GOVERNMENT OF WESTERN AUSTRALIA

DFES
Department of Fire & Emergency Services

2017-2018
WESTERN AUSTRALIAN CYCLONE AND SOUTHERN BUSHFIRE
SEASON SYNOPSIS

WA Cyclone and Southern Bushfire Season Synopsis 2017/18

With many areas of Western Australia predicted to experience above normal bushfire activity and a likelihood of around two tropical cyclones impacting land, there is no part of Western Australia that can afford to be under prepared this upcoming season.

Over these past few years, significant changes have occurred across the areas of prevention, preparedness, response and recovery within DFES. The WA Cyclone and Southern Bushfire Season Synopsis 2017/18 site provides a snapshot on many of these initiatives and provides links to gain detailed information if required. The Synopsis is intended to complement the preseason planning, preparedness and training initiatives already completed or underway by those involved in emergency and response activities.

I highlight that emergency services activities are inherently dangerous and responder safety remains the priority this summer. Regardless of what systems or controls are in place, the potential of hazards and the threats to those involved constantly remains. Bushfire and cyclone events are unpredictable and we should all strive to keep ourselves and others safe.

Knowledge of a hazard and the means of reducing the risk to ensure our own safety and that of fellow responders and the community are critical elements of our business.

Your mental health is also important and I urge you to include a ‘wellbeing check’ into your routine. It is imperative we monitor not only ourselves but also that we take the time to look after each other. Please remember it’s ok to not be ok and that there are support systems available to you.

I trust you will find this site informative and a useful source of reference over the potentially challenging months ahead of us.

Lloyd Bailey *AFSM*
Deputy Commissioner Operations
Department of Fire and Emergency Services

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Southern Seasonal Bushfire Assessment 2017/18

On top of persistent soil moisture deficits, the South West recorded its driest autumn for five years. This has resulted in forest vegetation experiencing additional water stress, with dead surface leaf litter and woody materials also continuing to dry out. Consequently, there is potential for above normal bushfire activity within the southern parts of the Swan Coastal Plain, the Warren region and the majority of the Southern Jarrah Forest.

A record wet 2016/2017 summer period for Western Australia, from the Midwest to the South Coast, has seen high perennial grassland fuel loads develop. However, the pattern of rainfall, recent bushfires, prescribed burning, cropping and grazing activities have constrained potential above normal grass fuel loads in many areas, with the exceptions being the Eastern Gascoyne, Pilbara and Eucla regions. Higher than average perennial grassland fuel loads, combined with drying soil moisture as summer approaches, have resulted in some areas in these regions being assessed as having an above normal fire potential for the southern bushfire season.

More detailed information is available from Bushfire and Natural Hazards CRC website at Southern Australia Seasonal Bushfire Outlook 2017

