



**WESTERN AUSTRALIA**

# **STATE TROPICAL CYCLONE EMERGENCY MANAGEMENT PLAN**

**SEPTEMBER 2004**

**PREPARED BY FIRE & EMERGENCY SERVICES AUTHORITY  
(State Emergency Service Division)**



**On behalf of the  
STATE EMERGENCY MANAGEMENT COMMITTEE**



# AMENDMENT CERTIFICATE

This document has been amended by  
**FESA Manager - Research & Logistics**  
in consultation with  
**FESA Regional Director - Pilbara/Kimberley**  
**and the Cyclone Subject Matter Advisory Group**  
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## AMENDMENT RECORD

Proposals for amendment or additions to this document should be forwarded to:

Research and Logistics Support Branch  
Fire and Emergency Services Authority of WA  
State Emergency Service  
91 Leake Street  
BELMONT WA 6104

Telephone: (08) 9277 0555  
Facsimile: (08) 9277 8320

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Senior Project Manager, Operations Services

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All Members

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Manager, Emergency Operations Unit

**Western Power**  
Manager Systems Operations

**Waters & Rivers Commission**  
Senior Engineer, Hydrology and Water Resources

**Water Corporation**  
Corporate Incident Manager

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# PART 1 - INTRODUCTION

## General

- 1.1 Tropical cyclones are a risk to the communities of the northwest during the period of 01<sup>st</sup> November to 30<sup>th</sup> April of each year. However, tropical cyclones can occur outside this period. The effects of tropical cyclones on the community include destructive winds, heavy rain, storm surge and flooding, which can cause risk to life, damage to community infrastructure and significant disruption to road and rail services. Cyclone activity affecting the south west (south from NW Cape) may also occur on a less frequent basis and generally during the period from February until April. (A detailed examination of the nature of tropical cyclones is at *Annex A*).
- 1.2 A Tropical Cyclone Emergency is defined as an event which is beyond the resources of FESA-SES or which requires the coordination of a number of significant emergency management activities.
- 1.3 As the designated Hazard Management Agency (HMA) for tropical cyclones in Western Australia, Fire and Emergency Services Authority – State Emergency Service Division (FESA-SES), has the following responsibilities:
  - ensure that emergency management activities pertaining to the prevention of, preparedness for, response to and recovery from a tropical cyclone are undertaken;
  - preparing a tropical cyclone plan;
  - during an event, activate and manage the response to the tropical cyclone through a designated Operations Area Manager(s).
- 1.4 A coordinated response to a tropical cyclone emergency requires the assistance of a wide range of combat agencies and support organisations each with its own statutory responsibilities. The location of the emergency, the availability of these agencies and the time required to reach the emergency, complicates the manner in which most eventualities can be dealt with.

## Aim

- 1.5 The aim of this plan is to detail the agreed emergency management arrangements for the risk of tropical cyclone.

## Objectives

- 1.6 This plan has the following objectives:
  - a. To outline the “comprehensive approach” to the tropical cyclone hazard in Western Australia.
  - b. To define the responsibilities of FESA-SES as Hazard Management Agency, Combat Agencies and Support Agencies in the event of a tropical cyclone emergency.
  - c. To detail arrangements for the control, coordination and response of State Authorities to a tropical cyclone emergency.
  - d. To identify Prevention and Preparedness strategies to be undertaken throughout Western Australia.

- e. To provide guidelines for the Response and Recovery to a tropical cyclone emergency in Western Australia.

## **Scope**

- 1.7 This plan provides for a comprehensive approach to managing the tropical cyclone hazard (or risk) within Western Australia.
- 1.8 Each agency with a statutory role shall have in place appropriate operational procedures, which detail that agency's response, including resources and communications, in accordance within this plan.
- 1.9 The arrangements provide for both government and non-government organisations to operate in a cooperative and coordinated manner in accordance with agreed roles and responsibilities.
- 1.10 Any of the State Emergency Management Support Plans may be activated in support of this Plan in accordance with State Emergency Management Committee (SEMC) Policy Statement 10 – 'Procedure for Activation of State Support Plans'.
- 1.11 This Plan should be read in conjunction with Local Emergency Management Plans that may identify further resources.
- 1.12 In the event of a particular type of emergency within Annex F of State Emergency Management Committee Policy Statement 7 – 'Western Australian Emergency Management Arrangements' occurring as a consequence of a tropical cyclone, then that WESTPLAN should be read in conjunction with WESTPLAN Cyclone.

## **Title**

- 1.13 The title of this plan is the "State Tropical Cyclone Emergency Management Plan", abbreviated to "WESTPLAN – CYCLONE".

## **Authority and Planning Responsibility**

- 1.14 The Fire and Emergency Services Authority (State Emergency Service Division) as the designated Hazard Management Agency under the authority of SEMC has prepared this plan. Responsibility for the development and maintenance of the plan rests with the FESA Manager, Research and Logistics Support Branch, State Emergency Service.

## **Tropical Cyclone Industrial Liaison Committee**

- 1.15 The Tropical Cyclone Industrial Liaison Committee (TCLIC) is the focal point of contact between the Industry in the northwest, the Bureau of Meteorology and Fire and Emergency Services Authority – State Emergency Service. The TCLIC normally meets twice a year to discuss issues relating to tropical cyclones and their impact on industry.

## **Tropical Cyclone Subject Matter Advisory Group**

- 1.16 The Tropical cyclone Subject Matter Advisory Group (SMAG) provides ongoing advice and feedback to Fire and Emergency Services Authority – State Emergency Service on matters related to their subject area eg. training, equipment, operational procedures and Occupational Health & Safety. Their terms of reference include;

- Research Hazard Management Agency phenomena within Western Australian context and identify Australian or International trends in the management of such events.
- Provide input into the development of Emergency Management Arrangements for the Prevention, Preparedness, Response and Recovery strategies.
- Provide input into the development of training competencies for task identified within cyclone management.
- Make recommendation with respect to equipment requirements specific to cyclone

1.17 It is important to note that it is **not** imperative for either of these groups to become involved during an incident or operation, other than to discuss any issues which maybe relevant.

## **PART 2 – CONCEPT OF OPERATION**

### **General**

- 2.1 The risk of a tropical cyclone is annually present and managing this risk, forms part of government agencies' responsibility to the community.
- 2.2 The management of a tropical cyclone emergency in Western Australia is facilitated by the adoption of emergency management and operational principles published in State Emergency Management Committee (SEMC) Policy Statement No 7. The principles governing the functioning of the Plan apply to all agencies at all levels.

### **Management Principles**

- 2.3 FESA SES is responsible for ensuring that emergency management activities pertaining to the prevention of, preparedness for, response to and recovery from a tropical cyclone are undertaken.
- 2.4 Where another Hazard/Emergency, for which a Hazard Management Agency is nominated in Annex F to SEMC Policy Statement No.7, occurs as a consequence of a Tropical Cyclone emergency, the designated Hazard Management Agency is required to manage the consequential emergency. FESA SES remains responsible for the overall management of the tropical cyclone emergency.
- 2.5 During emergency operations it is the role of the relevant Emergency Coordinator to assist the Hazard Management Agency in the provision of a coordinated multi-agency response. This includes assisting the Hazard Management Agency with the coordination of resources and/or services as required. It is vitally important that the Operations Area Manager and/or Incident Manager and the relevant Emergency Coordinator work in close cooperation.
- 2.6 Responsibility for resourcing and responding to an emergency initially rests at the local level. An emergency beyond the capability of local resources will receive support from District resources. State resources shall be provided if District resources are inadequate.
- 2.7 The community needs to be seen as the primary focus, in prevention, preparedness, response and recovery. Local Government is seen as the most immediate agency through which appropriate systems can be set up. Successful emergency management systems require input from local level. The basic requirements are:
  - An alert, informed and active community which supports its voluntary organisations;
  - An active and involved local government;
  - Agreed and coordinated arrangements for prevention, preparedness, response and recovery;
  - Planning with communities, rather than planning for communities; and
  - Communicating with communities, rather than communicating to communities.
- 2.8 Emergency management plans are tested through regular exercises. It is, therefore, necessary to ensure that emergency management exercises are an integral part of the State's emergency management program.

## **Operations Principles**

- 2.9 Multi-agency response in accordance with the roles and responsibilities detailed in Annex B.
- 2.10 Appointment of an Operations Area Manager(s), by FESA SES, responsible for the overall management of an Operations Area and provision of strategic direction to agencies and incident Manager(s) in accordance with the needs of the situation.
- 2.11 Activation by the Operations Area Manager, in consultation with the relevant District Emergency Coordinator of an Operations Area Management Group including representation from key agencies involved on the response to assist the Operations Area Manager in the overall management of the operation.
- 2.12 Appointment of an Incident Manager(s) responsible to the Operations Area Manager for the overall management and control of an incident and the tasking of agencies in accordance with the situation.
- 2.13 Activations by the Incident Manager, in consultation with the relevant Local Emergency Coordinator of an Incident Management Group including representation from key agencies involved in the response to assist the Incident Manager with the overall management of the incident.
- 2.14 Activation of a State Emergency Coordination Group may be established by the State Emergency Coordinator at the request of, or in consultation with the Hazard Management Agency to assist in the provision of a coordinated multi-agency response to and recovery from the emergency. Membership includes representation, at State Level, from key agencies, involved it is an operational arm of the State Emergency Management Committee.
- 2.15 Safety of operational personnel is paramount.
- 2.16 Where hazardous materials are involved, resolution of the Hazardous Materials incident takes precedence.

## **PART 3 - PREVENTION**

### **General**

- 3.1 Prevention activities eliminate or reduce the probability of occurrence of a specific hazard. They also reduce the degree of damage likely to be incurred.

### **Prevention Programs**

- 3.2 The Fire and Emergency Services Authority (FESA), Bureau of Meteorology, Local Governments, Main Roads Western Australia, Water Corporation, Telstra and Western Power are just some of the organisations working in partnership with each other to mitigate against tropical cyclones.
- 3.3 Some of the programs include:
- Local Governments, involved in the application and enforcement of building codes, informed land use planning for vulnerable areas, support to its voluntary organisations, conducting clean up, clearing drains and education campaigns for their communities. Local Governments should also liaise closely with FESA and Department of Community Development in relation to the location and construction standards of buildings designated as Welfare Centres, to ensure that they are suitable for this role. Inland Local Governments should also give consideration to this as they may be subject to the effects of decaying cyclones that have formed into rain bearing depressions.
  - FESA-SES research and develop Commonwealth mitigation programs, improve community warnings and disseminate information, provide input into town/community planning and pre-cyclone season clean-up activities.
  - During cyclone season, the Bureau of Meteorology (BoM) maintains a watch on the weather patterns searching for possible cyclone development and routinely issuing a Tropical Cyclone Outlook Statement. On development, the BoM will issue advice to the community in the form of Cyclone Information Bulletins and Cyclone Watch and Warning Messages.

