

UNCONFIRMED MINUTES

LOCAL EMERGENCY MANAGEMENT COMMITTEE MEETING

15 SEPTEMBER 2023

I certify that the minutes of the meeting of the Local Emergency Management Committee held on Friday, 15 September 2023 were confirmed on Friday, 1 December 2023.

Presiding Person



UNCONFIRMED MINUTES 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 COMMITTEE ROOM, 7000 GREAT EASTERN HIGHWAY, MUNDARING – 10:00AM

1.0 OPENING PROCEDURES

The Presiding Person declared the meeting open at 10:01.

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

Nil

1.2 Attendance/Apologies

Members	Chairperson James Parker	Mundaring Police OIC
	Adrian Dyson	Executive Officer Shire of Mundaring
	Rod Potter	State Emergency Services Mundaring
	Ryan Hamblion	Department of Communities
	Member Murray McBride	Department Fire Emeregency
	•	Services

Member Jamie O'Neill Department Fire Emeregency Services

Staff Craig Cuthbert Coordinator Emergency Management and Community Safety
Karen Dore Bushfire Risk Management Officer Charlotte Jones Emergency Management Secretary

Apologies Cr Trish Cook (Chairperson) South Ward

Cr Neridah Zlatnik East Ward
Shekofeh Elhani Coordinator Health Services
Jordan Cantelo Department of Biodiversity,
Conservation and Attractions
Jo Spadaccini Department of Communities

2.0 ANNOUNCEMENTS BY PRESIDING MEMBER WITHOUT DISCUSSION

Nil

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).

Nil

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).

Nil

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.

Moved Ryan Hamblion

Seconded Murray McBride

5.0 PRESENTATIONS

Nil

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

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.

KEY FINDINGS

- Ms Dore advised very positive feedback following the workshop with a lot of constructive crossover.
- Mr Hamblion agreed the format was very compatable with all parties and informed how individual residents living with disabilites may require support in the event of an emergency.
- Committee discussed collectively the Federal responsibility of the care givers to maintain the lists of people who are under their duty of care.

ACTION

That the Committee;

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

COMMITTEE RECOMMENDATION

That Council notes the information presented regarding the Disability Inclusive Emergency Planning workshop.

Noted



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.



- 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.







(f) (a) @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
 - 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!
 - 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:
 - How have disasters impacted you, your organisation and the people you support?
 - o What steps have you taken to prepare for emergencies?
 - How do you or your organisation enable people with disability to be aware, safe and prepared?
 - In a disaster in your community what other supports could people with disability count on?
- After lunch there's:
 - o Small group discussion
 - 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-toread 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 encumbent)
- 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: <u>karendore@mundaring.wa.gov.au</u>
T: 9290 6676 **M**: 0448 245 086
W: <u>www.mundaring.wa.gov.au</u>



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. Koora, 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

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
- Is briefed on the Australian Fire Advisory Council Spring Seasonal Outlook

KEY FINDINGS

- Excellect mitigation works have been completed through the off season, with 615 hectares burned off, with a very positive mitigation impact.

ACTION

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

COMMITTEE RECOMMENDATION

That Council notes the information presented by CESM Mundaring

Noted

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



afac Seasonal Bushfire Outlook

Spring | 2023

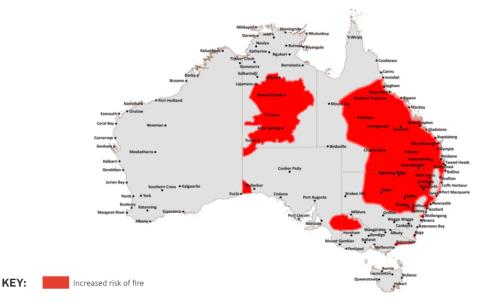


Figure 1 Seasonal Bushfire Outlook Spring 2023. Areas are based on the interim biogeographic regionalisation for Australia and other geographical features.



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.

Jurisdictional bushfire outlook summaries



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.

Jurisdictional bushfire outlook summaries (cont.)



Victoria



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: <u>emergency.vic.gov.au</u>

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 flamibility 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



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 pervious 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.

Jurisdictional bushfire outlook summaries (cont.)



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: qfes.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 savanah 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.



Western Australia



Seasonal Bushfire Outlook for Spring 2023 in Western Australia

Summarv

- 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.

