision of Bureau of Meteorology Hazard Services to the States and Territories 22 January 2018 section 6.

State Government agencies therefore, share responsibility with the Bureau for flood preparation, flood monitoring, developing forecasts and warnings and the dissemination of these warnings.<sup>36</sup>

### 4.4.8 DFES Flood Alerts

Leveraging the Bureau's flood warning services, DFES has developed an Alert System for use throughout the State where flood poses a risk to the community.

When a Bureau Flood Watch is issued, DFES will issue a “Prepare for Flood” alert to forecast affected communities. When the Bureau issues a Flood Warning, DFES will issue a “Take Action Now” alert to encourage people to take action to remain safe. Where the Bureau recommends evacuations, DFES will likely issue a “Prepare to Evacuate” or an “Evacuate Now” message. Once the danger has passed and the Bureau issues a flood cancellation alert, DFES will follow with a “Take Care: Cancellation” message.

### 4.4.9 Bureau Storm Warning Services

The Bureau issues Severe Weather Warnings for most cool season events and Severe Thunderstorm Warnings during the warm season when the main threat is from thunderstorms.

### 4.4.10 DFES Storm Alerts

Informed by the Bureau warning products, DFES will issue alerts based on the amount of time until the storm is expected to affect communities.

As HMA for storm, DFES will issue community alerts for severe weather events where the Bureau has issued a Severe Weather Warning or Severe Thunderstorm Warning which includes two or more of the following phenomena:

- Sustained winds of gale force (63 kilometres per hour) or more
- Damaging or destructive wind gusts (generally wind gusts exceeding 90 kilometres per hour)
- Very heavy rain that may lead to flash flooding
- Large or giant hail (2 centimetres in diameter or larger)
- Tornadoes

### Notes

<sup>37</sup> State EM Policy statement 5.74.

DFES may also issue community alerts for isolated severe weather phenomena (e.g. damaging winds) that do not meet the above criteria but for which a Bureau warning has been issued.

## 4.5 Evacuation Arrangements

Evacuation is a risk mitigation strategy that may be used to mitigate the effects of an emergency on a community.

Evacuation centres should be identified in LEMAs,<sup>37</sup> and are identified and established in partnership with local government and the Department of Communities. The Department of Communities is responsible for maintaining a list and providing information on evacuation centres.

## 4.6 Traffic Management During Emergencies

To ensure community safety, it is often necessary to alter the normal flow of traffic through an area affected by an emergency or its immediate surrounds. It is acknowledged some agencies have traffic management responsibilities under legislation other than the *Emergency Management Act 2005*. It is recommended these agencies conduct those activities consistent with the framework created by the State EM Policy, plans, procedures and guidelines.

Emergency management agencies should implement appropriate agency-specific procedures and training in accordance with State EM Policy section 5.8, State EM Plan section 5.3.3 and the State EM Traffic Management During Emergencies Guideline.



# Part Five:

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# Recovery

## 5.1 Recovery

Recovery is defined as ‘the support of emergency affected communities in the reconstruction and restoration of physical infrastructure, the environment and community, psychosocial and economic wellbeing’ (section 3 EM Act).

Recovery is a complex, non-linear, multi-layered process that occurs as people and communities work to resolve the impacts of a disaster. Recovery is intertwined with disaster prevention, preparedness and response and can provide an opportunity to improve upon pre-disaster circumstance and increase resilience.<sup>38</sup>

### 5.1.1 Roles and Responsibilities

It is a function of local government to manage recovery following an emergency affecting the community in its district (section 36 EM Act). Local Governments should have a Local Recovery Plan within the LEMA and a designated Local Recovery Coordinator (State EM Policy 6.3.2)

However DFES is responsible for initiating relief and recovery activities during the response to the emergency until the response and recovery are handed over to the local government. (State EM Plan section 64)

The State Recovery Coordinator is responsible for supporting local governments in recovery and for coordinating whole-of-government recovery activities to meet recovery needs that exceed the capacity of the local government. The State Recovery Coordinator may also be responsible for convening a State Recovery Coordination Group, developing a State Recovery Plan and providing advice to Government on the appointment of a State Recovery Controller when required.

When more than one local government is affected, a coordinated approach may be facilitated by DFES and Local Recovery Coordinators, with support from the State Recovery Coordinator.