### **Legislative Provisions**

- 3.4 The Building Codes of Australia and the relevant Australian Standard for wind loading on buildings, both incorporate provisions directed towards reducing the consequences of tropical cyclones.
- 3.5 Enforcement of local laws by Local Governments also contributes to a safer community.
- 3.6 The FESA Act (1998) incorporates provisions directed towards improving community safety and reducing the consequences of a tropical cyclone.

## **PART 4 - PREPAREDNESS**

### **General**

- 4.1 Preparedness activities focus on essential emergency response capabilities through the development of plans, procedures, organisation and management of resources, training and public education.
- 4.2 A prepared community provides the capacity to mitigate the effect of a tropical cyclone emergency.

### **Plans and Procedures**

- 4.3 Emergency Management Plans and/or Procedures are developed using historical data, local knowledge and experience to ensure agreed and coordinated activities for prevention, preparedness, response and recovery.
- 4.4 Good planning is required through consultation between FESA-SES, the community and subject experts.
- 4.5 Where a tropical cyclone is an unacceptable risk to the community, it is of vital importance that the State Emergency Service Local Manager (or delegate), assisted by the Local Emergency Management Committee (LEMC), implement treatment options to manage such an emergency within their area of responsibility and to identify resources required.

### **Organisation and Management of Resources**

- 4.6 Identification of adequate resources and expertise are essential to preparedness. In a tropical cyclone emergency, transport, earth moving machinery for access and bypasses, signage, electric generating plants, lighting, temporary toilet facilities, Local and District support maybe required at short notice.
- 4.7 Water, food, clothing, shelter, lighting, communications in addition to medical equipment and drugs, may be required by the emergency services in attendance.
- 4.8 The Health Department of Western Australia maintains a database of the location and availability of medical supplies around Australia, which may be called upon in an emergency.
- 4.9 FESA-SES is responsible for the provision of all resources required to physically combat a tropical cyclone.
- 4.10 Combat Agencies and support organisations will provide their own resources. FESA SES is responsible for ensuring resources that are not intrinsic or available to responding organisations are provided. Any requests for resources should therefore be made to FESA SES. Any requests should be task, resource and/or personnel specific.
- 4.11 The relevant Emergency Coordinator is to assist Operations Area/Incident Manager with the coordination of resources and/or services, when required.
- 4.12 Defence Assistance to the Civil Community (DACC) Category 1 is emergency assistance for a specific task(s) provided by a Local Australian Defence Commander/Administrator from within his/her own resources, in a civil emergency (Annex A to SEMC Policy Statement No. 9 – 'Commonwealth Physical Assistance'). These resources if any, should be identified in Local Emergency Management plans.

- 4.13 Where an operation is beyond the resources of the State to cope, and at the request of the State, it is the responsibility of Emergency Management Australia to coordinate the provision of the available physical resources provided by the Commonwealth (Refer to 5.25)

## **Training**

- 4.14 Training of personnel is an essential requirement for preparedness. FESA-SES is responsible for training and equipping an emergency service capable of assisting the community in managing the effects of tropical cyclones, similarly, Combat and Support agencies detailed in Annex B are expected to ensure and provide trained and equipped personnel. There is a further need for FESA-SES to conduct multi-agency exercises for the relevant level of emergency management thereby ensuring personnel are aware of their role in the organised response.

## **Public Education**

- 4.15 Annually, FESA-SES will coordinate a visit to vulnerable communities by representatives from FESA, the Bureau of Meteorology, Local Government and the Department for Community Development. Representatives will be available to discuss the seasonal outlook, community safety and welfare.
- 4.16 Between October and April each year, FESA will conduct cyclone public education campaigns, through media, community and school visits and make printed information readily available.

## **Warning Systems**

- 4.17 The primary objective of a warning system is to empower individuals and communities to respond appropriately to a threat in order to reduce the risk of death, injury, property loss and damage.
- 4.18 FESA-SES has implemented a Community Alert System (Blue, Yellow, Red and All Clear with Caution) and Evacuation Warnings which complement the respective Bureau of Meteorology Cyclone Warnings and "Official Storm Surge Warnings" to get the message across and stimulate those at risk to take action.
- 4.19 These systems are reviewed after each event to ensure the timely and effective dissemination of information to the community. (Detailed description of the Cyclone Warning, Storm Tide Warnings, Community Alert System and Evacuation Warning are at *Annex C, E & F*).

## **Media Management**

- 4.20 A media management strategy shall be reviewed annually to facilitate the communication of cyclone information provided by FESA to the media and residents of the Pilbara, Kimberley and Midwest Districts when a tropical cyclone emergency occurs.
- 4.21 Arrangements should be confirmed by FESA Media and Public Affairs with the Managers of Regional Radio, ABC Perth and with commercial radio and television stations, prior to 1<sup>st</sup> November of each year.



## **PART 5 – ORGANISATION AND RESPONSIBILITIES**

### **General**

5.1 The organisation for a tropical cyclone emergency is based on the following:

- The Fire & Emergency Services Authority - State Emergency Service as the nominated Hazard Management Agency has overall responsibility for the development of arrangements and management of operations.
- FESA SES utilises agreed arrangements detailed in Annex B with the combat and support organisations to assist the Hazard Management Agency in providing an effective and coordinated response to a cyclone emergency.
- An operational management structure in accordance with SEMC Policy Statement No.7.
- Reference to the relevant State Plans i.e. WESTPLAN HAZMAT, should a tropical cyclone create a subsequent emergency.
- The process to deal with a tropical cyclone emergency in Western Australia is based on the principle of graduated response. Responsibility for resourcing and responding to an emergency initially rests 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.
- Good communication between Local, District and State authorities are essential at all times, to ensure intelligent and timely application of resources to manage the emergency.

### **Management**

5.2 The FESA Executive Director, State Emergency Service will appoint an Operations Area Manager(s) who will assume overall management of an Operations Area in accordance with SEMC Policy Statement No 7 and if necessary implement the Response and Recovery Parts of this plan.

5.3 The Operations Area Manager, in consultation with the relevant Emergency Coordinator (s) may convene an Operations Area Management Group (OAMG) to assist in the overall management of the operation. The OAMG, in addition to the relevant Emergency Coordinator, will include representation from the key agencies involved in the response.

5.4 The Operations Area Manager will:

- Define the Operations Area;
- Appoint Incident Managers as required, responsible for the overall management and control of the response with specific localised communities or geographical areas affected by the emergency; and
- Advise the Executive Officer SEMC of the Operations Area and operational structure for that emergency for the information of the Minister and State Emergency Co-ordination Group as required.

- 5.5 The Operations Area Manager will establish an Operations Area Management Centre within the Operations Area.
- 5.6 Incident Management Centre – a facility where FESA locates an Incident Manager at or near the scene of an emergency to facilitate better management of a particular emergency. The Incident Management Centre may be located in an existing building or be a self-contained mobile unit. An Incident Management Centre should ideally have or be able to accommodate reliable communication capability and basic administration needs for both the Incident Manager and Incident Management Group to support FESA-SES.
- 5.7 The FESA Headquarters 91 Leake Street, Belmont, will provide logistic and planning support to an Operations Area Manager(s).
- 5.8 It is vitally important that the Operations Area Manager and the relevant Emergency Coordinator work in close cooperation with each other.
- 5.9 Hazard Management Agencies responsible for a particular type of emergency within Annex F of SEMC Policy Statement No.7, as a consequence of a Tropical Cyclone are required to combat that emergency until the Hazard Management Agency's responsibilities are completed.

### **Coordination**

- 5.10 A State Emergency Coordination Group (SECG) may be established by the State Emergency Coordinator at the request of or in consultation with, FESA to assist in the provision of a coordinated multi-agency response to the emergency.
- 5.11 The requirement for a SECG may be determined by the Operations Area Manager when a cyclone:
- Has, or threatens to have a significant impact upon a community; and/or
  - Requires significant coordination of support at the State level.
- 5.12 The State Emergency Coordinator is the Commissioner of Police who is responsible for coordination during emergencies.

### **Combat Agencies and Support Organisations**

- 5.13 This Plan relies on the deployment of resources and personnel from State agencies for the response to a tropical cyclone emergency.
- 5.14 This Plan is based on the assumption that each agency written into this Plan has in place appropriate Standing Operational Procedures/Plans which detail that agency's response arrangements in accordance with this Plan.
- 5.15 Combat Agencies and Support Organisations are responsible for the planning, command, coordination and conduct of emergency response and initial recovery operations undertaken by their respective agency or functional area.
- 5.16 Each agency and organisation involved in a tropical cyclone response shall, on request from the Operations Area Manager or Incident Manager, provide a written report.

5.17 The roles and responsibilities of participating agencies are detailed in *Annex B*.

### **Liaison Officers**

5.18 All agencies involved at *Annex B* of this Plan are required to place "on call" a Liaison Officer upon implementation of the Response and Recovery Parts of this Plan (Parts 6 & 7). This Liaison Officer must be of sufficient level and status to assist the respective Operations Area/Incident Manager with the decision making process and to represent their agency on the State Emergency Coordination Group/Operations Area Management Group/Incident Management Group as required.

5.19 Liaison Officers therefore, require a thorough knowledge and understanding of their organisation's role and responsibilities, operational plans and procedures, resources, communication channels and contact details.

5.20 Roles and responsibilities of Liaison Officers (LO's) are detailed at *Annex K*.

### **Communications**

5.21 Provision of communications during response activities measure under this Plan is based on the use of normal communication facilities required for the day to day activities of participating organisations. Should the normal services be inadequate or unavailable, additional resources will be arranged by FESA as the HMA.

5.22 Should the Operations Area Management Group be divided by geographic location, it is preferable agency representatives go to only one or two locations if required, and keep teleconferencing to a minimum.

5.23 All telephone requests and instructions are to be confirmed by facsimile/email as soon, as is practicable.

### **Contact Arrangements**

5.23 The contact arrangements for organisations and individuals relevant to the activation of the Plan are shown in *Annex L*.

### **Resources**

5.24 FESA-SES is responsible for the provision of resources, which are not intrinsic or available to participant organisations. Therefore, any requests should be task, resource and/or personnel specific.

### **Request for Commonwealth Assistance**

5.25 Where an emergency management operation is beyond the resources of the State to cope, and at the request of the State, it is the responsibility of Emergency Management Australia to coordinate the provision of the available physical resources provided by the Commonwealth.

