



08 September 2023

NOTICE OF MEETING

Dear Committee Member,

The next Local Emergency Management Committee meeting will be held at 10:00am on Friday, 15 September 2023 in the Committee Room, 7000 Great Eastern Highway, Mundaring.

The attached agenda is presented for your consideration.

Yours sincerely

Jonathan Throssell
CHIEF EXECUTIVE OFFICER

Please Note

If a Council Member has a query regarding a report item or requires additional information in relation to a report item, please contact the senior employee (noted in the report) prior to the meeting.



AGENDA
LOCAL EMERGENCY MANAGEMENT COMMITTEE MEETING
15 SEPTEMBER 2023

ATTENTION/DISCLAIMER

The purpose of this Committee Meeting is to discuss and make recommendations to Council about items appearing on the agenda and other matters for which the Committee is responsible. The Committee has no power to make any decisions which are binding on the Council or the Shire of Mundaring unless specific delegation of authority has been granted by Council. No person should rely on or act on the basis of any advice or information provided by a Member or Employee, or on the content of any discussion occurring, during the course of the Committee Meeting.

The Shire of Mundaring expressly disclaims liability for any loss or damage suffered by any person as a result of relying on or acting on the basis of any advice or information provided by a Member or Employee, or the content of any discussion occurring during the course of the Committee Meeting.

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LOCAL EMERGENCY MANAGEMENT COMMITTEE MEETING
COMMITTEE ROOM, 7000 GREAT EASTERN HIGHWAY, MUNDARING – 10:00AM

1.0 OPENING PROCEDURES

Acknowledgement of Country

Shire of Mundaring respectfully acknowledges the Whadjuk people of the Noongar Nation, who are the traditional custodians of this land. We acknowledge Elders past, present and emerging and respect their continuing culture and the contribution they make to the region.

Recording of Meeting

Members of Council and guests are advised that this meeting will be audio-recorded.

1.1 Announcement of Visitors

1.2 Attendance/Apologies

Members

Staff

Apologies

Guests

2.0 ANNOUNCEMENTS BY PRESIDING MEMBER WITHOUT DISCUSSION

3.0 DECLARATION OF INTEREST

3.1 Declaration of Financial Interest and Proximity Interests

Council Members must disclose the nature of their interest in matters to be discussed at the meeting (*Part 5 Division 6 of the Local Government Act 1995*).

Employees must disclose the nature of their interest in reports or advice when giving the report or advice to the meeting (*Sections 5.70 and 5.71 of the Local Government Act 1995*).

3.2 Declaration of Interest Affecting Impartiality

A Council Member or an employee who has an interest in a matter to be discussed at the meeting must disclose that interest (*Shire of Mundaring Code of Conduct, Local Government (Admin) Reg. 34C*).

4.0 CONFIRMATION OF MINUTES OF PREVIOUS MEETINGS

RECOMMENDATION

That the Minutes of the Local Emergency Management Committee Meeting held 30 June 2023 be confirmed.

5.0 PRESENTATIONS

6.0 REPORTS OF EMPLOYEES

6.1 Disability Inclusive Emergency Planning Community Workshop

File Code	EM.PLN 3
Author	Adrian Dyson, Manager Community Safety & Emergency Management
Senior Employee	Mark Luzi, Director Statutory Services
Disclosure of Any Interest	Nil
Attachments	1. DIEP flyer 2. DIEP Forum background

PURPOSE

To provide the Committee with a briefing on a Disability Inclusive Emergency Planning Community Workshop held at Boya Community Centre on 11 September 2023.

The attached document and event flyer provide background as to such Forums/Community Workshops held to date in the Eastern States, the model for the Forum/Community Workshop, the outcomes sought and the key stakeholders involved to date in running such forums/workshops in Western Australia.

OUTCOMES SOUGHT

Committee members;

- Are briefed on the Disability Inclusive Emergency Planning Workshop (the workshop) held at Boya Community Centre on 11 September 2023;

ACTION

That the Committee;

- Provide feedback on the workshop and;
- Engage in discussion as to an action plan arising out of the workshop findings

DISABILITY INCLUSIVE EMERGENCY PLANNING

Community Workshop



Hosted by the Shire of Mundaring, DFES Community Preparedness and University of Sydney, this community conversation will discuss how to reduce risk and increase resilience for people living with a disability before, during and after disasters.

Who is invited?

- Local people living with disability and their carers
- Industry service providers
- Emergency service agencies

Participatory support (ie transport, Auslan interpreter) available on request.



10.00am to 3.00pm



Monday 11 September 2023



**Boya Community Centre
119-135 Scott Street
Helena Valley**



**Free event
Catering provided**



**RSVP to Karen White, Coordinator Community Engagement,
9290 6715 ~ communityengagement@mundaring.wa.gov.au,
please advise of any dietary or participatory requirements.**



THE UNIVERSITY OF
SYDNEY



@shireofmundaring
www.mundaring.wa.gov.au

DIEP Forum Background

- 20 forums have been held in the Eastern States
- 628 participants / 177 people with disability
- Grew from an idea in 2019 around how to structure community conversations to ensure everyone is on board and having access to equal conversations
- PCEP (person centred emergency planning) vs DIEP
 - PCEP starts with the individual, working out to organisations and community
 - DIEP starts with the community, including organisations and the community
- More information at <https://collaborating4inclusion.org/disability-inclusive-disaster-risk-reduction/>

Model

- University of Sydney offer the expert facilitation skills and partner with LGs to be the host
 - o LG provides accessible venue with good acoustics / catering / transport / promotion **need to let people know it's interactive, bring their mouths not just their ears!*
 - o LG invites local stakeholders (preferably those we have a relationship with, have faith in to be drivers)
 - Work to a number of 32 (4 tables of 8), equal mix of:
 - People with disability (cover as many areas as possible physical / age / sensory / hearing / mobility / CALD)
 - Unpaid carers
 - Paid services
 - Agencies
 - Government
- Forum commences with a 1 hour welcome / morning tea, then people sit down at mixed tables for 'scene setting' before having facilitated, short conversations basically individual interviews around the room, all gathering data – the provided questions (with talking points) are:
 - o How have disasters impacted you, your organisation and the people you support?
 - o What steps have you taken to prepare for emergencies?
 - o How do you or your organisation enable people with disability to be aware, safe and prepared?
 - o In a disaster in your community what other supports could people with disability count on?
- After lunch there's:
 - o Small group discussion
 - o Large group plenary (sharing)
- To finish there's a summary of the day along with 'where to...' which includes PCEP training, network creation (Clare – see below – is already doing that)

Tangible Outcome = Report

- All data (audio / forms / transcripts) taken and summarised into an easy-to-read report
- Feeds into state analysis (and hopefully, eventually, national analysis)

- Can be used to request resourcing and for lobbying across all levels of government

Working Group Stakeholders

- DFES DAIP Coordinator, Jennifer Crowther
- DFES All Hazards Coordinator At Risk Communities, Saloni Sharma
- Valued Lives Project Lead, Clare Gibellini (*also member of Darling Range brigade, currently lives in Greenmount*)
- Rocky Bay, Emma (*also lives in Mundaring*)
- City of Rockingham Emergency Liaison Coordinator, Kolina Brennan
- City of Rockingham Emergency Liaison Coordinator, Greg Whip
- City of Rockingham DAIP Coordinator (new incumbent)
- Shire of Mundaring Coordinator Community Engagement, Karen White
- Shire of Mundaring Bushfire Risk Management Officer, Karen Dore

Karen ☺

Karen Dore


Bushfire Risk Management Officer

Please contact me by telephone if your matter is urgent and you need a response within 24 hours.

E: karendore@mundaring.wa.gov.au

T: 9290 6676 **M:** 0448 245 086

W: www.mundaring.wa.gov.au



Mundadjalina-k ngala kaditj Noongar moort nidja Wadjak boodjar-ak kalyakool moondang-ak kaaradj-midi. Ngala Noongar Moort wer baalabang moorditj kaadidjiny koota-djinanginy. Ngala Noongar wer Torres Strait Moort-al dandjoo koorliny kwaba-djinanginy. Koorra, yeyi wer kalyakool, ngalak Aboriginal wer Torres Strait birdiya wer moort koota-djinanginy.

Shire of Mundaring respectfully acknowledges the Whadjuk people of the Noongar Nation, who are the traditional custodians of this land. We acknowledge Elders past, present and emerging and respect their continuing culture and the contribution they make to the region.

6.2 Community Emergency Services Manager Report

File Code	EM.PLN 3
Author	Adrian Dyson, Manager Community Safety & Emergency Management
Senior Employee	Mark Luzi, Director Statutory Services
Disclosure of Any Interest	Nil
Attachments	1. CESM report 2. AFAC Spring seasonal outlook

PURPOSE

To consider a report and information update provided provided by the Community Emergency Services Manager including the Australian Fire Advisory Council Spring Seasonal Outlook (national).

OUTCOMES

The committee:

- Notes the Community Emergency Services Manager report, and;
- Is briefed on the Australian Fire Advisory Council Spring Seasonal Outlook

ACTION

That the Committee notes the Community Emergency Services Manager report and is briefed on the Australian Fire Advisory Council Spring Seasonal Outlook.

Shire of Mundaring LEMC September 15, 2023

Prevention;

- Hazard reduction burning has been completed in Chidlow, Mt Helena, and Darlington totalling approximately 615ha.
- AFDRS - The AFDRS was subject to a national review post southern WA bushfire season. This involved the Bureau of Meteorology, Australasian Fire and Emergency Service Authorities Council (AFAC), the AFDRS national project team and all jurisdictions. The WA team have been liaising regularly with the national team as well as capturing case studies throughout the season where time and resourcing permits, to better understand the AFDRS and identify potential improvements. Feedback from the public, external agencies and DFES is also being compiled to help inform the review.