Northern Territory



Seasonal Bushfire Outlook for Spring 2023 in Northern Territory

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 Arnhen 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



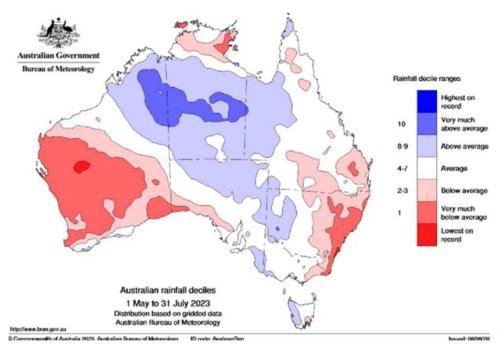


Figure 2 1 May 2023 - 31 July 2023 rainfall deciles

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



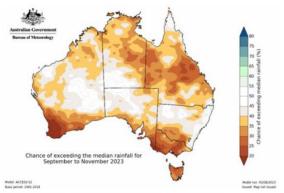


Figure 3 September – November 2023 chance of above normal rainfall

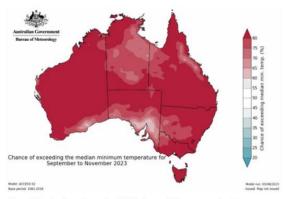


Figure 5 September – November 2023 chance of above normal minimum temperature

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.



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

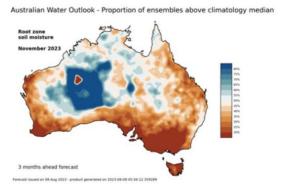


Figure 6 November 2023 chance of above normal soil moisture

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/fireweather-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.

AFAC is the National Council for fire and emergency services afac.com.au



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

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 amendements as at 5 September 2023).

KEY FINDINGS

- Emergency Access Ways deemed high risk are being assessed in areas such as culdesacs etc, to see if they can be adjusted to improve evacuation ability, or if rating needs ammending.
- Shire fire team members will hopefully be completing BAL Assessment course to assist Consultants and Residents in the community.
- Emergency Services awareness of mapping to ensure that roads maps are correct and up to date.
- Mitigation Activity Fund works have completed at Lake Leschenaultia, fire breaks throughout look very tidy and is very effective, breaking the lake reserve into cells.
- Ms Dore met with 12 preparedness advocates on 14th September to collaborate and distribute knowledge. As concern was raised regarding preparedness information being distributed as light on. Aiming to create a monthly newsletter with the Advocates with additional information/support.
- Funding application to Aware for Shire Fire team BAL assessors course completed.

ACTION

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

COMMITTEE RECOMMENDATION

That Council notes the information presented by Bushfire Risk Management Officer

Noted



Bushfire Risk Management Officer Quarterly Update, 30 June 2023

Up-to-date •
In progress •
Overdue •

05/09/23 notations for LEMC

1. Bushfire Risk Management Plan (BRMP)

Data updating continues.

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).

Extreme	Very High	High	Medium	Low
89 87	73 74	98 101	49 48	34 35

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).

In relation to Wooroloo Inquiry Recommendation 2 "enhanced and integrated community engagement programs for bushfire", 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.

2. Stakeholder Relations

- Stakeholder Relations Plan Summary available on request.
 - 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.

Other Agencies 'as required' and / or via Shire's FHIO / FPO.

3. Community Engagement

Inform	Consult	Involve	Collaborate	Empower

ProPer Prep Video Campaign (Inform)

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.

ProPer Prep (Involve)

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.

At Risk Communities (Involve)

- 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.

Volunteer Recruitment (facilitate to Empower)

Continuing to work with local Brigades to prepare an Action Plan for a collaborative Volunteer Recruitment campaign.

Bush Fire Ready Groups (Collaborate)

- 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		

MAF 23-24 Round 1, \$500k application

- Approved projects:
 - 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:
 - 5: Heritage Trail (Seaborne to Stoneville), mechanical works, \$90k, 15 days, October.

MAF 23-24 Round 2

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

Disaster Ready Fund (DRF) Round One (2023)

The Shire did not submit an application, however, *The Forever Project* 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.

National Disaster Risk Reduction (NDRR) grants program

- 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.

All West Australians Reducing Emergencies Aware (AWARE) program

- Closes 20/09/23.
- \$2,500 to \$30,000, 25% contribution required.
- Project ideas to be discussed and submission prepared. Past funded projects appear to be primarily assessment / training / review / exercise based.

Cr Cook (LEMC 30/06/23), house numbering.

Internal training, including an exercise, for non-EM staff to build Shire capacity in the event of an emergency.

Preparedness Advocate training / support, as identified by the newly formed 'network' (call for ideas shared 25/08/23).

Formal BAL Assessor training for relevant staff to assist with community engagement in relation to personal preparedness, including retro-fitting older homes.

Disaster Ready Fund (DRF) Round Two (2024)

- 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 Ma

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 avilable via the State Emergency Management Committee website, https://www.wa.gov.au/organisation/state-emergency-management-committee/disaster-ready-fund

Committee encouraged to bring additional uses for the grant funds if they have alternative suggestions.

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.

COMMITTEE RECOMMENDATION

That Council notes the information presented by Bushfire Risk Management Officer

Noted

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 and endeavouring to engage with prisons, water, and relevant stakeholders.

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 Mr Dyson to send out invitation.