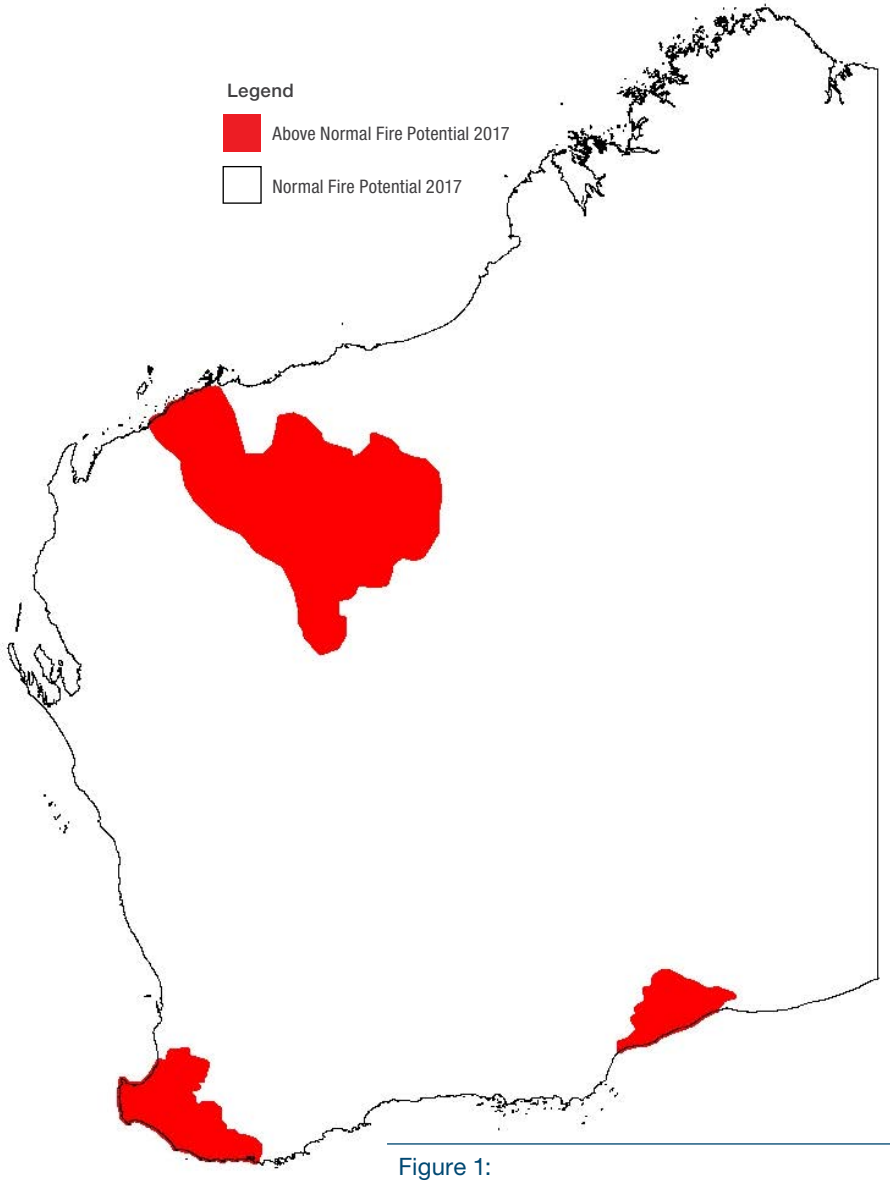


Figure 1:
Southern Western Australia Seasonal Bushfire Outlook

Bureau of Meteorology

Climate Outlook for Western Australia October – December

Towards the end of each month, the Bureau of Meteorology (BoM) releases a three-month climate outlook for Australia. The outlook for October through to December has been released and the key points for Western Australia are:

- Warmer three months likely for north western parts of the state.
- Near equal chances of wetter or drier three months.

For more information visit: www.bom.gov.au/climate/

Tropical Cyclone Outlook for Western Australia 2017-18

Summary of the Tropical Cyclone Seasonal Outlook for Western Australia:

- A ~60% chance of an above average number of tropical cyclones in waters off the northwest coast (average number is five).
- Likelihood of around two coastal impacts.
- Significant risk of at least one severe tropical cyclone coastal impact during the season.

It is important to note that the number of tropical cyclones is not a good indicator of the threat to communities. For most people, a bad season is one when their community cops a direct hit or suffers a major flood.

Information on tropical cyclones, including current advices and track maps can be accessed through www.bom.gov.au/cyclone/.

