



Borrooloola

Local Emergency Plan



**Northern Territory
Emergency Service**

Contents

1. Document control	4
1.1. Governance.....	4
1.2. Version history	4
2. Acknowledgement of Country	5
3. Introduction	5
3.1. Purpose.....	5
3.2. Application	5
3.3. Key considerations	5
4. Locality context	6
4.1. Climate and weather	7
4.2. Geography.....	7
4.3. Sacred sites	8
4.4. Sites of conservation.....	8
4.5. Tourism	8
4.6. NT and local government.....	8
4.7. Building codes	9
4.8. Land use.....	9
4.9. Homelands	9
4.10. Power generation and distribution.....	9
4.11. Water services	9
4.12. Health infrastructure	9
4.13. Emergency service infrastructure	9
4.14. Roads	10
4.15. Airports.....	10
4.16. Port infrastructure (barge landing).....	10
4.17. Telecommunication.....	10
4.18. Local radio stations	11
4.19. Medically vulnerable clients.....	11
5. Prevention	11
5.1. Emergency risk assessments	11
5.2. Disaster hazard analysis and risk register	11
5.3. Hazard specific prevention and mitigation strategies.....	12
6. Preparedness	12
6.1. Planning and recovery	12
6.2. Emergency resources and contacts	12
6.3. Training and education	12
6.4. Community education and awareness	12
6.5. Exercises.....	13
7. Response	13

7.1. Control and coordination	13
7.2. Local Emergency Controller	13
7.3. Local Emergency Committee	13
7.4. Emergency Operations Centre/Local Coordination Centre	13
7.5. WebEOC.....	14
7.6. Situation reports	14
7.7. Activation of the Plan	14
7.8. Stakeholder notifications	15
7.9. Official warnings and general public information	15
7.10. Australasian Inter-Service Incident Management System	16
7.11. Closure of schools.....	16
7.12. Closure of government offices.....	16
7.13. Emergency shelters or strong buildings.....	16
7.14. Evacuation	17
7.15. Identified evacuation centres	18
7.16. Register.Find.Reunite registration and inquiry system.....	18
7.17. Impact assessment.....	18
8. Recovery	19
8.1. Local Recovery Coordinator and Coordination Committee.....	19
8.2. Transitional arrangements	19
9. Debrief.....	20
10. Related references.....	20
11. Annexures.....	20
11.1. Annex A: Functional groups - roles and responsibilities	21
11.2. Annex B: Functions table.....	22
11.3. Annex C: Prevention, mitigation strategies and action plans for identified hazards.....	25
11.3.1. Fire.....	25
11.3.2. Flood.....	28
11.3.3. Road crash.....	33
11.3.4. Storm and water damage	34
11.3.5. Tropical cyclone	36
11.4. Annex D: Evacuation guideline.....	41
11.5. Annex E: Summary of response and recovery activities	49
12. Acronyms.....	54

1. Document control

1.1. Governance

Document title	Borroloola Local Emergency Plan
Contact details	NT Emergency Service, Planning and Preparedness Command
Approved by	Territory Controller
Date approved	12 December 2014
Document review	Annually
TRM number	04:D22:92710

1.2. Version history

Date	Version	Author	Summary of changes
15/12/2014	1	John McRoberts	First version
04/11/2015	2	Reece P Kershaw	Reviewed and updated
30/12/2016	3	Kate Vanderlaan	Reviewed and updated
28/11/2018	4	Travis Wurst	Reviewed and endorsed by the Regional Controller, as the Territory Controller's delegate
20/01/2020	5	Michael Hebb	Reviewed and endorsed by the Regional Controller, as the Territory Controller's delegate
17/11/2020	6	Travis Wurst	Reviewed and endorsed by the Regional Controller, as the Territory Controller's delegate
13/01/2021	7	Janelle Tonkin	Reviewed and endorsed by the Regional Controller, as the Territory Controller's delegate
13/06/2023	8	Travis Wurst	Reviewed and endorsed by the Regional Controller, as the Territory Controller's delegate
13/06/2024	9	Matthew Hollamby	Reviewed and endorsed by the Regional Controller, as the Territory Controller's delegate

Disclaimer: Every effort has been made to ensure that the information contained within this plan is accurate and where possible reflects current best practice. However, the Northern Territory Emergency Service does not give any warranty or accept any liability in relation to the content of material contained in the document.

2. Acknowledgement of Country

The Northern Territory Fire and Emergency Service (NTFES) and the Northern Territory Police Force (NTPF) acknowledges the First Nations people throughout the Northern Territory (NT), from the red sands of Central Australia to the coastal people in the Top End.

We recognise their continuing connection to their lands, waters and culture. We also pay our respects to the Aboriginal and Torres Strait Islander people with whom we work and who we serve and protect.

We pay our respects to the Aboriginal and Torres Strait Islander cultures, and to their leaders past, present and emerging.

3. Introduction

3.1. Purpose

The purpose of this Plan is to describe the emergency management arrangements for Borroloola Locality (the Locality).

3.2. Application

This Plan applies to the Borroloola Locality.

3.3. Key considerations

The *Emergency Management Act 2013* (the Act) is the legislative basis for emergency management across the NT. The Act reflects an all hazards approach to emergency and disaster events, natural or otherwise. It provides for the adoption of measures necessary for the protection of life and property from the effects of such events.

The Act defines the emergency management structures, roles and responsibilities for the NT and, in conjunction with the Territory and Regional Emergency Plan(s), form the basis for this Plan.

This Plan:

- confirms appointment of a Local Emergency Controller
- confirms establishment of the Local Emergency Committee (LEC)
- assesses hazards most likely to affect the community
- specifies control and coordination arrangements for mobilisation of local, and if necessary, regional resources
- identifies roles and responsibilities of key stakeholders
- details specific emergency response procedures for the higher risk situations

4. Locality context

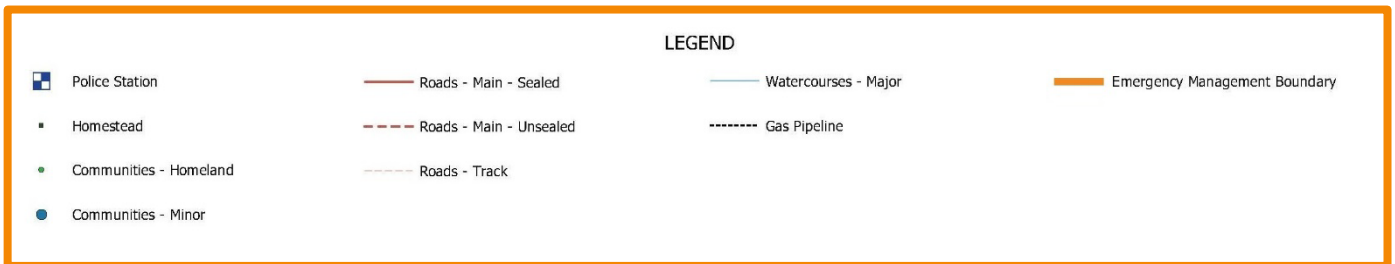
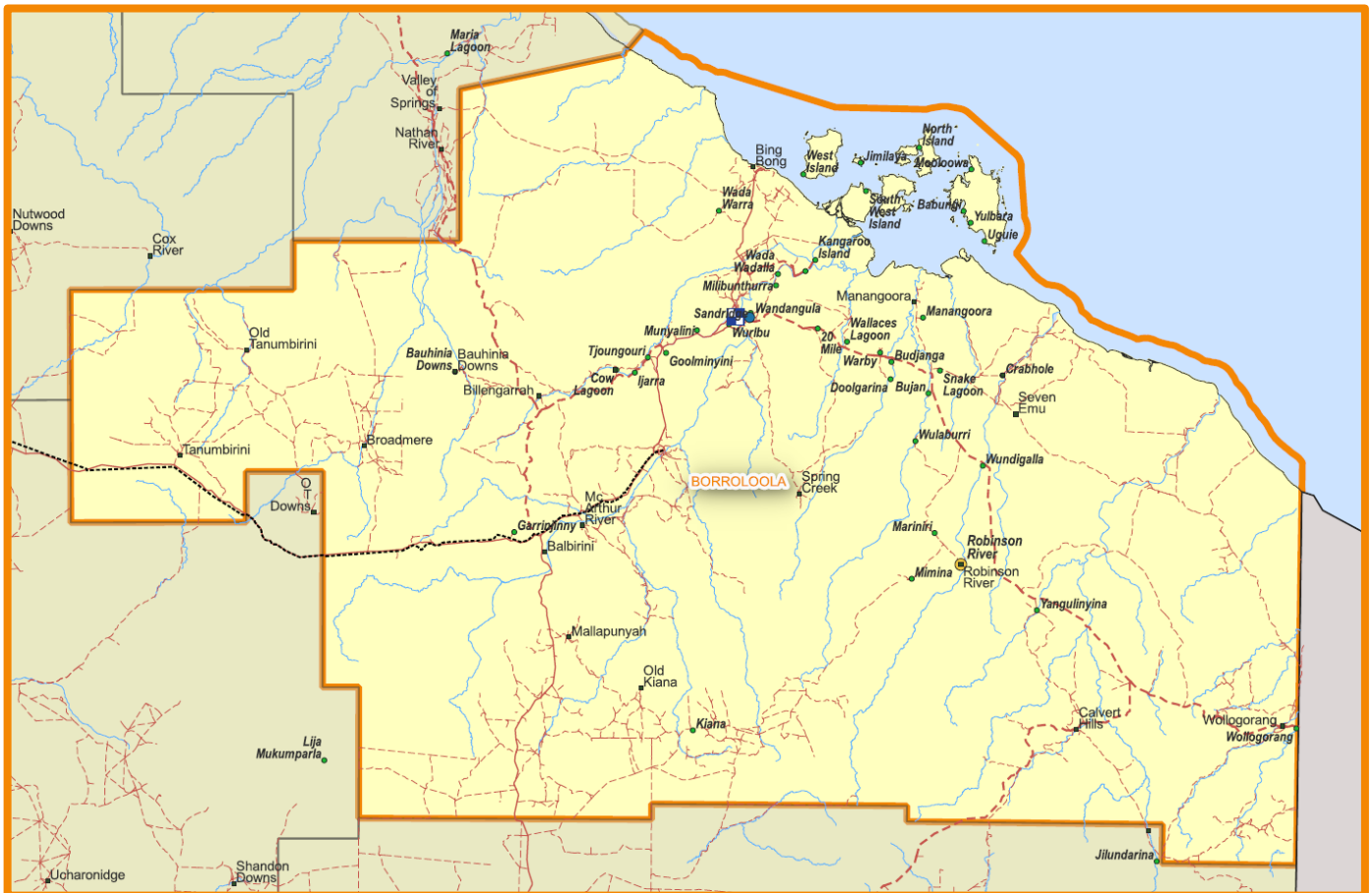
This Plan complements the Northern Regional Emergency Plan¹ as it relates to the Locality. For further information on the hierarchy of plans, refer to the Territory Emergency Plan². The Locality covers approximately 71,400 square kilometres (km) and is located approximately 470 km south-east of Katherine by direct line and approximately 660 km by road, forming part of the Northern Region, as defined by the Territory Emergency Plan.

At peak times, the listed population of the Locality of 2,500 can increase to approximately 4,000 people. The main population centre is Borroloola with approximately 1,100 people. The population of the Locality fluctuates with the onset of the Wet Season bringing people from other regions into the locality. Population numbers for these outstations can vary widely during the course of the year. As well as the Borroloola communities, there are a number of outstations in the Locality:

- Bahuhinia
- Black Craggie
- Bull Rush
- Cow Lagoon
- Garanjini
- Goolminyini
- Jungalina
- Kiana
- Mooloowa
- Minyallini
- Mumathumburu
- Numultja
- Sandridge
- Wanda Ngula
- Wada Wadala
- Wada Warra
- Wathunga
- Yathunga
- Yameeri

¹ More information can be found at: <https://www.pfes.nt.gov.au/emergency-service/publications>

² More information can be found at: <https://www.pfes.nt.gov.au/emergency-service/emergency-management>



4.1. Climate and weather

The Locality experiences similar weather conditions to those which occur throughout the Top End of the NT. There are 2 main seasons in the Locality, the Wet Season (October to April) and the Dry Season (May to September). Compared to Darwin, temperatures tend to be slightly higher during the Wet and slightly lower during the Dry.