Preparedness;

Winter rainfall has been below average for southern WA and above average for northern WA. This is reflected in the relative root zone soil moisture for these regions.

- For southern WA in late spring, drier and warmer conditions may contribute to higher surface fuel availability and make bushfires more difficult to suppress.
- September to November maximum temperatures are very likely (greater than 80% chance) to be above median.
- September to November minimum temperatures are likely (greater than 80% chance) to be above median

Response;

- Shire Response below from last LEMC

Incident Type	2023
Called Off - No Attendance	2
False Alarm - System Initiated	3
False Call - Good Intent	5
Fire - Bushfire (sml)	3
Fire - Other/Rubbish/Vehicle	2
Fire - Structure	1
Hazardous Situation	1
Road Crash & Rescue	2
Total	19



Seasonal Bushfire Outlook

Spring | 2023



KEY: ■ Increased risk of fire

Figure 1 Seasonal Bushfire Outlook Spring 2023. Areas are based on the interim biogeographic regionalisation for Australia and other geographical features.

Increased risk of fire is the likelihood of an increased number of significant bushfires occurring in the outlook period compared to average.

Overview

Australia's climate influences have shifted significantly since last spring, with above average temperatures and below average rainfall expected for almost the entire country for the coming season. Many regions have also seen increased fuel growth due to above average rainfall throughout recent La Niña years, which is contributing to increased risk of bushfire across locations in Australia during the spring 2023.

Increased risk of fire is expected for regions in Queensland, NSW, Victoria, SA and NT. Communities in these regions are urged to prepare for bushfire and monitor local conditions.

About the Outlook

Fire management is a year-round process. The Seasonal Outlook reflects the priorities in each state and territory for the coming months given the expected climate conditions. It identifies areas of increased risk of bushfire so communities are aware and primed to take appropriate action. It is not intended as a prediction of where and when bushfires will occur. Fire risk can vary greatly, even at the smaller scale, between bordering states and territories. Each state and territory's assessment takes into account different land use types and vegetation types. This is influenced by different forecasts for temperature and rainfall over these regions. It should be noted that forecasting for longer time periods can be less accurate as the atmospheric system is dynamic; the more time passes, the less certain forecasters can be of its state. A significant bushfire is defined as being of such size,

complexity, duration or other impact that requires resources (from both a pre-emptive management and suppression capability) beyond the region in which fires originate. Increased bushfire risk depends on many factors including weather and climate, fuel amount and availability, recent fire and disturbance history, natural and human barriers, and how quickly and effectively firefighting resources are able to suppress fires in an area.

The Seasonal Outlook format has changed

The format of the Seasonal Bushfire Outlook has been reviewed and updated to communicate fire risk more effectively to the community. Key changes include:

- Assessing increased risk of fire rather than bushfire potential. See definition for increased risk of fire above.
- Simplifying information by identifying areas with increased risk of fire. References to areas of 'normal fire potential' and 'below normal fire potential' have been removed.
- Delivering more targeted information to communities by providing maps for each state and territory in the jurisdictional bushfire outlook summaries below.
- Providing place names on maps, and highlighting key information and links for each jurisdiction.
- Prioritising information about fire risk earlier in the document, supported by a detailed climate overview.
- For more information on these changes, [visit the AFAC website](#).

AFAC is the National Council for fire and emergency services, supporting the sector to create safer, more resilient communities. AFAC drives national consistency through collaboration, innovation and partnerships. It delivers enhanced capability by developing doctrine and supporting operations.

New South Wales



Seasonal Bushfire Outlook for Spring 2023 in New South Wales

Summary

- Large areas of central and northern NSW are expected to see increased risk of fire in spring 2023.
 - Hazard reduction burns will be undertaken where permitted.
- For further information see: rfs.nsw.gov.au

Due to high fuel loads and the forecast of warmer and drier conditions, large areas of central and northern NSW are expected to see increased risk of fire this spring.

Although stocking rates continue to recover, large areas of high grass loads persist. These are particularly evident in the central and north-western areas of the state. Drier than average conditions and frost curing in these areas can mean an early start to the bushfire danger period. In the event of fires and windy weather, these high grass fuel loads can support intense and fast spreading grass fires.

High forest fuel loads are evident in parts of the coast and ranges not affected by the 2019-20 fires. These are particularly noticeable around the Sydney Basin, parts of the coast and north of the Hunter. The forecast of warmer, and in some areas drier, conditions these areas present increased risk of fire this season.

In areas affected by the 2019-20 fires, fuels continue to recover in response to ideal growing conditions over the last three wet La Niña years. However, high severity fire during 2019-20 fires has altered the way this regrowth is structured. Some parts of the forest (for example shrubs) are regrowing quicker, other parts are accumulating slower (surface and canopy fuels). Overall fuel loads are close to what are expected and regrowth in these areas is being monitored closely.

In the southwest, higher than average soil moisture and low rates of curing have led to the forecast of a normal spring bushfire outlook. Warmer conditions and spring growth could see this situation change quickly.

Where weather and resource opportunities permit, hazard reduction burning will be undertaken to reduce the potential for future fires to impact on communities. ■

Australian Capital Territory



Seasonal Bushfire Outlook for Spring 2023 in Australian Capital Territory

Summary

- Normal bushfire risk during spring expected for the ACT.
- The long-range outlook for spring predicts drier and warmer conditions, raising the possibility of increased bush and grass fire risks for summer.
- Fire agencies and land managers will conduct prescribed burning during spring to mitigate potential hazards.

For further information see: esa.act.gov.au

After experiencing three very wet years, the ACT is now facing drier conditions, although catchments still hold a significant amount of water. Considering the current landscape and water availability, there is a normal risk of bushfires in the ACT this spring.

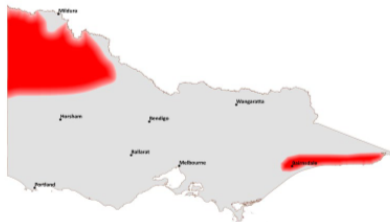
However, long-range outlooks for spring in the ACT predict drier than average conditions and above average day and night temperatures. There is a high chance of unusually warm conditions within the top 20% of the historical range. If these drying trends continue throughout spring, there could be an increased risk of bush and grass fires as we move into summer, particularly due to the grassland growth from the previous three wet years.

It is crucial for the community to stay vigilant and prepare their properties throughout spring. Residents should review, update, or prepare their Emergency Plans in anticipation of the high-risk weather season. Emergency Plan templates can be accessed at the ACT Emergency Services Agency website.

Fire agencies and land managers continue to conduct mitigation activities during spring, including prescribed burns when conditions permit during. ACT residents can keep track of planned and ongoing prescribed burns through the ACT Emergency Services Agency and ACT Parks and Conservation Service websites, or the Hazards Near Me App.

By staying informed and prepared, residents can help minimise the impact of potential bushfires during this period. Prioritising safety and ensuring a proactive approach helps to safeguard the community and environment. ■

Victoria



Increased Risk of Fire

Seasonal Bushfire Outlook for Spring 2023 in Victoria

Summary

- Victoria can expect a warmer spring and earlier start to the high risk fire season this year, following three years of lower fire risk seasons as a result of La Niña conditions
- Sit down with your family or household and make or review your Bushfire Survival Plan at www.cfa.vic.gov.au/bushfireplan
- Know how to stay informed and know which information channels work for you.

For further information see: emergency.vic.gov.au

Despite below average rainfalls for winter, much of the state has moist soils due to above average rainfall for much of the last three years. This moisture is likely to result in higher grass and crop growth during the spring outlook period.

In the east, a strong drying trend has emerged recently in far east Gippsland, extending to central Gippsland, which has resulted in recent planned burn opportunities. As a result, there is a higher than normal potential for forests to carry fire in the outlook period, especially in and surrounding coastal communities close to bushland where vegetation was unburnt or lightly burnt during the 2019-20 fires.

This outlook indicates drier and warmer conditions than usual for spring. As a result, there is a high likelihood that the bushfire season of 2023-24 will commence earlier across much of central, western and northern Victoria. In agricultural areas, elevated grass fuel loads will likely cure earlier than most years and may present an elevated risk until harvest occurs.

Elsewhere around the state, the fire risk potential is assessed to be normal noting that drier forests, woodlands and heathlands (inland and coastal) can pose a fire risk under the onset of hot, dry and windy weather conditions. There is considerable uncertainty around the effect that forecast climate drivers will have in regard to any potential extremes in drying rates and flammability of foothill and damper forests. As a result, landscape conditions will be monitored during the outlook period to identify key risk areas leading into the summer period. ■

Tasmania



Increased Risk of Fire

Seasonal Bushfire Outlook for Spring 2023 in Tasmania

Summary

- Normal bushfire risk is predicted for spring.
- Drier and warmer conditions, and an abundance of fuel will see bushfire risk increase towards summer.
- Property owners must prepare now.

For further information see: fire.tas.gov.au

Winter has seen below average rainfall for some areas in the east of the state. Maximum temperatures have been above average across the entire state for the period. Consequently, the soil dryness index across parts of the east is higher than expected for this time of year, indicating drier bushfire fuels more generally.

The contrast of climatic conditions for this spring season compared to the previous is significant. The potential for El Niño to establish this year is likely, and the development of a positive Indian Ocean Dipole is possible. These climate drivers combined typically strengthen the drying effect across Tasmania.

The past three years of wetter and warmer than normal conditions have led to significant growth and accumulation of fine fuels across the state. This is likely to increase bushfire intensity and make fire control more challenging.

The rates at which the landscape dries and fuels increase in flammability will be influenced by spring rainfall, daytime temperatures, windy days, and cloudiness. If the current trend continues as forecast, the onset of grassland curing in areas of the east will occur earlier than previous years, and forest fuels will become more readily available to burn earlier in the season.