What's new from the Bureau of Meteorology

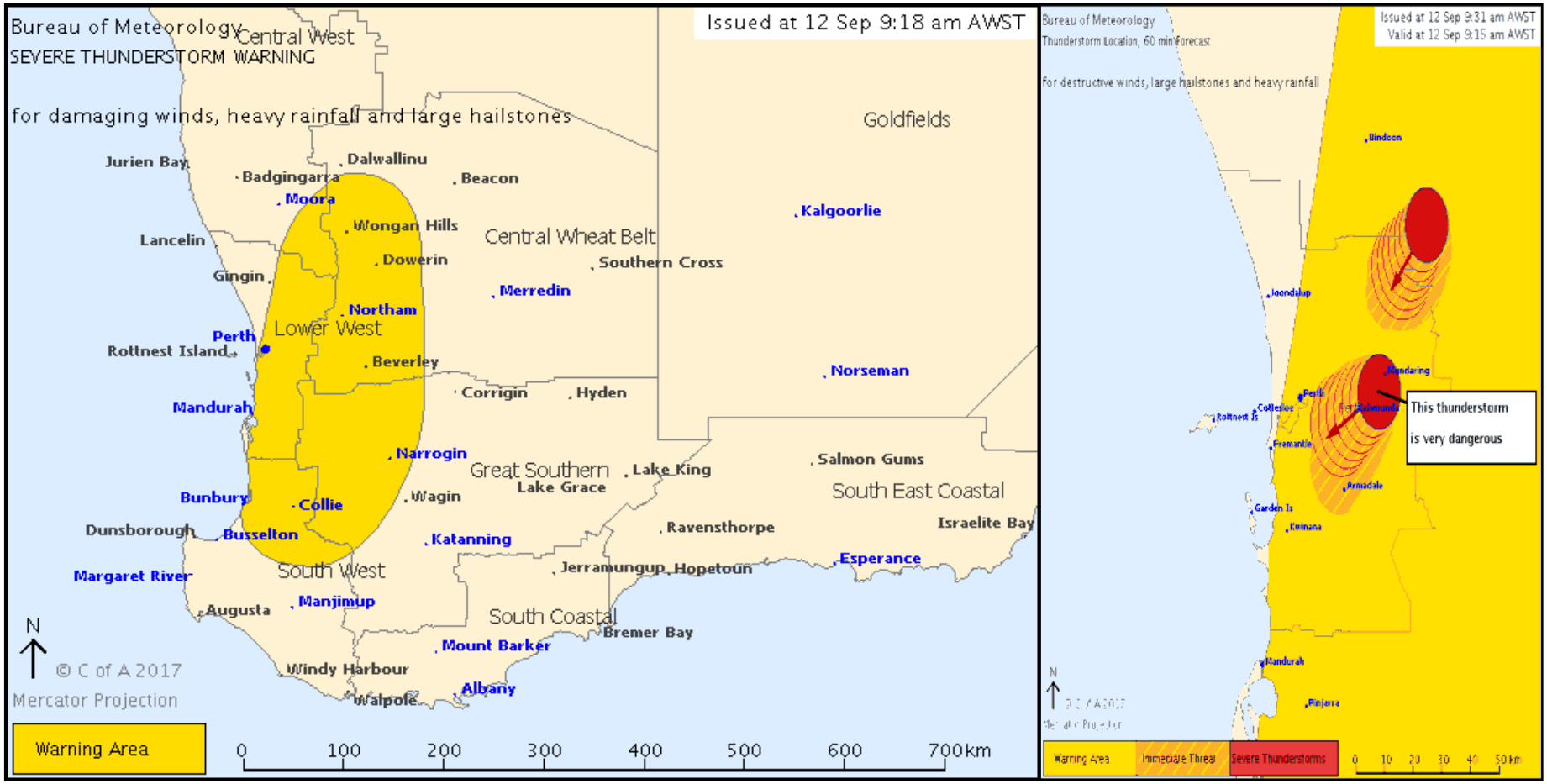
4 Day Fire Danger Ratings:

The BoM is producing four day Fire Danger Ratings, which can be found on the BoM's website at: www.bom.gov.au/wa/forecasts/fire-danger-ratings.shtml

Cell Based Severe Thunderstorms Service for Perth and surrounding areas:

BoM is improving the Severe Thunderstorm Warning service for Perth and its surrounding areas by providing a cell based Severe Thunderstorm warning service. These warnings will be issued when individual severe thunderstorms are within range of the BoM's weather-watch radars. They provide more specific information on individual severe thunderstorms. The warning includes a map depicting any existing thunderstorms and the forecast direction of movement for up to 60 minutes.

Bureau of Meteorology



When issued, severe thunderstorm warnings can be accessed via the BoM WA warnings page: [www.bom.gov.au/wa/warnings/.](www.bom.gov.au/wa/warnings/)

Bureau of Meteorology

Atmospheric Instability and the C-Haines Index

BoM introduced atmospheric instability into the DFES Operational Preparedness Briefings by adopting the C-Haines Index. The C-Haines Index provides a guide on whether pyro-cumulonimbus (pyro-cb) will develop. Pyro-cb is a fire generated thunderstorm which can have a significant impact on fire behaviour as it can cause:

- Amplification of burn and spread rates.
- Enhanced spotting from the lofting of firebrands downwind.
- Ignition of new fires from lightning strikes.

In recent fires, the Fire Dangers have been relatively low but the fires have become out of control due to the effects of pyro-cb. Of note, during the Waroona/Yarloop fire the Fire Dangers peaked in the Very High range however lightning and/or enhanced spotting from pyro-cb's was identified as the weather driver for the fire to become uncontrollable.