4.2. Geography

The Locality ranges from relatively flat plains with coastal hilly outcrops rising to approximately 125 metres (m). The Locality is drained by a number of rivers and creeks. Of note, are:

- Cox River - crossing the Savannah Way
- Wearyan River - crossing the Savannah Way
- Limmen Bight River - crossing Nathan River Road
- Robinson River - crossing Savannah Way
- McArthur River - crossing Savannah Way, Borrooloola access
- Nicholson River - crossing Savannah Way
- Calvert River - crossing Savannah Way
- Foelsche River - crossing Savannah Way

- Batten Creek - crossing Carpentaria Highway, King Ash Bay access
- Rocky Creek - crossing Robinson Road, Borroloola

4.3. Sacred sites

The Aboriginal Areas Protection Authority (AAPA) is a statutory body established under the *Northern Territory Aboriginal Sacred Sites Act 1989* and is responsible for overseeing the protection of Aboriginal sacred sites on land and sea across the NT.

A sacred site is defined by the *Aboriginal Land Rights (Northern Territory) Act 1978* as being 'a site that is sacred to Aboriginals or is otherwise of significance according to Aboriginal tradition.' Sacred sites are typically landscape features or water places that are enlivened by the traditional narratives of Aboriginal people.

AAPA requests notification of any action that may have affected a sacred site.

For more information on sacred sites relevant to this Locality or to report an action that may have affected a sacred site, contact AAPA on (08) 8999 4365 or via email at enquiries.aapa@nt.gov.au.

4.4. Sites of conservation

The Sir Edward Pellew Islands Group and the Borroloola Locality are sites of conservation significance to the NT, for further information contact Department of Environment, Parks and Water Security³ (DEPWS).

4.5. Tourism

Tourism is also a major economic contributor to the Locality, particularly throughout the months of May to October.

4.6. NT and local government

In March 2019, NT Government (NTG) implemented 6 regional boundaries across the NT to strengthen the role of the Regional Network Group and align service delivery and reporting. This Locality sits within the Big River Boundary.

NTG agencies that have a presence in the Locality include:

- NT Police, Fire and Emergency Services (NTPFES)
 - NT Police Force (NTPF), Borroloola Police Station
 - NT Police Force (NTPF), Robinson River Police Station
 - NT Fire and Rescue Service (NTFRS), Borroloola Fire Emergency Response Group (FERG)
- Department of Health (DoH)
 - Borroloola Health Centre
 - Robinson River Health Centre
- Department of Education (DoE)
 - Borroloola School
 - Robinson River School
- Department of Territory Families, Housing and Communities (TFHC)
- Centrelink

The Locality is within the Roper Gulf Regional Council (RGRC) local government area. While council headquarters is located in Katherine, there is a service delivery centre located in Borroloola.

³ More information can be found at: <https://nt.gov.au/environment/environment-data-maps/important-biodiversity-conservation-sites/conservation-significance-list>

4.7. Building codes

Buildings and construction in the Locality are subject to the *Building Act 1993* and the *Building Regulations 1993*.

4.8. Land use

The Locality land use is in consultation between RGRC and Traditional Owners, and include infrastructure in the areas of:

- residential
- Indigenous protected areas
- sewerage ponds
- mining
- air strip
- waste management

4.9. Homelands

Homelands are typically located on Aboriginal land, which is held by the Aboriginal Land Trusts established under the *Aboriginal Land Rights (Northern Territory) Act 1976*. There are also some homelands that are located on Community Living Areas or parcels of land within national parks. Assets on homelands are owned by the underlying leaseholder, which for the majority of homelands is the relevant Aboriginal Land Trust. Generally, homelands are not subject to the NTG leasing or part of the NT's remote public housing system.

The homeland service provider for this Locality is Mabunji Aboriginal Corporation and AUS Projects NT. Homeland service providers contribute to the delivery of housing, municipal and essential services, including fire breaks, where funding allows. Homeland service providers do not deliver emergency services. Land councils and local ranger groups within the Locality may provide land management activities on Aboriginal land, such as back burning, installing firebreaks and other mitigation works.

4.10. Power generation and distribution

All power supplied to Borrooloola comes from a stand-alone diesel power station, with a solar farm established to supplement power generation. Robinson River is also run on an independent power generator.

4.11. Water services

Borrooloola is serviced by ground water as the primary water source.

4.12. Health infrastructure

The Borrooloola Health Centre and Robinson River Health Centre have the capacity to provide emergency medical aid in addition to routine health treatment. Serious medical cases are required to be medically evacuated to Darwin or Katherine. Patients can be evacuated either via road or air.

4.13. Emergency service infrastructure

The Locality has the following emergency service infrastructure:

- Borrooloola Police Station and cells
- Robinson River Police Station
- Borrooloola NTFRS FERG
- Borrooloola Health Centre

- Robinson River Health Centre

4.14. Roads

The Carpentaria Highway is the major road for the Locality. Wollogorang Road is an unsealed road which runs from Borroloola to the Queensland border, and is a key travel route for Robinson River, as it connects to the Robinson River Access Road (also unsealed), and a number of populated outstations.

Bing Bong road leads to the Bing Bong Loadout Facility and is dual lane sealed, and also connects to Batten Road, which is the access route for King Ash Bay and a number of populated outstations.

The Tablelands Highway is a single lane sealed road which runs south from Cape Crawford to the Barkly Highway beyond the locality. The Nathan River Road travels north from Cape Crawford to the Roper Highway beyond the Locality, and is unsealed for the entirety of its length. During the Wet Season, many roads may be subject to inundation at various creek/river crossings and low lying areas.

4.15. Airports

The table below lists the airstrips in the Locality:

Name of the Strip	Datum	Details (type, length, etc.)	Operator of the strip
Borroloola	16°04'35"S 136°18'13"E	Sealed 1249 m x 30 m	RGRC
McArthur River Mine	16°26'39"S 136°04'56"E	Sealed 2500 m x 23 m	McArthur River Mine
Bessie Springs (McArthur River Station)	16°39'S 135°51'E	Red gravel 1000 m x 30 m	Bessie Springs Manager
Mallapunyah Springs Station	16°58'S 135°47'E	Red gravel 1160 m x 30 m	Local Manager
Robinson River Community	16°43'S 136°57'E	Sealed 1260 m x 30 m	CEO Mungoorbada Aboriginal Corporation
Wollogorang Station	17°13'S 137°56'E	Red gravel 1800 m x 30 m	Local Manager
Nathan River Station	15°56'S 135°24'E	Red gravel 1300 m x 50 m	Local Manager
Merlin Mine	16°49'21"S 136°19'54"E	Compacted gravel all weather 2500 m x 30 m	Camp Manager
Calvert Hills	17°12'27"S 137°21'10"E	954 m x 35m	Station Manager

4.16. Port infrastructure (barge landing)

The Locality has a barge landing located at Bing Bong 45 km to the east of Borroloola, which is operated by the McArthur River Mine.

4.17. Telecommunication

Telecommunications are available across the Borroloola area via a combination of landline, mobile and satellite communications delivery. Mobile phone reception is also available at Robinson River close to the Mungoorbada Aboriginal Corporation Office and at the McArthur River Mine. Across the remainder of the Locality satellite communications are the only available service.

4.18. Local radio stations

Borroloola has the following radio stations broadcasting in the Locality:

- 106.1 FM Australian Broadcasting Corporation (ABC) Radio
- 102.9 FM TEABBA Radio (Top End Aboriginal Bush Broadcasting Association) and Mabuntji
- 107.7 FM ABC Radio national

4.19. Medically vulnerable clients

The Borroloola and Robinson River health centres have lists of medically vulnerable clients and are updated regularly. There are both permanent and visiting general practitioners. Malandari Aged Care is the one aged care facility in the Locality, and is operated by Mabunji Aboriginal Resource Association.

5. Prevention

5.1. Emergency risk assessments

The Borroloola LEC is responsible for undertaking appropriate activities to prevent and mitigate the impact of emergencies in their Locality.

5.2. Disaster hazard analysis and risk register

The LEC has identified the following hazards for the Locality:

- air crash
- fire (within Fire Protection Zone)
- flood
- hazardous material
- heatwave
- road crash
- storm and water damage
- tropical cyclone

These hazards have been rated against the National Disaster Risk Assessment Guidelines (NERAG):

Hazard	Overall Consequence	Overall Likelihood	Risk Rating
Air crash	Minor	Rare	Low
Fire (within a gazetted area)	Moderate	Unlikely	Medium
Flood	Moderate	Likely	High
Hazardous material	Minor	Unlikely	Low
Heatwave	Insignificant	Likely	Low
Road crash	Minor	Likely	Medium
Storm and water damage	Minor	Likely	Medium
Tropical cyclone	Moderate	Likely	High

5.3. Hazard specific prevention and mitigation strategies

Prevention and mitigation relate to measures that reduce exposure to hazards and reduce or eliminate risk. Actions include identifying hazards, assessing threats to life and property, and from these activities, taking measures to reduce potential loss of life and property damage.

The cornerstone of mitigation is guided and coordinated risk assessments, which should involve all potentially affected members of a community. Strategies are developed based on a thorough understanding of the hazards identified in emergency risk planning and how those hazards can impact all aspects of the community.

Specific prevention and mitigation strategies for identified hazards can be found at **Annex C**.

6. Preparedness

Arrangements to ensure that, should an emergency occur, all resources and services that are needed to provide an emergency response and or recovery can be efficiently mobilised and deployed.

6.1. Planning and recovery

NT emergency plans⁴ are required by the Act and are maintained at a Territory, regional and local level. Arrangements in the plans aim to be flexible and scalable for all hazards. The planning process enables agreements to be reached between people and organisations in meeting community needs during emergencies. The plan becomes a record of the agreements made by contributing organisations to accept roles and responsibilities, provide resources and work cooperatively.

The LEC is responsible for the annual review of operations and the effectiveness of the Local Emergency Plan, supported by the NTES Planning and Preparedness Command.

6.2. Emergency resources and contacts

The LEC are responsible for maintaining the emergency resource register and LEC contact list. Local emergency management stakeholders are to advise the Local Controller of changes to resource holdings, operational response capabilities and key personnel contacts. Emergency resource and LEC contact list for each locality are available on Web-based Emergency Operations Centre (WebEOC).

6.3. Training and education

The Act provides the legislative requirement for those involved in emergency management activities to be appropriately trained. Training and education activities are undertaken to ensure agencies are familiar with and understand the NT emergency management arrangements, as well as the relevant controlling and hazard management authorities for identified hazards.

The NTES Learning and Development Command is responsible for emergency management training across the NT. Online and face to face training is scheduled throughout the year.

6.4. Community education and awareness

Effective and ongoing community education and preparedness programs that emphasise to communities the importance of practical and tested emergency plans and safety strategies is essential. Empowering communities to act in a timely and safe manner will minimise the loss of life, personal injury and damage to property and contribute to the effectiveness of any warning system.

List of available activities and initiatives but are not limited to within the area:

- NTES hazard briefings
- NTES Paddy Program

⁴ More information can be found at: <https://pfes.nt.gov.au/emergency-service/publications>
Borroloola Local Emergency Plan | V9.0

- NTFRS Smart Sparx Program
- NT swimming and first aid program

6.5. Exercises

Local level exercises are a key measure for testing the effectiveness of the local emergency plan and should involve all relevant stakeholders. Exercises ensure that the plan is robust and understood, and that capabilities and resources are adequate. Exercises are conducted if arrangements in the plan have not been enacted since the last review, or substantial changes have occurred, including:

- legislative changes
- major changes have occurred in the areas of key personnel, positions or functions across prevention, preparedness, response and recovery
- new or emerging hazards/risks have been identified

The NTES Planning and Preparedness Command have developed resources that outline the process to develop the exercise concept in designing, planning, conducting, facilitating, participating or evaluating exercises.

7. Response

Actions taken in anticipation of, during and immediately after an emergency to ensure that its effects are minimised and that people affected are given immediate relief and support.

7.1. Control and coordination

Arrangements for response are based on pre-agreed roles and responsibilities for stakeholders. When the scale and complexity of an event is such that the resources of the community are depleted a number of arrangements are in place for assistance from the region, the Territory and/or the Australian Government. Pathway for assistance is through the Regional Controller.

7.2. Local Emergency Controller

In accordance with section 76 of the Act, the Territory Controller or their delegate (section 112 of the Act) can appoint a Local Emergency Controller (Local Controller). The Local Controller for the Locality is the Officer In Charge of the Borroloola Police Station. The Local Controller is subject to the directions of the Regional Controller. The powers, functions and directions of the Local Controller can be found in sections 77, 78 and 79 of the Act.

7.3. Local Emergency Committee

In accordance with section 80 of the Act, the Territory Controller has established a Borroloola LEC. The Local Controller is chair of the LEC and remaining membership consists of representatives from NT Government and non-government entities within the Locality. Division 11 of the Act specifies the establishment, functions, powers, and membership and procedure requirements of a LEC.