- 5.26 Each State and Territory has identified a person, or persons, to be the nominated "Requesting Authority" for Commonwealth physical support. In the case of Western Australia the Requesting Authority is the State Emergency Coordinator and the Action Officer is the Executive Officer, State Emergency Management Committee. See SEMC Policy Statement No. 9 – "Commonwealth Physical Assistance" for full details and procedures.

***Note that EMA will only accept requests from the nominated "Requesting Authority"***

- 5.27 Defence Assistance to the Civil Community (DACC) Category 1 is emergency assistance for a specific task(s) provided by a Local Australian Defence Commander/Administrator from within his/her own resources, in a civil emergency (Annex A to SEMC Policy Statement No. 9). This resource should be considered when writing Local Plans.

### **Finance Aspects**

- 5.28 In accordance with SEMC Policy Statement No. 13 'Funding for Multi-Agency Emergencies', all costs associated with a multi-agency response to a tropical cyclone emergency shall be met by each individual agency, provided such costs are related to the delivery of services or resources which form part of the agency's core function, or the agency has a bi-lateral agreement to provide such services and resources at its own costs.
- 5.29 Where costs are incurred in delivering services or resources at the request of Fire and Emergency Services Authority, as Hazard Management Agency, which are not part of the agency's core functions and there are no prior agreements as to funding responsibilities, then such costs shall be met by Fire and Emergency Services Authority.
- 5.30 Where agency/departmental resources are inadequate, either because of insufficient funds or lack of a suitable appropriation item on which to call, no financial commitments can be entered into or expenditure incurred unless authorised by the Operations Area Manager.

### **Training**

- 5.31 The Fire and Emergency Services Authority has responsibility for ensuring that all emergency management activities including preparedness towards a tropical cyclone are undertaken. Planning, training, exercising and subsequent evaluation are all part of the preparedness element and are generally undertaken as part of their annual activities to manage the risks for which they are responsible.

## **PART 6 - RESPONSE**

### **General**

6.1 Response activities combat the effects of the event, provide emergency assistance for casualties, help reduce further damage and help speed recovery operations.

### **Notification and Implementation**

6.2 The Bureau of Meteorology (BoM) will advise the Fire and Emergency Services Authority District Headquarters in the region most at risk of a tropical cyclone emergency.

6.3 The FESA District Manager will advise the FESA Regional Director who will assess the situation and if considered necessary in consultation with the FESA Executive Director SES implement Part 6 and 7 of this Plan, as required.

6.4 Factors, which will influence implementation, are:

- A Severe Tropical Cyclone threatening a community;
- A Tropical Cyclone which affects more than one FESA Directorate and requires a multi-agency response; or;
- As determined by FESA Executive Director SES

6.5 When implemented the FESA Executive Director SES will:

- appoint an Operations Area Manager(s); and
- depending on the situation may in consultation with the Executive Officer SEMC and State Emergency Coordinator request the State Emergency Coordinator to establish a State Emergency Coordination Group.

6.6 The designated Operations Area Manager will:

- appoint an Incident Manager(s) as required;
- in consultation with the relevant District Emergency Coordinator(s), may establish an Operations Management Group; and,
- define the Operations Area and advise the Executive Officer SEMC for the information of the Minister and the SECG.

## **PUBLIC WARNINGS**

### **Cyclone Warnings**

6.7 The Bureau of Meteorology issues cyclone warnings to a variety of government and non-government agencies and media outlets. When a cyclone warning message is issued, FESA District Manager of the region at risk will assume the role of Operations Area Manager and activate an Operations Area Management Centre.

6.8 If required, out of normal business hours, the Operations Area Management Centre will pass cyclone warnings to agencies, which have a responsibility within this plan.

### **Community Alerts**

6.9 As a cyclone nears the coast, the Incident Manager in consultation with the appointed Operations Area Manager shall implement stages of alert for their communities. The

FESA Regional Director Pilbara/Kimberley shall ensure that Community Alerts are timely and coordinated across FESA Districts.

6.10 Community Alerts are attached to Cyclone Warnings, therefore the Operations Area Manager shall ensure the state of Community Alerts are provided to BoM, thirty minutes prior to the dissemination of the next Cyclone Warning.

6.11 Sometimes a tropical cyclone emergency will encompass two Districts. For an example a tropical cyclone may be travelling between Broome and Port Hedland and its forecast track crosses more than one District. In this situation the appointed Operations Area Manager within whose District the last position report was received shall maintain management, ensuring Community Alerts are provided to the BoM.

If the last position report was received at the boundary of the two Districts, the appointed Operations Area Manager of the District toward which the tropical cyclone was proceeding shall assume management.

## **MANAGEMENT ACTIVITIES**

### **Pre Impact Activities**

6.12 When Community Alerts are issued, local cyclone plans should be activated. Some of the following activities may also occur at this stage:

- a. Activation of Incident Management Centre and Operations Area Management Centres.
- b. The opening, staffing and preparation of identified welfare centres.
- c. Conduct of pre impact evacuations where necessary.
- d. Closure of boat launching facilities.
- e. The securing and closure of ports and airports.
- f. Closure of schools, public offices and businesses.
- g. Securing of industrial facilities such as conveyor systems, drilling platforms and offshore oil and gas production facilities.
- h. Closure of roads.

### **Post Impact Activities**

6.13 After the impact of a cyclone on a community, the main response tasks will be the conduct of damage assessment, the treatment of the injured and the rescue of trapped persons. The Operations Area Manager /Incident Managers should consider the following post impact response activities:

- a. Identification, reporting and treatment of injured persons.

- b. Location and rescue of trapped persons.
- c. Survey and assessment of damage to public utilities, facilities and residences and the reporting of the results to the Incident Manager.
- d. Clearance of debris from roads, airports and ports.
- e. Reopening of roads.
- f. Reopening of ports and airports.
- g. Return of evacuees from shelters to residences.
- h. Sheltering of the homeless.
- i. Temporary repair of damaged buildings.
- j. Recovery, recording and storage of deceased persons.
- k. Assessment of the need for post impact evacuations.
- l. Consider possible isolation of remote areas and the resupply options available to assist them.
- m. Re-establishment of communications systems.
- n. Establishment of procedures to deal with media enquiries.

## **Evacuation**

- 6.14 The tactical decision to recommend residents evacuate from certain areas either prior to or after cyclone impact shall be the responsibility of the Operations Area Manager in consultation with key stakeholders including the relevant Incident Manager, Emergency Co-ordinator and the community.
- 6.15 In the event of a storm surge associated with a severe cyclone, which should threaten a community, Fire and Emergency Services Authority will use local radio and TV stations to warn the public of the danger and provide safety advice.
- 6.16.1 These will be issued in the form of "Official Storm Surge Warnings" refer to *Annex G, H, I and J*.
- 6.17 The responsibility for implementing the evacuation rests with Fire and Emergency Services Authority supported by the WA Police Service and the Department for Community Development.
- 6.18 If transport is provided by FESA during the withdrawal phase, once FESA has determined absence of hazard, assessed the availability, condition and safety of accommodation, utilities, public health, and commodities essential for maintenance of life, transport will be provided by FESA during a specific period for the return of residents.

## **Impact Assessment**

- 6.19 An important post impact task is the conduct of damage assessment. When safe and practicable, it is vital that the Incident Manager coordinates a impact assessment to quantify damage, establish casualties and be able to inform the community of inherent dangers within the issue of the "ALL CLEAR" alert.
- 6.20 The assessment shall be passed to Operations Area Manager as quickly as possible to enable the release of appropriate public information and to ensure a graduated response.
- 6.21 If the impact upon a localized community or geographical area requires coordination and significant multi-agency emergency management activities at a District or State Level, FESA will appoint an Operations Area Manager and define an operations area.

## **Medical Response**

- 6.22 If mass casualties are involved, the Operations Area Manager is to ensure the State Health Coordinator is notified, who will activate WESTPLAN - HEALTH as a matter of urgency.
- 6.23 The initial transport of medical resources and personnel will be coordinated at Local and District level where possible. Transport requirements over and above what is available locally may be obtained through the State Health Coordinator.

## **Rescue**

- 6.24 State arrangements for specific types of rescue apply during cyclone operations. The Operations Area Manager shall advise the appropriate Hazard Management Agency or task the Combat Agency.

## **Communications**

- 6.25 If communication with a community at risk has not been established after the cyclone has passed, when safe to do so, FESA will immediately dispatch a reconnaissance team including medical and communication responders.

## **Restricting Access**

- 6.26 The Operations Area Manager may need to ensure public safety by restricting access to certain areas by road, sea or air.
- 6.27 Fire and Emergency Services Authority in consultation with the WA Police Service, Main Roads Western Australia and Local Government, will decide on those roads that in the interest of public safety must be closed prior to or after the impact of the cyclone.
- 6.28 The responsibility for the closure and opening of ports rests with the Port Authorities of the eight 'declared independent' ports in Western Australia (Broome, Port Hedland, Dampier, Geraldton, Esperance, Bunbury, Fremantle, and Albany) and with the Department of Planning and Infrastructure (Maritime Division) for all other Ports and Marinas (*Refer Annex M & N*).
- 6.29 Air Services Australia controls restrictions on air space and airport owners (normally Local Governments) control restrictions on the use of airfields.



## **Re-supply**

- 6.30 The Operations Area/Incident Manager shall manage re-supply of communities. In the case of isolated communities which have retail outlets the State Isolated Communities Freight Subsidy Emergency Management Plan may be activated. In other cases the Operations Area Manager may re-supply, commensurate with the operational circumstances.

## **Transport**

- 6.31 Transport requirements for the evacuation of injured and non-injured survivors from the emergency site and the transportation of emergency service responders, is an issue that should be resolved through the Operations Area Management Group or if necessary the State Emergency Coordination Group. Local and District resources should be used wherever possible.