More information on atmospheric instability and the C-Haines Index can be found HERE

Photo: Pyro-cb developing over the Lower Hotham fire, 2015.

Incident Management

Directive 3.8 – Severe Weather Events

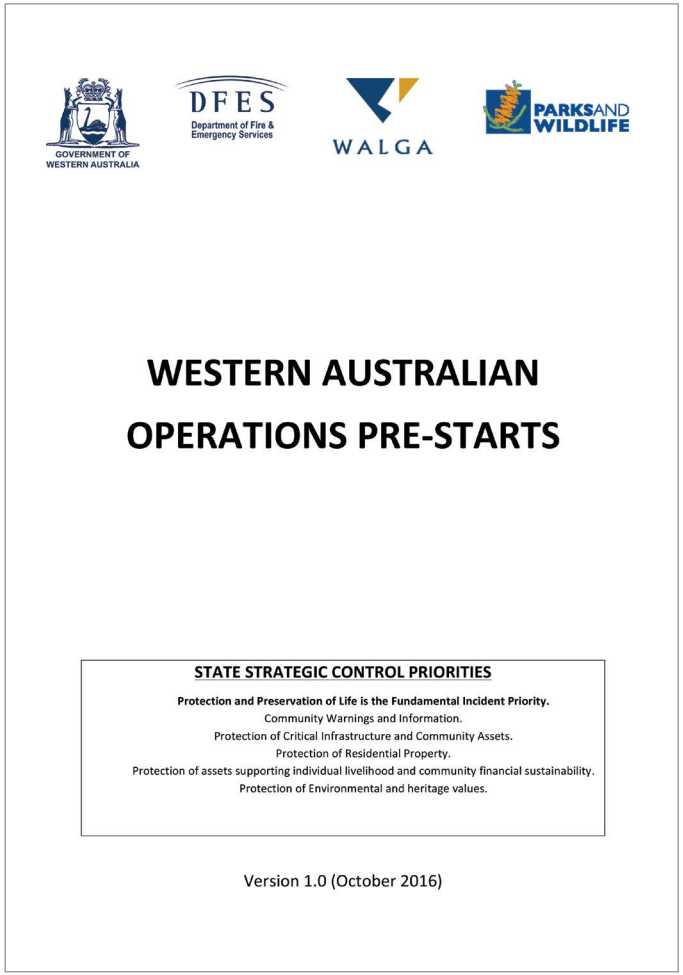
A new Directive, *Directive 3.8 – Severe Weather Events*, has been developed for the management of severe weather events for cyclones, floods and storms (it excludes tsunami and earthquakes). The Directive replaces the State Emergency Service Operations Instruction 7 and 9 and addresses the areas of Prevention, Preparedness, Response and Recovery.

The Directive is available here Directive 3.8 – Severe Weather Events

Operations Pre-Starts Book

All appliances, including those from Parks and Wildlife Service, CFRS, VFRS, VFES, and BFBs, should carry an Operations Pre-Starts Book (OPB). The OPB is intended to capture the minimal amount of critical information for a Crew Leader/Officer in Charge (OIC) from their initial briefing at the Control Point prior to commencing operations at an incident. The OPB is a summary of the current situation, strategies, tactics, communications and safety structures for the incident and is intended for use when no formal Incident Action Plan has been developed.

The OPB is to be used in accordance with SAP 3.2.C – Incident Action Planning



Incident Management

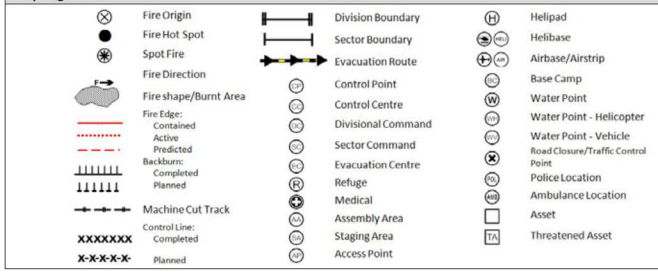
OPERATIONS PRE-START

Incident Name:		Date/Time:		Controlling Agency:	
Incident Number:		Incident Level:		Incident Shift:	