7.4. Emergency Operations Centre/Local Coordination Centre

NT Emergency Management Arrangements	Controlling Authority Arrangements
Emergency Operations Centre (EOC) (Territory and Regional level)	Incident Control Centre (ICC)
Local Coordination Centre (LCC) (local level)	Incident Control Point (ICP)

LCCs will be established as required by Local Controllers to provide a central focus to the management, control and coordination of emergency operations in the Locality. When activated, the functions of the LCCs are:

- information collection and dissemination
- preparation and issue of official warnings and advice to the public
- coordination of the provision of resources required in the Locality
- submitting requests for resources through the Regional Controller to the Territory EOC where applicable
- dissemination of information to the media and general public.

The LCC for this Locality is the Borroloola Police Station. The Regional EOC will be located in Darwin at the Peter McAulay Centre. Agencies and functional groups may establish their own coordination centres to provide the focal point for the overall control and coordination of their own agency resources. Liaison Officers from functional groups and support agencies will attend the EOC as required.

ICCs will be established as required by a Controlling Authority to provide an identified facility for the management of all activities necessary for the resolution of an incident

An ICP is normally located near the incident in its early stages but may be relocated to an ICC where more permanent and convenient facilities and services are available.

7.5. WebEOC

WebEOC is a critical information management system used throughout the NT for emergency management activities. The system is owned and maintained by NTPFES. The online platform is used for the coordination of multi-agency response to, and recovery from, an emergency event. WebEOC also enables real-time information sharing across all agencies involved in emergency management activities.

7.6. Situation reports

It is essential for effective control and coordination of emergency management operations that the Local Controller is able to gather and collate relevant information relating to the emergency from regular, concise and accurate situation reports (SITREPs).

LEC members are to provide SITREPs at agreed times to enable the preparation of a consolidated report which will be distributed to all committee members and other relevant authorities. This may be achieved through WebEOC.

7.7. Activation of the Plan

This plan has 5 stages of activation and are designed to ensure a graduated response to hazardous events, reducing the possibility of under or over reaction by the emergency management agency.

The stages are:

Stage 1	Alert	This stage is declared when the Local Controller receives warning of an event which, in their opinion, may necessitate an emergency management response
Stage 2	Standby	This stage is declared when the Local Controller considers an emergency operation is imminent. During this stage passive emergency measures are commenced
Stage 3	Activation	This stage is declared when active emergency measures are required
Stage 4	Stand-down response operations and transition to Recovery	Stage 4 occurs when the Local Controller and Local Recovery Coordinator agree to transition to recovery (if required) in accordance with the transitional arrangements of this Plan

Stage 5	Recovery	This stage is called if ongoing recovery operations and coordination is required
---------	----------	--

The stages identified provide for a sequential response. However, it may be necessary because of the degree of warning and speed of onset of an event, for the Local Controller to skip the actions required under stage 1 or 2.

7.8. Stakeholder notifications

Upon activation of the plan the following personnel are to be advised as a matter of urgency:

- all available members of the LEC
- Northern Regional Controller
- NTES Territory Duty Officer (TDO)

7.9. Official warnings and general public information

Official warnings and general public information will be broadcast to the Locality through the following means:

- radio broadcast
- television news broadcast
- Secure NT website and social media broadcasts and updates

Official warnings are issued by the Bureau of Meteorology (the Bureau), Geoscience Australia, Bushfires NT (BFNT), NTPFES and Controlling Authorities.

Emergency Alert is a national telephony-based emergency warning system that can deliver warning messages to landlines and mobile handsets based on the service address and mobile handsets based on the last known location of the device. Authority to utilise the Emergency Alert may be given by virtue of the pre-approval of a hazard specific emergency plan or under the Territory Emergency Plan.

The approval for the release of an Emergency Alert message can only be authorised by one of the following:

- Territory Controller
- Director, NTES
- Regional Controller
- Chief Fire Officer, NTFRS
- Deputy Chief Fire Officer, NTFRS
- Executive Director, BFNT
- Chief Fire Control Officer, BFNT

The Standard Emergency Warning Signal (SEWS) is an audio alert signal (wailing siren) which may be broadcast on public media to draw attention to the fact that an urgent safety message is about to be made. Generally, SEWS is only played before announcements concerning significant emergencies where emergency management arrangements should be activated as a result.

Control and hazard management authorities may have pre-planned use of SEWS for non-weather related events, through a pre-approved hazard-specific emergency plan.

The approval for the release of a SEWS message can only be authorised by one of the following:

- Territory Controller
- Director, NTES
- Manager Hazard Preparedness and Response NT (the Bureau) (for weather and flood-related events)

Warning and information messages for general public are authorised by the Regional or Incident Controller. The dissemination of such emergency warnings and information is to be by whatever means are appropriate and available at the time.

7.10. Australasian Inter-Service Incident Management System

The Australasian Inter-Service Incident Management System (AIIMS)⁵ is a robust incident management system that enables the seamless integration of activities and resources of a single agency or multiple agencies when applied to the resolution of any event.

7.11. Closure of schools

The decision to close schools due to an impending threat will be made by the Chief Minister on advice from the Territory Emergency Management Council (TEMC). When the nature of an event demands an immediate response, local authorities will take the appropriate steps to ensure the safety to the public. This action may include the temporary closure of a school to begin preparations, pending formal closure of the school by the Chief Minister for the remainder of the event.

The decision to reopen schools will be made by the Chief Minister on advice from the Chief Executive, DoE.

7.12. Closure of government offices

The decision to close government offices due to an impending threat will be made by the Chief Minister on advice from the TEMC. When the nature of an event demands an immediate response, local authorities should take all appropriate steps to ensure public safety and the protection of property.

The decision to reopen government offices will be made by the Chief Minister on advice from the TEMC.

All NTG agencies are to have an emergency preparedness plan which sets out their processes for closing down their offices once approval has been given. This should have clearly articulated employee guidelines to ensure employees know when they are authorised to leave and are required to return to work.

7.13. Emergency shelters or strong buildings

Emergency shelters and strong buildings are places of refuge that provide people with a place of protection and shelter during a disaster or emergency event such as a cyclone, flood or fire.

The recognised emergency shelters within the Locality are:

Shelter(s)	People Capacity
Borroloola Police Station and cells	75
Borroloola School Workshop training centre	50
Borroloola Primary School	250
Borroloola Secondary Unit (High school)	200
RGRC Council Office	100
Rrumburriya Brick Office	30
Robinson River Police Station	200

⁵ More information can be found at: <https://pfes.nt.gov.au/emergency-service/publications>
Borroloola Local Emergency Plan | V9.0

Robinson River Health Clinic	300
Robinson River Mungoorabada Office	60

Those whose normal accommodation has been assessed as cyclone safe are to be encouraged to remain in their homes to reduce the burden on emergency shelters. However once emergency shelters are opened, no person is to be refused entry. Persons with special needs, the aged, the infirm and persons under the influence of drugs or alcohol are to be assessed by the shelter management team upon entry in to the emergency shelter.

The DoE, RGRC, Rumburriya, Mungoorabada and the Mabunji Resource Centres in conjunction with the NTPF are responsible for the management of emergency shelters during an emergency event.

The responsibilities of the emergency shelter manager are:

- the provision of personnel to staff and operate the emergency shelters at such times as they are activated
- the maintenance of effective liaison with other stakeholders with responsibilities relating to cyclone shelters, in particular the NTPF

Emergency shelters are opened under the direction of the Territory or Regional Controller in consultation with the Shelter Group (DoE). Emergency shelters will not normally operate for more than 48 hours.

The timing of the opening of emergency shelters will be dependent upon the severity of the impending incident, the numbers to be sheltered, the time of day the incident is expected to impact and the period of time the emergency shelters are likely to be occupied. The announcement that emergency shelters are open in the Locality will be made by radio broadcast and social media, and will include emergency shelter rules such as no pets or alcohol being permitted in shelters. It is up to the discretion of the local shelter manager to determine if food will be provided.

7.14. Evacuation

Evacuation is a risk management strategy that can be used to mitigate the effect of an emergency or disaster on a community. It involves the movement of people to a safer location and their return. The decision to evacuate a community, including establishing an evacuation centre, is not taken lightly as it represents significant resource and financial implications.

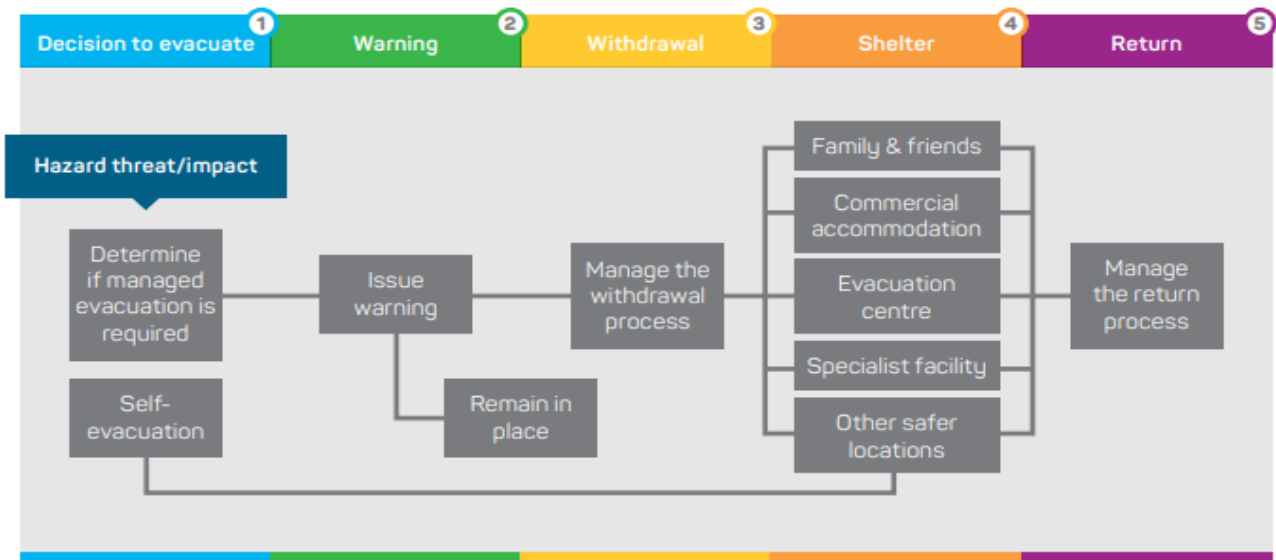
Evacuation of the Locality will be considered as a last resort. Where an evacuation is required the TEMC, in consultation with the Regional Controller, Local Controller and the LEC, will arrange emergency accommodation and transport, as necessary, through the relevant functional group/s.

An evacuation guideline for the Locality can be found at **Annex D**.

Evacuation is a complex process that has 5 distinct steps:

1. decision
2. warning
3. withdrawal
4. shelter
5. return

Each step is linked and must be carefully planned and carried out in order for the entire process to be successful. Given an evacuation centre will only be opened as a part an evacuation, it is vital to have an understanding of the 5-step process.



Source: Australian Institute of Disaster Resilience, *Evacuation Planning Handbook*, 2017

7.15. Identified evacuation centres

An evacuation centre is designed to accommodate people for short to medium periods of approximately 4 to 6 weeks, although this figure may vary.

An evacuation centre will provide some or all of the following services:

- meals
- beds
- linen
- personal support
- medical services (or access to them)
- assistance accessing finances and recreational activities

An evacuation centre's provision of some or all of these services is in contrast to an emergency shelter, in which people are expected to be self-sufficient.

For further information on evacuation centres/shelters management, refer to the NT Evacuation Field Guide available on WebEOC.

7.16. Register.Find.Reunite registration and inquiry system

Australian Red Cross, in partnership with the Australian Government Attorney-General's Department, has developed an improved system to help reunite families, friends and loved ones separated by an emergency. This system is called Register.Find.Reunite⁶.

This system can be initiated by either the Territory or Regional Controller without the national system being activated. Any activation of this system should occur in consultation with the Welfare Group in the first instance.

7.17. Impact assessment

Immediately after an emergency event, there is a need to identify and assess impacts to inform short and long-term recovery priorities. Comprehensive assessment of all impacts is a vital component of emergency response activities. Guidelines for the conduct of rapid assessments in the NT, including the establishment of dedicated Rapid Assessment Teams (RATs) to collect data in the field, have been developed.

⁶ More information can be found at: <https://register.redcross.org.au/>
Borroloola Local Emergency Plan | V9.0

The Survey, Rescue and Impact Assessment Group, led by the NTPFES, is responsible for coordinating rapid impact assessments. At the local level, Local Controllers should contact the Survey, Rescue and Impact Assessment Group lead to discuss impact assessments if deemed appropriate.

8. Recovery

The coordinated process and measures for supporting emergency-affected communities in the reconstruction of physical infrastructure and restoration of the social, economic and natural environments.