#### Notes

<sup>38</sup> Guide to Disaster Recovery Capitals, ReCap Project

## 5.1.2 Recovery Activities During Response

DFES must notify the Local Recovery Coordinator and State Recovery Coordinator when a Level 2 incident or above is declared or probable (eg forecast of a significant severe weather event likely to impact communities). Once notified, the Local Recovery Coordinator and State Recovery Coordinator shall be included in incident management arrangements for situational awareness. (State EM Plan section 64)

DFES will assist the Local Recovery Coordinator, State Recovery Coordinator and other agencies with a responsibility for recovery during the response phase with information and by assembling resources to initiate recovery actions. To the extent possible, DFES shall ensure mitigating actions are conducted in a way that simplifies and facilitates recovery.

DFES will ensure that relief agencies are provided access to the affected community during the emergency and shall assist relief agencies to deliver essential services in safe and accessible community-based locations. whilst managing access to the affected area as required to ensure community safety, security and welfare.

If safe and operationally practicable, DFES shall permit recovery operations to commence during the response. A site may be considered ‘safe for recovery’ when:

- control of the emergency situation has been established
- trapped persons and the deceased or missing as far as practicable have been recovered
- hazards and risks have been assessed and appropriate treatments or controls identified
- non-emergency services personnel are using appropriate controls (e.g. work practices and personal protection).

As recovery commences, DFES shall provide necessary risk management advice and support to the impacted local government(s), recovery agencies and community.

### 5.1.3 Waste, Debris Management and Disposal and Hazardous Materials

The on-site recovery and clean-up of hazardous materials and infrastructure is the responsibility of the owner of the hazardous materials. However the potential widespread presence of unsecured waste and hazardous materials can pose a risk to people and environments, particularly when owners undertake uncontrolled clean-up of impacted properties.

DFES should seek to inform themselves, participating agencies and contractors and the public of potential risks and provide advice on appropriate risk controls. The following agencies have a role in providing advice and support:

- The DWER Pollution Response Unit (PRU) will provide advice covering waste disposal and site mitigation actions to meet current environmental standards.
- DMIRS manage the licensing of contractors for the management of hazardous material
- ChemCentre WA has a role in advising on site mitigation through a thorough understanding of the chemistry and physics of the contaminant(s).
- The Radiation Health Directorate will provide advice on radioactive waste.

Under the *Environmental Protection Act 1986*, DWER may issue a pollution notice to the owner of hazardous materials that are involved in an emergency situation, requiring clean-up to be completed to the satisfaction of DWER.

### 5.1.4 Impact Statement and Incident Handover

The Impact Statement is a key document to inform recovery planning by both local and state governments.

DFES will gain an understanding of the known and emerging impacts during the response to an emergency and provide this awareness to the Local Recovery Coordinator and State Recovery Coordinator as soon as possible, and prior to finalisation of the Impact Statement. Impacts shall be considered across the four recovery domains of social, built, natural and economic environments. (State EM Plan section 6.2).

DFES must complete an Impact Statement for all level 3 incidents and for Level 2 incidents where there are impacts requiring recovery. (State EM Plan section 6.4.1).

The State Recovery Coordinator, in consultation with the local government, will determine if an Impact Statement is required for Level 2 incidents where the Incident Controller has not identified any recovery impacts.

The Impact Statement is prepared utilising a standard input and with input from the members of the ISG, local governments and other relevant agencies. (State EM Recovery Procedure 5.4.)

The Impact Statement must be approved by the Incident Controller and local government CEO and shall be noted by the State Recovery Coordinator. Mutual agreement on the Impact Statement is required for the incident to be handed back to the local government.

The final Impact statement should be provided to the members of the Incident Support Group, Local Recovery Coordinators and the ROC/MOC and OAM. The State Recovery Coordinator shall also distribute the Impact Statement to members of the SRCG and/or agencies with a lead role in identified recovery activities.

The IC may be required to attend initial meetings of the State Recovery Coordination Group or Local Recovery Coordination Group to assist in providing situational awareness and risk advice.





# Appendices

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## Appendix A: Distribution List

This State Hazard Plan is available on the [SEMC website](#). The agencies below will be notified by the HMA (unless otherwise specified) when an updated version is published on this website.