Situation and Weather Forecast:

Sketch Map:

Map Legend:



OPERATIONS PRE-START

Incident Name:		Date/Time:		Controlling Agency:	
Incident Number:		Incident Level:		Incident Shift:	

Briefing Delivered By:		**Position:**	

Strategic Control Priorities:

- **Protection and Preservation of Life is the Fundamental Incident Priority**
- Community Warnings and Information
- Protection of Critical Infrastructure and Community Assets
- Protection of Residential Property
- Protection of assets supporting individual livelihood and community financial sustainability
- Protection of Environmental and heritage values

Incident Control Point Information:

Incident Controller:		Bush Fires Act Section 13 'Authorised Person':			
Control Point:		Command Channel:		Comms Plan:	

Sector Information:

Sector Name:		Sector Commander:	
Sector Channel:		S/C Phone:	
Division Name:		Division Commander:	

Operational Strategies and Tactics:

Strategies:

Tactics: *(obtain from Sector Commander)*

Safety Messages:

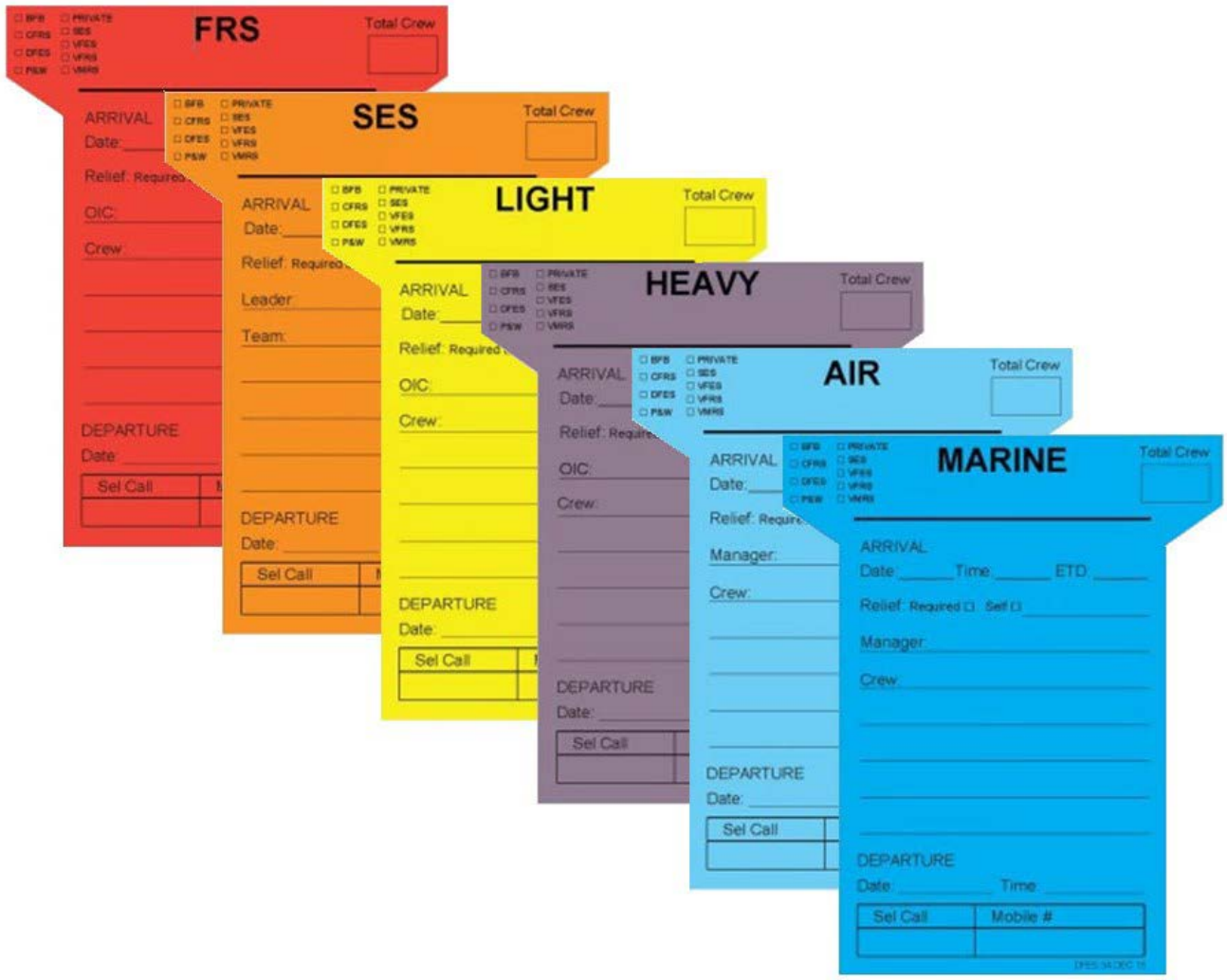
- Ensure crews are wearing appropriate PPE for tasking.
- Be aware of power and electrical hazards, assume all power infrastructure is live.
- Exercise caution working on smoke covered roads
- Be aware of overhead hazards (falling branches/limbs, aircraft, etc.)