8.1. Local Recovery Coordinator and Coordination Committee

When a region and/or Locality has been affected by an event, the Regional Recovery Coordinator may appoint a Local Recovery Coordinator in accordance with section 87 of the Act. The responsible agency for Recovery is the Department of the Chief Minister and Cabinet (CM&C). The Local Recovery Coordinator will establish a Local Recovery Coordination Committee (LRCC) drawing from membership of the LEC and other relevant members of the community as needed. The Local Recovery Coordinator reports directly to the Regional Recovery Coordinator.

Local Recovery Coordinator and Committee functions, powers and directions are established in Division 12 and 13 of the Act respectively.

8.2. Transitional arrangements

The transition from response to recovery coordination reflects the shift from the protection of life and supporting the immediate needs of the community to establishing longer term, more sustainable support structures.

The transition to recovery coordination occurs after the completion of the transition checklist and at a time agreed by the Territory Controller and Territory Recovery Coordinator in accordance with the Territory Emergency Plan.

Transition will occur when the Territory Recovery Coordinator is satisfied that the following has occurred:

- the Territory Controller has briefed the TEMC and the Territory Recovery Coordinator
- the Regional Controller has briefed the Regional Recovery Coordinator
- where there is significant changeover of personnel, the EOC planning operations and logistics sections have briefed incoming recovery planning, operations and logistics staff

The Regional Recovery Coordinator will ensure all functional group leaders, agencies, support groups and other relevant stakeholders are notified prior to the transition to recovery. This notification is to include changes to relevant contact details and other pertinent information.

An example of response and recovery activities can be found at **Annex E**.

9. Debrief

Debrief processes embed continuous improvement into the delivery of emergency management activities. Consistent approaches to lessons learned encourage adaptability, and flexibility across all levels of government. Sharing of knowledge and experiences throughout emergency events assists with ongoing continuous improvement of people and organisations involved.

The NTG implements a lessons learned approach recognising the positive impact on organisational culture commensurate with increasing opportunities to achieve emergency management goals. Whilst lessons learned often begins in one agency through an internal debrief process, those lessons learned are transferable across multi-agencies.

During any operational response, personnel involved are encouraged to record activities where there are lessons to be learned. Activities can include decision making and consequential responses. Where decisions are made by an Incident Controller, Incident Management Team (IMT) member or a functional group member, those decisions should be recorded in a Decision Log (WebEOC). Decision Logs can be referred to as part of the debrief process.

10. Related references

The following references apply:

- *Emergency Management Act 2013*
- *Northern Territory Aboriginal Sacred Sites Act 1989*
- *Aboriginal Land Rights (Northern Territory) Act 1976*
- *Aboriginal Land Rights (Northern Territory) Act 1978 (Cth)*
- *Building Act 1993*
- *Building Regulations 1993*
- Territory Emergency Plan
- Northern Regional Emergency Plan
- National Disaster Risk Reduction Framework
- National Disaster Risk Assessment Guidelines
- Rapid Assessment Team Guidelines
- Transition to Recovery Checklist

11. Annexures

Annex A Functional groups - roles and responsibilities

Annex B Functions table

Annex C Prevention, mitigation strategies and action plans for identified hazards

Annex D Evacuation guideline

Annex E Summary of response and recovery activities

11.1. Annex A: Functional groups - roles and responsibilities

Functional Group	Local Contact
Animal Welfare	Department of Industry, Tourism and Trade (DITT)/ RGRC Vet Program
Critical Goods and Services	DITT
Digital and Telecommunications	Department of Corporate and Digital Development (DCDD)
Emergency Shelter	DoE/Borroloola school
Engineering	Department of Infrastructure, Planning and Logistics (DIPL)
Industry	DITT
Medical	Top End Health Service/Borroloola Health Clinic and Robinson River Health Clinic
Public Health	Top End Health Service/Borroloola Health Clinic/ Robinson River Health Clinic
Public Information	CM&C
Public Utilities	PAWC/AUS Projects
Survey, Rescue and Impact Assessment	NTPFES
Transport	DIPL with local supporting agencies
Welfare	TFHC

Full details on functional groups roles and responsibilities are detailed in the Territory Emergency Plan.

11.2. Annex B: Functions table

Emergency response and recovery functions with Identified agencies/organisation/provider.

During an event some of these functions may be needed at a local level.


Functions	Agency/organisation/provider responsible
Animal/livestock management	DITT
Anti-looting protection	NTPF
Banking services	Territory Credit Union/ATM Post Office/ Malandari Store/Red Dirt Supermarket/Gulf Mini Mart/TJS One Stop/Robinson River Store
Broadcasting: what radio stations provide announcements?	ABC radio – Voice of the Gulf/Mabunji
Clearing of essential traffic routes	RGRC/DIPL/Mabunji
Clearing storm water drains	RGRC/Mabunji
Clothing and household Items	Malandari Store/Red Dirt Supermarket/Gulf Mini Mart/TJS One Stop/Robinson River Store
Community clean up	RGRC/Mabunji
Control, coordination and management	Designated Control Authority
Coordination to evacuate public	NTPF
Critical goods and services (protect/resupply) <ul style="list-style-type: none"> • food • bottle gas • camping equipment • building supplies 	DITT/DIPL/Mabunji/Malandari Store/Red Dirt Supermarket/Gulf Mini Mart/TJS One Stop/Robinson River Store /Cairns Stores/
Damaged public buildings: coordination and inspections	RGRC/Mabunji
Disaster victim identification capability	NTPF
Emergency Alerts	NTPFES/BFNT
Emergency food distribution	Red Cross/Malandari Store/Red Dirt Supermarket/Gulf Mini Mart/TJS One Stop/Robinson River Store /Mabunji Aged Care Services
EOC including WebEOC	NTPFES
Emergency shelter, staff, operations and control	DoE/TFHC

Functions	Agency/organisation/provider responsible
Evacuation centre - staffing, operations and control	TFHC
Financial relief/assistance Payments of NDRRA (National Disaster Relief and Recovery Assistance)	CM&C
Identification of suitable buildings for shelters	DIPL
Interpreter services	Aboriginal Interpreter Services
Management of expenditure in emergencies	Controlling Authority and any activated functional groups at the direction of the Controlling Authority
Medical services	Borrooloola Health Clinic/Robinson River Health Clinic
Network communications (IT): responders/public maintenance and restoration of emergency communication	Telstra – Power Projects/DCDD
Power: protection and restoration:	PAWC/AUS Projects
Public messaging during response and recovery.	Hazard Management Authority/CM&C
Public/Environmental Health (EH) management <ul style="list-style-type: none"> all EH functions including water & food safety disease control 	Borrooloola Health Clinic/Robinson River Health Clinic
Rapid Impact Assessment	NTPFES
Recovery coordination	CM&C
Repatriation	CM&C
Restoration of public buildings	DIPL/TFHC/Mabunji
Restoration of roads and bridges (council/territory) excluding railways	DIPL/RGRC
Road management and traffic control including public Information on road closures	NTPF/RGRC/DIPL
Sewerage: protection and restoration	PAWC/AUS Projects
Survey	NTPFES

Functions	Agency/organisation/provider responsible
Traffic control	NTPF/RGRC/DIPL
Transport: commercial and public airport/ planes, automobiles, ferries, buses	DIPL/RGRC airstrip
Vulnerable groups	TFHC/Borrooloola Health Clinic/Robinson River Health Clinic
Waste management <ul style="list-style-type: none"> • collection • disposal of stock 	RGRC
Water (including drinking water): protection and restoration	PAWC/AUS Projects

11.3. Annex C: Prevention, mitigation strategies and action plans for identified hazards

11.3.1. Fire

Hazard	Controlling Authority	Hazard Management Authority
 Fire (within Gazetted Area)	NT Fire and Rescue Service	NT Fire and Rescue Service

A fire hazard is an event, accidentally or deliberately caused, which requires a response from one or more of the statutory fire response agencies. A fire hazard can include, but not limited to:

Term	Definition
Structure fire	A fire burning part, or all of any building, shelter, or other construction
Bushfire	An unplanned fire. It is a generic term that includes grass fires, forest fires and scrub fires. Bushfires are a natural, essential and complex part of the NT environment. The term bushfire is interchangeable with the term wildfire
Vehicle fire	An undesired fire involving a motor vehicle

Agency capabilities

NTFRS protects the Territorian community from emergencies involving fire, motor vehicle crashes and other dangerous situations, including hazardous materials and building collapse.

The NTFRS are the Hazard Management Authority and Controlling Authority for fires within their jurisdiction. This means that the agency is responsible for managing technical aspects of responding to a fire and commanding its resources through their Incident Controller. This means that if a fire is occurring within an Emergency Response Area (ERA), then the NTFRS is the Controlling and Hazard Management Authority.

In areas that are located outside the NTFRS ERA and where there is no fire protection zone (BFNT), fire is the responsibility of the land owner or occupier. BFNT should be contacted when the owner or occupier are unable to control the fire. BFNT may contact the Local Controller to discuss local response arrangements and coordination of resources.

The NTFRS identifies 3 classes of incidents and describes them in generic terms, as shown in the following table.

Incident classification	Description
Level 1	Level 1 incidents are generally characterised by being able to be resolved through the use of local or initial response resources only
Level 2	Level 2 incidents may be more complex either in size, resources or risk. They are characterised by the need for: <ul style="list-style-type: none"> • deployment of resources beyond initial response • sectorisation of the incident • the establishment of function sections due to the levels of complexity • or, a combination of the above
Level 3	Level 3 incidents are characterised by degrees of complexity that may require the establishment of divisions for effective management of the situation




Prevention and preparative controls include, but are not limited to:

- a Fire Danger Period is declared over large areas when climatic and seasonal conditions presents increased fire risk for a prolonged period of time. A Fire Danger Period usually coincides with the accepted 'fire season' in an area. Broadly this is during the Australian summer months in central Australia and during the Dry Season further north. A permit to burn is required before using fire during a Fire Danger Period in all zones
- a Fire Ban can be declared for up to 24 hours. A combination of factors are considered when declaring a fire ban period including forecast fire danger, ignition likelihood, hazards and resourcing. All permits to burn are revoked within the declared fire ban area
- a Fire Management Area can be declared in an area where BFNT have identified heightened fire risk. A fire management plan can be prescribed for a Fire Management Area, and the plan can require landowners to take action to prepare for, or prevent, the spread of fire
- additional fire regulations apply within NTFRS ERA and BFNT Fire Protection Zone (FPZ). Permits to burn are required throughout the entire year inside an ERA or FPZ and a minimum 4m wide firebreak within the perimeter boundary of all properties and additional firebreaks around permanent structures and stationary engines is required within an FPZ
- BFNT Regional Fire Management Plan
- establishment of an Incident Management Team with liaison officers from other agencies to assist
- radio, television and social media posts

Warnings and advice approval flow (bushfire only):

The Australian Warning System is a new national approach to information and warnings during emergencies like bushfire. The System uses a nationally consistent set of icons, like those below.

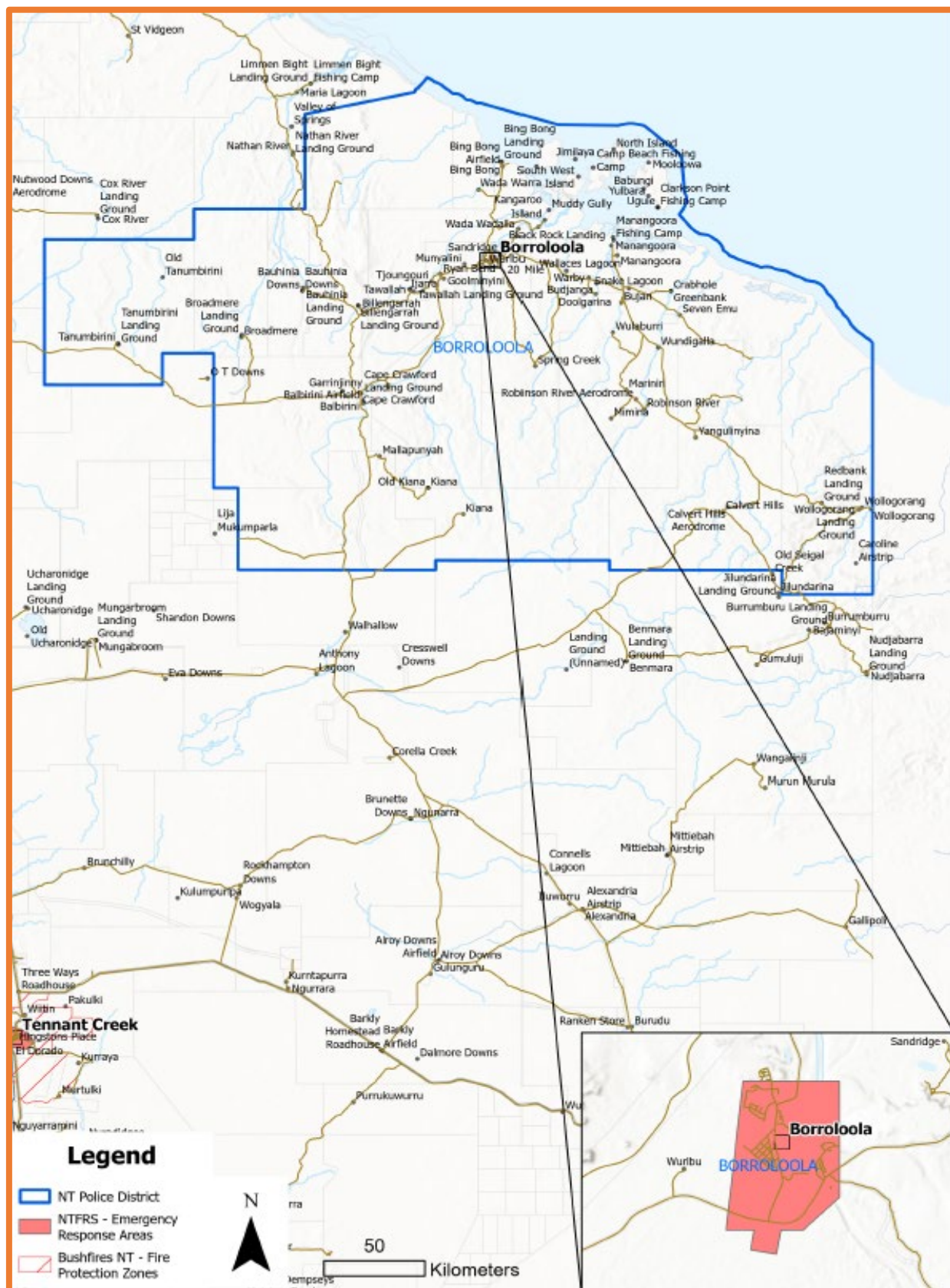
There are 3 warning levels:

	Warning level	Description
	Advice (Yellow)	An incident has started. There is no immediate danger. Stay up to date in case the situation changes
	Watch and Act (Orange)	There is a heightened level of threat. Conditions are changing and you need to start taking action now to protect you and your family
	Emergency Warning (Red)	An Emergency Warning is the highest level of warning. You may be in danger and need to take action immediately. Any delay now puts your life at risk

Each warning level has a set of action statements to give the community clearer advice about what to do. Calls to Action can be used flexibly across all 3 warning levels depending on the hazard.

All warnings and advice will be issued by the Incident Controller from the NTFRS as the controlling authority for fire within an emergency response area.

Fire ERA map - Borroloola



11.3.2. Flood

	Hazard	Controlling Authority	Hazard Management Authority
	Flood	NT Police Force	NT Emergency Service

Communities in the Borroloola locality may be subject to inundation or isolation caused by seasonal monsoonal/severe storm activity.

Inundation (also known as pluvial flooding), occurs when an area receives a large amount of water in a short amount of time which causes localities to be submerged. In the NT, this can include when a riverbank is at risk after several days of heavy rain.

Isolation causes communities/individuals to be cut off from the rest of the area. This could mean some people in an area are affected by a flood while others are not. Flood events can cause long-term impacts on communities, such as disruptions to supplies of food, clean water, wastewater treatment, electricity, transport, communication, education and health care. Where isolation is likely to occur for an extended time, pre-season planning by the LEC is critical to ensure there will be limited disruptions to critical goods and services.

When such flooding occurs, access by both air and road may be severely restricted. A flood hazard includes a flood threat to the township, housing and infrastructure of the Locality including the surrounding areas. The Bureau will issue a Flood Watch advice with up to 4 days lead time in situations where forecast rainfall and catchment conditions may lead to flooding.

The severity of a flood event is usually stated in terms of the Annual Exceedance Probability (AEP) expressed as a percentage. The levels associated with a 1.0% AEP flood event is generally used for development control purposes. A flood event with a 1.0% AEP can be described as a flood which has odds of 100 to one of occurring in any one year. It is also referred to as a one in 100-year event but this can be confusing since a flood of this magnitude or greater could occur in successive years – even twice or more in one year is possible.

It should also be emphasised that floods more severe than the 1.0% AEP event are possible and that a bigger event will occur is not a matter of 'if' but 'when'. The largest flood possible is referred to as the Probable Maximum Flood (PMF) but the extent of such a flood has not been determined for Borroloola. However, it may be of interest to note that the PMF for Katherine is some 3.5 m above the flood level associated with a 1.0% AEP event.

The township of Borroloola is situated on the northern bank of the McArthur River approximately 60 km upstream from the river mouth and about 10 km downstream of the tidal limit. The state of the tide during a flood event will affect the flood levels experienced at Borroloola and tide information should be consulted when a flood event is expected to occur.

River level records from 1962 to 2001 at the gauge at the Burketown Crossing show the Borroloola community has been threatened by a flood on several occasions during this period. 5 events exceeded 10 m with the main threat occurring in 2001 when the river reached 15.25 m. The second highest flood level recorded was in 1974 at 14.45 m and in 1993 the river reached 12.63 m. The 1991 flood was estimated to have been a 2.0% AEP event or a flood with odds of 50 to one of occurring in any one year.

Flooding of the McArthur River is generally brought about by monsoonal rains and decaying tropical cyclones passing over its catchment. Tropical cyclones and storms are natural occurrences that afford warning and because they are seasonal and reasonably predictable, they enable planned measures to be formulated and community preparation to be actioned prior to each season.

Most of the existing development within the township is above the estimated 1.0% AEP flood level. During such an event the few buildings in the area inundated are expected to only be subject to shallow flooding and flow velocities of less than 0.5 m/s (1.8 km/hr).

Refer to the DEPWS floodplain and flood extent map⁷ on page 30 for the Borroloola area.

At 8.5 m at the gauge, the road between the old and new part of the town is cut at the culvert over Rocky Creek. At times, this crossing can remain impassable for days at a time. The closure restricts normal access to high ground from the old part of town and isolates the new area from the airstrip and the outside world. Boat access is available and operation is not considered dangerous as velocities do not exceed 0.2 m/s (0.75 km/hr) at the crossing. A flood need only exceed the 1.0% AEP event by 1.5 m for the airstrip to be affected and at this stage, the whole of the old part of town will be inundated.

McArthur River Mine also has gauges up river and can provide advice that is 2 days ahead of Borroloola.

The indicative impact of flood levels is indicated in the table below:

McArthur River at the Borroloola Crossing	
Measurement at gauge (m)	Effect in town
9.0 - Minor	Nil effect in town
13.6 - Moderate	Flooding will occur along roadways
14.9 - Major	Flooding will cover extensive areas

There is currently no formal flood forecasting system in place for the McArthur River. There are several rain and river level gauges in the catchment but these are not telemetered at present. It is anticipated that the rain and river level gauges at the Burketown Crossing will be fitted with satellite communication equipment before the next wet season but this will not provide flood forecasting capabilities.

The Local Controller will be largely dependent on knowledge available at the local level in making judgements about the potential for flooding to occur. However, they should maintain contact with the duty forecaster at the Bureau to obtain information about rainfall extent and intensities over the catchment to provide firm guidance.

As the Hazard Management Authority the NTES have established, equipped and trained volunteer units available across the NT, of which are capable of responding to the impact of floods. Initial control and coordination will be through the NTES TDO.

The NTES maintain the Territory EOC in a state of readiness. If the EOC is required to be activated by the Local Controller, the NTES will support this activation and facilitate, where possible, the staffing requests for IMT personnel.

⁷ More information can be found at: <https://depws.nt.gov.au/water/water-resources/flooding-reports-maps/floodplain-maps>

TOWN OF BORROLOOLA COMPUTED 1% AEP (1 in 100 Year) FLOOD EXTENT and FLOOD SURFACE CONTOURS

This map, one of a series of six covering the 56,254 km² (in 20 years) catchment of the 15,546 km² (in 100 years) Borroloola (1 in 100 year) 0.9% AEP (1 in 100 years) and Probable Maximum Flood (PMF) flood surface and around the Town of Borroloola, was developed by the Department of Natural Resources, Environment, The Arts and Sport (NRES) following the Water & Environmental Borroloola Floodplain Mapping Study, Report No. 0729 of 14 November 2011, and a similar flow chart.
Land Information Centre, Department of Lands & Planning
E-mail: landinfo@nt.gov.au

Darwin
1st Floor NAB House, 71 Smith Street, Darwin, Northern Territory, 0801
T: (08) 8933 3000 F: (08) 8933 3400

Katherine
1st Floor Katherine Government Centre
5 First Street, Katherine, Northern Territory, 0802
T: (08) 8973 8900 F: (08) 8973 6800
Internet: www.nt.gov.au/floods

LEGEND

	Flood extent	18.25	Flood surface contour, 1% AEP (1 in 100 year)
	Floodway depth	1.5 metres	Flood surface contour, 0.9% AEP (1 in 100 year)
	1% AEP floodway		
	Water channel/bank		Minor Canal/way
	Intermittent creek		Family Culvert/cross
	Bridge / Causeway		Town Court
	Priority boundary		Main road, sealed
	Town boundary		Minor road, sealed
			Minor road, unsealed
			Track

Notes:
This map delineates areas in and around the Town of Borroloola which are subject to inundation by a flood of the 1% AEP (1 in 100 year) Probable Maximum Flood (PMF) of flooding shown on this map is approximate.
Priority is defined as the area where the depth of floodwater exceeds 0.5 metres or the roadway height exceeds 1.
A 1% AEP flood (often referred to as the 100th) is defined as a flood which has a 1 in 100 chance of being equalled or exceeded in any one year.
This map is intended to be used as a guide at a scale of 1 : 20,000 and any enlargement beyond this scale does not increase the accuracy of the data appearing on the map and is not recommended.

For further information contact:
Water Resources Branch, Natural Resources Division,
Department of Natural Resources, Environment, The Arts and Sport
71, 1st Floor, NAB House, 71 Smith Street, Darwin, Northern Territory 0801
Goyder Centre, Gwyng Hall Terrace, Palmerston,
Northern Territory of Australia

LIMITATIONS OF MODELLED RESULTS / DATA RELIABILITY

TOPOGRAPHIC DATA

	Scale: 1 : 25,000
	Date of photography: 14/05/2010
	Scale: 1 : 10,000
	Date of photography: 04/11/1989

The hydrodynamic model developed in this study has used a DEM compiled from aerial photogrammetry data. The model may be subject to error due to the 1:25,000 data being used, the accuracy of the data or the location of structures. Hence, the possible of predicted flood levels are subject to the following factors before the final flood extent is determined: the accuracy of the data used in the model.