- All agencies and organisations with responsibilities under this Plan
- Minister for Emergency Services (SEMC Business Unit to notify)
- State Emergency Management Committee (SEMC), SEMC subcommittees and SEMC reference group members (SEMC Business Unit to notify)
- State Library of Western Australia (SEMC Business Unit to notify)
- the Community (through publication on the [SEMC website](#)).

## Appendix B: Glossary of Terms/Acronyms

### B1 Glossary of Terms

Terminology used throughout this document has the meaning prescribed in section 3 of the *Emergency Management Act 2005* or as defined in the State Emergency Management Glossary. In addition, the following hazard-specific definitions apply.

| Term                                    | Definition  |
|---|---|
| <b>District Officer State Situation</b> | Monitors all emergencies across the State on a 24/7 basis.  |
| <b>Flash flooding</b>                   | Flooding occurring within approximately six hours of rain, usually results from relatively short intense bursts of rainfall, commonly from thunderstorms, and is characterised by rapid rises in water-levels                         |
| <b>Metropolitan Operation Centre</b>    | Responsible for supporting emergency incidents and maintaining situational awareness of emerging threats and risks across their designated DFES regions   |
| <b>Regional Operation Centre</b>        | Responsible for supporting emergency incidents and maintaining situational awareness of emerging threats and risks across their designated DFES regions   |
| <b>Riverine flooding</b>                | Occurs when water levels rise over the top of riverbanks due to excessive rain from weather systems producing widespread heavy rainfall   |
| <b>Severe Weather</b>                   | The collective term for cyclones, floods and storms.  |
| <b>State Operations Centre</b>          | The DFES State Operations Centre (SOC) coordinates the strategic activities of the FES Commissioner in delivering his/her emergency management responsibilities as a Hazard Management Agency under the provisions of WA Legislation. |

| Term   | Definition  |
|--|---|
| <b>State waters</b>  | <p>(a) all waters within the limits of the State; and</p> <p>(b) all coastal waters of the State within the meaning given in the Coastal Waters (State Powers) Act 1980 (Commonwealth) section 3(1).</p>  |
| <b>Storm Surge</b>   | An abnormal rise in the water level over and above the normal (astronomical) tide and is caused by strong winds piling water up against the coast as the tropical cyclone approaches  |
| <b>Western Australian Fire and Emergency Services Manual</b> | The Manual provides detailed instruction and guidance on the various individual and collective responsibilities of agencies and individuals—from Incident Management Teams, to the staff of the DFES State Operations Centre, DFES Regional Operations Centres and State level. |

## B2 Acronyms

| Acronym           | Meaning   |
|-------------------|---|
| <b>ABC</b>        | Australian Broadcasting Corporation                         |
| <b>AFAC</b>       | Australasian Fire and Emergency Service Authorities Council |
| <b>AHLG</b>       | All-Hazards Liaison Group                                   |
| <b>AIA</b>        | Arrangement for Interstate Assistance                       |
| <b>ARI</b>        | Annual Recurrence Interval                                  |
| <b>Bureau</b>     | Bureau of Meteorology                                       |
| <b>CCOSC</b>      | Commissioners and Chief Officers Strategic Committee        |
| <b>COMDISPLAN</b> | Commonwealth Government Disaster Response Plan              |
| <b>DFES</b>       | Department of Fire and Emergency Services                   |
| <b>DMIRS</b>      | Department of Mines, Industry Regulation and Safety         |

| Acronym     | Meaning  |
|-------------|--|
| <b>DPLH</b> | Department of Planning, Lands and Heritage       |
| <b>DWER</b> | Department of Water and Environmental Regulation |
| <b>EM</b>   | Emergency Management                             |
| <b>FES</b>  | Fire and Emergency Services                      |
| <b>FWCC</b> | Flood Warning Consultative Committee             |
| <b>GA</b>   | Geoscience Australia                             |
| <b>HMA</b>  | Hazard Management Agency                         |
| <b>IC</b>   | Incident Controller                              |
| <b>IMT</b>  | Incident Management Team                         |
| <b>ISG</b>  | Incident Support Group                           |
| <b>LEMA</b> | Local Emergency Management Arrangements          |