Safety Priorities:

LACES Checklist: *(at the Sector)*

Lookout:			LACES Checks are to be conducted every				hours.
• Everybody looks out for everybody else • All crew members monitor for situation changes			• Establish Lookouts • Continuously re-evaluate the situation				
Awareness:							
• Current and Potential Weather • Hazards and Risks			• Fire Behaviour and Conditions • Terrain and aspect				
Communications:							
• Establish and maintain communications on the sector • Provide regular situation reports			Communications Checked at:				
	hrs	hrs	hrs	hrs	hrs	hrs	
Escape Routes:							
• Know your escape route at all times • Position vehicles to allow for rapid escape			Our escape route is:				
Safety Zones							
• Always have a safety zone to which you can retreat • Continually monitor your safety zone.			Our Safety Zone is:				

Incident Management



T-Card Management

T Cards, so called due to their 'T' shape, are used to maintain vision of all human and physical resources on the incident ground. This is vital given that the Incident Controller has ultimate responsibility for everyone and everything at the incident (essentially a workplace) that they are controlling. **T Cards are mandatory for all personnel** and should be used to keep track of equipment also. Certain parts of the T Card MUST be completed whilst other parts can be used as applicable.

Each appliance should carry a supply of T Cards and MUST submit a completed T Card to the Control Point (CP) prior to commencing operations. Details recorded on each T Card will provide the IMT with information required to plan for the following:

- Welfare of all personnel, i.e. food and water, rest breaks, shifts length, etc.
- Crew changeovers and extra resource requirements
- Ability to contact individual personnel

Further information on T Cards is available in SOP 3.2.6 – T Cards and Incident Management Boards

Incident Management

Automatic Vehicle Location

The Automatic Vehicle Location (AVL) system provides real-time visibility of vehicles and automated features that support enhanced crew safety.

AVLs have been installed in vehicles across the state, with portable AVL units deployed in regional locations to ensure Local Government, contractor and farm vehicles can also be monitored.

Click HERE to find out more information.

Restricted Access Permits

Western Australia's Emergency Management arrangements provide Incident Controllers the powers to prohibit movement within, into, out of or around an incident area, direct the evacuation and removal of persons from part or all of an area and close roads, access routes or areas of water in or leading to an incident area.

A Restricted Access Area is an area or specified properties within the incident area in which permitted people are allowed to return for a period of time for a specified purpose.

A Restricted Access Permit must be issued to allow entry, exit and potentially re-entry to the Restricted Access Area in accordance with the permit conditions.

The appointed Incident Controller has the authority to issue Restricted Access Permits to a variety of persons for a range of reasons and scenarios. The form and nature of the Permit is a decision for the IC, in consultation with the Local Emergency Coordinator (LEC) in attendance at the Incident Control Centre and may be in the form of:

- An adhesive sticker to be affixed to a vehicle's windscreen
- A paper permit
- Department of Fire and Emergency Services ID card

A "Restricted Access Permit Unit" can be established by the Incident Controller depending upon the nature and extent of the restricted access area and the number of persons likely to apply for restricted access permits.

Further information is available in SAP 3.2.D – Restricted Access Permits

An online video has also been developed, Traffic Management – Restricted Access Permits

Incident Management

New RFA boards in WebEOC

On Friday 18 August 2017, DFES implemented a new system and process to manage Natural Hazards Requests for Assistance (RFAs). WebEOC was extended to provide an end-to-end solution for managing Natural Hazard RFA's.