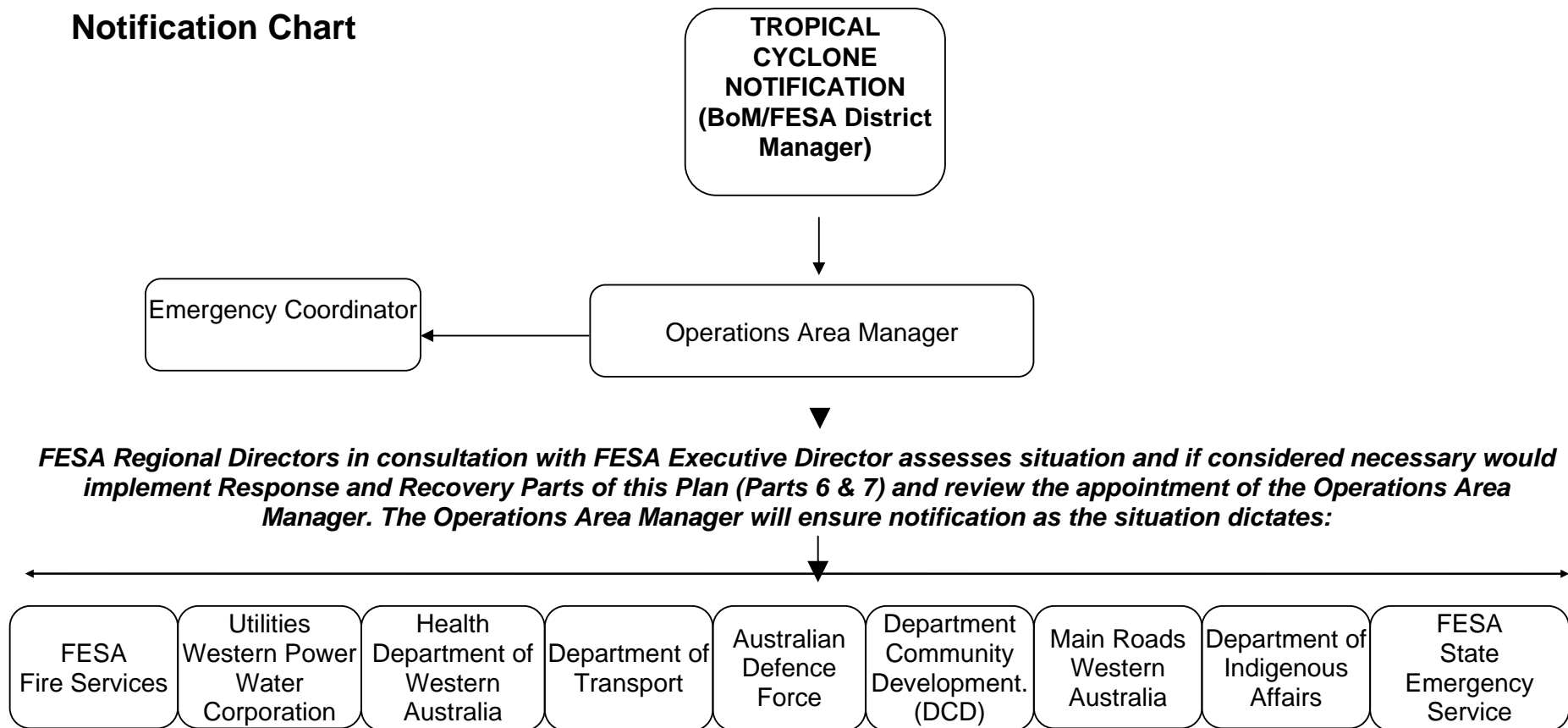
## **Public Information**

- 6.32 Intense public and media interest can be anticipated in the event of a tropical cyclone emergency. The Bureau of Meteorology will issue warnings and technical information, all other public statements relating to the emergency situation, including community safety messages, will be issued by the Operations Area Manager or by a spokesperson who has been officially authorised by the Operations Area Manager to release such information.
- 6.33 In the event that public affairs support in addition to that provided within Fire and Emergency Services Authority is required to deal with a particular emergency situation, Fire and Emergency Services Authority may call upon the State Emergency Public Information Coordinator for support under the arrangements contained in the State Public Information Emergency Management Support Plan.

## **Transition to Recovery**

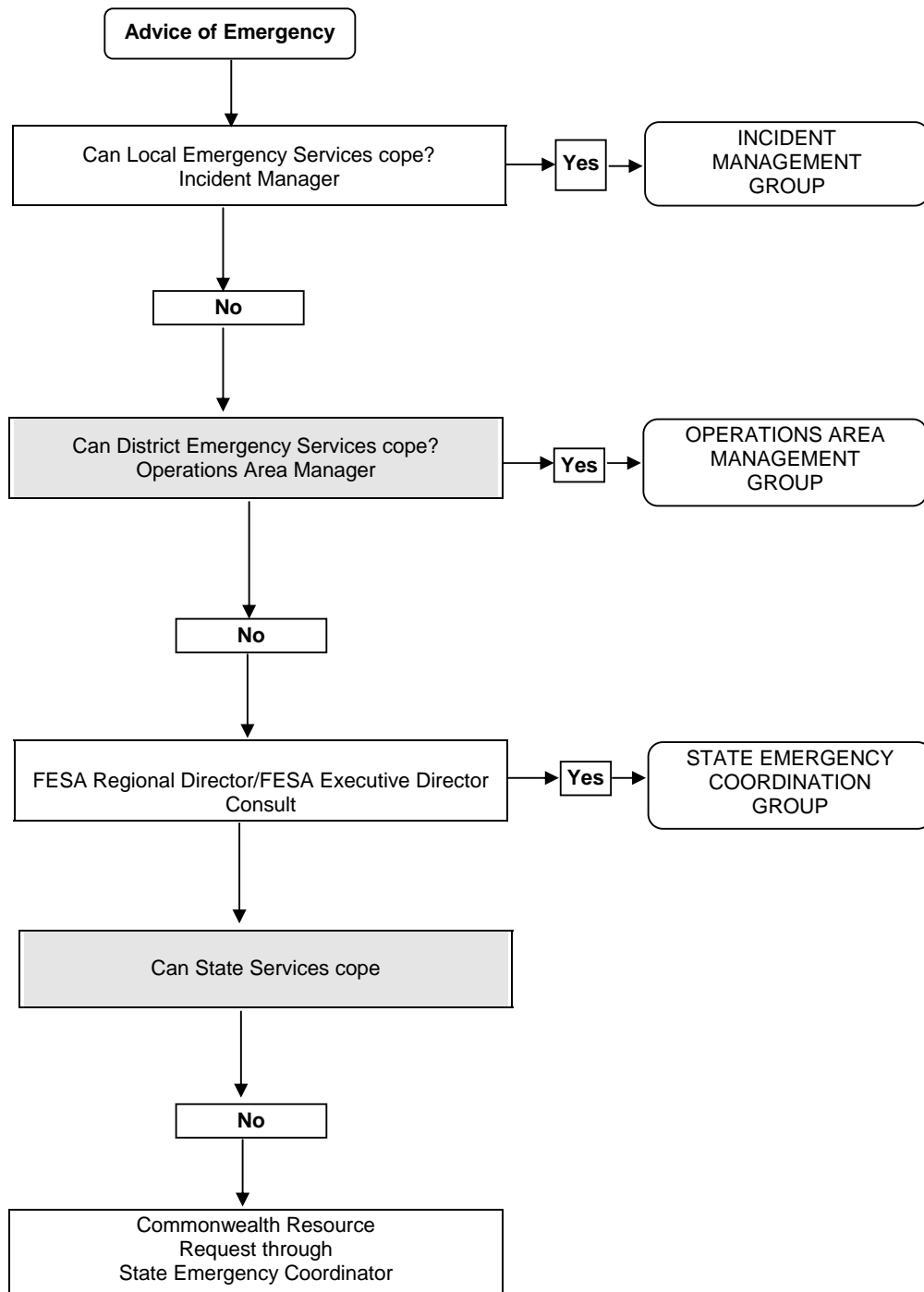
- 6.34 During the post impact phase of the tropical cyclone emergency, recovery activities will commence, and many of these activities will continue from the response phase to the recovery phase. There will be no clear division from one element to another as there is with prevention and preparedness. The response element can be considered to continue at least until the following conditions are met.
- a. All rescues have been accomplished
  - b. All injured have been attended to
  - c. The homeless have been provided with shelter.
  - d. Essential public services such as water and power have been restored.
  - e. Temporary repairs have been made to designated buildings.
  - f. Physical and electronic communications have been largely restored.
- 6.35 The decision to move from the response to recovery and the procedures for the hand over between the two elements, rest with Fire and Emergency Services Authority. The recovery element may continue for a prolonged period depending on the level of damage, injury and disruption.
- 6.36 In the absence of local recovery plans or arrangements, Fire and Emergency Services Authority is to initiate action to establish suitable arrangements during the response element.

## Notification Chart



## Response and Activation Flow Chart

These arrangements can be activated in phases, should the situation allow this. However, in exceptional cases, the warning time may be reduced to only a period of hours. In this case, specific State agencies and the Commonwealth may require a rapid response.



## **PART 7: RECOVERY**

### **General**

- 7.1. Recovery activities, short and long term, help communities affected by an emergency, achieve a proper and effective level of functioning. During recovery operations, actions are taken to minimize the recurrence of the risk and/or lessen its effects.

### **Principles of Recovery**

- 7.2. Community recovery should be coordinated at the community level. State level involvement should be facilitative, assisting the community, rather than directive.
- 7.3. Fire and Emergency Services Authority is responsible for ensuring the activation of the appropriate recovery arrangements. This should be achieved through consultation with the State Recovery Coordinator and the Incident Management Group. It may require the activation of the Local and/State Recovery plans, including the raising of sub-committees. Fire and Emergency Services Authority shall maintain membership of the recovery committee to ensure a smooth transition, before standing down.
- 7.4. Recovery activities commence and operate in concert with response but may continue for some time after response activities have been complete.
- 7.5. Recovery planning should be separate from, but integrated with, emergency management plans. The philosophy of the Emergency Management cycle ensures that mitigation strategies are addressed during the recovery process.
- 7.6. Community recovery will include but not restricted to:
- Enhance and/or increase community safety programs.
  - Review treatment options.
  - Inform communities of self-preservation measures in order to reduce risk or injury and or death.
  - Personal Services, which includes such services as reception and direction to welfare facilities, care of children, counseling, payment of special benefits as well as advice of a general nature.
  - Establishment of Welfare Centres and emergency accommodation as temporary shelter for persons rendered homeless and where necessary the allocation of more permanent accommodation.

### **Assessment and Operational Recovery Planning**

- 7.7. In order to facilitate the effective coordination of the recovery process it is essential that an assessment of the recovery and restoration requirements be conducted as soon as possible after the impact of the event.

- 7.8. As the requirement for State level involvement in the recovery may not immediately be recognised, the State Recovery Coordinating Committee will initially rely upon information provided by Local Recovery Committees in the affected area and the Incident Manager.
- 7.9. In addition, the State Recovery Coordinating Committee will arrange for a representative of the appropriate recovery organisation to conduct an on-site assessment.
- 7.10. From the information obtained through Local Recovery Committee, the Incident Manager and its own on-site assessments the State Recovery Coordinating Committee will develop a recovery plan and strategies for the event for implementation by the appropriate recovery agencies.

### **Public Information**

- 7.11. Efficient dissemination of information to the affected community and the community at large in respect to recovery measures and contact point is essential.