Conditions are anticipated to remain favourable for fuel reduction burning through much of the spring period. Eastern and southern areas are likely to become too dry for low intensity fuel reduction burning earlier than other areas. Land managers are encouraged to seize opportunities to reduce fire hazards.

The Tasmanian community is reminded that there is potential for significant bushfires to occur during spring. Get ready by reviewing bushfire plans, preparing properties, and maintaining awareness of local conditions as fire danger increases. ■

South Australia



Seasonal Bushfire Outlook for Spring 2023 in South Australia

Summary

- Above average rainfall has rapidly switched to below average rainfall and drying out of soil in many areas of the state.
- Much greater fuel loads are present, requiring greater efforts for hazard reduction throughout spring before the hotter weather arrives.
- SA is expecting well above average maximum temperatures and above average minimum temperatures in spring.

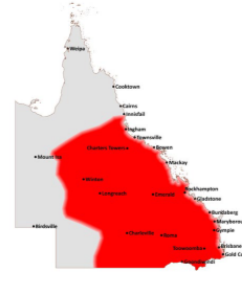
For further information see: cfs.sa.gov.au

Very much above average rainfalls across much of the state throughout early winter 2023 have rapidly switched to below average rainfall during July in all but the far northeast of the state. Consequently, the fire danger outlook has increased from below average to above average for spring across much of the southern half of the SA.

The far southwest corner of the state is currently showing very much below average root zone soil moisture and higher ratings of evaporative stress compared to previous years.

The spring outlook shows well-above average maximum temperatures and above average minimum temperatures coupled with average rainfall for much of the state or well below average rain for southern coastal areas. fire danger outlook is showing increased risk of fire for grassland in the SA-Victoria border region and also for Mallee Heath areas across southern SA approaching the Victorian border. These factors raise expectations of an early start to the 2023 fire danger season. ■

Queensland



Seasonal Bushfire Outlook for Spring 2023 in Queensland

Summary

- The combination of drying fuels, forecast below average rainfall and above average temperatures is likely to bring locally intense bushfire activity.
- Bushfires may be destructive across parts of Queensland as vegetation becomes flammable during the spring months.

For further information see: afes.qld.gov.au

Whilst there has been periods of episodic rain events across southern Queensland during the late summer and early autumn periods, the general rainfall totals are significantly lower than the past two years. This has led to reductions in soil moisture rates across the sub-tropical and temperate zones, and increased fire activity in these areas.

There has been significant rainfall across the central and far northwest areas of Queensland during the July months, this rain fall has delayed the onset of the northern Australian fire season. Without follow up mid-spring rainfall this area is likely to see elevated fire potential in the late parts of spring around the northern and central Queensland grasslands, timber country and savannah grasslands, with many of these areas not experiencing fire conditions for a number of years due to prolonged drought.

Whilst Queensland has experienced significant rainfall across many parts of the state, which has resulted in significant growth in vegetation, the fuel loads being observed are similar to traditional post La Niña growth patterns.

The combination of drying fuels, forecast below average rainfall and above average temperatures is likely to bring locally intense bushfires that maybe destructive across parts of Queensland as vegetation becomes flammable during the spring months. Reduced seasonal rainfall, low root zone soil moisture levels and elevated evaporation rates across areas around the inland parts of the Capricornia, Wide Bay–Burnett and the Southeast Coastal forecast areas, and in wide-spread parts of the Southern Downs and Granite Belt, have combined to produce above average fire potential for these areas moving into the spring fire season. ■

Jurisdictional bushfire outlook summaries (cont.)

Western Australia



Seasonal Bushfire Outlook for Spring 2023 in Western Australia

Northern Territory



Seasonal Bushfire Outlook for Spring 2023 in Northern Territory

Summary

- Winter rainfall has been below average for southern WA and above average for northern WA. This is reflected in the relative root zone soil moisture for these regions.
- An above average wet season in the Kimberley has delayed curing in the savanna grassland and subsequently the late dry season.

For southern WA in late spring, drier and warmer conditions may contribute to higher surface fuel availability and make bushfires more difficult to suppress.

For further information see: dfes.wa.gov.au

With average root zone soil moisture, average fuel growth, and forecast average spring conditions, an increased risk of fire for the Pilbara is unlikely. An above average wet season in the Kimberley has delayed the onset of late dry season conditions. The Kimberley region has experienced delayed curing in the savanna grassland due to above average root zone soil moisture, facilitating ongoing planned burning activities to reduce landscape fuel availability. Bushfire risk will increase as the vegetation continues to cure and the weather becomes drier and warmer. However, good planned burning achievements and above average root zone soil moisture should result in average fire risk until the end of spring season.

Significant areas of southern WA are experiencing below average relative root zone soil moisture and the drier and warmer than average spring forecast will likely increase these root zone soil moisture deficits. Reduced relative root zone soil moisture will likely result in the earlier curing of grasslands and the increased surface fuel availability within woody vegetation in late spring compared to an average year. The forecast drier and warmer than average spring forecast for southern WA has the potential to impact planned burning opportunities in some areas, and bushfires in late spring may be more difficult to suppress due to higher surface fuel availability. As the southern bushfire season approaches, it is important for the community to stay alert and prepare their properties throughout spring. ■

Summary

- Drying conditions are predicted to impact the entire NT as El Niño continues to develop.
- Average grass fuel loads and adequate fire scar coverage across the Top End, Katherine and Arnhem districts mean there is normal fire potential for these regions.
- Above-average grass fuel loads, continuity of these fuels and high densities of invasive Buffel Grass have increased the risk for wildfires to travel across vast distances during spring, or

For further information see pfes.nt.gov.au or [Bushfires NT](#)

Grass fuel loads are at average levels throughout the Northern Savanna and Top End of the NT, except for areas where invasive Gamba Grass is located within peri-urban areas south of Darwin and north of Katherine. Early season mitigation programs have concluded throughout the Northern Savanna, Arnhem and Top End regions. It was challenging for fire managers to access many areas around Darwin, Katherine and the Victoria River Region to conduct early dry season mitigation burns due to persisting soil moisture levels.

Occurrences of wildfires has increased for urban and peri-urban areas in these regions from June through August, with over 3,000 wildfire incidents. Fire scar coverage is adequate across the Northern Savanna and Top End, and carbon abatement programs have also been largely successful in creating suitable mosaic-style fire scar coverage for the Arnhem region, reducing the risk of wildfire potential in these areas.

Central Australia and the Barkly region experienced a burst of heavy rainfall in June, contributing to further growth of already above average grass fuel loads. With minimal fire scar coverage, well-above average fuel loads, above median temperatures and dry, windy conditions predicted for spring, increased fire risk is predicted for the Barkly, Tanami, Alice Springs and Lassiter forecast regions.

Fire authorities have been working with stakeholders in Central Australia and Barkly regions, to assist with preparedness, planning and mitigation programs over the spring period. ■

Recent climate conditions

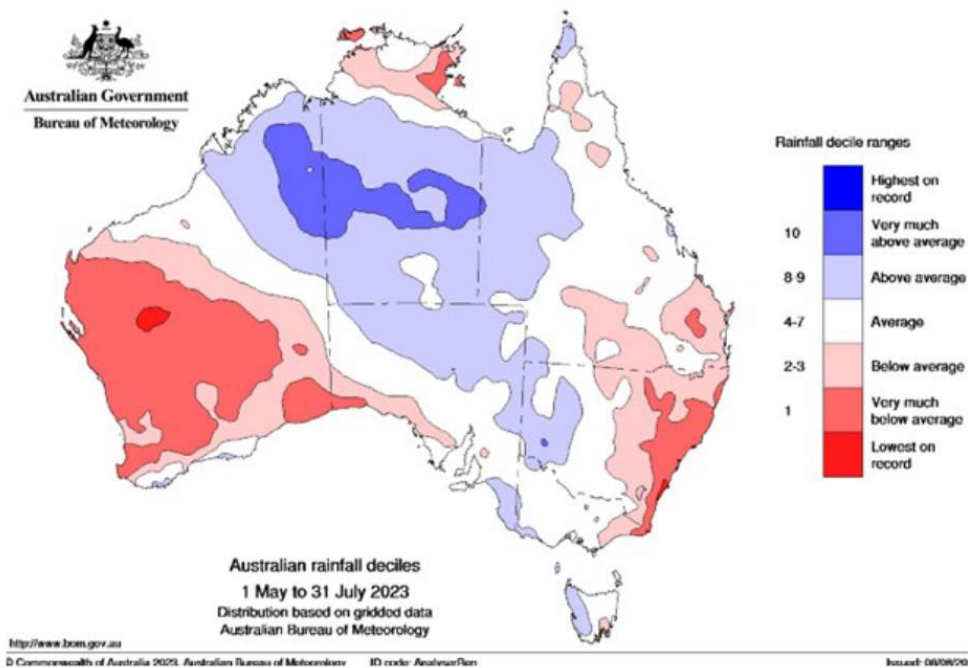


Figure 2 1 May 2023 – 31 July 2023 rainfall deciles

Seasonal fire conditions depend on many factors, including the amount and type of fuel (vegetation) and how dry that fuel is. Fuel conditions are influenced by recent rainfall, temperatures, and soil moisture.

For Australia as a whole, May to July 2023 rainfall was 20% below the 1961-1990 average. Above average rainfall for the three months (Figure 2) occurred across broad areas of northern and central Australia, from the Kimberley in WA, southern and central NT, western Queensland, northern SA and western NSW. Much of this above average rainfall was unseasonable rainfall that fell in late June or early July, and it obscures the otherwise drier than usual conditions which prevailed in the south, except for western Tasmania.