This change was managed though the All Hazard Incident Management System (AHIMS) program and will impact our people in the Communication Centre (COMCEN), State Emergency Service (SES) and Volunteer Fire and Emergency Services (VFES).

Benefits to COMCEN

- One system for capturing RFAs
- A streamlined process
- Increased system functionality
- Integration with existing DFES systems

Benefits to Volunteer

- Increased operational agility and situational awareness
- Ability to manage RFAs at a unit level
- Real time access to RFAs via the web based system

Further information is available HERE

Fire Chat

Everyone is encouraged to access the new bushfire planning and preparation tools for this bushfire season – the 5 minute Fire Chat and the Bushfire Preparation Toolkit, which were launched recently.

The *5 minute Fire Chat* asks people in high bushfire risk areas to discuss three key questions with family, friends or neighbours.

This approach is easy to achieve, and if this is all people do, they will be better prepared. For those who then want to take the next step, there is *Your Bushfire Preparation Toolkit*.

Additional information is available HERE

Safety

Emergency Services type activities are inherently dangerous and regardless of the systems or controls in place, there constantly remains the potential of hazards and risk to those involved. Safety is a paramount objective and hazards need to be identified and risks assessed with appropriate decisions being based on knowledge, skills and experience.

Safety Circulars

Twelve safety circulars have been issued relating to equipment and vehicles during 2017 so far. As safety is paramount, ensure you are aware of and comply with the critical messages within the safety circulars as applicable to you in your emergency response role.

The full list is available HERE

Fatigue

The consequences of heat illness and fatigue within an emergency services organisation can result in adverse effects on the health status of responders attending the incident, an increased risk of accidents, reduced individual decision-making ability and influence the organisational capability to respond in a prolonged incident.

Keep a look out for each other – Check me, check you!

Fatigued people are often unaware that they are not functioning as well as they would be if they were not fatigued and this can make it difficult to diagnose.

Signs and symptoms:

- A desire to sleep
- Delayed reaction times
- Decreased alertness
- Decreased motor skills
- Reduced visual perception
- Reduced situational awareness
- Stress, frustration and irritability
- Impaired memory performance
- Impaired performance insight
- Short periods of involuntary sleep (micro sleeps).

How to Reduce the Risk of Fatigue

- Try to get 7-9 hours of sleep per night
- Eating healthy and balanced meals will give you the energy you need to fuel your body throughout the day.
- Keeping physically fit and active
- Psychological health DFES has a number of strategies to help people experiencing psychological issues including the Wellness Branch, Health and Safety Services, Peer Supporters and our Employee Assistance Program.

Safety

Tips for Battling Fatigue

- Exercise – During the summer months, consider conducting Physical Training in the afternoon. Do not exercise too hard during your Physical Training session so you are not too fatigued for the remainder of the day.
- Sleep – Ensure you have adequate sleep so that you don't become sleep deprived.
- Water – Try to limit the amount of electrolyte drinks that are being consumed and ensure enough water is being drunk.
- Nutrition – When leaving the Control Point for the sector, ensure you have enough supplies and snacks to sustain yourself if by chance you cannot get back to the Control Point for a meal.
- Wellbeing – Ensure you monitor yourself and your team for any changes in physical or mental health during busy days or after a particularly challenging incident.

Heat Related Illness

Heat related illnes can kill, so it's vital we all understand it.

Do Something Now! Immediate controls must be implemented to reduce the risk of injury.

An online video is available at Don't Let Heat Stress Bring You Down

LACES

No one ever plans to be lost, disoriented or injured therefore it is vital to continually monitor the environment to identify the hazards and assess the risks as they apply to the tasks being carried out. On an incident ground, it is important to utilise LACES as a guide to help maintain situational awareness and mitigate the risks that may be faced.

DFES personnel and volunteers use the acronym LACES (Lookouts, Awareness, Communication, Escape Routes, and Safety Zones) to assist in maintaining personal safety at all times LACES Save your life – Check safety first

Red Flag Warnings

Red Flag Warnings is a message system that provides a process to ensure critical information (such as weather changes) is confirmed as received to the lowest levels and understood by all personnel involved in an incident.

A Red Flag Warning should be issued when there is, or predicted to be, a significant risk to safety due to changed circumstances including:

- Weather changes;
- Hazardous materials;
- Fire behaviour;
- Structural integrity;
- Equipment failures.