| Acronym     | Meaning                                       |
|-------------|---|
| <b>LEMC</b> | Local Emergency Management Committee          |
| <b>MOC</b>  | Metropolitan Operations Centre                |
| <b>NSR</b>  | Australian Government National Situation Room |
| <b>NRSC</b> | National Resource Sharing Centre              |
| <b>OAM</b>  | Operational Area Manager                      |
| <b>OASG</b> | Operational Area Support Group                |
| <b>RFC</b>  | Regional Forecasting Centre                   |
| <b>ROC</b>  | Regional Operations Centre                    |
| <b>SEC</b>  | State Emergency Coordinator                   |
| <b>SECG</b> | State Emergency Coordination Group            |
| <b>SEMC</b> | State Emergency Management Committee          |
| <b>SEWS</b> | Standard Emergency Warning Signal             |

| Acronym       | Meaning   |
|---------------|---|
| <b>SLS</b>    | Service Level Specification                     |
| <b>SOC</b>    | State Operations Centre                         |
| <b>SOCMET</b> | State Operations Centre Meteorologist           |
| <b>TC</b>     | Tropical Cyclone                                |
| <b>TCHA</b>   | Tropical Cyclone Hazard Assessment              |
| <b>TCWC</b>   | Tropical Cyclone Warning Centre                 |
| <b>TWS</b>    | Telephone Warning System                        |
| <b>WALGA</b>  | Western Australian Local Government Association |
| <b>WAPC</b>   | Western Australian Planning Commission          |

## Appendix C: Roles and Responsibilities of Organisations

The Department of Fire and Emergency Services (DFES), through its Commissioner as the Hazard Management Agency (HMA), has the primary responsibility for managing the adverse effects of emergencies associated with tropical cyclones, floods and storms in WA. The assistance and cooperation of other agencies and organisations operating within their functional areas are necessary for effective emergency prevention, preparation, response and recovery.

This appendix outlines the hazard specific roles and responsibilities of agencies and organisations under this Plan. Some all-hazards information is provided for agencies who may have a role under this plan – full details of these roles and responsibilities can be found in the State Emergency Management Plan, Appendix E.

The EM Act, EM Regulations, State EM Policy, Plan and Procedures, State Hazard Plans and State Support Plans should be referenced for a comprehensive understanding of the roles and responsibilities within the emergency management framework

The agencies will undertake the agreed responsibilities, as detailed below. All agencies are to maintain appropriate public information policy, plans and procedures in relation to their specific responsibilities

**Note:** The capability and commitment of each Local Government to undertake the tasks and meet the responsibilities identified in this State Plan should be confirmed by the HMA and detailed in Local Emergency Management Arrangements. This will ensure the varying capabilities of individual Local Governments are recognised and accommodated.

### Overarching

| Organisation                                     | Overarching Roles and Responsibilities  |
|--|---|
| <b>Department of Fire and Emergency Services</b> | <p><b>Role:</b> Supporting the FES Commissioner in their role as the Hazard Management Agency (HMA)</p> <ul style="list-style-type: none"> <li>a. Manage the adverse effects of a severe weather emergency across the emergency management aspects of prevention, preparedness, response and recovery.</li> <li>b. Undertake operational lessons management activities.</li> </ul>  |
| <b>Bureau of Meteorology</b>                     | <p>Provide a State Operations Centre Meteorologist (SOCMET) to DFES State Operations Centre, during normal working hours and/ or after hours. Alternative liaison officers are Regional Manager Severe Weather, Regional Forecasting Centre Operations Manager, Manager Weather Services or Regional Director as required.</p> <p>A comprehensive list of roles and responsibilities are provided in the Service Level Specification for Flood Forecasting and Warning Services for Western Australia and the Intergovernmental Agreement on the Provision of Bureau of Meteorology Services.</p> |