COMMITTEE RECOMMENDATION

That Council notes the information presented by Executive Officer Mr Dyson

Noted

Exercise Climate Mutatio

METROPOLITAN DISTRICT EMERGENCY MANAGEMENT COMMITTEE

Date: 18 and 20 October 2022

EXERCISE PLAN









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









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

⁴ SEMC 2019 Emergency Preparedness Report









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,

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

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

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









^{*} WA Community Disaster Resilience Strategy Discussion Paper Summary

KPIs

- 1.1 Identification of plans, processes or procedures within agencies or local government that require amendment as result of pre-emergency situational awareness.
- 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

 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

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.









8

'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

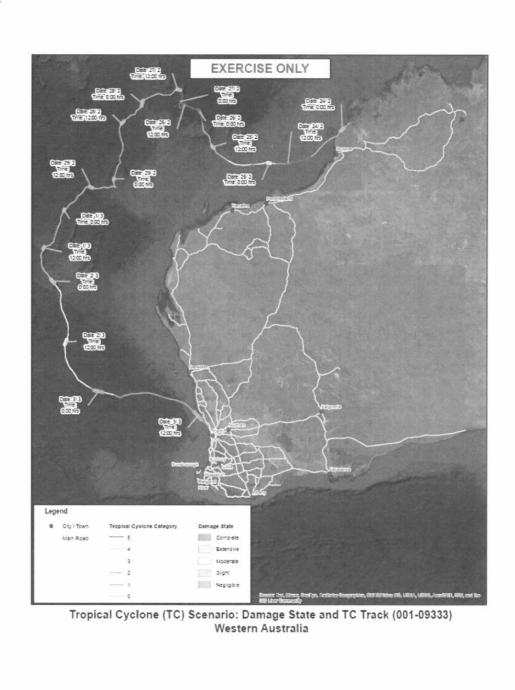
A map showing the track of the cyclone is available at: http://www.bom.gov.au/weather/wa/cyclone



















11

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

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.

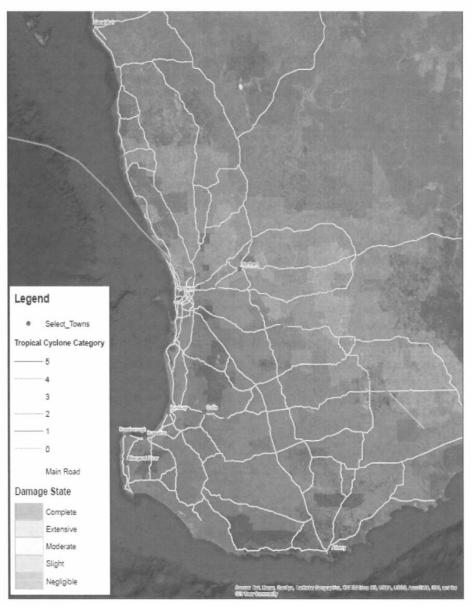








13



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









14

SHORT AND LONG - TERM IMPACTS:

BUILT ENVIRONMENT	 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
ECONOMIC ENVIRONMENT	 Businesses affected - partial and complete loss of roof cladding, inadequate securing of gutters, flashings, fascia and eaves, wall collapse. Many businesses unable to operate.
SOCIAL ENVIRONMENT	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
NATURAL ENVIRONMENT	Tree/flora debris Deceased domestic and livestock in some areas Impact to crops Beach erosion Stagnant pools of water during and after flooding increase insectand 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 coordination 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

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 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

COMMITTEE RECOMMENDATION

That Council notes the information presented by Executive Officer Mr Dyson

Noted

7.0 URGENT BUSINESS (LATE REPORTS)

Ryan Hamblion – Department of Communities

• State Support Plan

- Emergency Relief and Support is currently with the Director General and Minister for approval; should be tabled and approved at the next SEMC in October.
- Change of Welfare Centre to Evacuation Centre, and removal of the word Welfare and replaced with Emergency Relief and Support.

Capability Audit

- Communities has procured Nous Group to conduct an audit of Western Australia's emergency relief and support capability. Communities is engaging with its community sector partners via the State Welfare Emergency Committee and the State Welfare Emergency Committee — Operations to seek their input into the audit.

Disaster Victim Identification (DVI)/Mass Fatality

- Communities is engaging with WAPOL and the State Coroner's Office to strengthen its response to a potential major emergency, where mass DVI processes are required.
- Coordinating the DISCC (Disaster Information Support and Care Centre); hoping to test the plan later this year.

Evacuation Centre Audit

- Full audit on all centres
- Request from DFES for more information fields in regards to hazards flood, cyclone, bushfire risks (came from Cyclone Ilsa).

Rod Potter - SES

 Unit focusing on training new recruits to ensure people up to speed coming close to fire season

Adrian Dyson – Shire of Mundaring

- Brigade Station reviews bring conducted to identify any major works required, and review of brigades located within the Shire.
- Council elections next month, potentially new LEMC members joining the committee.
- Will be encouraging other committee members such as Schools, Prisons, Watercorp etc to have representative come to meetings.

Murray McBride - DFES

- Audit need to be carried on on LEMC contact directory to confirm up to date
- DFES Mitigation funding to spend within the Shire of Mundaring this year is \$250k, approximately \$50k spent at present.
- DFES Terra Motus exercise to be run by Mundaring Weir towards end of November.