### **Infrastructure**

- 7.12. The restoration/reconstruction of essential services e.g. roads, transport, water, sewerage, electricity and waste disposal, will remain the responsibility of the agencies with the existing responsibility for the provision of those services.

### **Debriefing**

- 7.13. The Operations Area Manager and/or Incident Manager will ensure the debriefing of all participating organisations and of personnel involved in the emergency response takes place within a reasonable time following the stand-down phase.
- 7.14. They must assess crisis-counseling needs and facilitate the provision of such counseling if required. Initially, peer support and general assistance from community based groups and local Medical Practitioners should be sought.

### **Post Operations Reports**

- 7.15. Each agency or organisation involved in a tropical cyclone emergency shall, on request from the Operations Area Manager, provide a written report.
- 7.16. The Operations Area Manager shall arrange for a post operations report, based on such reports submitted by participating agencies and organisations, to be forwarded to the State Emergency Management Committee.

### **Operation Analysis**

- 7.17. In-depth analysis of the operation to identify ways to improve this Plan or Local Plans/Procedures should be conducted at an appropriate time after the conclusion of the response element.
- 7.18. The Operations Area Manager/Incident Manager will ensure an Operational Debrief, Post Incident Analysis or Major Incident Review is conducted. Representatives of all agencies involved in the incident will be invited to attend.

## **Prevention Strategies**

- 7.19. It is essential during the recovery process that the opportunity is taken to implement preventative strategies identified in the emergency management process. FESA-SES will identify key areas in the community infrastructure, which failed as a result of the event and will promote actions and/or studies designed to minimize the effects of cyclones on communities in the future. Strategies that may well be worthy of consideration include increased building construction standards, land use management, disaster hardening of key community facilities and utilities.

## THE TROPICAL CYCLONE HAZARD

### Introduction

1. For approximately six months of the year (usually November - April) about 20,000 km of Australia's coastline and about 20 per cent of the population are vulnerable to the devastating winds, high seas and heavy rain that can be generated by a tropical cyclone. Australia's population in tropical areas is increasing rapidly in response to the development of mineral, energy, tourism, fishing and agricultural industries and changing defence priorities. Unfortunately, the rapid growth in population in these areas can result in people being unaware of the potential danger of tropical cyclones and of the best way to protect their lives and property when tropical cyclone threat is imminent. The Pilbara coast is threatened by tropical cyclones more often than any other area of Australia.

### Tropical Cyclone Definition and Description

2. Tropical Cyclones are low pressure systems in the tropics that have clockwise (in the southern hemisphere) wind circulations with the mean surface winds (averaged over 10 mins) exceeding gale force (63km/h) near the centre. The centre of the tropical cyclone called the eye is the area of lowest pressure (usually between 900 and 990 hPa) and is about 10 to 60 km across. The winds in the eye are very light, while the weather there is generally fine with only high cloud or even no cloud at all. Surrounding the eye is a ring of dense cloud, called the eye wall, in which are embedded, heavy rain and the most destructive winds. This wall of cloud often extends up to 15 km into the atmosphere. Wind speeds of up to 260 km/h and rainfall in excess of 500 mm have been recorded during tropical cyclones in WA. Generally, the wind speed decreases as the atmospheric pressure and distance from the eye increase. To be classified as a tropical cyclone the minimum wind speed must exceed 63 km/h. To be classified as a severe tropical cyclone the maximum wind speeds must exceed 125km/h. In other parts of the world, the terms hurricane and typhoon are used to refer to a severe tropical cyclone.

### Formation and Life Cycle

3. Tropical cyclones derive their energy from the warm tropical oceans and will not form unless the sea temperature is above 26.5C. They generally form between 500 km and 1500 km away from the equator as they need a contribution from the Earth's coriolis force to initiate rotation within the cloud mass. In the Kimberley, unusual situations can occur where a low may form over land and then move out over the ocean, intensifying into a tropical cyclone as it encounters warm ocean water.
4. There are four stages in the life cycle of a tropical cyclone; the formative, immature, mature and decaying stages. The average lifetime of a tropical cyclone is about 9 days but some may last for 20 days or more while others can intensify explosively to the mature stage in about 24 hours. Some cyclones may only reach category one intensity for a brief time, while others may encounter a favourable environment allowing intensification to severe intensity. Cyclones weaken when they move over land, experience strong 'wind shear' usually because of strong upper-level winds or move over cooler waters to the south.

## **Tropical Cyclone Motion**

5. Although tropical cyclone tracks are often erratic, there is a general pattern of movement that commonly occurs. A cyclone in the formative stage usually develops from an area of strong convective cloud over the ocean. It then usually moves slowly towards the west and the convective cloud becomes more organised as the cyclone develops into the immature stage. Eventually the cyclone starts to recurve southward and eventually weaken. Cyclones typically move at speeds of 5 to 20 km/h and accelerate as they move further south. Those that affect the west coast, in particular, can accelerate to speeds in excess of 40 km/h

## **Tropical Cyclone Effects**

6. The greatest threats to a community arise from; destructive winds in the maximum wind belt, the storm surge which can cause inundation of coastal areas, and severe flooding from widespread and intense rainfall.

### **Wind Damage.**

7. The wind damage from a tropical cyclone increases approximately as the fourth power of wind speed. The maximum sustained wind in a severe tropical cyclone often exceeds 150 km/h with gusts exceeding 200 km/h. Such violent winds turn sheets of galvanised iron, masonry, and other debris into lethal flying weapons. Examples of wind strengths in Australia are:
  - a. The strongest wind speed recorded over land was 267km/h at Learmonth during cyclone Vance in March 1999.
  - b. The most graphic example of wind damage occurred during cyclone Tracy at Darwin in December 1974, when an estimated 55% of buildings were destroyed by winds of over 200km/h, with only 5% of buildings remaining habitable. Over 23,000 people had to be evacuated.

### **Storm Surge.**

8. The most destructive aspect of a tropical cyclone near the coast is the storm surge. This is a raised dome of water about 60 to 80 km across and typically about 2 to 5m higher than the normal tide level. The amplitude of the surge is strongly influenced by geographic factors such as ocean bottom topography, coastline geometry, the angle of approach of the tropical cyclone to the shore and other factors such as prevailing currents. Bays and estuaries, through the natural converging of their waters as they move toward the shore, can increase the amplitude of the surge by more than 50 %. If an estuary is already in flood, the amplitude will be further enhanced. The worst possible conditions arise whenever a large storm surge arrives and it is superimposed upon a spring high tide. Records of Australian storm surges are very incomplete, but evidence suggests that storm surges of similar magnitude to those recorded overseas do occur.
9. Examples of the larger WA storm surge reports are as follows:
  - a. 1921, Shark Bay, 3m,
  - b. 1939, Port Hedland, 2m,
  - c. 1937, Hamelin Pool, 4m,
  - d. 1988, Shark Bay, 4m and
  - e. 1999, Onslow, 3.8m



## **Rainfall**

10. Some of Australia's heaviest rainfalls have occurred in association with tropical cyclones and their decay over land. Some cyclone induced rainfall records for WA are listed below:
  - a. 927 mm, over 36 hours, at Whim Creek, April 1896.
  - b. 591 mm, over 60 hours, at Marandoo, December 1975.
11. In WA, the loss of life due to flooding has been relatively rare, however flooding causes great economic losses at regular intervals, leads to the isolation of communities for extended periods of time and can create massive disruption to services. Cyclone Hector in 1986 caused extensive flooding through the Kimberley after it degenerated into a rain bearing depression and moved slowly inland over the Fitzroy River system. In February 1995, the remnants of tropical cyclone Bobby paralysed road and rail transport over the southern half of WA by causing widespread flooding.

## **Cyclones affecting the West Coast of WA (South from NW Cape)**

12. Cyclone activity south of the tropics occurs less frequently than in the Pilbara and Kimberley but the effects can be equally devastating. Some cyclones that impact this area change their characteristics such that their regions of heavy rainfall are displaced to the southern quadrants of the storm while the northern and eastern quadrants of the cyclone are largely cloud free and harbour hot, dry, gale force or stronger winds that produce dust storms and extreme fire weather conditions. These 'hybrid' cyclones also accelerate and move at speeds of around 70 km/h compared with the usual speed of movement of a tropical cyclone which is around 13 km/h. They have caused major flooding (e.g. Greenough River 1988 with cyclone Herbie), widespread bushfires (e.g. cyclone Alby 1978), and significant storm tides (e.g. Denham 1988 with cyclone Herbie).

## **Cyclone Severity Categories**

13. The intensity of cyclones is graded by the Bureau of Meteorology using a five category system in which Category 1 is weakest and Category 5 is strongest. A description of the categories is shown at *Annex D*.

## ROLES AND RESPONSIBILITIES OF PARTICIPATING ORGANISATIONS

### Introduction

1. FESA-SES as the HMA, has the primary responsibility for managing tropical cyclones effects in WA, however, it requires the support and assistance of other organisations to ensure an integrated community response to tropical cyclones.
2. The organisations which have a direct responsibility in the management or mitigation of the cyclone threat in Western Australia are:
  - a) Airservices Australia
  - b) Alinta
  - c) Bureau of Meteorology
  - d) Department for Community Development
  - e) Department of Health
  - f) Department for Planning and Infrastructure
  - g) Electronic Media
  - h) Emergency Management Committees
  - i) Local Government\*
  - j) Main Roads WA
  - k) Port Authorities
  - l) Telstra
  - m) Department of Environment
  - n) Water Corporation of WA
  - o) Western Australia Police Service
  - p) Fire and Emergency Services Authority – State Emergency Service (FESA-SES)
  - q) Western Power

### Agency Responsibilities

3. The agencies listed have undertaken the responsibilities shown in the following table and are committed to maintaining appropriate internal plans and procedures to implement their 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 Hazard Management Agency and detailed in the Local Hazard Emergency Plan and/or Local Emergency Management Arrangements. This will ensure the varying capabilities of individual Local Governments are recognised and agreed to by all parties.