## Prevention and Mitigation

| Organisation                     | Prevention and Mitigation Roles and Responsibilities   |
|----------------------------------|--|
| <b>Bureau of Meteorology</b>     | <p><b>Cyclone</b></p> <ol style="list-style-type: none"> <li>Participate in research and development of tropical cyclone models and techniques to improve tropical cyclone forecasting/notification.</li> <li>Establish and maintain data collection networks and monitor tropical cyclone events.</li> <li>Store and provide historical tropical cyclone intelligence data and information.</li> <li>Contribute to the planning, installation and maintenance of new and improved tropical cyclone warning/notification systems.</li> </ol> <p><b>Flood (See section 3.2 of SLS)</b></p> <ol style="list-style-type: none"> <li>Participate in research and development of flood forecasting models and techniques to improve flood forecasts.</li> <li>Establish and maintain real-time rainfall data collection networks and monitoring and dissemination systems.</li> <li>Store and provide historical water and flood intelligence data and information.</li> <li>Contribute to the planning, installation and maintenance of new and improved flood warning systems.</li> <li>Chair and provide secretariat support for the Flood Warning Consultative Committee (FWCC).</li> </ol> <p><b>Severe Weather and Severe Thunderstorm Warnings</b></p> <ol style="list-style-type: none"> <li>Participate in research and techniques to improve Severe Weather and Severe Thunderstorm Warnings and notifications.</li> <li>Establish and maintain data collection networks, monitoring, archiving and verification of severe weather and severe thunderstorm events.</li> </ol> |
| <b>Department of Communities</b> | <ol style="list-style-type: none"> <li>In consultation with the Local Emergency Management Committee, determine a register of potential evacuation centres.</li> </ol>   |



| Organisation  | Prevention and Mitigation Roles and Responsibilities   |
|---|--|
| <b>Department of Fire and Emergency Services</b>        | <ul style="list-style-type: none"> <li>a. Ensure the development and maintenance of response and risk treatment plans specific to cyclones.</li> <li>b. Discharge the duties of HMA and Controlling Agency for severe weather emergencies, in accordance with the Emergency Management Act 2005 and State EM Policy section 5 and State EM Plan section 5.</li> <li>c. Liaise with other HMAs, Controlling Agencies and Emergency Services Network Operators to ensure preparation, response and recovery operations are coordinated.</li> <li>d. Appoint emergency managers at all levels for a particular tropical cyclone.</li> <li>e. Facilitate the provision of assistance as required.</li> <li>f. Request activation of a SECG if required.</li> </ul> |
| <b>Department of Planning, Lands and Heritage</b>       | <ul style="list-style-type: none"> <li>a. Incorporate appropriate severe weather related mitigation measures into the state planning framework.</li> </ul>   |
| <b>Department of Water and Environmental Regulation</b> | <ul style="list-style-type: none"> <li>a. Contribute to the planning, installation and maintenance of new and improved flood warning systems.</li> <li>b. Provide available river level data when requested by DFES.</li> <li>c. Maintain real-time river level monitoring systems.</li> <li>d. Store and provide historical river flood information.</li> </ul>   |

## Preparedness

| Organisation  | Preparedness Roles and Responsibilities   |
|---|---|
| <b>Bureau of Meteorology</b>                            | <p><b>Cyclone</b></p> <p>a. Participate in community awareness programs on tropical cyclone warning systems.</p> <p><b>Severe Weather and Severe Thunderstorm Warnings</b></p> <p>a. Collaborate with DFES in the improvement and issuing of public alerts and warning messages.</p>  |
| <b>Department of Fire and Emergency Services</b>        | <p>a. Develop, implement and revise the Plan, in consultation with key stakeholders.</p> <p>b. Periodically test and validate local, regional/district and State preparedness actions.</p> <p>c. Recommend the adoption of risk treatment strategies to State, District and Local Emergency Management Committees.</p> <p>d. In cooperation with other agencies, provide communities with severe weather risk awareness, information and education.</p> <p>e. Raise, train and equip an emergency service capable of responding to the effects of a severe weather event.</p> <p>f. Liaise with local governments and other agencies in the provision of incident control centres in severe weather susceptible areas of the State.</p> |
| <b>Department of Water and Environmental Regulation</b> | <p>a. Participate in community awareness programs on total flood warning system.</p>  |
| <b>Local Governments</b>                                | <p>a. Participate in community awareness programs on severe weather hazard risks.</p>   |

## Response

| Organisation                     | Response Responsibilities  |
|----------------------------------|--|
| <b>Bureau of Meteorology</b>     | <p><b>Cyclone</b></p> <ul style="list-style-type: none"> <li>a. Provide a tropical cyclone and storm surge prediction, interpretation and notification service.</li> <li>b. Collaborate with DFES in the issuing of community alerts and warning messages.</li> </ul> <p><b>Flood (See section 3.2 of SLS)</b></p> <ul style="list-style-type: none"> <li>a. Provide a flood prediction and interpretation service including advice and outlooks on meteorological forecasts, catchment conditions, rainfall and quantitative precipitation forecasts.</li> <li>b. Collaborate with DFES in the issuing of Flood Watch and Flood Warning messages.</li> </ul> <p><b>Severe Weather and Severe Thunderstorm Warnings</b></p> <ul style="list-style-type: none"> <li>a. Provide Severe Thunderstorm Warnings and Severe Weather Warning services.</li> </ul> |
| <b>Department of Communities</b> | <ul style="list-style-type: none"> <li>a. Provide a liaison officer to DFES SOC, if required.</li> <li>b. In consultation with DFES and local government, and consideration of available resources, determine the number and location of evacuation centres to be opened during the severe weather emergency.</li> <li>c. Staff evacuation centres.</li> <li>d. Facilitate evacuee registrations.</li> </ul>   |