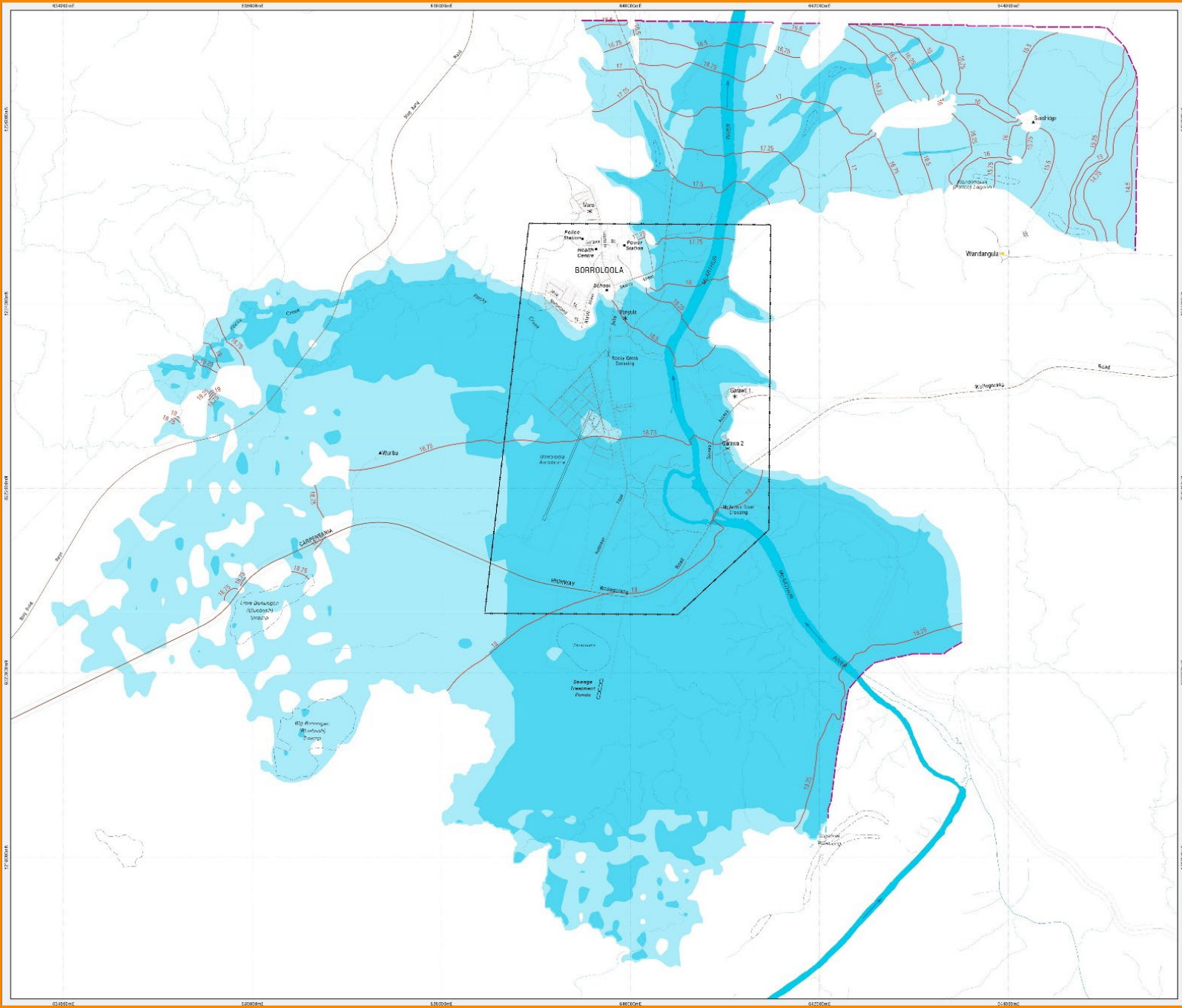
Scale 1:20,000
0 500 1000 1500 2000

This map was produced under the auspices of the Northern Territory Government.
This map was produced under the auspices of the Northern Territory Government.
GDA 94
This map was produced under the auspices of the Northern Territory Government.
GDA 94
This map was produced under the auspices of the Northern Territory Government.
GDA 94

Prepared by:
Special Data Mapping Unit,
Natural Resources Division,
Department of Natural Resources,
Environment, The Arts and Sport,
Northern Territory of Australia
MARCH 2012

MAP LOCALITY

© Northern Territory of Australia
This product and all material forming part of its copyright belongs to the Northern Territory of Australia. It may be reproduced for personal or internal use only, without fee, provided that the user acknowledges the Northern Territory of Australia as the source of the information. It may not be reproduced for any other purpose without the prior written permission of the Northern Territory of Australia.
The Northern Territory of Australia does not warrant that the product or any part of it is correct, complete and free from liability for any loss or damage of any kind, in any way, arising as a result of its use or misuse.



Prevention and preparative controls include, but are not limited to:

- radio, television and social media
- community engagement strategies
- LEC participate in education, training, exercises and continued professional development
- Community stores recommended to store 6 weeks minimum of food and fuel
- Local clinic recommended to store 6 weeks minimum of usual patient medication and maintain community vulnerability register




Public safety message process:

- the Bureau issues a flood advice to NTES TDO
- NTES TDO issues Australian Warning System to the PFES Media Unit
- NTES TDO notifies Local Controller and NTES Northern Command Manager
- Local Controller notifies LEC
- NTES Northern Command Manager consults with the Bureau and Incident Controller to determine recommended messaging
- PFES Media Unit or Public Information Group receives approved messaging to publish.

Warnings and advice approval flow

The Australian Warning System is a new national approach to information and warnings during emergencies like storm, flood and cyclone. The system uses a nationally consistent set of icons that are found below.

There are 3 warning levels:

	Warning level	Description
	Advice (Yellow)	An incident has started. There is no immediate danger. Stay up to date in case the situation changes
	Watch and Act (Orange)	There is a heightened level of threat. Conditions are changing and you need to start taking action now to protect you and your family
	Emergency Warning (Red)	An Emergency Warning is the highest level of warning. You may be in danger and need to take action immediately. Any delay now puts your life at risk.

Each warning level has a set of action statements to give the community clearer advice about what to do. Calls to Action can be used flexibly across all 3 warning levels depending on the hazard.

On advice from the Bureaus' weather warnings, the NTES determine the Australian Warning System level.

The NTES TDO is responsible for issuing Australian Warning System warnings and advice prior to an Incident Controller is appointed.

Actions to be taken – Flood⁸

Organisation/ Provider	Flood Watch	Isolation
All Members	Attend LEC meetings Relay information to other key stakeholders	Assist where necessary and ensure all procedures for each location/area to be affected is well prepared
Local Controller	Update LEC members of the impending situation	SITREP is to be circulated to committee members and key stakeholders

⁸ Action stages as per Flood products issued by the Bureau of Meteorology

11.3.3. Road crash

	Hazard-specific capabilities	Controlling Authority	Hazard Management Authority
	Road Crash	NT Police Force	NT Fire and Rescue Service

A road crash occurs when a vehicle collides with another vehicle, pedestrian, animal, road debris, or other stationary obstruction, such as a tree, pole or building. Road crashes often result in injury, disability, death, and or property damage as well as financial costs to both society and the individuals involved. Emergency services are frequently called on to extricate seriously injured casualties from their vehicles following road crashes. This is achieved by employing space creation techniques to create openings in the vehicle. These openings make it possible to administer first aid to the casualty and to remove them from the vehicle.

A number of factors contribute to the risk of collisions, including vehicle design, speed of operation, road design, weather, road environment, driving skills, fatigue, impairment due to alcohol or drugs, and behaviour, notably aggressive driving, distracted driving, speeding and street racing.

Responses to road crash incidents will be coordinated from the JESCC. NTFRS will respond as per-determined response arrangements contained within the ICAD system for incidents occurring within an NTFRS ERA. For incidents occurring outside of an ERA, response will be approved by the rostered NTFRS TDO.

Prevention and preparative controls include, but are not limited to:

- radio, television and social media
- targeted road safety campaigns
- community engagement strategies
- training in PUASAR024 - undertake road crash rescue delivered by NTES and NTFRS to NTPFES members

Public safety message process:

- NTPF Territory Duty Superintendent to approve public messaging and forward to NTPFES Corporate Communications Unit for dissemination

11.3.4. Storm and water damage

	Hazard	Controlling Authority	Hazard Management Authority
	Storm and water damage	NT Police Force	NT Emergency Service

A severe storm is defined by the Bureau as one which produces:

- hail, diameter of 2 centimetre (cm) or more (\$2 coin size); or
- wind gusts of 90 km/h or greater; or
- flash floods; or
- tornadoes, or
- any combination of these

Severe storms can be quite localised and develop quickly. Severe storm activity can occur at any time of year but are more frequent during the Top Ends tropical monsoon season, October to April. The exact location of severe storms can be hard to predict and conditions can change rapidly without warning. The Bureau will issue warnings for the Locality via the Local Controller with a prediction of what to expect and advice to send out to their LEC and community stakeholders.

As the Hazard Management Authority the NTES have established, equipped and trained volunteer units across the NT, of which are capable of responding to the impact of storms. Initial control and coordination will be through the NTES TDO.

Prevention and preparative controls include, but are not limited to:

- radio, television and social media
- community engagement strategies
- LEC participate in education, training, exercises and continued professional development




Public safety message process:

- the Bureau issues a severe weather advice to NTES TDO
- NTES TDO issues Australian Warning System to the PFES Media Unit
- NTES TDO notifies Local Controller and NTES Northern Command Manager
- Local Controller notifies LEC
- NTES Northern Command Manager consults with the Bureau and Incident Controller to determine recommended messaging
- PFES Media Unit or Public Information Group receives approved messaging to publish

Warnings and advice approval flow

The Australian Warning System is a new national approach to information and warnings during emergencies like storm, flood and cyclone. The system uses a nationally consistent set of icons that are found below.

There are 3 warning levels:

	Warning level	Description
	Advice (Yellow)	An incident has started. There is no immediate danger. Stay up to date in case the situation changes
	Watch and Act (Orange)	There is a heightened level of threat. Conditions are changing and you need to start taking action now to protect you and your family
	Emergency Warning (Red)	An Emergency Warning is the highest level of warning. You may be in danger and need to take action immediately. Any delay now puts your life at risk.

Each warning level has a set of action statements to give the community clearer advice about what to do. Calls to Action can be used flexibly across all 3 warning levels depending on the hazard.

On advice from the Bureaus' weather warnings, the NTES determine the Australian Warning System level.

The NTES TDO is responsible for issuing Australian Warning System warnings and advice prior to an Incident Controller is appointed.

11.3.5. Tropical cyclone

Hazard	Controlling Authority	Hazard Management Authority
 Tropical cyclone	NT Police Force	NT Emergency Service

A Tropical cyclone⁹ hazard includes a cyclone threat to the township, housing and infrastructure of the Locality including the surrounding areas. During the cyclone season, November to April, the Bureau of Meteorology keeps a 24-hour watch on developing tropical weather systems. The Bureau will issue a Tropical Cyclone Advice whenever a tropical cyclone is likely to cause winds in excess of 62 km/h (gale force) over Australian communities within the next 48 hours.

Table – Tropical cyclone categories

Category	Max Mean Wind (km/h)	Typical Strongest Gust (km/h)	Transport Effects
1	63 - 88	< 125	Negligible house damage. Damage to some crops, trees and caravans. Craft may drag moorings
2	89 - 117	125 - 164	Minor house damage. Significant damage to signs, trees and caravans. Heavy damage to some crops. Risk of power failure. Small craft may break moorings
3	118 - 159	165 - 224	Some roof and structural damage. Some caravans destroyed. Power failures likely
4	160 - 199	225 - 279	Significant roofing loss and structural damage. Many caravans destroyed and blown away. Dangerous airborne debris. Widespread power failures
5	>200	> 279	Extremely dangerous with widespread destruction

Note: Corresponding approximate wind gusts and central pressure are also provided as a guide. Stronger gusts may be observed over hilltops, in gullies and around structures.

As the Hazard Management Authority the NTES have established, equipped and trained volunteer units available across the NT, to support response and recovery operations to tropical cyclones.

The NTES maintain the Territory EOC in a state of readiness. If the EOC is required to be activated by the Local Controller, the NTES will support this activation and facilitate, where possible, the staffing requests for IMT personnel.

Prevention and preparative controls include, but are not limited to:

- implementation of cyclone preparation initiatives and council clean ups
- radio, television and social media posts

⁹ More information can be found at: <http://www.Bureau of Meteorology.gov.au/cyclone/tropical-cyclone-knowledge-centre/understanding/tc-info/>

Public safety message process (initial notification):




- the Bureau issue a cyclone advice to NTES TDO
- NTES TDO issues Australian Warning System to the PFES Media Unit
- NTES TDO notifies Local Controller and NTES Northern Command Manager
- Local Controller Notifies LEC
- NTES Northern Command Manager consults with the Bureau, Regional Controller, NTES Director and Incident Controller to determine recommended messaging
- PFES Media Unit or Public Information Group receives approved messaging to publish
- responsibility for development and promulgation of warnings and information post the establishment of an IMT will rest with the Public Information Officer and the Incident Controller

The response to a cyclone event is staged and dependant on timings of the Watch and Warnings issued by the Bureau and the projected impact on the communities. The following table provides a guide to typical actions for members of the LEC upon receipt of notifications from the Bureau. The table also notes the need for LEC members to contribute to the recovery process post the impact of the cyclone.

Warnings and advice approval flow

The Australian Warning System is a new national approach to information and warnings during emergencies like storm, flood and cyclone. The system uses a nationally consistent set of icons that are found below.

There are 3 warning levels:

	Warning level	Description
	Advice (Yellow)	An incident has started. There is no immediate danger. Stay up to date in case the situation changes
	Watch and Act (Orange)	There is a heightened level of threat. Conditions are changing and you need to start taking action now to protect you and your family
	Emergency Warning (Red)	An Emergency Warning is the highest level of warning. You may be in danger and need to take action immediately. Any delay now puts your life at risk.

Each warning level has a set of action statements to give the community clearer advice about what to do. Calls to Action can be used flexibly across all 3 warning levels depending on the hazard.

On advice from the Bureaus' weather warnings, the NTES determine the Australian Warning System level.

The NTES TDO is responsible for issuing Australian Warning System warnings and advice prior to an Incident Controller is appointed.