Exercise Terra Motus

METROPOLITAN DISTRICT EMERGENCY MANAGEMENT COMMITTEE

Date: 21 and 29 November 2023









Background Information

¹The Perth Metropolitan Region (PMR) has a population of approximately 2.2 million residents and covers a geography of 8060 km². It has a coastal strip to the west with coastal plains and dunes structures and Perth Hills to the east. The Swan and Canning Rivers are major landscape features. It has 34 local governments and is separated into four emergency management (EM) districts: South, East, Central and North. The region has high-density and rural living, a major port, highways, freight rail and passenger rail network, national parks and most state government central office facilities. It also contains several hospitals, university campuses, cultural centres as well as domestic and international airports. The metropolitan region experiences a diverse range of hazard events across both man-made and natural hazards.

²Western Australia is the most seismically active state in Australia. Of the 20 major earthquakes in Australia since 1890, nine have occurred in WA. This activity has generally been concentrated east of the Darling Fault in the Yilgam Craton. Another notable area of activity is offshore to the west of Perth on submarine faults. The Perth basin itself has been less active, but it can host significant earthquakes in the basement rocks. The PMR area is located west of the Darling Range and largely within a coastal plain known as the Perth Basin. The western margin of the Darling Range is bound by one of the more prominent geological boundaries in Australia, approximately 1000km long.

State Hazard Plan – Earthquake

Hazard Definition and Impact Earthquake

³An earthquake is a sudden release of energy and resulting ground shaking caused by movements within the earth's crust. This hazard is defined as the vibrations caused by rocks breaking under stress. The underground surface along which the rock breaks and moves is called a fault plane. Earthquakes in Australia are usually caused by movements along faults as a result of compression in the Earth's crust. Earthquakes can be caused by:

- underground volcanic forces
- the breaking of rock under the Earth's surface
- · a sudden movement along an existing fault line.

Most earthquakes happen around the edge of tectonic plates. Despite sitting in the middle of the Australian tectonic plate, WA still experiences earthquakes due to forces exerted on the plate by the tectonic activity going on around its edges. The intraplate nature of WA's earthquakes present challenges for emergency planning, as they are less common and do not follow easily identifiable patterns.

Exercise Need

The State Emergency Management Committee (SEMC) is the peak emergency management body in Western Australia. The State Emergency Management Policy directs District Emergency Management Committees (DEMC) to:

³ STATE HAZARD PLAN EARTHQUAKE page 6









¹ METROPOLITAN DISTRICT RISK REPORT

² EIRAPSI Project Final Report Page 3, 22

- 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 and engage the members of four metropolitan DEMCs (North, East, South and Central) with roles and responsibilities under the State Emergency Management Framework. The exercise will run for 120 minutes on 21 and 29 November 2022.

Exercise Aim

The exercise aim is to:

- explore the Perth Metropolitan emergency management districts' preparedness, co-ordination and recovery arrangements for an extreme event (earthquake).
- 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. Participants are encouraged to pre-determine their agency/local government capability and discuss these as part of the exercise.

Emergency Response & Evacuation

- To facilitate a better understanding of pre-established structures that exist between agencies during and after an event to facilitate effective command, control, and co-ordination. KPIs
 - Identification and discussion of structures that facilitate command, control, and coordination.
 - Identification and discussion of agency and local government capabilities and limitations.
 - Identification of suitable sites and areas available that maintain the provision of relief and support.

Recovery Coordination

To raise awareness of recovery arrangements or partnering agreements in place following a major emergency.

KPIs

- Identification and discussion of arrangements or partnering agreements in place.
- Identification and discussion of any limitations with arrangements or partnering agreements.

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: 10.30am to 12.30pm on November 21 and 29 2023

Participants will need to consider existing emergency management arrangements, plans, partnership agreements 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.

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 facilitator and evaluator immediately following the exercise session.
- The exercise evaluators will meet for a cold debrief and finalise the exercise evaluation report.

Exercise Documentation

The following exercise documentation will be developed:

- Exercise plan (this document)
- Evaluation data collection
- 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 further improvements.

The evaluation should be conducted in real time where possible, with forms being handed to the 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.

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.

Post Exercise Report

A post-exercise report will be compiled to:

- Share lessons learnt with participating agencies
- Identify areas for improvement and capability gaps
- Verify the extent to which the exercise objectives were achieved.









'EXERCISE TERRA MOTUS'

EXERCISE SCENARIO

The following scenario was taken from the Earthquake Impact and Risk Assessment for Perth and Supporting Infrastructure (EIRAPSI)- Final report on the backgrounds, collaboration structure, methods, and findings from the EIRAPSI project ((https://d28rz98at9fiks.cloudfront.net/145456/145456 00 1.pdf) Geoscience Australia.