| Organisation                                     | Response Responsibilities   |
|--|---|
| <b>Department of Fire and Emergency Services</b> | <ul style="list-style-type: none"> <li>a. Discharge the duties of HMA and Controlling Agency for severe weather emergencies, in accordance with the <i>Emergency Management Act 2005</i> and State EM Policy section 5 and State EM Plan section 5.</li> <li>b. Liaise with other HMAs, Controlling Agencies and Emergency Services Network Operators to ensure preparation, response and recovery operations are coordinated.</li> <li>c. Appoint emergency managers at all levels for a particular tropical cyclone.</li> <li>d. Facilitate the provision of assistance as required.</li> <li>e. Request activation of a SECG if required.</li> </ul>   |
| <b>Department of Health</b>                      | <ul style="list-style-type: none"> <li>a. Provide a liaison officer to DFES SOC, if required.</li> <li>b. Coordinate the health response in a severe weather emergency, including the activation of the State Health Emergency Response Plan if required.</li> <li>c. Advise DFES on all medical and health aspects in relation to a severe weather emergency.</li> <li>d. Provide health advice and support to the designated recovery committee.</li> <li>e. Through the hospital stream, provide acute medical care and relief to injured persons.</li> <li>f. Through the public health stream, provide environmental health, public health, mental health and communicable disease control services, as required.</li> <li>g. Maintain an awareness of the readiness of health service infrastructure including assessment of impact on clinical services, response and/or evacuation requirements.</li> <li>h. Provide acute health services, particularly to those persons within the affected community who have chronic medical conditions.</li> </ul> |

| Organisation   | Response Responsibilities   |
|--|---|
| <b>Department of Mines, Industry Regulation and Safety</b>       | <ul style="list-style-type: none"> <li>a. Provide a liaison officer to DFES SOC, if required.</li> <li>b. Assist in specific technical strategies that fall within the remit of DMIRS.</li> </ul>   |
| <b>Department of Planning, Lands and Heritage</b>                | <ul style="list-style-type: none"> <li>a. Provide a liaison officer to DFES SOC, if required.</li> </ul>  |
| <b>Department of Primary Industries and Regional Development</b> | <ul style="list-style-type: none"> <li>a. Provide a liaison officer to DFES SOC.</li> <li>b. Coordinate animal welfare in emergencies in line with the arrangements identified in the State Support Plan Animal Welfare in Emergencies.</li> </ul>  |
| <b>Department of Water and Environmental Regulation</b>          | <ul style="list-style-type: none"> <li>a. Provide a qualified liaison officer to DFES SOC, if required.</li> <li>b. Provide technical advice to DFES in relation to managing asbestos and other environmental risks.</li> </ul>   |
| <b>Energy Suppliers and Network Managers</b>                     | <ul style="list-style-type: none"> <li>a. Provide a liaison officer to DFES SOC, if required.</li> <li>b. Disconnect and restore energy services as prioritised by DFES or the designated recovery authority. Restoration priority will include consideration of other lifeline interdependence requirements.</li> <li>c. Provide technical advice to DFES in relation to energy supply, disconnection and restoration.</li> <li>d. Assist in the provision of emergency energy as requested by DFES or the designated recovery authority.</li> </ul> |