Rainfall for the three months was below average along much of the eastern coast of Australia, and most of the southern half of WA, with pockets of below average rainfall in southwest SA, the Top End of the NT and southeast Tasmania. Below to very much below average rainfall was observed during July for most of southern Australia. No states or territories were in the top or bottom 10 of their respective records for the three months.

For much of 2023, rainfall has been closer to average following a very wet 12 months, which saw both La Niña and negative Indian Ocean Dipole events influencing the Australian climate. The latter part of 2022 also saw an extended positive Southern Annular Mode, which also likely contributed towards the extended wet period.

Recent months have seen warmer than average maximum temperatures in parts of the country, with May to July 2023 above average for much of the eastern two-thirds of the country, and parts of western WA. We have also observed drier than average conditions in many of these areas, with drier conditions seen in 2023 across southern parts of WA and parts of eastern Australia, particularly southeastern Queensland, northern and eastern NSW, and eastern parts of Victoria and Tasmania.

Long-range forecasts

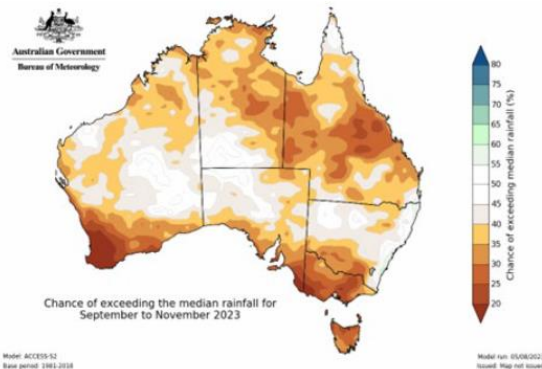


Figure 3 September – November 2023 chance of above normal rainfall

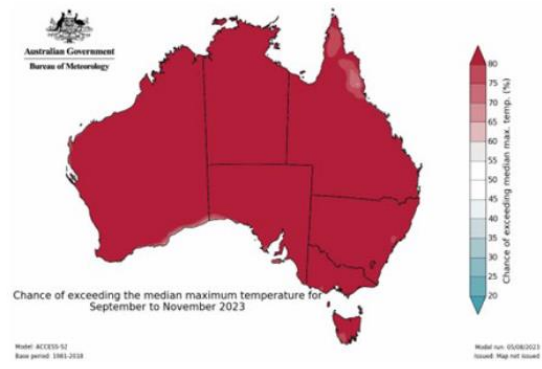


Figure 4 September – November 2023 chance of above normal maximum temperature

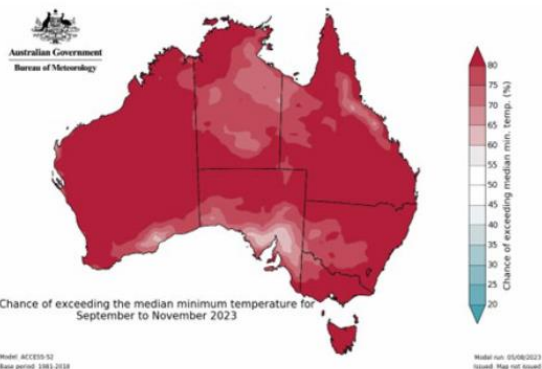


Figure 5 September – November 2023 chance of above normal minimum temperature

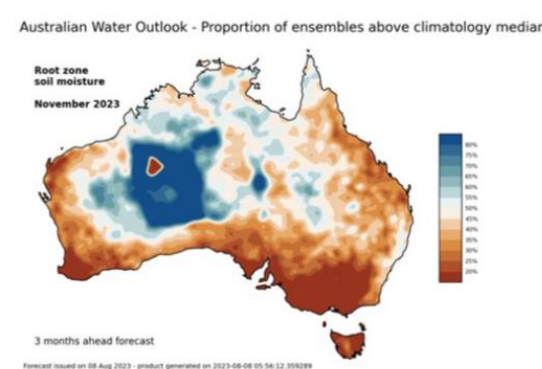


Figure 6 November 2023 chance of above normal soil moisture

The Bureau of Meteorology’s long-range forecasts are based on global models of the oceans, atmosphere, land, and ice. These models implicitly include physics that capture the influence of all climate drivers, including long-term trends.

September to November rainfall (Figure 3) is likely (greater than 60% chance) to be below median across northern parts of Australia from the Kimberley in WA stretching across to Queensland, and southern parts of Australia from southern WA, stretching across Victoria and Tasmania to the Riverina region in southern NSW. Isolated areas of the southwest and southeast of Australia are very likely to experience below median rainfall (greater than 80% chance). No areas favour above average rainfall for the period.

September to November maximum temperatures (Figure 4) are very likely (greater than 80% chance) to be above median for almost all of Australia.

September to November minimum temperatures (Figure 5) are likely (greater than 60% chance) to be above median for areas surrounding the Great Australian Bight, and the central NT, extending into western Queensland. Elsewhere, minimum temperatures are very likely (greater than 80% chance) to be above median.

The combination of reduced rainfall and above average temperatures and evaporation results in outlooks for drier than average root zone (top metre) soil moisture (Figure 6) by late spring for much of the south and east of the country. Small scattered parts of inland WA, the NT, northern SA, and western Queensland may continue to have wetter than average soils. For eastern Australia, this is a significant change from the wet soils of 2022, suggesting the abundant growth associated with high moisture availability in spring 2022 may be drying out in 2023; the high fuel loads are likely to become more flammable in some places.

Updates to climate forecasts, including forecasts of monthly, fortnightly and weekly outlooks and the outlook for the Indian Ocean Dipole and El Niño–Southern Oscillation will continue to be published at www.bom.gov.au/climate/ahead and <https://awo.bom.gov.au/>

Climate drivers

The El Niño-Southern Oscillation (ENSO) is currently neutral (neither La Niña nor El Niño). However, tropical Pacific ocean waters have been steadily warming since the start of 2023, and have passed El Niño thresholds. Climate models anticipate further warming of the tropical Pacific in the coming months. In the atmosphere, however, wind, cloud and broad-scale pressure patterns mostly continue to reflect neutral ENSO conditions. This means the Pacific Ocean and atmosphere have yet to become fully coupled, as occurs during El Niño events. With these factors in mind, the ENSO Outlook remains at El Niño Alert. When El Niño Alert criteria have been met in the past, an El Niño event has subsequently developed around 70% of the time. El Niño typically reduces winter-spring rainfall across much of eastern Australia.

The Indian Ocean Dipole (IOD) is currently neutral. Climate models suggest the possibility of positive IOD development in the coming months. A positive IOD typically reduces winter-spring rainfall across much of southern and central Australia.

Globally, sea surface temperatures have been the warmest on record (since 1900) for each respective month since April. While March is typically the time of the year where sea surface temperatures are highest, Copernicus reports that July 2023 has come in as equal highest for any month, on par with March 2016. July was also the globe's hottest month on record for air temperatures (combined land and ocean).

Australia's temperature and rainfall variability are also influenced by global warming caused anthropogenic influences (human activities). Australia's climate has warmed by around 1.47 °C in the period between 1910 and 2021. There has also been a trend towards a greater proportion of rainfall from high intensity short duration rainfall events, especially across northern Australia. Southern Australia has seen a reduction of 10 to 20% in cool season (April–October) rainfall in recent decades.

Historically, forest fire activity in eastern Australia is lower during a La Niña, such as last summer, or negative IOD years. However, regions that see above average winter, spring and summer rainfall typically experience increased grass and vegetation growth which increase subsequent fuel loads in the year following. This means going in to the spring 2023 season, increased fuel growth is likely to be present.

The tendency for fire seasons to have elevated fire dangers more frequently, and for elevated fire danger to appear earlier and later in the season, is an observed trend in Australia's climate. This reflects reduced and/or less reliable cool season (April–October) rainfall in southern parts of the country and rising temperatures. Year-to-year variability can reduce the impact of the long-term trends in increased severity and length of fire seasons, as was the case during the recent La Niña events. A change in ENSO state would expect to see a return to the general trend, or even an increase to the general trend.

The frequency of dangerous fire weather days has increased significantly in recent decades across many regions of Australia, especially in the south and east. These increases are particularly evident during spring and summer and are associated with an earlier start to the southern fire weather season (State of the Climate 2022).

Further information

For further information about climate forecasts and conditions, please visit the following pages

- bom.gov.au/climate/ahead
- bom.gov.au/weather-services/fire-weather-centre/fire-weather-services

This Seasonal Outlook was developed by AFAC, the Bureau of Meteorology, Queensland Fire and Emergency Services, the NSW Rural Fire Service, ACT Emergency Services Agency, ACT Parks and Conservation Service, Country Fire Authority, Department of Energy, Environment and Climate Action Victoria, Tasmania Fire Service, SA Country Fire Service, Department of Fire and Emergency Services and Department of Biodiversity, Conservation and Attractions WA, and Bushfires NT.

6.3 Bushfire Risk Management Report

File Code	EM.PLN 3
Author	Adrian Dyson, Manager Community Safety & Emergency Management
Senior Employee	Mark Luzi, Director Statutory Services
Disclosure of Any Interest	Nil
Attachments	1. BRMO Quarterly Update 30 June 2023

PURPOSE

To brief the Committee on Shire of Mundaring progress against its Bushfire Risk Management Plan as per the Bushfire Risk Management Officer (BRMO) Quarterly Update 30 June 2023 (with amendments as at 5 September 2023).

OUTCOMES SOUGHT

The Committee is briefed on the BRMO Quarterly Update 30 June 2023 (with amendments as at 5 September 2023).

ACTION

That the Committee notes and provides feedback on the BRMO Quarterly update 30 June 2023 (with amendments as at 5 September 2023).



