

SA HEALTH BUSHFIRE AND EXTREME HEAT RESPONSIBILITIES

PREPAREDNESS AND RESPONSE

RECENT SIGNIFICANT BUSHFIRE EVENTS

- **February 2014 Bangor Bushfire**

Started 25 km north-east of Port Pirie 14th January, contained January 30th, controlled February 6th. Broke control lines 2 days later and threatened the township of Laura, finally controlled February 14th, 35000 hectares burnt. 5 houses destroyed, 24 injuries recorded none serious (injury data from CFS website).

Health system - Laura hospital was relocated during the high danger period, no adverse events reported during the relocation.

- **January 2015 Sampson Flat Bushfire**

Began January 2nd in the Adelaide Hills, burned uncontrolled for 4 days, across approx. 12,600 hectares. Fire travelled in a south easterly direction, impacting a number of towns including Kersbrook and Gumeracha. Fire destroyed approx. 24 houses, 103 sheds and caused 62 firefighter injuries, damage bill estimated at \$13 million. (injury data from CFS website).

Health system - Mount Pleasant hospital was relocated early on as a precaution and two days later Gumeracha hospital started to relocate as the fire threatened, but the relocation was stopped as conditions deteriorated with staff and patients sheltering in place, assisted by CFS and MFS assets protecting the hospital. No fatalities.

- **November 2015 Pinery Fire**

Began midday November 25th in lower-Mid-North wheat belt, approx. 70km north of Adelaide. Due to high winds and open wheat fields, fire moved with incredible speed not previously seen. Most destruction occurred during the first day, initially burning in a south easterly direction from Pinery. South westerly change in the afternoon of the first day meant the eastern flank of the fire became a new fire front burning in an easterly direction towards the Barossa Valley. Fire burnt an estimated 82,500 hectares, thousands of livestock and approximately 91 homes destroyed, many more damaged.

Health system - Two fatalities and 5 serious burns cases all retrieved to and treated at the RAH burns unit. Minor injuries very difficult to estimate but Gawler and Lyell McEwin hospitals experienced a steady presentation of patients with minor injuries including smoke inhalation during the afternoon and evening. Communities took refuge in a number of hospitals during the afternoon/evening including Kapunda, Eudunda and Tanunda.

Aged Care - Two residential aged care facilities (non SA Health) were burnt over and received assistance from emergency services and SA Health sourcing water supplies and emergency generators.

RECENT SIGNIFICANT HEATWAVE EVENTS

2009 - Record breaking 13 day heat wave experienced in late January to early February. Daily temperatures reached record high maximum and minimums. Health impacts were felt across the health sector as the hot weather continued. Ambulance call-outs and hospital and emergency presentations significantly increased. Total heat-related hospital admissions were 14-fold and emergency presentations were 12-fold higher compared to non-heat wave periods, adding an extra 518 heat-related cases to the health system. Subsequent data analysis indicated an 11% increase in mortality compared to previous heatwave periods (1993-2006).



As a result of this event SA Health developed its Extreme Heat Strategy in partnership with the State Emergency Service (Control Agency) and Bureau of Meteorology identifying extreme heat thresholds and triggers relative to health related impacts of extreme heat (see SA Health Extreme Heat Strategy detail and alert levels below).

- 2014 - Extreme Heat Warnings activated in both January and February. Temperatures twice soared over 40°C over consecutive days, with high over-night temperatures. These combined periods resembled in duration and intensity the 2009 event presenting an opportunity to compare the health impacts of the two events as part of an evaluation of the effectiveness of the heat health interventions in Adelaide. SAAS experienced a statistically significant reduction in heat related call outs compared to 2009 and heat related presentations and admissions to hospitals were also significantly reduced. Whilst the estimated excess mortality for 2014 was slightly increased (2009 34.5 cases and 2014 38.2 cases) this was not believed to be statistically significant.