## RESPONSIBILITIES OF PARTICIPATING ORGANISATIONS

Organisation	Responsibilities
<b>Airservices Australia.</b>	a) Dissemination to aircraft of unforecast changes to cyclone warnings.
<b>Alinta.</b>	a) Disconnecting gas supplies as and when requested by FESA-SES. b) Restoring gas supplies in the priority requested by FESA-SES or the designated recovery authority.
<b>Bureau of Meteorology.</b>	a) Providing and Disseminating cyclone prognosis, information and warnings of cyclones to FESA-SES, government authorities, industry and the media and the public. b) Providing warnings on the possibility of storm surge to vulnerable communities to FESA-SES and government agencies. c) Providing warnings of rainfall, which could cause possible flooding due to the effects of cyclones to FESA-SES and government authorities. d) Maintaining close liaison with FESA-SES during a tropical cyclone event and provide the appropriate technical advice as required. e) Participating in the pre-season cyclone briefings conducted by the FESA-SES. f) Providing public education materials on tropical cyclones.
<b>Department for Community Development</b>	a. Coordinate other Welfare Agencies. b. During an incident determine the number and location of Welfare centres to be opened in consultation with the HMA and consideration of available department resources. c. Determine a register of potential Welfare centres in consultation with the Local Emergency Management Committee. d. Staffing of Welfare centres. e. Responsible for the registration of evacuees. f. Participate in the emergency recovery arrangements for people affected by cyclones. g. In liaison with the HMA assist in the management of Welfare Centres. (Under Review)
<b>Department of Health</b>	a) Coordinate on behalf of the HMA the medical responses to a Cyclone situation including activation of WESTPLAN – Health if required b) Advise the HMA on all medical and health aspects in relation to a Cyclone situation c) Through the hospital stream, provide acute medical care and relief to injured persons. d) Provide acute mental health services, particularly to those persons within the community, who have chronic conditions. e) Provide a liaison officer at the HMA Coordination Centre. f) Provide advice and support to the designated Recovery Committee.
<b>Department for Planning &amp; Infrastructure (Maritime Division)</b>	g) Closure of ports, boat harbours and boat launching ramps (those designated as under DPI control). b) Preparation of ports and boat harbours for possible cyclone impact (those designated as under DPI control).
<b>Telstra</b>	a) Advising FESA-SES of any major communications outages, which could affect communications into an area, threatened by a cyclone. b) Telstra will take into consideration the restoration priorities requested by FESA-SES or the designated recovery authority. However, actual restoration priorities will depend on Telstra's network configuration, safety/availability of its staff, material, local community issues and national/local security issues.

<b>Electronic Media Outlets.</b>	<ul style="list-style-type: none"> <li>a) Broadcasting cyclone watch and warning messages when requested by FESA-SES or the BoM.</li> <li>b) Broadcasting public information on the progress of a cyclone when requested by the FESA-SES.</li> <li>c) Broadcasting of community alert advices.</li> <li>d) Providing support as requested by FESA-SES and the designated recovery authority during the response and recovery phases.</li> </ul>
<b>Emergency Management Committees.</b>	<ul style="list-style-type: none"> <li>a) Assisting FESA-SES in the execution of its tasks.</li> <li>b) Conducting Emergency Management Planning in relation to tropical cyclones.</li> <li>c) Providing EM advice to the appropriate local, regional or state governments</li> </ul>
<b>Local Government.</b>	<ul style="list-style-type: none"> <li>a) Providing resources to assist FESA-SES when requested.</li> <li>b) Making available suitable Municipal buildings to be used as Welfare Centres.</li> <li>c) Issuing closure notices for airports and airfields, which are owned by the Local Governments when necessary.</li> <li>d) Closing and opening roads within their jurisdiction when requested by FESA SES</li> <li>e) Provide details on road conditions to FESA SES.</li> <li>f) Implementing pre cyclone season clean up campaigns in their communities.</li> <li>g) Undertake a lead role in the community recovery process.</li> <li>h) Providing pre-cyclone preparedness handouts containing information and education on cyclones.</li> </ul>
<b>Main Roads WA.</b>	<ul style="list-style-type: none"> <li>a) Closing and opening roads within its jurisdiction when requested by FESA-SES.</li> <li>b) Assist in the recovery process through road and road infrastructure repair and reconstruction as required.</li> <li>c) Provide details on road conditions to FESA-SES.</li> <li>d) Provide assistance in the monitoring of river levels.</li> <li>e) Assist other lifeline agencies as necessary.</li> </ul>
<b>Port Authorities</b> (for declared ports of Broome, Dampier Port Hedland, Bunbury, Fremantle, Geraldton, Esperance, and Albany)	<ul style="list-style-type: none"> <li>a) Closing and opening of ports under their control.</li> <li>b) Preparation of ports for possible impact of tropical cyclones.</li> </ul>
<b>Department of Environment</b>	<ul style="list-style-type: none"> <li>a) Monitoring and reporting on water levels in catchment areas and rivers to the BoM for the possible issue of Flood Warnings</li> </ul>
<b>Water Corporation</b>	<ul style="list-style-type: none"> <li>a) Restoring water supplies in the priority requested by FESA-SES or the designated recovery agency.</li> <li>b) Assisting in the provision of emergency water supplies as requested by FESA-SES or the designated recovery authority.</li> </ul>
<b>Western Australian Police Service</b>	<ul style="list-style-type: none"> <li>a) Ensuring coordination between agencies for tropical cyclone operations at all levels, where necessary.</li> </ul>

	<ul style="list-style-type: none"> <li>b) Supporting FESA-SES in the evacuation process once the decision is made to recommend evacuations.</li> <li>c) Providing security of evacuated areas.</li> <li>d) Controlling the movement of persons during evacuation/relocation and return.</li> </ul>
<b>FESA-SES</b>	<ul style="list-style-type: none"> <li>a) Raise, train and equip an emergency service able to respond to the effects of a cyclone.</li> <li>b) Developing and maintaining emergency plans specific to cyclones.</li> <li>c) Act as Hazard Management Agency as detailed in SEMC Policy Statement No. 7 and liaise with other HMAs to ensure co-ordination of response.</li> <li>d) Periodically test and validate local, regional and state cyclone plans.</li> <li>e) Recommending the adoption of improved prevention measures and strategies to State, District and Local Emergency Management Committees.</li> <li>f) Appointing an Operations Area Manager(s)/Incident Manager(s).</li> <li>g) Providing Incident Management Centres/Operations Area Management Centres .</li> <li>h) Providing public awareness, information and education on cyclones.</li> <li>i) Assisting the BoM disseminating warnings to the public.</li> <li>j) Ordering the implementation of community alerts on the approach of cyclones, and their cancellation at the appropriate times.</li> <li>k) Arranging for the survey of damage and issuing a damage assessments.</li> <li>l) Assisting with the relocation of those made homeless.</li> <li>m) Assisting communities in the recovery process.</li> </ul>
<b>Western Power.</b>	<ul style="list-style-type: none"> <li>a) Disconnecting electricity services as and when requested by FESA-SES.</li> <li>b) Restoration of electricity services in the priority requested by FESA-SES or the designated recovery authority.</li> <li>c) Assisting in the provision of emergency power as requested by FESA-SES or the designated recovery authority.</li> <li>d) Assist with emergency restoration of lines and associated switching equipment (Not provision stand-by generators).</li> <li>e) Receive timely advice on the various alert stages i.e. red, blue, yellow, to enable activation of their own plans.</li> <li>f) Provide input into the impact assessment to ensure that all hazards, such as low hanging wires have been removed prior to the issue of "all clear" alert.</li> </ul>

## CYCLONE WARNING SYSTEM

### Routine Monitoring Phase

1. This phase relates to the routine monitoring activities carried out by Bureau of Meteorology staff and commences at the beginning of the cyclone season. Bureau staff maintains a watch on the weather patterns searching for possible cyclone development.
2. During this phase, the Tropical Cyclone Outlook for northwest Australia is disseminated, providing current information and development potential for any tropical lows in the region between longitudes 110E and 129E.
3. The Tropical Cyclone Outlook for northwest Australia is issued at around 1pm during the cyclone season, 1 November to 30 April.

### Cyclone Information Phase

4. This phase comes into effect when a cyclone or any system with cyclonic potential is within, the Perth Tropical Cyclone Warning Centre (PTCWC) area of responsibility, or in the case of the Kimberley region, the Darwin TCWC area, but is not close to the coast or island communities. The guiding criterion is that the system does not pose a threat of gales to coastal areas or island communities within 48 hours and that the issue of WATCH or WARNING messages is not warranted.
5. During this phase, details of the cyclone or tropical low are released within the text of Explanatory Notes and Gale/Storm Warnings to shipping for systems west of 110E, and in the Tropical Cyclone Information Update for areas east of 110 longitude. The Tropical Cyclone Information is issued routinely at 0100, 0700, 1300 and 1900 WST. Gale/Storm/Hurricane Warnings to shipping are issued to the same schedule and contain 12 and 24 hour forecast positions.

### Cyclone Watch Phase

6. This phase comes into effect whenever it is considered that a cyclone (or potential cyclone) may cause gales in coastal areas within 48 hours but not before 24 hours.
7. During this phase, details of the cyclone (or potential cyclone) are disseminated by the issue of Cyclone Watch messages, distributed widely including to the media. While FESA receives all watch messages directly from the PTCWC or the Darwin TCWC, irrespective of the cyclone location, only FESA District Headquarters whose areas are under possible threat are advised by the TCWC directly.
8. Cyclone Watch messages are issued immediately the need becomes apparent and then at six hourly intervals standardised from 0700 hours. These messages continue to be issued until such time as the threat of future gales to the coast has ceased, or until it is necessary to replace the Watch with a Warning. Gale/storm/hurricane warnings will continue to be issued where necessary.

### Cyclone Warning Phase

9. The Cyclone Warning Phase comes into effect as soon as a tropical cyclone or developing tropical low is considered likely to cause gales on the coast or at island communities within the next 24 hours.

10. During this phase, details of the cyclone and its severity category are disseminated by the issue of Cyclone Warning Messages and distributed on the same basis as Cyclone Watch messages. Cyclone Warning messages are issued every three hours.
11. When possible, the first Cyclone Warning Message will be issued during daylight hours, in order that the population in the threatened areas will have some hours of daylight to make preparations before the onset of gales.
12. Each Cyclone Warning will also include the following information (when appropriate):
  - cyclone name;
  - advice number (sequential);
  - severity category;
  - description of warning and watch areas;
  - the most recent estimation of the position of the cyclone relative to prominent localities;
  - the most likely crossing point;
  - the extent of gales, destructive winds and very destructive winds relative to prominent locations;
  - qualitative description of storm surge threat;
  - qualitative description on flooding due to heavy rain resulting from the cyclone;
  - main technical details of the cyclone; and
  - locations of the current community alerts supplied by FESA SES including if requested, a statement along the line "*the communities of.... are expected to go the Red Alert at :00m WST*".
13. When the storm force winds or stronger, ie 'destructive' or 'very destructive' winds (implies Category 2 or higher) are expected within 12 hours the warning will include a message to radio and television stations to sound the Standard Emergency Warning Signal (SEWS) in the format: *Transmitters serving the area .... to .... are requested to sound the Standard Emergency Warning Signal before broadcasting the following warning.*
14. Whenever possible, when an area is under direct threat, intermediate hourly statements will be issued. The issue of these is possible when the cyclone is being tracked by radar and a high degree of confidence can be placed on its position.