Bushfire Risk Management Officer Quarterly Update, 30 June 2023

05/09/23 notations for LEMC

Key
Up-to-date ●
In progress ●
Overdue ●

1. Bushfire Risk Management Plan (BRMP)				
<p>● <i>Data updating continues.</i></p> <p>Currently there are 343 345 Human Settlement “assets” mapped within the Bushfire Risk Management System (BRMS). These assets can range in size from a few adjacent properties to a subdivision (up to 250 properties).</p>				
<i>Extreme</i>	<i>Very High</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>
89 87	73 74	98 101	49 48	34 35
<p>Continuing to review “Extreme” assets. Also, adding into the BRMS mapping potential entrapment points as identified in the Shire’s Bushfire Area Access Strategy (BAAS) and DPLHs proposed Bushfire Area Vehicle Access Strategy (BAVAS).</p> <p>In relation to Woorlooloo Inquiry Recommendation 2 “<i>enhanced and integrated community engagement programs for bushfire</i>”, the Shire are awaiting DFES announcing further information in relation to the Areas of Community Engagement Focus (ACEF) program review. An understanding of this will ensure that proposed community engagement undertaken with residents located within asset areas whose main risk is from within the asset is in line with these findings.</p>				
2. Stakeholder Relations				
<p>● <i>Stakeholder Relations Plan Summary available on request.</i></p> <ul style="list-style-type: none"> ● DBCA – 2024 Burn Program, meeting scheduled for early December. ● DoE (DFES) – ongoing liaison with DFES Bushfire Risk Management Liaison Officer, collaborating via BRMS. ● DPLH (DFES) – pre-season meeting held 23/06/23. ● MRWA – pre-season meeting held 24/08/23. ● WaterCorp – pre-season meeting held 11/07/23. <p><i>Other Agencies ‘as required’ and / or via Shire’s FHIO / FPO.</i></p>				
3. Community Engagement				
<i>Inform</i>	<i>Consult</i>	<i>Involve</i>	<i>Collaborate</i>	<i>Empower</i>
<p>● ProPer Prep Video Campaign (Inform)</p> <p>A series of five one-minute videos have been prepared in collaboration with the Shire’s Environmental Team offering advice on APZs, Environment, Firebreaks (what they are, what they are not + alternative options) and Winter Burning Workshops. These are available via https://engage.mundaring.wa.gov.au/emergency-response-recovery and are being individually promoted on a monthly basis through social media.</p>				
<p>● ProPer Prep (Involve)</p> <p>It is proposed that the original ProPer Prep (property and personal preparation) collateral will be updated following further consultation with DFES, Red Cross and local Brigades, along with community feedback to ensure that this initiative meets its original simplified messaging objective.</p>				
<p>● At Risk Communities (Involve)</p> <ul style="list-style-type: none"> ● Disability Inclusive Emergency Preparedness workshop being held on 11 September. ● DFES At Risk Program – proposal to utilise outcomes of above to further engage with aged care facilities / senior groups in relation to preparedness. 				
<p>● Volunteer Recruitment (facilitate to Empower)</p> <p>Continuing to work with local Brigades to prepare an Action Plan for a collaborative Volunteer Recruitment campaign.</p>				

<ul style="list-style-type: none"> ● Bush Fire Ready Groups (Collaborate) <ul style="list-style-type: none"> ● Preparedness advocate email list created (14 people). ● Preparedness advocate 'meet & greet' session organised for 14/09/23 (6 RSVPs + 3 guests and 1 apology to date). ● At the suggestion of Darlington preparedness advocate/Brigade the Shire is facilitating a shared information stall at the Rotary Markets on 10/09/23, ten volunteers assisting. 		
4. Mitigation Activity Funding (MAF)		
● 22-23 \$499,146.12	● 21-22 \$499,968.54	● 20-21 \$331,596.00
● 19-20 \$182,914.00	● 18-19 \$258,000.00	
<ul style="list-style-type: none"> ● MAF 23-24 Round 1, \$500k application <ul style="list-style-type: none"> ● Approved projects: <ol style="list-style-type: none"> 1: Lake Leschenaultia (west), mechanical works \$90k/firebreaks \$100k, 35 days, 24/08/23. 2: Superblock Stage 2, mechanical works \$170k. 3: Old Northam Rd (Liberton to Jason), mechanical works \$90k \$140k, 18 days, 11/09/23. 4: Stoneville Rd (Bentley to Cameron), mechanical works \$50k \$80k, 10 days, 02/10/23. ● Variation submitted and approved: <ol style="list-style-type: none"> 5: Heritage Trail (Seaborne to Stoneville), mechanical works, \$90k, 15 days, October. 		
<ul style="list-style-type: none"> ● MAF 23-24 Round 2 <ul style="list-style-type: none"> ● Closes 21 September 2023, discussing submission of treatments to address Lake Leschenaultia (east) works and most high priority entrapment points (as per findings of BAAS review with additional BAVAS data). 		
5. Other Funding Opportunities		
<ul style="list-style-type: none"> ● Disaster Ready Fund (DRF) Round One (2023) <p>The Shire did not submit an application, however, <i>The Forever Project</i> were successful in an application for 50% funding for a \$500,000 "Fire Demonstration Garden" project which the Shire may be able to become involved with. Cr Cook's observation, at LEMC 30/06/23, that there could be an opportunity to liaise internally with regards to the proposed Administration garden upgrade.</p> 		
<ul style="list-style-type: none"> ● National Disaster Risk Reduction (NDRR) grants program <ul style="list-style-type: none"> ● Submitted 29/05/23 (NDRR2324-014), awaiting outcome (expected mid-July January 2024). ● \$20,000 project, \$10,000 requested. ● Project: creation of a further ten informative localised property and personal preparation related videos, project plan underway. 		
<ul style="list-style-type: none"> ● All West Australians Reducing Emergencies Aware (AWARE) program <ul style="list-style-type: none"> ● Closes 20/09/23. ● \$2,500 to \$30,000, 25% contribution required. ● Project ideas to be discussed and submission prepared. <i>Past funded projects appear to be primarily assessment / training / review / exercise based.</i> <p>Cr Cook (LEMC 30/06/23), house numbering.</p> <p>Internal training, including an exercise, for non-EM staff to build Shire capacity in the event of an emergency.</p> <p>Preparedness Advocate training / support, as identified by the newly formed 'network' (call for ideas shared 25/08/23).</p> <p>Formal BAL Assessor training for relevant staff to assist with community engagement in relation to personal preparedness, including retro-fitting older homes.</p> 		
<ul style="list-style-type: none"> ● Disaster Ready Fund (DRF) Round Two (2024) <ul style="list-style-type: none"> ● Likely to open in January and close in March, with funds available in July 2024. ● Expression of Interest (DRFEOI24-0004-XXX) "in progress". ● DFES webinar attended to ascertain the types of projects that will be supported and how to best prepare an application. Several ideas currently under discussion. 		

6.4 Grant Funding Opportunities

File Code	GS.STA 5
Author	Adrian Dyson, Manager Community Safety & Emergency Management
Senior Employee	Mark Luzi, Director Statutory Services
Disclosure of Any Interest	Nil
Attachments	Nil

PURPOSE

To brief, and receive feedback from, the Committee on proposed grant applications under the All West Australians Reducing Emergencies (AWARE) program and the Disaster Ready Fund (DRF) program, as follows;

Program	Opening	Closing	Proposals
AWARE	Currently open	20 September 2023	BAL Assessor training for Shire EM staff
DRF	December 2023	April 2024	Generator – Mundaring Arena (evacuation centre)
DRF			Static water supply tanks – bushfire response in non scheme areas
DRF			Emergency response trailer – animal emergency welfare
DRF			Review risk register, treatments etc.

Note; Further information on the AWARE and DRF grant programs is available via the State Emergency Management Committee website, <https://www.wa.gov.au/organisation/state-emergency-management-committee/disaster-ready-fund>

OUTCOMES SOUGHT

The Committee is briefed on the shortlisted AWARE and DRF grant application proposals that may be submitted by Shire of Mundaring and provides feedback on same.

ACTION

That the Committee notes the shire of Mundaring shortlisted AWARE and DRF grant proposals and provides feedback on same.

6.5 Shire of Mundaring LEMC Exercise Update

File Code	EM.PLN 3
Author	Adrian Dyson, Manager Community Safety & Emergency Management
Senior Employee	Mark Luzi, Director Statutory Services
Disclosure of Any Interest	Nil
Attachments	1. Exercise Climate Mutatio Plan

PURPOSE

To provide an update briefing to the Committee on Exercise Zeus, a Shire of Mundaring LEMC Exercise to be held on Friday 20 October 2023 for which invitations will be distributed shortly.

Exercise Zeus will be a Discussion Exercise (disceX) based on a scenario of a cyclone that severely impacts areas from Geraldton to Albany.

The exercise will further explore the impacts (at the Shire of Mundaring district level) considered within *Exercise Climate Mutatio* as developed and run by the Metropolitan District Emergency Committee in October 2022. In that regard Shire of Mundaring acknowledges all involved in the planning and running of *Exercise Climate Mutatio*.

A copy of the *Exercise Climate Mutatio* Exercise Plan is attached.

OUTCOMES SOUGHT

Committee members are briefed on, and provide feedback on, planning for Shire of Mundaring LEMC Exercise Zeus to be held Friday 20 October 2023.

ACTION

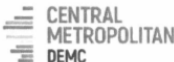
That the Committee notes, and provides feedback on interim details in relation to the Shire of Mundaring LEMC Exercise Zeus to be held on Friday 20 October 2023.

Exercise Climate Mutatio

METROPOLITAN DISTRICT EMERGENCY MANAGEMENT COMMITTEE

Date: 18 and 20 October 2022

EXERCISE PLAN



1



Background Information

The State Emergency Management Committee (SEMC) is the peak emergency management body in Western Australia. The SEMC provides direction, advice and support to public authorities, industry, commerce, and the community to plan and prepare for an efficient emergency management capability for Western Australia.