This project was undertaken to develop a better understanding of the risk and impact posed by earthquake in the Perth region. The key project partners were:

- Department of Fire & Emergency Services, Western Australia (DFES)
- Electricity Networks Corporation trading as Western Power (Western Power)
- Water Corporation of Western Australia (Water Corp)
- Main Roads, Western Australia
- Global Earthquake Model Foundation (GEM)
- Geoscience Australia (GA)

⁴The study region covered the PMR extending from the suburb of Yanchep in the north, and Nambeelup in the south, and east along the Great Eastern Highway as far as Mundaring. It encompassed an urban population of approximately 1.98 million people, 733,000 buildings and nearly 500 road bridges. It extended across the deep sedimentary basin beneath Perth and onto the shallow bedrock environment beyond the Darling Fault, a major North-South geological feature than runs for approximately 1,000 km and creates the major topographic relief to the immediate east of Perth.

KEY TERMINOLOGY

ARI - Annual Recurrence Interval. Measure calculate the probability that a ground-rupturing earthquake will take place within a specific area of a fault within a certain number of years

Mw - Moment magnitude is considered the authoritative magnitude scale for ranking earthquakes by size. It is more directly related to the energy of an earthquake.

Epicentre - the point on the earth's surface directly above the focus of an earthquake

Please familiarise yourself with the scenario prior to the conduct of the exercise.

⁴ EIRAPSI Project Final Report page 3









Scenario Earthquake Magnitude, Depth, and Time of Day: Mw 4.8, 8 km, at 2:00 am

Epicentre: Proximity of Mundaring Weir, WA

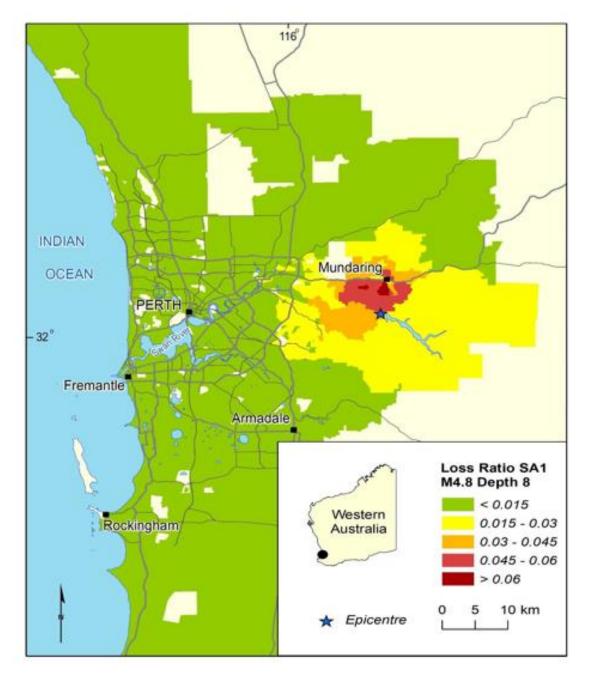


Fig.1 Average severity of building damage in terms of percentage of building reconstruction cost for the Mundaring Weir 2,500yr ARI scenario (MW 4.8, depth 8km).









IMPACTS

NORTH AND CENTRAL EM DISTRICTS - Local Government Areas

Joondalup, Stirling, Wanneroo, Bassendean, Bayswater, Kalamunda, Mundaring, Perth, Swan, Western Central (Mosman Park, Subiaco, Claremont, Cottesloe, Peppermint Grove, Cambridge, Nedlands, Vincent)

EAST AND SOUTH EM DISTRICTS - Local Government Areas

Armadale, Belmont, Victoria Park, Canning, South Perth, Gosnells, Serpentine-Jarrahdale, Cockburn, East Fremantle, Fremantle, Kwinana, Mandurah, Melville, Murray, Waroona, Rockingham, Rottnest Island

Participants should note that the information on the projected impacts and losses presented are based on simulations and expert opinion.

Table 1: Direct damage to buildings and injuries to people for this scenario centred on Mundaring Weir.

Scenario		M.3
Magnitude and Depth		MW 4.8, 8km
Average Recurrence Intervalfor Bedrock Hazard [years]		2.500
Number of Building Damaged		64,300
Residential Building Damage (Total, 701,500)	Slight	62,500
	Moderate	1,400
	Extensive	5
	Complete	0
Non-residential Building Damage (Total, 31,500)	Slight	340
	Moderate	20
	Extensive	0
	Complete	0
Casualties (Total, 1,976,500)	Slightly	105
	Moderately	15
	Severely	0
	Dead	0
Building Triage Number		32,800
Uninhabitable Buildings		880
People requiring temporary Accommodation		2,450









Table 2: Interdependency outcomes from the impact of Scenario centred at Mundaring Weir with a 2,500-year return period (Mw 4.8)