### **Cyclone Related Terminology**

15. The following terms are used in official Bureau of Meteorology warnings:
  - a. **'Gale'** means winds with average speeds between 63 km/h and 90 km/h.
  - b. **'Storm-Force'** means winds with an average speed between 90 km/h and 125 km/h
  - c. **'Severe Cyclone'** means a cyclone with average wind speeds near the eye of at least 125 km/h.
  - d. **'Destructive Winds'** is used when wind gusts are expected to exceed 125 km/h.
  - e. **'Very Destructive Winds'** is used when wind gusts are expected to exceed 170 km/h.
  - e. **'Gusts'** can be of 40% greater speed than the average wind.
  - f. **'Hurricane Force Winds'** means winds with an average speed exceeding 125km/h.

## Storm Tide Warnings

16. The storm tide warning system is activated if it is anticipated that the sea level (maximum storm surge plus high tide) could rise higher than the Highest Astronomical Tide (HAT) at a locality within the cyclone warning zone. The warning system will assume the worst case scenario for each of the towns within the cyclone warning zone, that is, the zone of maximum onshore winds passing over the town at the time of high tide.

## Advice to the public

17. Warnings of storm tides to the public are to take the form of a statement included in the cyclone warning message. Quantitative estimates of storm surge are not included in forecasts disseminated to the public.

## Advice to FESA

18. At 18 hours prior to the expected onset of winds of 75 kilometres per hour on the coast until landfall, BoM will issue a **STORM TIDE WARNING** to FESA. The BoM will assume the worst case scenario, that is, the height of the highest tide level for the day will be added to the storm surge estimate assuming coastal crossing close to each key population centre in the warning area. This provides an estimate of the **maximum possible storm tide height for each centre**.
19. The forecast storm tide height will be used as the primary tool to determine the need for evacuation procedures to be carried out. **Storm tide heights provided to FESA-SES are relative to Australian Height Datum (AHD), the reference level on contour maps.** The advice is to be updated 3-hourly, coincident with the Cyclone Warning Messages.
20. A **FINAL STORM TIDE WARNING** will be issued if the cyclone path is such that storm surge is no longer expected, or if the expected surge is no longer expected to exceed HAT.

## Marine Warnings

21. The Bureau of Meteorology issues the following warnings through the media during a cyclone event: **All warnings locate a cyclone centre in degrees and tenths of a degree of latitude and longitude.**
  - a. **'Coastal Waters Forecasts'** are issued for vessels operating within 60 nautical miles of the coast. They are issued at 0430, 1130, 1530 and 2130 hours WST.
  - b. **'Coastal Waters Warnings'** are issued for vessels operating within 60 nautical miles of the coast whenever a cyclone or similar situation is likely to cause strong to hurricane force winds. Initial warnings will try to give 24 hours notice and subsequent warnings shall be issued at 0100, 0400, 0700, 1000, 1300, 1600, 1900, 2200 hours WST. Intermediate three-hourly warnings will be issued when a Tropical Cyclone Warning is current.
  - c. **Warnings for the High Seas'** are issued 12 to 24 hours prior to gale, storm or hurricane strength winds in the WA Region. Warnings are renewed as required at 0100, 0700, 1300 and 1900 Western Standard Time (WST)



## CYCLONE SEVERITY CATEGORIES

(Descriptions of damage are indicative only and may vary between localities due to factors such as building standards, surface flooding, etc.)

Category	Average Wind (km/h)	Strongest Gust (km/h)	Central Pressure (hPa)	Typical Effects (Indicative only)
1	63 - 90	Less than 125	More than 985	a) Negligible house damage. b) Damage to some crops, trees, and caravans. c) Craft may drag moorings.
2	91 - 125	126 - 169	985 - 970	a) Minor house damage. b) Significant damage to signs, trees and caravans. c) Heavy damage to some crops. d) Risk of power failure. e) Small craft may break moorings.
3	126 - 165	170 - 224	970 - 950	a) Some roof and structural damage. b) Some caravans destroyed. c) Power failures likely.
4	166 - 225	225 - 279	950 - 925	a) Significant roofing loss and structural damage. b) Many caravans destroyed and blown away. c) Dangerous airborne debris d) Widespread power failures.
5	More than 225	280 or greater	Below 925	a) Extremely dangerous with widespread destruction.

## **COMMUNITY ALERT SYSTEM**

1. The following system of Community Alerts has been developed as a treatment option for use throughout the state where tropical cyclones are an unacceptable risk to the community.
2. The aim is to warn the community of danger and provide safety advice at various stages during the approach of a cyclone. Community Alerts are issued in four stages and are issued by the appointment Incident Manager in consultation with the Incident Management Group and the appointed FESA Operations Area Manager.
3. The FESA Regional Director Pilbara/Kimberley has overall responsibility for the timely issuing and coordination of Community Alerts across FESA Districts.
4. Community Alerts are attached to BoM Cyclone Warning Messages; therefore the FESA Operations Area Manager shall ensure Community Alerts are provided to BoM, thirty minutes prior to the dissemination of the next Cyclone Warning Message.
5. BoM Cyclone Warning Messages will be issued immediately the need becomes apparent, then at three hourly intervals as follows;

0100, 0400, 0700, 1000, 1300, 1600, 1900, 2200 Western Standard Time

6. Should there be exceptional circumstances whereby the Incident Manager needs to immediately change the Community Alert, The FESA Operations Area Manager shall consult with the Bureau of Meteorology who will issue a "Flash" Cyclone Warning Message with the change of Alert status.
7. When an area is under direct threat and the cyclone centre position is being tracked by radar cyclone warning messages will be issued hourly. It is desirable to issue hourly warnings 12 hours prior to coastal crossing and for as long as the cyclone can be tracked inland using radar after the coastal crossing.
8. Community Alerts are broadcast on radio, television and internet ([www.bom.gov.au](http://www.bom.gov.au)) Visual displays at prominent places are used in local areas.
9. "How the community can prepare" and the four stages of community alert system are as follows;

### **HOW THE COMMUNITY CAN PREPARE**

During October/November each year to reduce damage from high winds and water, the community can take some fairly simple and inexpensive preparation; others will require the advice of a professional contractor:

- **Contact your insurance company** – to check you have adequate buildings and content cover
- **Keep a list of useful numbers to hand** – your council, emergency services, insurance company and BoM WA Tropical Cyclone Warning Advice (1300 659 210)
- **Prepare a Family Cyclone Plan** – think about what you and your family would do and what you might need in the event of a cyclone. Identify that strongest part of your house or closest Welfare Centre, think about how you would keep pets safe and where you would park your car. Make anchor points and have on hand chains and cable to secure caravans, boats and trailers. Discuss the plan with your family and friends.

- **Store irreplaceable items safely**
- **Have a few sandbags prepared to block doorways from flooding caused by intense rainfall** – in an emergency, make sandbags using old pillows – cases or carrier bags.
- **Make up a Cyclone Kit** – include battery-operated radio, torch, non-perishable food and water for 4 days, key personal documents and any medical supplies for 7 days.
- **Make sure you know where to turn off you electricity and gas supplies** – if you're not sure, ask the person who reads the meter when they next visit.
- **Discuss possible cyclone impact with your family, friends and your neighbours** – Is there an elderly neighbour or relative who will need your help?
- **Trim tree branches and be ready to clear away loose material that could be blown around during extreme winds.**
- **Do cyclone shutters or screens protect your windows?**
- **Is your roof and all external doors properly secure?**
- **Know the four stages of your Community Alerts;**

<b>BLUE Alert .....</b>	<b>Means.....</b>	<b>PRECAUTION</b>
<b>YELLOW Alert .....</b>	<b>Means.....</b>	<b>ACTION</b>
<b>RED Alert .....</b>	<b>Means.....</b>	<b>SHELTER</b>
<b>ALL CLEAR</b>	<b>Means .....</b>	wind and any storm surge dangers have passed but
<b>.....</b>		<b>CAUTION</b> is still necessary

### **BLUE ALERT**

#### **MEANING:**

The community should commence taking PRECAUTIONS. A cyclone may produce gales (gusts exceeding 90km/h). within 48 hours.

#### **PUBLIC RESPONSE:**

- Keep up to date with the development of the cyclone through radio, television and/or internet. ([www.bom.gov.au](http://www.bom.gov.au))
- Identify any loose material and rubbish around your property and consider time and methods of removal or securing.
- Check and/or purchase emergency supplies including but not restricted to:
  - First aid kit
  - Torches
  - Spare Batteries
  - Canned food
  - Drink water containers
  - Tie down material and anchor points
  - Portable radio
  - Personal medication
  - Vehicle fuel.

- Make sure you have identified the strongest part of your house or closest Welfare Centre
- Should you require assistance contact family, 'find a friend' a neighbour or FESA State Emergency Service (Be aware of any storm surge risk)
- Ensure your family is aware of cyclone procedures
- Consider re-location the vulnerable and disabled such as late-term pregnant, elderly or infirm people whom may require special support.
- Identify a safe place for your pets. (Most Welfare Centres will not accept animals, except guide dogs.)

### **YELLOW ALERT**

#### **MEANING:**

The community should commence **ACTION** in readiness for the cyclone's arrival because the cyclone has moved closer and there is a significant risk that destructive winds (gusts exceeding 125 km/h) will develop.

#### **PUBLIC RESPONSE:**

- Continue to listen radio, television and/or internet ([www.bom.gov.au](http://www.bom.gov.au)) for announcements on the cyclone's progress, particularly any storm surge advice.
- If you live in a low-lying coastal area and the cyclone is likely to create a storm surge, evacuations will be recommended during Yellow Alert. Refer to your evacuation guide.
- Store or secure loose material and items likely to be dislodged by destructive winds.
- Securely fasten all cyclone screens into position
- Secure boats, caravans, trailers, garden sheds, rainwater tanks and LPG bottles to tie down points.
- Know the whereabouts of family members and pets. You may consider sheltering pets early.
- Ensure emergency supplies are in order as identified during Blue Alert
- Fill emergency containers with water
- Fuel the car

### **RED ALERT**

#### **MEANING:**

The community should move to **SHELTER**. The cyclone is likely to produce destructive winds (gust exceeding 125 km/h). Only Emergency Services as identified by the Local Emergency Management Committee should still be functional.

#### **PUBLIC RESPONSE:**

- Continuously listen to portable radio for announcements on the cyclone's progress
- Go immediately to the strongest part of your house or closest Welfare Centre.

- Ensure that pets and animals are safely sheltered
- Park vehicles in the most sheltered area available with handbrake applied and in gear or shift in park position.
- Disconnect electrical appliances and turn off gas supply valves.
- Keep away from doors and windows and keep them closed.
- When deemed safe, the Incident Manager will coordinate a post-impact assessment to ensure community safety.
- Stay indoors until the cyclone "ALL CLEAR" message is given on radio, television and/or internet.