The SEMC held a Strategy Workshop on 4 May 2022 and the key topic discussed was **Climate Change** and the impact on the Western Australian community. The SEMC has recognised the challenge of climate change, and that a longer-term approach is needed. The following issues¹ were raised:

- It is widely acknowledged the effects of climate change mean an increase intensity, frequency, and duration of extreme weather events.
- The EM framework must allow a focus on preparedness and prevention to ensure it is able to cope with a compounding effect on resources during response and recovery.
- Resilience through prevention and preparedness must be built within the community and forge a stronger connection between community and emergency management capability.
- An increased level of planning is required for
 - population growth and urbanisation.
 - people with disabilities, and in
 - biodiversity and conservation.
- Building inter-agency collaboration and understanding workforce resourcing is critical, with more frequent and severe emergencies.
- Cross agency sharing of reliable forecasts and data modelling is important for the future.

The *Western Australian Climate Change Policy* sets out the State's plan for a climate-resilient community. In 2022/23 the SEMC intends to develop a framework through a Climate Change Adaption Plan to support this policy, and to build resilience in the Western Australian community.

¹ SEMC Strategy Workshop - Outputs

2



Climate Change: the facts

Western Australia (WA) is geographically Australia's largest state but remains vulnerable to climate change, with a continual decline in rainfall in the southwest of WA, a drying interior, and a broadening of the fire season. Greater exposure and intensity of cyclones will occur in WA, along with an increase in frequency and/or intensity of extreme weather events, such as longer heatwaves and more dangerous conditions for bushfires and a sea-level rate rise almost three times the global average.²

As one of the most fire-prone regions in the world, the fire risk in Western Australia has increased over the past 40 years, with fire seasons getting longer due to drier and warmer conditions. Ongoing drying across the south-west of the state may significantly reduce crop yields in some areas, while increased temperatures and changes to rainfall and fire risk will have implications for livestock and pasture management. Extreme weather events may affect primary industry by exacerbating land degradation, causing plant and animal deaths, and in turn increase infrastructure and insurance costs.³

Climate change can cause health implications for all West Australians, with an increase in pollutants and allergens, and changing patterns of disease. The change in climate-related hazards, place a strain on emergency services and will see the need for greater preparedness to protect key infrastructure and our most vulnerable communities.³

Climate change: the facts⁴

It is going to get hotter: since the 1950s, each decade has been hotter than the previous one. Between 2000 and 2016 human exposure to atmospheric warming in the three biggest Australian cities was on average about 0.9°C.

Our population is increasing: The Australian Bureau of Statistics projects the population to grow by 29 per cent over the next two decades.

The population is ageing: the number of people aged 65 years and over is predicted to rise by 91 per cent and those aged 85 and older to more than double.

The urban heat island effect (the difference in temperature measured inside and outside the city) is increasing. With increasing urbanisation and high-density housing comes a greater heat island effect.

Our dependence on air-conditioning and power usage is increasing. People are increasingly living in homes not designed to reduce heat stress and more reliant on air-conditioning, the operation of which cannot be guaranteed during an extreme heat event.

The Department of Water and Environmental Regulation's (DWER) Climate Change Unit coordinated a climate change policy for WA. In late 2020 the WA government released its climate policy that aims to create a low carbon future and create jobs in clean industries to support WA's economic recovery. The policy will ensure our environment, economy and the community are more resilient and better prepared for the unavoidable impacts of climate change. It includes actions to drive our transition to net zero emissions by 2050.

<https://www.wa.gov.au/government/publications/western-australian-climate-policy>

² Climate Health WA Inquiry: Final Report, Department of Health, 2020

³ Climate change in Western Australia – Issues Paper, Department of Water and Environmental Regulation, 2019

⁴ SEMC 2019 Emergency Preparedness Report



State Hazard Plan – Severe Weather⁵

Hazard Definition and Impact

Cyclone

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

Dangerous phenomena associated with tropical cyclones are:

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

The severity of a cyclone is described in terms of categories ranging from 1 (weakest) to 5 (strongest).

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

Storm Surge

A storm surge is potentially, the most destructive phenomenon associated with tropical cyclones and other low-pressure weather systems that make landfall. A storm surge is a raised dome of water about 60 to 80 km across and typically about 2 to 5 meters higher than the normal tide level. If the surge coincides with a high tide, extensive inundation, particularly along low-lying coastlines, can occur.

Need to Exercise

The State Emergency Management Policy directs that District Emergency Management Committees are required to:

- identify which capabilities are required to enhance interagency coordination across their emergency management district during an emergency
- ensure their emergency management district is incorporated into an annual exercise
- report against their exercise schedule by submitting consolidated post-exercise reports

Exercise Overview

The exercise will form part of the North and South DEMC meetings. The exercise will run for 2 hours and 30 minutes on 18 and 20 October 2022.

⁵ State Hazard Plan Severe Weather

The exercise will engage the members of four metropolitan District Emergency Management Committees (North, East, South and Central) with roles and responsibilities under the State Emergency Management Framework.

⁶Shared responsibility for resilience is a key principle of the Western Australian State Emergency Management Policy. The focus of the exercise will be on raising awareness and building preparedness capability amongst the emergency management sector.

State Emergency Management Capability

The exercise will combine two metropolitan DEMCs to exercise capabilities across boundaries in the metropolitan district. The scenario is designed to enable WA emergency management agencies to undertake capability analyses, to provide guidance on mitigation strategies and options, and enhance intelligence and planning capabilities.

Understanding impacts reduces uncertainty and enhances decision making, enabling emergency managers to make a more proportional response for pre-deployments rescue, damage assessments and initial recovery.

⁷Providing tangible information and knowledge to educate the community to better understand and appreciate the impacts of cyclones allows community members to identify mitigation options and understand the benefit of different mitigation measures. Traditionally community engagement has mostly focused on the hazard and warnings rather than vulnerabilities, impacts and mitigation options.

Exercise Aim

'Exercise Climate Mutatio' is being conducted to provide an opportunity for members of the district emergency management committees to explore the sector's resilience and vulnerability to an extreme weather event.

The aim of the capability-based exercise is to:

- explore the Metropolitan emergency management districts' preparedness for an extreme weather event (cyclone)
- facilitate a better understanding of emergency coordination and cooperation arrangements for the Metropolitan emergency management districts'

Exercise Objectives

The exercise objectives will address the following Core Capabilities of the State Emergency Management Capability Framework.

Analysis and Continuous Improvement – Horizon Scanning

1. To provide an opportunity for agencies and local government to use hazard research and pre-emergency situational awareness to assist in amending plans, processes, or procedures.

⁶ WA Community Disaster Resilience Strategy Discussion Paper Summary

⁷ Severe Wind Hazard Assessment: Tropical cyclone scenarios for coastal Western Australian communities



KPIs

- 1.1 Identification of plans, processes or procedures within agencies or local government that require amendment as result of pre-emergency situational awareness.
2. To determine resource availability and limitations and ensure agencies and local government have an appreciation of those resources and limitations.

KPIs

- 2.1 Identification and discussion of resources available
- 2.2 Identification and discussion of deficiencies in resources

Community Involvement – Sector Information Sharing

3. To provide an opportunity for agencies and local government to improve resilience through the sharing of emergency management information including risks, vulnerabilities, and treatment options.

KPIs

- 3.1 Impacts identified and shared between agencies and local government
- 3.2 Vulnerabilities identified and shared between agencies and local government
- 3.3 Treatment options identified and shared amongst agencies and local government

Planning and Mitigation- Business Continuity Planning

4. To explore internal capabilities of agencies and local government in business continuity planning and fatigue management strategies.

KPIs

- 4.1 Identification of business continuity plans for agencies and local government
- 4.2 Identification of internal fatigue management strategies in place for agencies and local government
- 4.3 Deficiencies in business continuity plans and fatigue management strategies discussed

Emergency Response – Command, Control and Co-ordination

5. To facilitate a better understanding of pre-established protocols and structures that exists between agencies during an event to facilitate effective command, control, and co-ordination.

KPIs

- 5.1 Identification and discussion of structures which facilitate command, control, and co-ordination
6. To facilitate cross agency understandings of capability and limitations.

KPIs

- 6.1 Identification and discussion of agency and local government capabilities
- 6.2 Identification and discussion of agency and local government limitations
7. To provide a networking opportunity for all metropolitan district emergency management committee members.

KPIs

- 7.1 Agencies and local government work constructively together during the exercise

Participants will be encouraged to pre-determine their agency/local government capability and discuss these as part of the exercise.

Exercise Format

The exercise will be conducted as a hypothetical style discussion exercise as part of the joint District Emergency Management Committee meeting:

Venue: Mineral Resources Park, Lathlain

Time: 10.15am to 12.30pm on October 18 and October 20

Participants will need to consider existing emergency management arrangements, plans, and agency Standard Operating Procedures.

Participants will be asked to address relevant issues within the scenario as it develops. Due to the restricted time frame, not all issues will be discussed and resolved. These may be noted by the exercise control team and addressed offline.

Exercise Briefings

- Exercise briefings will be provided by the exercise facilitator and occur immediately at the start of the exercise on the scheduled date and time.
- A hot debrief will be conducted between the exercise team and evaluators immediately following the exercise session.
- The exercise evaluators will meet for a debrief and assist with finalisation of the exercise evaluation report.

Exercise Documentation

The following exercise documentation will be developed:

- Exercise plan (this document)
- Master Schedule of events
- Exercise data collection observation form
- Exercise report

Exercise Evaluation

The purpose of the evaluation will be to:

- gauge the level of success in achieving the exercise objectives
- capture key issues and outcomes that can be actioned for continuous improvement.