Actions to be taken – Tropical cyclone¹⁰

Organisation/ Provider	Watch	Warning (onset of Gale Force Winds)			Reduced risk	Transition to recovery
	48 hours	24 + hours	6 + hours	3 + hours		
All members	Attend briefings Inform key stakeholders Provide SITREPs Assist the Local Controller as required Ensure final preparations are undertaken prior to next stage	Attend briefings Inform key personnel Assist the Local Controller as required	Attend briefings Assist the Local Controller as required Inform key personnel	Assist the Local Controller as required Take and Remain in shelter	Remain in shelter until directed by Local Controller Assist the Local Controller as required	Attend briefings Inform key personnel Assist the Local Controller as required
Local Controller	Convene LEC meeting Ensure LEC members and community have activated their Cyclone Plan Co-ordinate the dissemination of the cyclone watch information to the relevant local community Communications established and maintained with Regional Controller, and NTES TDO and advise state of preparedness	Convene LEC meeting Ensure that the dissemination of the Cyclone Warning information to the public is maintained Advise Regional Controller of state of preparedness and ascertain SITREPs requirement	Update LEC and allocate tasks as required Ensure that the dissemination of the Cyclone Warning information to the public is maintained At the appropriate time, advise persons at risk to move to a shelter NTPF presence will be required at the designated shelter/s	Take and remain in shelter	When it is declared safe to move outside, ascertain the extent of injury to persons and damage to property Give Directions to survey teams advising community of reduced risk Provide SITREPs to Regional Controller and Incident Controller	Provide SITREPs to Regional Controller and Incident Controller Prepare for transition to recovery Begin compilation of information for Post Operation Report

¹⁰ Action stages as per Tropical Cyclone advice and warnings issued by the Bureau of Meteorology

Organisation/ Provider	Watch	Warning (onset of Gale Force Winds)			Reduced risk	Transition to recovery
	48 hours	24 + hours	6 + hours	3 + hours		
	Participate in REC meetings as required	Activate EOC if required			Prepare for transition to recovery	
NT Police	<p>Brief police members</p> <p>Disseminate warnings and information as required</p> <p>Maintain normal police duties</p> <p>Assist Local Controller as required</p> <p>Ensure all operational vehicles are fully fuelled</p>	<p>Brief police members</p> <p>Assist with the preparation of the EOC</p> <p>Disseminate Cyclone Warning information as directed by the Local Controller and advise information received</p>	<p>Brief police members</p> <p>Disseminate Cyclone information as directed by the Local Controller and advise him of information received</p> <p>Limit transport and ensure all emergency vehicles are fully operational</p> <p>Co-ordinate the movement of personnel to shelter</p> <p>Commence final patrol of area</p> <p>Ensure all personnel take shelter</p>	Take and Remain in shelter	<p>When advised by Local Controller move outside ascertain the extent of injury to persons and damage to property and report with damage assessments</p> <p>Assist Local Controller with prioritising response operations</p>	<p>Assist in the preparation of the final SITREP's</p> <p>Ensure that all NTPF equipment used in the operation is accounted for, maintained and restored</p> <p>Inform key personnel</p>

Organisation/ Provider	Watch	Warning (onset of Gale Force Winds)			Reduced risk	Transition to recovery
	48 hours	24 + hours	6 + hours	3 + hours		
Borroloola FERG	<p>Attend LEC meetings</p> <p>Brief unit members</p> <p>Advise the Operations Officer of the unit involvement</p> <p>Check and prepare unit equipment. Carry out duties as directed by the Local Controller</p>	<p>Brief unit members</p> <p>Advise the Operations Officer of the unit involvement</p>	<p>Brief unit members</p> <p>Advise the Operations Officer of the unit involvement</p>	<p>Take and Remain in shelter</p>	<p>Remain in shelter until advised by Local Controller that it is safe to move outside</p> <p>Provide SITREPs as required</p>	<p>Coordinate any urgent priorities and participate in meetings as required</p> <p>Organise Request For Assistance documentation</p>

11.4. Annex D: Evacuation guideline

The following is to be used as a **guide** only.

Stage 1 - Decision		
Authority	The Regional Controller will authorise the activation of the evacuation plan. This evacuation plan is to be approved by the TEMC prior to activation.	Regional Controller in conjunction with TEMC
Legal references	The Act and approved Local Emergency Plan. It is recommended that the Minister declares an Emergency Situation under section 18 of the Act, when this evacuation plan is activated.	
Alternative to evacuation? i.e. shelter in place, temporary accommodation on-site/nearby.	If needed residents will be progressively relocated within the community to <location to be determined>.	Local Controller to arrange
Summary of proposed evacuation	<p>Decision – made by the Regional Controller when the community have sustained damage during <to be determined> that cannot support residents in situ during recovery.</p> <p>The Local Controller to disseminate information to the community.</p> <p>Withdrawal – 3 stage process:</p> <ol style="list-style-type: none"> 1. <location to be determined>; community to the <location to be determined>; to be registered for evacuation to <location to be determined> 2. once registered, groups to move to the airstrip assembly area using buses/vehicles 3. Red Cross to register check utilising Register Find Reunite. <p>Shelter – evacuees will be encouraged to stay with friends or family. The remainder will be accommodated at an evacuation centre <Location to be determined></p> <p>Return – to be determined once recovery can sustain return to <location to be determined>.</p>	The decision will be informed by additional advice from technical experts, e.g. the Bureau.
Which communities/outstations or geographical area does the evacuation apply to?	<Out stations, Homelands and homesteads>	

<p>Vulnerable groups within the community</p>	<p>The Medical Group will liaise with local health staff and provide information on medically vulnerable people.</p> <p>The identified people will be evacuated <at a time to be determined>.</p>	<p>Medical Group & Transport Group to action.</p>
<p>Community demographics (approx. total number, family groups, cultural groups etc.)</p>	<p>For more information, refer to the Evacuation Centre Field Guide (page 20 section 4.3) which can be found in WebEOC.</p> <p>Examine the demographic breakdown of the community to be evacuated including:</p> <ul style="list-style-type: none"> • the total number of people being evacuated • an estimate of the number of people likely to require accommodation in the evacuation centre • a breakdown of the evacuees to be accommodated by age and gender. For example, the number of family groups and single persons, adult males and females, teenage males and females, and the number of primary school-aged children, toddlers and infants • a summary of cultural considerations, family groups, skin groups and community groups • potential issues that may arise as a result of these groups being accommodated in close proximity to one another • a summary of people with health issues, including chronic diseases, illnesses and injuries. • details of vulnerable clients (other than medically vulnerable), such as the elderly, frail and disabled (and if they are accompanied by support i.e. family members) • details of community workers also being evacuated who may be in a position to support the operation of the evacuation centre. Examples include teachers, nurses, health workers, shire staff, housing staff and police. 	
<p>What is the nature of the hazard?</p>	<p><To be determined></p>	
<p>Estimated duration of the potential evacuation?</p>	<p><To be determined></p>	

<p>Triggers for the evacuation</p>	<p>Example</p> <ol style="list-style-type: none"> 1. evacuation planning to commence when the Locality is under a <to be determined> 2. implement evacuation if the severity and impact has caused major damage and disruption to all services 3. elderly and vulnerable people are to be considered for evacuation due to limited health services. <p>Further details of the intra-community relocation plan are required.</p>	<p>Regional Controller</p>
<p>Self-evacuation</p>	<p>Where possible residents will be encouraged to self-evacuate and make their own accommodation arrangements if they wish to do so. Individuals and families taking this option will be encouraged to register prior to leaving the community.</p>	<p>Local Controller</p>
<p>Responsibility for the coordination Stage 1</p>	<p>Regional Controller Local Controller</p>	
<p>Stage 2 - Warning</p>		
<p>Who has the authority to issue warnings?</p>	<p>The Bureau will issue advice and warnings. All further public information will be approved by the Regional Controller in consultation with the Public Information Group and NTES.</p> <p>The Local Controller will coordinate the dissemination of community level information.</p> <p>A combination of the following will be utilised:</p> <ul style="list-style-type: none"> • broadcasted over radio and television • social media utilising the NTPFS Facebook page SecureNT X (formerly known as Twitter) feed. • loud hailer • door to door • Emergency Alert System. 	<p>Regional Controller to liaise with Public Information Group and NTES</p>
<p>Process for issuing evacuation warnings and other information</p>	<p>At community level, the Local Controller is to appoint a community spokesperson to disseminate up to date situational information at community meetings which are to be held immediately post a convening LEC meeting, at each declared stage of the Local Emergency Plan. A media brief approved by the Local Controller at each LEC meeting, will be announced over the local radio station containing current situational information, relevant safety information, what to prepare, when to self-evacuate, and where to go.</p>	<p>Local Controller</p>

When will warnings be issued (relative to the impact of the hazard)?	Immediately upon a decision to evacuate being made the LEC will commence coordinating residents to prepare for transport.	Local Controller
What information will the messages contain? (What do people need to know?)	To be determined: <ul style="list-style-type: none"> outline of the proposed evacuation plan measure to prepare residences safety issues; not overloading transport items to bring on the evacuation arrangements for pets and animals. 	Local Controller Biosecurity & Animal Welfare Group liaison
Responsibility for the coordination of Stage 2	Local Controller/Regional Controller	
Stage 3 - Withdrawal		
Outline	3 stage process: <ol style="list-style-type: none"> community residents to <staging area 1> <staging area 1> to airport airport to <location to be determined> evacuation centre 	
<Location> community to the airstrip	<p>Lead</p> <ul style="list-style-type: none"> NTPF <p>Overview</p> <ul style="list-style-type: none"> the community will gather at the <location to be determined> prior to being transported by community buses to the airstrip. <p>Risks/other considerations</p> <ul style="list-style-type: none"> evacuation should be undertaken during daylight hours, if possible. risks include inclement weather, persons with infectious diseases, vulnerable persons, and frail/elderly persons, chronically ill estimated time en-route: ___ minutes each way estimated timeframe overall: ___ hours utilising current resources. alternate transport options. 	NTPF

<p>Assembly area</p>	<p>Likely location of assembly area: <to be determined>.</p> <p>Additional resources will be required to host an evacuation centre in the form of tents and bedding. This will also be the point where evacuee registration will take place. Basic services should be provided i.e. drinking water, information.</p> <p>Services to be provided</p> <ul style="list-style-type: none"> • Red Cross Coordinator: Red Cross <p>Other details</p> <p>Evacuee registration. Residents will need to register at <location to be determined> or airport if (self-evacuating) to be permitted access to the evacuation centre at the <location to be determined>.</p>	<p>NTPF/TFHC</p>
<p><Location> community to <location to be determined></p>	<p>Lead - NTPF</p> <p>Example Lead - Transport Group</p> <p>Overview</p> <ul style="list-style-type: none"> • Transport Group has identified commercial operators and the Police Air Section able to provide evacuation assistance. • Total proposed air assets: _____. Commercial operators will be charging commercial rates for their services at a cost of (\$_____). • The operation will begin at _____hrs with the first aircraft, leaving <to be determined> and arriving at _____hrs • The operation will continue throughout the day until all community members are evacuated. It is estimated that all community members can be evacuated by _____hrs (arriving in <to be determined>). 	<p>NTPF/Transport/Logistics</p>

<p>< Location > airport to evacuation centre <to be determined></p>	<p>Lead - Transport Group</p> <p>Example</p> <p>Overview</p> <ul style="list-style-type: none"> • Buses will be on standby at • <location to be determined> airport from ____am to receive passengers and continue throughout the day transferring to <to be determined> only, as required. • Transport staff will be on the ground at <location to be determined> airport to marshal passengers on buses only. • Buses to be arranged by the Transport Group. Evacuees will be collected from <location to be determined> airport and transported to the <location to be determined>. <p>A reception team provided by NTPF will meet evacuees and facilitate transport.</p> <ul style="list-style-type: none"> • details <to be determined> • estimated time en-route: ____ minutes • estimated timeframe: possibly ____ hours, dependant on aircraft arrivals • alternate transport options: ____. 	<p>Transport Group</p>
<p>End point</p>	<p><location to be determined></p>	<p>EOC/welfare coordination</p>
<p>Transport of vulnerable members of the community</p>	<p>Medical Group to arrange transport of vulnerable people from the community to <location to be determined>.</p>	<p>Medical Group</p>
<p>Registration and tracking</p>	<ul style="list-style-type: none"> • Welfare Group to activate registration arrangements. Registration will be undertaken by NTPF and will occur at <location to be determined>. • Names of evacuees will be obtained prior to boarding buses. • Where possible details of individuals and families self-evacuating to be obtained on arrival at the <location to be determined> airstrip. • If persons are not registered as evacuees or self-evacuees they will not be provided access to the evacuation shelter. 	<p>Welfare Group/ NTPF</p>
<p>Coordination Stage 3</p>	<p>Regional Controller</p>	<p>EOC coordination.</p>

Stage 4 – Shelter		
Overview	An evacuation centre will be established at the <location to be determined>. The <location to be determined> will be the primary areas used.	
Alternate shelter options	Where possible evacuees will be encouraged to seek alternative accommodation with family, friends or through commercial accommodation.	
Estimated duration of the shelter phase	To be determined	
Arrangements for domestic animals	No domestic animals are to accompany evacuees. Any self-evacuees with domestic animals will be expected to make their own arrangements for the animals.	Advise Animal Welfare
Roles		
• Director	TFHC	Welfare Group
• Deputy Director	TFHC	Welfare Group
• Logistics/planning	EOC	Controlling Authority
• Admin teams	EOC	CM&C/Welfare Group
• Shift manager/s	To be determined – drawn from pool of trained staff.	Welfare Group
• Welfare team	To be determined	Welfare Group
• Facility team	To be determined	
• Sport and Rec team	To be determined	
• Medical team	To be determined. It is likely St Johns volunteers will be requested. Evacuees will be referred to off-site medical services.	Medical Group
• Public health team	To be determined	Public Health Group
• Transport team	To be determined	Transport Group
Evacuation centre set-up	Refer to the evacuation centre template for set-up considerations.	
What strategy will be put in place to close the evacuation centre?	Closure of the evacuation centre will be largely dependent on the extent of inundation and complexity of the recovery process.	