Sector	Implications, response and initial recovery Scenario Earthquake Magnitude, Depth, and Time of Day: Mw 4.8, 8 km, at 2:00 am Especiate: Provinity of Mandarina Weir, WA
	Epicentre: Proximity of Mundaring Weir, WA
DFES	An Emergency Situation would be declared.
	The initial triaging of the 32,800 buildings, which include several that are moderatelydamaged, would take approximately one month.
	A large number of people are in damaged homes and will initially need to be accommodated outside their homes. The 2,450 people unable to resume residencelonger term will be more challenging to accommodate. Approximately 33% will find accommodation with friends and family locally, 33% will be cared for by their insurance companies, and 33% will need accommodation that may require moving out of the local area. Initial arrangements for this will take several days
	Call centres will be overwhelmed during this period with a greater need to expandcapacity.
Water Corp	The Mundaring Water Treatment Plant and Pumping Station C sites are monitored 24/7.
	Engineering teams from existing projects will be diverted to implement fixes to WTPissues.
	Greater damage is anticipated to local municipal water supply with broken pipes etcbut resources available to isolate these and quickly fix. Damage also expected where bridge approach settlement affects major pipes. Damage isolated and repaircoordinated with Main Roads. Water supply largely not interrupted.
Western Power	Visual inspection to be completed within a set period. Power not expected to be interrupted. As all distribution power supply is overhead, bridge approach settlementwill not affect power assets. Some issues with loss of pole transformers and tripping of distribution transformer relays. Inspection capacity will be ramped up.
Main Roads	Visual inspection of a large number of bridges in the epicentral area prioritised using a "watch list". Isolated problems with the lateral spreading and settlement of some bridge approaches made trafficable within the earliest practicable timeframe. Bridgeswill remain operational.
Interdependencies	Damage to bridge approaches affects water services that require coordinated repair.









SPECIAL IDEA 1 - CO-ORDINATION AND EVACUATION

0-10 days +

Capability Area: Response

Core Capability: Command, Control and Coordination and Evacuation

Summary

DFES is the Controlling Agency and has activated an Operational Area Support Group (OASG) to coordinate the response to this event. DFES will ensure a structured and planned transition from response to recovery. A great deal of work has occurred to make the affected areas as safe as possible. There is still a lot to do by the recovery effort as seen by the Impact Statement that was tabled at the meeting.

- Ensuring there are no trapped people in the severely impacted buildings.
- Ensuring community members are cleared from severely damaged and dangerous buildings, and they are closed to the public.
- Residents in moderate to severely damaged homes are displaced and currently moving through collapsed or semi-collapsed structures.
- Key infrastructure, mainly water and sewerage are not working effectively.
- Danger from fallen debris that blocks roads and footpaths and any further collapse of walls and fascia.
- School children are sheltering in place at schools, waiting to be picked up by parents.
 Some panic among parents has been reported.
- Some aged care centres have been moderately damaged.

The Operational Area Manager announced the worst affected areas and the affected aged care centres will need to be evacuated. Any concerned residents should relocate to the evacuation centres provided.

Please consider these questions prior to the exercise.

Exercise Syndicate Questions

- What would be some immediate needs and priorities from your agency/local government perspective?
- How will short-term welfare for large numbers be provided? What are some of the key welfare issues in regard to displaced community members that will need to be considered early?
- How will advice to relocate be disseminated to the community? What key messages should communications include?
- How will the need for long-term accommodation be provided?









SPECIAL IDEA 2 – RECOVERY SUPPORT

0-90 days +

Capability Area: Impact Management & Recovery Co-ordination Core Capability: Impact Assessment & Recovery Co-ordination

Summary

A more comprehensive understanding of the impacts is known. The short-term response and immediate clean-up and restoration process are going to take some time. There are widespread impacts to infrastructure, homes, and businesses. Your LG has activated its Partnering Agreement for the provision of Emergency Recovery Support.

Refer to existing Partnering Agreements or other arrangements you may have with neighbouring local governments to help you answer these questions.

Please consider these questions prior to the exercise.

Exercise Syndicate Questions

- What are the trigger points from your agency/local government perspective to request assistance? District? State?
- How will your LG request for and offer aide? How is this completed?
- Is the Controlling Agency involved in this process? How?
- How will the time frame for assistance be determined?
- How will personnel be covered for insurance purposes?
- Who will cover costs associated with typical employee remuneration during the provision of support?
- What will be your Immediate (1 to 6 months), Medium (6-30 months) and long term priorities (ongoing)









Should there be a need to coordinate multiple agencies across one or more emergencies at a district level, and strategic management beyond the Incident Controller is required, the Controlling Agency may discuss with the HMA the need for an operational area manager (OAM) to be appointed by the HMA. The OAM will facilitate control across the operational area. The OAM must be competent to manage a highly complex emergency.

SHIRE OF MUNDARING LOCAL EMERGENCY MANAGEMENT COMMITTEE DISTRICT EMERGENCY MANAGEMENT ADVISOR REPORT 15 SEPTEMBER 2023

STATE NEWS

AMENDMENTS TO SUITE OF STATE EMERGENCY MANAGEMENT DOCUMENTS

State EM Policy 5.12 - Funding Arrangements for Emergency Response

- State EM Policy 5.12 has been reviewed to clarify funding arrangements in an emergency response.
- A key outcome of the review was to clarify funding for traffic management during an emergency response. The HMA or Controlling Agency is responsible for costs, even if they direct another agency to engage traffic management contractors.