The evaluation should be conducted in real time where possible, with forms being handed to the exercise facilitator on the day. The nominated exercise evaluators are the primary data collectors and analysers of the collected evidence and will contribute their findings to the exercise report.

Exercise evaluators are responsible for:

- observing participants' responses against key performance indicators, collecting information, and recording their observations
- assessing strengths and weaknesses against the exercise objectives
- evaluating and reporting on the achievement of the exercise objectives and key performance indicators.

Post Exercise Report

- A post exercise report will be compiled to;
- Share lessons identified with participating agencies
 - Identify areas for improvement
 - Identify capability gaps
 - Verify the extent to which the exercise objectives were achieved.



'EXERCISE CLIMATE MUTATIO'

EXERCISE SCENARIO

Tuesday 2nd March 2023

On Tuesday 2 March the Bureau of Meteorology (BOM) advised they were tracking the development of a tropical low off the North-West Coast. Initial tracking modelling showed that the system would pass close to the South-West land division and then out to the Indian Ocean.

A severe weather warning has been issued by BOM. Wind gusts are expected to increase at coastal towns as the leading edge of the system begins to move through. Heavy rainfall of up to 100 millimetres, plus abnormally high tides, are forecast. The storm is expected to produce destructive winds of up to 130 kilometres per hour, heavy rainfall, and unusually high tides to over 1,000 kilometres of coastline as it travels south.

DFES has established an All-Hazard Liaison Group (key stakeholder inter-agency liaison and used to support the DFES State Operations Centre) because the State has been set as a moderate risk level and the BOM has predicted a heightened risk of a severe weather event.

IDW24100
BUREAU OF METEOROLOGY
WESTERN AUSTRALIAN REGIONAL OFFICE

TOP PRIORITY

TROPICAL CYCLONE ADVICE NUMBER 24
Issued at 9:05 am WST on Tuesday, 2nd March 2023
BY THE BUREAU OF METEOROLOGY
TROPICAL CYCLONE WARNING CENTRE PERTH

A CYCLONE WARNING for a SEVERE CATEGORY 3 CYCLONE is now current for coastal areas between Geraldton and Cape Leeuwin, including the Perth Metropolitan area. A CYCLONE WATCH extends south to Albany and includes adjacent inland parts of the Great Southern.

At 9.00am WST SEVERE TROPICAL CYCLONE MUTATIO was estimated to be:
750 kilometres west northwest of Geraldton and
470 kilometres west of Carnarvon and
moving southwest at 50 kilometres per hour.

Severe Tropical Cyclone MUTATIO is expected to come close to the coast in the vicinity of the Perth Metropolitan area during Saturday. Gales with gusts above 125 kilometres per hour are likely in coastal communities between Geraldton and Augusta.

Very destructive winds with gusts to 200 kilometres per hour are likely to develop at Cape Leeuwin and in the vicinity of Augusta during Saturday

Residents of the Perth Metropolitan area are specifically warned of the potential of a very dangerous storm tide as the cyclone centre approaches the coast.

Tides are likely to rise significantly above the normal high tide mark with very dangerous flooding, damaging waves, strong currents, and extensive coastal erosion.

Widespread heavy rain is likely in western parts of the Perth Metropolitan area over the next few days.

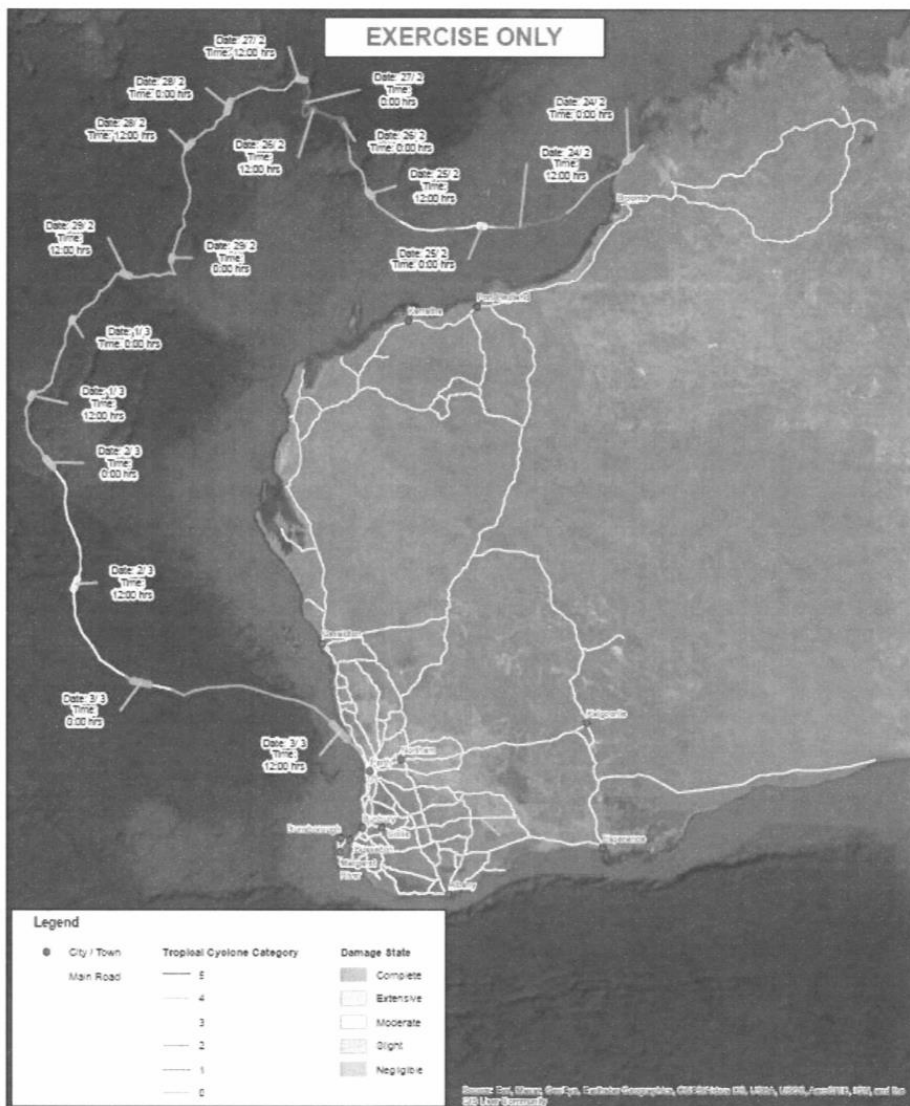
Details of Severe Tropical Cyclone MUTATIO at 9.00am WST.
Location of centre: within 20 kilometres of Latitude 24.1 South Longitude 106.2 East.
Recent movement: southwest at 50 kilometres per hour.
Central Pressure: 935 hPa.
Maximum wind gusts: 150 kilometres per hour.
Severity Category: 3

DFES advises of the following community alerts:
RED ALERT: Nil communities.
YELLOW ALERT: People in or near the communities of Geraldton, Perth, Mandurah, Gracetown and Augusta should commence action in readiness for the cyclone's arrival.
BLUE ALERT: People in or near the communities of Albany should be taking precautions.

The next advice will be issued at 1 pm WST.
Cyclone advice and State Emergency Service Community Alerts are available by dialling 1300 659 210

A map showing the track of the cyclone is available at: <http://www.bom.gov.au/weather/wa/cyclone>





Tropical Cyclone (TC) Scenario: Damage State and TC Track (001-09333)
Western Australia



PRE-EXERCISE QUESTIONS

Capability Area: Analysis and Continuous Improvement

Core Capability: Horizon Scanning

Achievement Objective:

2.2.3 Implement best practice identified through hazard research and pre-emergency situational awareness.

Capability Area: Community Involvement

Core Capability: Sector Information Sharing

Achievement Objective:

3.5.1 Engagement occurs between government, industry, and communities to inform resilience through the sharing of emergency management information including risks, vulnerabilities, and treatment options.

DFES has established an All-Hazards Liaison Group (AHLG). This group is not part of the formal State EM arrangements, DFES may establish this group as part of its planning and preparedness arrangements.

The purpose of the AHLG is to ensure agency specific advice and support in relation to risk management planning is available during periods of heightened risk including elevated Fire Behaviour Index (FBI), catastrophic fire weather conditions and other severe weather predictions or emergencies.

It is also essential AHLG members communicate within the group to ensure current and emerging risks, including agency interdependencies are understood. These interdependencies must be communicated to relevant staff.

Please consider these questions prior to the exercise.

- Based on the exercise scenario on Page 9, what actions would your organisation begin to take, if any, to prepare for this event?
- What hazard research does your agency undertake (if any)? How is this captured? How will this information be shared with relevant agencies during operations?
- How does your agency/local government maintain situational awareness prior to an emergency? How is this captured? How will this information be shared?
- What information could your agency/local government provide to the All-Hazards Liaison Group (AHLG)? What information would your agency/local government like to receive from the AHLG?
- Prior to an emergency, how does your agency engage with other government departments, industry, and communities to inform resilience through the sharing of emergency management information including risks, vulnerabilities, and treatment options?

You may be required to present a five-minute summary of your findings at the commencement of this session.