| Organisation             | Response Responsibilities   |
|--------------------------|---|
| <b>Local governments</b> | <ul style="list-style-type: none"> <li>a. Provide resources to assist DFES when requested.</li> <li>b. Make available suitable local government buildings to be used as evacuation centres.</li> <li>c. Issue closure notices for airports and airfields under local government administration when necessary.</li> <li>d. Close and open roads within their jurisdiction, when requested by DFES.</li> <li>e. Provide details on road conditions to DFES.</li> <li>f. Initiate and lead the local community through the recovery process.</li> <li>g. Inspect and declare severe weather hazard-affected properties fit for habitation.</li> </ul> |
| <b>Main Roads WA</b>     | <ul style="list-style-type: none"> <li>a. Provide a liaison officer to DFES SOC, if required.</li> <li>b. Provide advice to DFES of the potential and actual impacts of severe weather emergencies on the State road network.</li> <li>c. Close and open State roads when requested to do so by DFES. This Plan recognises that the Commissioner of Main Roads (or delegated Officers) has the power to close or open roads under the <i>Main Roads Act 1930</i>.</li> <li>d. Communicate road closures to the public.</li> </ul>   |
| <b>NBN Co</b>            | <ul style="list-style-type: none"> <li>a. Provide a liaison officer to DFES SOC, if required.</li> <li>b. Provide advice regarding the provision of broadband and internet communications services.</li> <li>c. Give priority consideration to emergency communications requirements of authorities responsible for hazard and emergency management within WA. Actual service provision and restoration priorities will depend on nbn's network configuration, the safety and availability of staff, material availability, local community issues and national and local security issues.</li> </ul>   |

| Organisation                      | Response Responsibilities  |
|-----------------------------------|--|
| <b>Public Transport Authority</b> | <ul style="list-style-type: none"> <li>a. Provide a liaison officer to DFES SOC, if required.</li> <li>b. Provide advice to DFES of the potential and actual impacts of a severe weather emergency on the public transport system.</li> <li>c. Close and open transport services when requested by DFES.</li> <li>d. Communicate service closures to the public.</li> </ul>  |
| <b>Telstra</b>                    | <ul style="list-style-type: none"> <li>a. Provide a liaison officer to DFES SOC, if required.</li> <li>b. Provide advice regarding the provision of emergency communications services.</li> <li>c. Give priority consideration to emergency communications requirements of authorities responsible for hazard and emergency management within WA. Actual service provision and restoration priorities will depend on Telstra's network configuration, the safety and availability of staff, material availability, local community issues and national and local security issues.</li> </ul> |
| <b>Water Corporation</b>          | <ul style="list-style-type: none"> <li>a. Provide a liaison officer to DFES SOC, if required.</li> <li>b. Restore water supplies and sewerage systems in consultation with DFES, or the designated recovery coordinator.</li> <li>c. Minimise interruption to the water supply and wastewater system, and the impact to people, properties and the environment from interruptions, contaminations and overflows.</li> <li>d. Assist with the provision of safe drinking water to affected communities, within its areas of responsibility, until normal services are restored.</li> </ul>    |

| Organisation                          | Response Responsibilities  |
|---------------------------------------|--|
| <b>Western Australia Police Force</b> | <ul style="list-style-type: none"> <li>a. Provide liaison officers/representation to any ISG/OASG/ALHG and/or SECG as appropriate.</li> <li>b. Assist with evacuation and/or traffic management on request.</li> <li>c. Maintain public order where required.</li> <li>d. In the event of mass casualties, provide Disaster Victim Identification.</li> <li>e. Provide emergency coordinators as appropriate to assist DFES in the provision of a coordinated response.</li> </ul> |

## Recovery

| Organisation                                     | Recovery Responsibilities   |
|--|---|
| <b>Department of Communities</b>                 | <ul style="list-style-type: none"> <li>a. Participate in the emergency recovery arrangements for people affected by severe weather.</li> </ul>  |
| <b>Department of Fire and Emergency Services</b> | <ul style="list-style-type: none"> <li>a. Liaise with other HMAs, Controlling Agencies, Local Government's and Emergency Services Network Operators to ensure preparation, response and recovery operations are coordinated.</li> </ul> |
| <b>Local governments</b>                         | <ul style="list-style-type: none"> <li>a. Initiate and lead the local community through the recovery process.</li> <li>b. Inspect and declare severe weather hazard-affected properties fit for habitation.</li> </ul>                  |
| <b>Main Roads</b>                                | <ul style="list-style-type: none"> <li>a. Assist in the recovery process through State road and State road infrastructure repair and reconstruction.</li> </ul>   |
| <b>Public Transport Authority</b>                | <ul style="list-style-type: none"> <li>a. Assist in the recovery process through rail infrastructure repair and reconstruction.</li> </ul>  |