State EM Policy and State EM Plan Appendix AA - COVID-19 Recovery

- The State Recovery Controller appointment for the pandemic caused by the virus COVID-19 has concluded.
- Amendments that were made to parts of the State EM Framework so that they did not
 apply for recovery activities are no longer required. As a result, Appendix AA has been
 removed from the State EM Policy and State EM Plan.

For any queries, please email semc.policyleqislation@dfes.wa.gov.au

ENGAGE EMERGENCY MANAGEMENT WEBSITE

the Engage Emergency Management (EM) website has been launched which is hosted on an updated version of Social Pinpoint.

We invite you to:

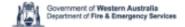
- Visit the Engage EM website
- 'Join' by pressing the button at the top right corner of the screen.
- By joining, you will be able to:
- help us keep your contact details up to date
- reduce the contact information needed within each survey
- receive a copy of your feedback submissions after your submit
- view previous projects you have provided feedback on
- be advised when new consultation projects are available for comment.

Please note, the State EM Policy Branch will transition to sending all consultation request emails direct from the Social Pinpoint platform. You may still receive notice of these consultations through your other stakeholders.

DRAFT WA COMMUNITY DISASTER RESILIENCE STRATEGY

The draft WA Community Disaster Resilience Strategy is now available for comment and feedback. The document is available for review and download here

Feedback is invited, with a particular focus on the following:





- Do the guiding principles capture the core considerations for achieving community disaster resilience?
- Do the key objectives and outcomes represent the right outcomes for a community?
 Are they practical to guide monitoring and evaluation of projects and activities?
- How likely are you to progress any of the initiatives and opportunities?
- How likely are you to integrate or use the Strategy to guide your organisation's activities?
- Is there anything else you would like to see the Strategy address?

Feedback can be provided via email to resilience@dfes.wa.gov.au

DEMC AND LEMC REVIEW

At its August 2022 meeting the SEMC endorsed the proposed project scopes to review the local and district committee structure. The objectives of the review are to:

- Establish clear roles, responsibilities, functions, and governance for DEMCs and LEMCs so they can achieve the strategic objectives of SEMC.
- Identify improvements to the governance arrangements and capabilities that will increase
 effective and efficient management outcomes.
- Create a shared understanding of the SEMC expectations of DEMCs and LEMCs.

Independent consultants have completed consultations at a state and district level. Local level input is now being sought.

Focus groups will be held online the week commencing 14 August 2023. Numbers will be kept small to encourage and facilitate discussion about key issues of importance to the review including the functions, operations, membership, and effectiveness of LEMCs, interactions with DEMCs and discussion related to state EM arrangements. This consultation will build on committee-focused input received via the Local Emergency Management Arrangements (LEMA) Review.

LEMC Executive Officers are encouraged to nominate themselves and to distribute this invitation to all LEMC members. (LEMC members includes LEMC Chair as a key role and member of LEMC). Your participation will be supported even if you are unable to commit to the full focus group timeframe.

Please nominate here for your preferred focus group date and time.

Nominations close 04 August 2023 with confirmation advice distributed by no later than 10th August 2023.

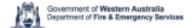
For more information on the Review into the District and Local Emergency

Management Committee's Review into District and Local Emergency Management

Committees (www.wa.gov.au)

LEMA REVIEW OUTCOMES AND NEXT STEPS

The Local Emergency Management Arrangements (LEMA) Review is a partnership between the Department of Fire and Emergency Services (DFES) and WALGA, initiated in response to reports that current LEMA requirements are not fit-for-purpose for Local Government and that a new LEMA model is needed. From April to December 2022, WALGA engaged 100 Local Governments to identify LEMA strengths, weaknesses, and improvement opportunities in a consultation that included 10 in-depth interviews, 10 interactive workshops and an online survey.





2

WALGA's LEMA Review Consultation with Western Australian Local Governments: Project Summary and Recommendations Report summarises the key findings of the consultation process to date. A more detailed overview can be found in WALGA's LEMA Review Issues Paper and an independent LEMA Review Workshop Consultation Report.

A LEMA Improvement Plan was developed and was endorsed at the August SEMC meeting. An overview of the Plan is available here. Further updates on the implementation of the plan will be communicated once finalised.

Find out more about the LEMA Review Project on <u>WALGA's website</u> or email WALGA's LEMA Review Project Lead, <u>Simone Ruane</u>.

DISTRICT NEWS

2023 METROPOLITAN DISTRICT EMERGENCY MANAGEMENT COMMITTEES (DEMC)

Planning is underway for the next round of district emergency management committee meetings and discussion exercise "Exercise Terra Motus" scheduled for:

- North Metropolitan (North and Central) DEMC Tuesday 21 November 2023
- South Metropolitan (East and South) DEMC Wednesday 29 November 2023

The DEMC meetings will be Chaired by the metropolitan WA Police Force Commanders. The meeting will include a keynote presentations and agency/local government updates.