GENERAL IDEA – WEDNESDAY 3rd MARCH 2023

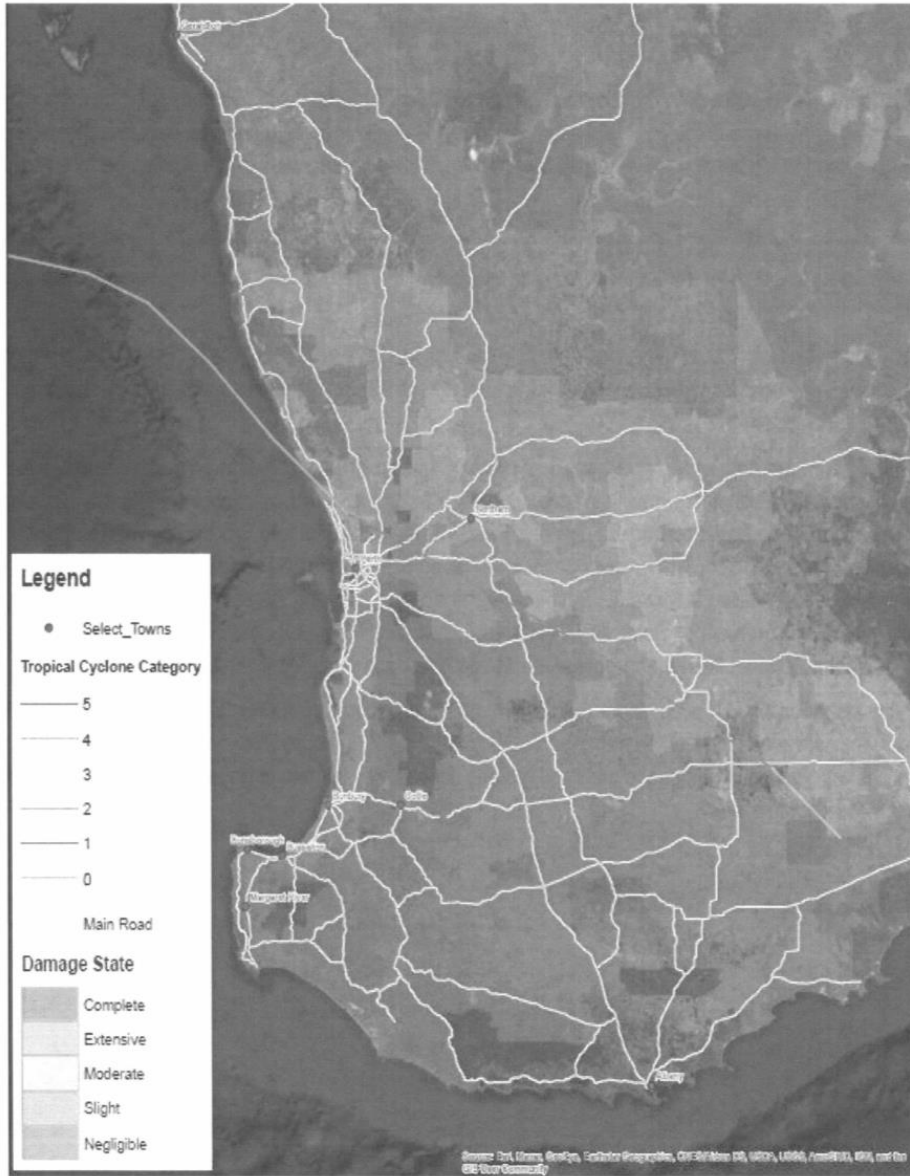
At 6.00am on Wednesday 3rd March 2023, a rare ex Tropical Cyclone Mutatio wreaked havoc on the Perth Metropolitan area. The tropical system interacted with a cold front to produce severe weather over larger parts of WA. The unusual category three storm made a rare landfall in the south-west of WA and impacted large areas of the State.

Many locations across the metropolitan district recorded damaging wind gusts of up to 130 km/h across numerous locations. Torrential rain with up to 40 mm within a half hour period and dangerous winds caused widespread damage.

A 10-metre swell impacted the metropolitan coastline and caused very hazardous conditions and severe erosion to low lying beaches and road infrastructure. These abnormally high sea levels caused localised flooding in some areas.

Wide-spread power outages have been experienced due to fallen trees and power lines. More than 135,000 homes and business have lost power. The worst affected suburbs include Wanneroo, Joondalup, Stirling, Armadale, Bassendean, Bayswater, Perth, Kalamunda, Mundaring, Swan, Western Central (Mosman Park, Subiaco, Claremont, Cottesloe, Peppermint Grove, Cambridge, Nedlands, Vincent), Armadale, Bassendean, Bayswater, Belmont, Victoria Park, Canning, South Perth, Perth, Cockburn, Fremantle, East Fremantle, Gosnells, Kalamunda, Kwinana, Mandurah, Melville, Mundaring, Murray, Rockingham, Rottnest Island, Serpentine/Jarrahdale, Waroona.

By the afternoon of 3rd March, more than 2,300 storm related calls for assistance have been made to emergency services. There were more than approximately 1,200 requests for assistance for emergency services with reports of damage to buildings, homes, fences, key infrastructure across Perth as the storm front moved south.



Tropical Cyclone (TC) Scenario: Damage State and TC Track (000-09333)

SHORT AND LONG - TERM IMPACTS:

<p>BUILT ENVIRONMENT</p>	<ul style="list-style-type: none"> • Homes – partial and complete loss of roof cladding, inadequate securing of gutters, flashings, fascia and eaves, wall collapse, • Sheds and outer infrastructure like fences, pools, patios, carports • Roads • Bridges • Wind-driven rain entering buildings through vents, under flashings or through weep holes in windows and glass sliding doors, causing damage to floors, ceilings, walls and building contents. • Property inundation and damage caused by storm tide • Small business • Number of cultural/heritage sites • Damage to jetties, groynes, small boats • Ground contamination affects site and surrounding areas • Recovery of infrastructure required – BCPs • Rail and bus disruptions due to power outage • Pump stations affected. • Waste-water overflow • Electricity network loss at least 6 sub stations
<p>ECONOMIC ENVIRONMENT</p>	<ul style="list-style-type: none"> • Businesses affected - partial and complete loss of roof cladding, inadequate securing of gutters, flashings, fascia and eaves, wall collapse. Many businesses unable to operate.
<p>SOCIAL ENVIRONMENT</p>	<ul style="list-style-type: none"> • Community members affected by event • Agency personnel • Aged and vulnerable • Aged care residences out of power • Hospitals impacted • Commercial / Business operator owners • Fatigue management of service providers • Onset of mental health issues
<p>NATURAL ENVIRONMENT</p>	<ul style="list-style-type: none"> • Tree/flora debris • Deceased domestic and livestock in some areas • Impact to crops • Beach erosion • Stagnant pools of water during and after flooding increase insect and waterborne diseases, such as dengue fever, cholera, and malaria. • Exposure to raw sewage and other hazardous materials mixed with floodwaters poses a serious health threat. • Ground contamination

SPECIAL IDEA 1 – Thursday 4 March - +1 days

Command, Control and Coordination

Capability Area: Emergency Response

Core Capability: Command, Control and Coordination

Achievement Objective: 6.1.1 Pre-established and well understood protocols and structures exist that define the interrelationships between stakeholders during an event and facilitate effective command, control, and coordination.

Summary

The whole of metropolitan Perth has been affected by the cyclone. Emergency operations and co-ordination within the metropolitan area are being managed at the State level. The Hazard Management Agency has requested the State Emergency Co-ordinator establish a State Emergency Co-ordination Group to ensure the provision of co-ordinated emergency management. These meetings are expected to continue over the next week.

Please consider these questions prior to the exercise.

Exercise Participant Questions

- What role does the State Emergency Coordination Group (SECG) (state level co-ordination) provide to the state?
- Will your agency/local government have a role in the SECG? If so, please outline how you would support this structure?
- To your knowledge, why is an Operational Area Support Group (OASG) (district level co-ordination) rarely established in the metropolitan area? Do you believe an OASG should be established for this emergency? Please outline your thinking or provide reasons for your commentary.
- How will your agency or local government manage early communications of impacts to and the welfare and recovery of communities?

You may be required to present a five-minute summary of your findings at the commencement of this session.

SPECIAL IDEA 2 – Friday 5 March +2 days

Business Continuity Planning

Capability Area: Planning and Mitigation

Core Capability: Business Continuity Planning

Achievement Objective: 4.7.1 Business continuity plans are in place across government, industry and business and consider hazard specific risks.

Summary

The short-term response and immediate clean-up and restoration process is going to take some time. There have been wide-spread impacts to infrastructure, homes, and businesses.

Please consider these questions prior to the exercise.

Exercise Participant Questions

- What actions would your agency/local government begin to take, and what would be the costs and impacts on day-to-day business?
- How will your agency/local government maintain normal business while contributing to the state-wide emergency response?
- Describe the elements of your agency/local governments' Business Continuity Plan that would be activated in preparation for, and response to, the impacts of Tropical Cyclone Mutatio?
- What would be the impact on your agency /local government if the Information Technology (IT) and phone system fails? Do you have a back- up system in place? Do you have the ability to use a generator to power vital systems, including the phone system? If the phone system is not operational, where would the calls go, and how would they be dealt with?
- What financial arrangements do you have in place in your agency/local government to track and manage expenditure for emergency and recovery activities?

You may be required to present a five-minute summary of your findings at the commencement of this session.

6.6 Local Emergency Management Arrangements Review

File Code	EM.PLN 3
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Disclosure of Any Interest	Nil
Attachments	Nil

PURPOSE

To brief the Committee as to progress on the Local Emergency Managements (LEMA) review project which is now focussing on the:

- Recovery Plan
- Animal Emergency Welfare Plan

The briefing will focus on the salient points of the most current drafts of those plans.

OUTCOMES SOUGHT

Committee members are briefed on, and provide feedback on, the draft;

- Recovery Plan
- Animal Emergency Welfare Plan

ACTION

That Committee members note, and provide feedback on, the draft plans

7.0 URGENT BUSINESS (LATE REPORTS)

8.0 CLOSING PROCEDURES

8.1 Date, Time and Place of the Next Meeting

8.2 Closure of the Meeting