Stage 5 – Return		
Indicators or triggers that will enable a return	(Refer to Recovery action plan for the community) CM&C	
Who is responsible for developing a plan for the return?	Recovery coordination in conjunction with Incident Management Team (IMT).	
• Transportation	To be determined	
• Route/assembly points en-route	To be determined	
• End point	To be determined	
How will information about the return be communicated to evacuees?	To be determined	
What information needs to be conveyed to the evacuated community members?	To be determined	

11.5. Annex E: Summary of response and recovery activities

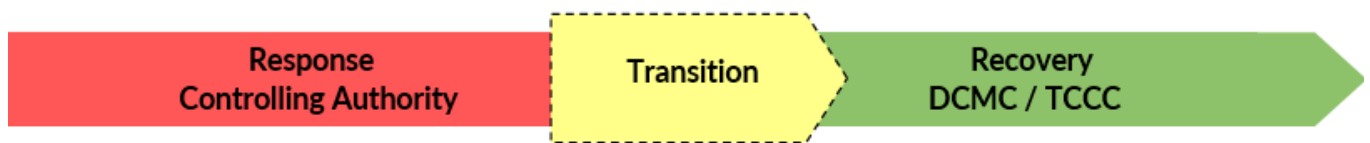
The following table outlines a summary of possible response and recovery activities to be considered following an event.

This table is presented as a guide only, assisting emergency managers with operational decision making, planning and resource allocation. It also highlights the importance of response and recovery coordination working collaboratively.

Activities have been broken down and are listed under either response or recovery for simplicity and ease of use. In practice not all response activities will be completed during the response phase. Likewise not all recovery activities will commence after the transition to recovery.

The post event period of any event is highly dynamic and produces many challenges, both foreseen and unpredicted. Response and recovery coordination must be flexible and able to adapt to the situation as it evolves.

In most cases the points noted in this table and in the ensuing document are outlined in greater detail in functional group or agency plans.



Activity	Response activities	Recovery activities
1. Situational awareness	<ul style="list-style-type: none"> Road clearance teams General public Media reports Survey and rescue teams Impact assessment teams 	<ul style="list-style-type: none"> Contributes to recovery planning through impact assessment data Comprehensive Impact Assessments Needs Assessment
2. Public Information	<ul style="list-style-type: none"> Public Information Group activation Spokes persons identified SecureNT activated 	<ul style="list-style-type: none"> Continues in recovery
3. Survey and Rescue	<ul style="list-style-type: none"> Survey teams deploy to designated areas Critical sites surveyed Deploy rescue teams - NTFRS and Territory Response Group provide primary urban search and rescue capability 	<ul style="list-style-type: none"> Survey and Impact Assessment data used to develop the Recovery Action Plan
4. Road clearance	<ul style="list-style-type: none"> Road patrol teams deploy and check assigned routes Road clearance to priority sites Assess supply routes 	<ul style="list-style-type: none"> Restoration of road networks and bridges Return to business as usual
5. Emergency accommodation	<ul style="list-style-type: none"> Emergency accommodation and shelter <ul style="list-style-type: none"> evacuation centres 	<ul style="list-style-type: none"> Evacuation centres may continue into recovery

Activity	Response activities	Recovery activities
	<ul style="list-style-type: none"> • Provision of resources that will enable people to remain in their homes • Emergency clothing 	<ul style="list-style-type: none"> • Temporary accommodation options • Repatriation planning
6. Medical	<ul style="list-style-type: none"> • Hospital <ul style="list-style-type: none"> - road clearance to the hospital - damage assessment - increase morgue capacity - divert patients from remote and regional areas - power (fuel) and water supplies • Medical clinics and field hospitals <ul style="list-style-type: none"> - determine the need for clinics to be opened - assess damage to clinics - deploy field hospital/s • Medical presence in shelters <ul style="list-style-type: none"> - supplied by the Medical Group • ambulance pick up points on key, cleared roads • GP clinics and pharmacies <ul style="list-style-type: none"> - identify GP clinics able to open - identify pharmacies able to open • Medically vulnerable people <ul style="list-style-type: none"> - support agencies to follow-up and advise the Medical Group - vulnerable people in shelters - support for vulnerable people at shelters • Care Flight/Royal Flying Doctors Service 	<ul style="list-style-type: none"> • Hospital <ul style="list-style-type: none"> - repair works - business continuity plans • Department of Health <ul style="list-style-type: none"> - health centres - repair works - reopen other clinics • Support return of vulnerable people in community. • GP clinics and pharmacies <ul style="list-style-type: none"> - ongoing liaison by the Medical Group • CareFlight/Royal Flying Doctors Service - resume business as usual • St John Ambulance – resume business as usual
7. Essential goods and services	<ul style="list-style-type: none"> • Establish emergency feeding and food distribution points 	<ul style="list-style-type: none"> • Support the re-opening of the private business sector • Monitor levels and availability of essential goods

Activity	Response activities	Recovery activities
	<ul style="list-style-type: none"> Assessing the damage to suppliers and retailers of critical resources Assess the impact on barge operations and any effect on the ability to supply remote communities Implement interim banking arrangements 	<ul style="list-style-type: none"> Manage logistics arrangements supplying resources to outlying communities Public Health inspections (food outlets) Banking sector business continuity arrangements
	<p><u>Fuel</u></p> <ul style="list-style-type: none"> Fuel suppliers and point of sale Manage fuel supplies to emergency power generation 	<ul style="list-style-type: none"> Monitor fuel levels Infrastructure repairs Emergency fuel supplies for recovery Liaise with fuel suppliers, distributors and wholesalers to re-establish long term supply
	<p><u>Banking</u></p> <ul style="list-style-type: none"> Assess damage to banks and ATMs Implement temporary arrangements 	<ul style="list-style-type: none"> Emergency cash outlets Implement long term arrangements
<p>8. Evacuation</p>	<ul style="list-style-type: none"> Evacuations within community Evacuation out of community Registration 	<ul style="list-style-type: none"> Support services for evacuees Recovery information for evacuees Repatriation
<p>9. Public Health</p>	<ul style="list-style-type: none"> Communicable disease control response Drinking water safety standards Sewage and waste disposal Safe food distribution and advice Vector and vermin control Food and commercial premises 	<ul style="list-style-type: none"> Ongoing in recovery
<p>10. Utilities</p>	<ul style="list-style-type: none"> Power supply Power generation Water supply Sewerage Emergency sanitation 	<ul style="list-style-type: none"> Restore power network Restore water and sewerage infrastructure Issue alerts until safe to use
<p>11. Impact Assessments</p>	<ul style="list-style-type: none"> Training assessment teams Initial Impact Assessments 	<ul style="list-style-type: none"> Comprehensive Impact Assessments Ongoing needs assessments

Activity	Response activities	Recovery activities
12. Transport infrastructure (supply lines)	<u>Air (Airport/Airstrip)</u> <ul style="list-style-type: none"> • Clear the runway to allow air movements • Establish a logistics hub at the airport • Terminal damage and operational capability assessment 	<ul style="list-style-type: none"> • Monitor repairs and business continuity activities
	<u>Road</u> <ul style="list-style-type: none"> • Highway and critical access roads damage assessment • Repair work to commence immediately 	<ul style="list-style-type: none"> • Planning and prioritising repair work of all affected key Territory Highways (Stuart, Barkly, Victoria and Arnhem)
	<u>Rail</u> <ul style="list-style-type: none"> • Rail damage assessment • Outage estimation 	<ul style="list-style-type: none"> • Ongoing liaison with operator to support restoration to business as usual
	<u>Port, Harbour and Barge</u> <ul style="list-style-type: none"> • Assess damage to port infrastructure and harbour facilities <p>Assess the damage to barge facilities</p>	<ul style="list-style-type: none"> • Repairing infrastructure <p>Establish alternate arrangements for the supply of remote communities</p>
13. Waste management	<ul style="list-style-type: none"> • Waste management requirements and develop waste management plan if required 	<ul style="list-style-type: none"> • Continues in recovery
14. Repairs and reconstruction	<ul style="list-style-type: none"> • Private housing <ul style="list-style-type: none"> - impact assessments - temporary repairs • Government buildings <ul style="list-style-type: none"> - damage assessment • Public housing <ul style="list-style-type: none"> - impact Assessments • Private industry <ul style="list-style-type: none"> - damage assessments 	<ul style="list-style-type: none"> • Private housing <ul style="list-style-type: none"> - information and support to facilitate repairs • Government buildings <ul style="list-style-type: none"> - repairs and reconstruction • Public housing <ul style="list-style-type: none"> - long term repair plans • Private industry <ul style="list-style-type: none"> - repair and reconstruction • Temporary accommodation for a visiting construction workforce
15. Transport Services	<ul style="list-style-type: none"> • Staged re-establishment of public transport services 	<ul style="list-style-type: none"> • Continues in recovery
16. Tele-communications	<ul style="list-style-type: none"> • Telstra and Optus will assess the damage to their infrastructure 	<ul style="list-style-type: none"> • Repair damage networks and infrastructure (for private

Activity	Response activities	Recovery activities
	<ul style="list-style-type: none"> Put in place temporary measures to enable landline and mobile services 	<p>entities there is support for operators only)</p>
17. Public safety	<ul style="list-style-type: none"> Police will maintain normal policing services to the community 	<ul style="list-style-type: none"> Gradual return to business as usual
18. Animal welfare	<ul style="list-style-type: none"> Temporary emergency arrangements for pets 	<ul style="list-style-type: none"> Reunite pets with their owners and cease emergency support arrangements
19. Community consultation	<ul style="list-style-type: none"> Information provision regarding the overall situation, response efforts, what services are available and how to access them 	<ul style="list-style-type: none"> Community consultation process regarding long term recovery and community development

12. Acronyms

Acronyms	Definitions
AAPA	Aboriginal Areas Protection Authority
ABC	Australian Broadcasting Corporation
AEP	Aerodrome Emergency Plan
AEP	Annual Exceedance Probability
AIDR	Australian Institute Disaster Resilience
AIIMS	Australasian Inter-service Incident Management System
ARFFS	Aviation Rescue and Fire Fighting Service
BFNT	Bushfires NT
CAHS	Central Australia Health Service
CM&C	Department of the Chief Minister and Cabinet
DCDD	Department of Corporate and Digital Development
DEPWS	Department of Environment, Parks and Water Security
DIPL	Department of Infrastructure, Planning and Logistics
DITT	Department of Industry, Tourism and Trade
DoE	Department of Education
DoH	Department of Health
EH	Environmental Health
EOC	Emergency Operations Centre
ERA	Emergency Response Area
FERG	Fire and Emergency Response Group
ICAD	Intergraph Computer-Aided Dispatch
ICP	Incident Control Point
JESCC	Joint Emergency Service Communication Centre
KM	Kilometre

Acronyms	Definitions
LCC	Local Coordination Centre
LEC	Local Emergency Committee
LRCC	Local Recovery Coordination Committee
M	Metres
NERAG	National Disaster Risk Assessment Guidelines
NT	Northern Territory
NTES	Northern Territory Emergency Service
NTFRS	Northern Territory Fire and Rescue Service
NTG	Northern Territory Government
NTPF	Northern Territory Police Force
NTPFES	Northern Territory Police, Fire and Emergency Services
PAWC	Power and Water Corporation
PPRR	Prevention, Preparedness, Response and Recovery
RAT	Rapid Assessment Team
RCC	Rescue Coordination Centre
RGRC	Roper Gulf Regional Council
SAR	Search and Rescue
SEWS	Standard Emergency Warning Signal
SITREP	Situation Report
TDO	Territory Duty Officer
TEABBA	Top End Aboriginal Bush Broadcasting Association
TEMC	Territory Emergency Management Council
TEOC	Territory Emergency Operations Centre
TFHC	Department of Territory Families, Housing and Communities
WebEOC	Web-Based Emergency Operations Centre