The discussion exercise will take place after the meeting and explore preparedness for the hazard of earthquake.

LOCAL NEWS

FUNDING OPPORTUNITIES

DISASTER READY FUND ROUND 2

The <u>Disaster Ready Fund</u> (DRF) aims to help communities protect themselves against the devastating impacts of disasters by investing in important disaster resilience and risk reductions projects across Australia. From 2023-24, the DRF will provide up to \$200 million per financial year over five years – up to \$1 billion in total. Round One of the DRF was highly competitive with over 300 applications.

Call for Expressions of interest (EOI)

The Department of Fire and Emergency Services (DFES) administers the fund and is inviting Expressions of Interest (EOIs) from government and non-government organisations who have projects that will build resilience in the Western Australian community and prepare for future natural hazard impacts.

Submit your EOI by following the steps below:

- Consider the previous guidelines.
- If eligible, fill out the online EOI form.
- Once the EOI is complete, click on 'Submit' and a copy will be emailed to you along with a reference number. Keep this reference number handy in case you need to contact us with guestions about your EOI.





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The request for EOIs is an open-ended and ongoing process, with no closing date or deadline. However, if you are interested in applying for funding in 2023/24, you should submit your EOI by 15 November 2023.

Webinars

Three webinars have been arranged to assist government and non-government organisations to prepare and write a competitive grant application. The webinars will include what information you need to gather, how to develop the problem statement, guidance around quantifying expected outcomes and budget and market viability.

The webinars have been tailored for the following audiences:

Social services sector	30 August 2023, 10am - 12pm
Local government	4 September 2023, 10am - 12pm
State government	7 September 2023, 10am - 12pm

Email: semc.grants@dfes.wa.gov.au

https://www.wa.gov.au/organisation/state-emergency-management-committee/disasterready-fund

AWARE PROGRAM 2023-2024

The All-West Australians Reducing Emergencies (AWARE) Grant program for 2023 will open on 16 August and close on 20 September 2023.

Fundina:

- The 2023 round has a total allocation of \$238,000.
- Projects could apply for between \$2,500 and \$35,000 grant funding.
- Local level risk assessment projects can request a maximum of \$6,000.

Eligible project types:

- further the emergency risk management process
- facilitate capability-based exercises
- assist in reviewing Local Emergency Management Arrangements
- deliver emergency management training
- host or facilitate emergency management events or forums.

Co-contribution:

Applicants must contribute at least 25 percent of the total project cost in cash or in-kind.

How to apply:

- All applications must be submitted through the online portal available on the SEMC Website. Applications received through any other channels such as emails or post will not be accepted.
- A sample application is available on SEMC Website for reference only.

If you require further information please contact:

Aruna Pillai T: 08 9395 9328 E: aruna.pillai@dfes.wa.gov.au





MITIGATION ACTIVITY FUND

Round two of the Mitigation Activity Fund Grant Program for 2023/24 has opened. Eligible Local Governments will receive an email with details of the grant program and have until 21 September to submit their application. If you have any queries regarding this grant round, contact MAFGP@dfes.wa.gov.au

WALGA EM TRAINING

Recovery Coordinators Course for Local Government

Thursday, 7 - Friday, 8 September 2023

In this course we explore what it means to be a local Recovery Coordinator, including preevent planning critical in the establishment of contemporary and established systems and processes, required for your Local Government to manage this critical function confidently and proficiently. This course will focus on and build from the National Disaster Recovery Principles and explore ways to apply sound leadership and guidance to impacted communities. Register Here

Emergency Management for Local Government Leaders

Wednesday, 4 October 2023 (9:00am-12:30pm)

This course will offer solutions to be ready, resourced and will provide a better understanding regarding what we need to achieve: prior to, during and recovering from a disaster. Targeted to Local Government CEOs, Directors, Managers, Mayors/Presidents and Elected Members.

Register Here

Emergency Management Foundations for Local Government

Thursday, 16 November

This foundation course explores contemporary emergency management concepts and how these apply to your Local Government, within the Western Australian context. It is suitable for CEOs, Elected Members, Managers and Officers who would like to enhance their role in Emergency Management.

Register Here

Community Disaster Recovery

Friday, 17 November

This course will demonstrate recovery group management, pre-event recovery planning processes, the benefit of engaging with your community in preparedness and resilience building activities, and an understanding of the resources available to you.

Register Here

2023 SEMC MEETING SCHEDULE

4 October 2023

6 December 2023

Complied by:

District Emergency Management Advisor Metropolitan Operations

Department of Fire and Emergency Services





8.0 CLOSING PROCEDURES

8.1 Date, Time and Place of the Next Meeting

The next Local Emergency Management Committee will be held on 1 December 2023 at 10:00am in the Committee Room, 7000 Great Eastern Highway, Mundaring.

8.2 Closure of the Meeting

11:01am