All DFES staff and volunteers should familiarise themselves with SOP 3.2.7 Red Flag Warnings.

Safety

Emergency Messages

The Emergency Message is only to be used in cases of extreme emergency. This definition could include a range of situations, for example, an emergency responder suffering illness/injury which requires urgent medical attention.

Emergency messages must be preceded by the words 'EMERGENCY EMERGENCY EMERGENCY' and must include the name and rank of the person sending the message.

Actions required by operational crews upon receipt of an emergency message may include the following, dependent on the incident and situation:

- Acknowledge receipt of message
- Confirm location and situation
- Immediately notify the OIC/ComCen as appropriate
- Respond at the direction of the OIC as required
- Re-establish contact with sender

Further information is available in SOP 3.2.4 – Incident Communications.

Burnover Survival

Most entrapments result from sudden changes in fire intensity and direction, usually following a wind change. Sheltering within the vehicle is the best option for mounted crews, although the window and door trims remain vulnerable to the effects of radiant heat. Ensure you utilise the appropriate burnover process for the particular crew protection installed in the vehicle.

Whilst the best process for 'burnover' is to **avoid** placing yourself and crew members in situations where they may occur, SOP 3.5.11 – Entrapment at Bushfire provides the procedure designed to ensure the safety of responders entrapped by an encroaching bushfire and subject to a likely burnover of their vehicle.

An online video 'Burnover Blanket Use' is available.

Deadman Zone

Firefighters working in parallel to a fire line are operating within an area where fire behaviour and environmental conditions may not be readily observable. Such areas are termed the dead-man zone where a wind change can rapidly alter the direction of fire spread and prevent firefighters engaged in parallel attack from withdrawing to a place of refuge.

The following resources are available to all DFES staff and volunteers to familiarise themselves with all relevant processes/procedures that are designed to minimise risk:

- Operations Directive 3.5 – Bushfire
- SOP 3.5.10 – Crew Safety at Bushfires

An online video 'Deadman Zone' is also available.

Wellness

Working within an emergency services environment is both rewarding and challenging.

It is important you take a holistic approach to your wellbeing: physical, mental and spiritual. Making sure you take care of yourself now will help protect yourself from the negative impact of stress and mental health issues in the future.

Noticing when your wellbeing is affected can be very difficult. The way we think and act can become 'normalised' (i.e. your normal way of thinking/behaving), meaning you may not notice the early signs and symptoms of any possible problems.

Quick Wellbeing Check

Q. How am I sleeping?

Q. When is the last time I had a good laugh?

Q. Am I spending more time at home and less time socialising?

Q. Am I arguing with partners, family or friends a lot?

Q. Have my family or BGU members commented that I have changed?

Include a 'wellbeing check' into your routine. If your answers are negative, or seem to be getting more negative, seek help. The Wellness Branch or the free counselling service 'PeopleSense' are a good first step to get the information and help you need.

As part of the emergency services, it is likely that you will attend a critical incident (e.g. bushfire, cyclone, road crash, house fire, land/sea search) at some point. Attending such incidents can impact your wellbeing (e.g. changes in sleeping/eating patterns, more grumpy than usual, less motivation). These are normal and common reactions to an extraordinary situation and generally only last between 2 days – 4 weeks after the incident.

Please remember its ok not to be ok – there are support systems available to you that you can easily access. These include: personal support networks, the DFES Wellness Branch, the DFES free counselling service 'PeopleSense' (9388 9000), DFES Peer Support Officers, a General Practitioner or a Mental Health Professional.

Signs you may need help

- **Physical Health** – tired all the time, appetite/weight changes, headaches, disturbed sleep, sick and run down.
- **Behaviour** – not wanting to see family/friends, not completing day to day tasks, finding it hard to concentrate, getting upset over little things.
- **Thoughts** – "I'm a failure", "it's all my fault", I'm worthless", "life is not worth living", "there's no point in trying".
- **Feelings** – overwhelmed, unhappy, guilty, indecisive, disappointed, no confidence, irritable, angry.

It is very important we monitor ourselves but also that we take the time to look after each other.

Note: *Bush Fire Brigades are included in the DFES Wellness Branch response and can access all DFES Wellness Branch Services.*