### **ALL CLEAR WITH CAUTION**

#### **MEANING:**

The wind and any storm surge danger from the cyclone has passed. However, ground hazards such as fallen power lines, structural debris and road hazards may exist. (If necessary, FESA-SES will add a cautionary note to the "ALL CLEAR")

#### **PUBLIC RESPONSE:**

- Continue to listen to radio/television for public information announcements
- Only proceed outside with caution
- Check for ground hazards such as downed power lines, fallen trees, broken water and sewerage lines, loose roof sheeting and debris, particularly if highlighted in the "ALL CLEAR"
- Check to see if neighbours are all right
- Report any injuries and dangerous situations to FESA-SES
- Check whereabouts of pets and animals
- Commence clean up of immediate area
- Do not make unnecessary telephone calls as the lines may be needed for emergency medical assistance or rescue requests.

## **FESA SES STORM SURGE EVACUATION GUIDE**

If authorities advise you to relocate to another area – please do so!

### **'Prepare to Evacuate'**

When the **'Prepare to Evacuate'** is given, the following items should be prepared and handy for immediate transport in case the **'Evacuate Now'** alert is issued:

- First aid kit including personal medication
- Torch, portable radio and spare batteries
- Sleeping bags/bedding (eg swag, gym mattress)
- Cooler box, water/cordial
- Special items required for infants, the aged and people with disabilities
- Canned/dehydrated food for 24-36 hours and a can opener
- Cutlery/plastic plates and cups
- One change of clothing per person
- Toiletries and sanitary supplies
- Reading material for all and board/card games for children
- Mobile phone, spare battery and charger
- Extra car and house keys

In addition the following should be packed separately into a strong waterproof carry bag:

- Personal documents – birth certificates, marriage certificate, passports, education, prescriptions and trade qualifications
- Legal and financial documents – drivers license, special licenses, insurance policies, credit cards and bank books
- Irreplaceable documents
- Valuables
- Contact details of your agreed out of town contact

Only essential items can be taken into Welfare Centres. Please note that pets (Except guide dogs) and alcohol are prohibited.

## **'Evacuate Now'**

**'Evacuate Now'** means that it is likely that the storm surge by the cyclone will impact. You must do the following tasks, then relocate to your closest Welfare Centre or safe area (eg 'Find a Friend' on higher ground).

- Unplug appliances and turn off gas at the bottle, electricity at the mains and water at the metre.
- Secure and lock all windows, doors and cyclone shutters – don't forget to lock the front door before leaving
- Ensure neighbours are aware of alert
- Be in your allocated Welfare Centre or preferred safe location within one hour of the **'Evacuate Now'** notice being given
- Stay calm as sufficient time will be given for you to safely evacuate.
- It is your responsibility to relocate safely, however if you need transport assistance, contact your local SES
- Take your emergency kit with you, including important documents
- Wear long sleeved shirts, long pants and sturdy shoes so you can be protected as much as possible
- Call your out of town contact to let them know where you are going
- Allow for the special needs infants, the aged and people with disabilities
- Collect your family members or go to your agreed meeting place
- If you go to a Welfare Centre, register your details at the registration desk
- If you evacuate to a friend or relative's house, consider registering with the local Welfare Centre to help others find you
- Follow the instruction issued by the Emergency Services.

## PREPARE TO EVACUATE

Issued by the Fire & Emergency Services Authority at  
.....AM/PM on .....(Date)

Standard Emergency Warning Signal is **NOT** to be used

A storm surge warning associated with approaching Severe Tropical Cyclone \_\_\_\_\_ (Name) has been issued by the Weather Bureau.

People in \_\_\_\_\_(Town/Community) are warned if present factors remain, it is possible storm surge will affect the low-lying coastal areas of the town.

The flooding caused by storm surge is both rapid and powerful.

The State Emergency Service says people should Prepare to Evacuate by:

- Reading their Evacuation Procedures Guide;
- Ensure their Evacuation Kit is ready;
- Identify their nominated Welfare Centre or Find A Friend in a safe area; and;
- Ensure neighbours have received this warning.

### **THERE IS NO NEED TO MOVE AT THIS TIME.**

Keep listening to your radio for further information and advice or call \_\_\_\_\_(Local Unit). State Emergency Service is responding to the emergency.

This Evacuation Advice will be updated in \_\_\_\_\_at .....AM/PM

\_\_\_\_\_  
Signature of FESA Officer  
Authorising release.

\_\_\_\_\_  
Name/Title of Officer  
Authorising release.



## EVACUATION ADVICE

Issued by the Fire & Emergency Services Authority at  
.....AM/PM on .....(Date)

Standard Emergency Warning Signal to be sounded for 5 – 10 seconds prior to announcement

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A storm surge warning has been issued by the Weather Bureau.

People in \_\_\_\_\_(Town) are warned of the storm surge associated with Severe Tropical Cyclone  
\_\_\_\_\_(Name).

Rapid and powerful flooding caused by storm surge is possible in low-lying coastal areas near  
\_\_\_\_\_(Town) as the cyclone crosses the coast.

To ensure Community Safety, the State Emergency Service recommends people \_\_\_\_\_  
(Insert Brief Description) **EVACUATE NOW.**

- Please consult your Evacuation Procedures Guide;
- Ensure your neighbours have received this warning; and;
- Move immediately to your nominated Welfare Centre or Find a Friend in a safe area.

If you require assistance telephone .....

Emergency Services personnel are in attendance.

This Evacuation Advice will be updated in \_\_\_\_\_ at .....AM/PM

\_\_\_\_\_  
Signature of FESA Officer  
Authorising release.

\_\_\_\_\_  
Name/Title of Officer  
Authorising release.

## ALL CLEAR ADVICE

Issued by the Fire & Emergency Services Authority at  
.....AM/PM on .....(Date)

Standard Emergency Warning Signal is **NOT** to be used

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The Weather Bureau advises that the risk of storm surge to \_\_\_\_\_(Town) associated with Severe Tropical Cyclone \_\_\_\_\_(Name) has now passed.

The State Emergency Service says people may return to their properties with caution.

Keep listening to your radio for further information and advice. For emergency assistance call \_\_\_\_\_ (Local Unit or 1300 1300 39).

\_\_\_\_\_  
Signature of FESA Officer  
Authorising release.

\_\_\_\_\_  
Name/Title of Officer  
Authorising release.

## VERBAL WARNING

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"I am/We are here to deliver a storm surge warning associated with Severe Tropical Cyclone \_\_\_\_\_(Name)

The cyclone is moving towards \_\_\_\_\_

As your house is in a vulnerable area, you are advised to consider evacuating your property NOW. If evacuating please take with you, your evacuation kit and assemble at the designated Welfare Centre or 'Find a Friend".

For further information please listen to your radio"

## ROLES AND RESPONSIBILITIES OF LIAISON OFFICERS

### Role

1. The role of a Liaison Officer (LO) is to arrange the provision of specified departmental physical resources and specialist skills to combat a tropical cyclone emergency.
2. It is essential that each LO has the necessary authority, or rapid access to such authority, to commit departmental resources.

### Responsibilities

3. A LO is responsible for the following:
  - Representing their agencies on the State Emergency Coordination Group /Operations Area Management Group/ Incident Management Group as required
  - Ensuring that agency approval is obtained for the employment of resources in support of FESA-SES when tasked by the Operations Area Manager/Incident Manager. It is expected that State agencies will meet costs associated with activities within their functional responsibilities.
  - Liaising with other LO's and the Operations Area/Incident Manager to achieve the most efficient use of resources in accordance with State Emergency Coordination Group policies and priorities.
  - Keeping the Operations Area Manager/Incident Manager informed of progress in arranging provision of resources.
  - Keeping their own Ministers and senior officers informed of the operational progress.
  - Maintaining accurate records of actions taken and approvals gained in response to Operations Area/Incident Manager's requests for justification and explanation of expenditure incurred.
  - Participating in committees to coordinate such issues as evacuation, transport health, and welfare/accommodation. Committees will be activated as required to ensure that resources are deployed in the most economic and efficient manner.

## **KEY PERSONNEL CONTACT DETAILS**

**Please refer contact inquiries to:**

**FESA Research and Logistics Support Branch**

**State Emergency Service**

**Telephone: (08) 9277 0555**



## INDEPENDENT PORTS/SMALL BOAT HARBOURS

<b>Independent Ports</b>	<b>Small Boat Harbours</b>
Wyndham	Point Samson
Yampi Sound	Exmouth
Derby	Canarvon
Port Walcott	Geraldton*
Varanus Island	Port Denison
Barow Island	Jurien
Onslow	Hillarys
Cape Culver	Fremantle*
Useless Loop	Bunbury*
	Albany*
	Bremer Bay
	Esperence*

\* Also Port Authority Ports

# MAP OF PORTS AND MAJOR MARITIME FACILITIES (INCLUDING DECLARED INDEPENDENT PORTS)





## OPERATIONAL SEQUENCE GUIDE

Situation	Serial	Organisation/ Action
<b>ALERT</b>  On receipt of advice that the level of response to an emergency might involve State level resources.	1.1	FESA  a. The FESA Executive Director liaises with Regional Director.  b. FESA Executive Director advises Executive Officer SEMC who activates to the necessary level of readiness and alerts all involved agencies.  c. Activate the FESA Headquarters, Belmont
	1.2	OTHERS  a. Receive and distribute internally operational information on the situation.  b. Check the availability of relevant equipment.  c. Nominate staff for deployment, if necessary  d. Place Liaison Officers "On Call"
<b>CALL OUT</b>  Advice received that State Level support is requested.	2.1	FESA/State Emergency Co-ordinator  a. FESA Executive Director consults with the Executive Officer SEMC/State Emergency Coordinator on the need for a State Emergency Coordination Group.  b. Staff and equip the Operation Headquarters.  c. Liaise with involved agencies.  d. Determine the requirement for State assistance  e. Activate State Support Plans as required.
	2.2	OTHERS  a. Advise per alert phase.  b. Deploy personnel as required.  c. Provide Liaison Officers to the State Emergency Coordination Group if activated.  d. As an immediate response measure, fulfil role and responsibilities as outlined in Annex B
<b>STAND DOWN</b>  On completion of response element	3.1	FESA-SES  a. Inform participating agencies.

	3.2	<p>b. Hand over to the State Recovery Coordinator</p> <p>OTHERS</p> <p>a. Organisations are stood down in accordance with relevant procedures for each organisation.</p> <p>b. Recovery activities in accordance with associated plans continue</p>
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