SA HEALTH RESPONSIBILITIES FOR BUSHFIRE AND EXTREME HEAT

- SA Country Fire Service (CFS) is the Hazard leader and Control Agency for rural fire
- SA State Emergency Service is the Hazard Leader and Control Agency for Extreme Weather including extreme heat
- SA Health is a Support Agency for rural fire emergencies and extreme weather (and all other emergencies with the exception of human disease) and is required to provide support, assistance and advice to CFS and SES during any emergency
- SAAS is a functional support group for all emergencies and is required to provide support, assistance and advice to all agencies during any emergency, with significant responsibilities responding to and supporting emergency services and communities during bushfire emergencies.
- SA Health and SAAS must comply with the Whole of Government Operating Principles on Days of Catastrophic Fire Danger Rating issued by the Department of the Premier and Cabinet.
- The SA Health catastrophic fire danger rating day guideline outlines SA Health guidelines, consistent with whole-of-government principles for critical service provision and staff welfare on days of Catastrophic Fire Danger Rating – ([click here](#))

BUSHFIRE PREPAREDNESS

SA Govt Seasonal Preparedness briefings

SA Health/SAAS attend the annual Australian Govt preparedness briefing (September 18th 2017), including briefings on the seasonal outlook from Bureau of Meteorology and CFS and an update on national coordination and strategic insights from Emergency Management Australia. (Abridged 2017 seasonal outlook attached below).

Annual Seasonal Preparedness training program

The program provides information to CHSALHN Executive and staff assisting them prepare their sites and personnel for summer and the potential threat of bushfire, whilst engaging with local emergency services, agencies and community partners, to inform emergency arrangements and plans. The program rotates through three CHSALHN regions each year ensuring each region participates every two years, 2017 sessions included:

- 12th September – Barossa Hills Fleurieu region – hosted Gawler Hospital



- 16th October – Yorke and Northern region – hosted Clare Valley Hospital
- 31st October – South east region – hosted Mount Gambier Hospital

CHSALHN Bushfire Planning Framework

Country Health has developed specific bushfire procedures including:

- Bushfire Safety actions
- Seasonal Preparation
- Hospital Building Protection Zone Guidelines
- Shelter in Place/Relocation Guidelines

These arrangements are located on the Country Health Share point page called the Country Health Hub [click here](#)

SAAS Bushfire Planning Framework

SAAS maintain localised bushfire and heat specific procedures including:

- Bushfire Response;
- Catastrophic/Extreme Fire days
- Bushfire Burn over
- Extreme heat event arrangements

Residential aged Care Sector – (Non SA Health)

SA Health EMU attends the annual preseason briefings hosted by the two aged care sector peak bodies in SA, Aged & Community Services SA/NT (not for profit) Aged Care Industry Association (private providers). This presents an opportunity to update the sector on SA Health emergency management activities and provide advice on preparedness and response activities.

Australian Government Aged Care Programmes

SA Health EMU also maintains regular liaison with the Australian Government Aged Care Programmes (ACP) division in SA. ACP maintains an industry wide 24/7 emergency hotline and passes on urgent requests for assistance to SA Health emergency management duty officer in the event of a bushfire threatening facilities. ACP will also support EMU and providers sourcing alternative beds/accommodation should a facility need to relocate.

State Emergency Centre (SEC) activation for bushfire

CFS may request the SEC be activated for briefings to provide updates in advance of days of Catastrophic Fire Danger rating or when a significant bushfire emergency occurs. When the SEC is activated the EMU and SAAS will provide personnel to act as liaison for the Health/SAAS Commanders and to support the coordinated State response.

NATIONAL HEALTH EMERGENCY MANAGEMENT ARRANGEMENTS

The Australian Government Dept. of Health maintains emergency plans and arrangements for coordination of Health sector response to and recovery from incidents of national significance.

- National Health Emergency Response Arrangements - coordination of health sector in response to emergencies of national consequence
- OSMASPLAN - national overseas mass casualty response plan
- AUSTRALIA - domestic response plan for Mass Casualty Incidents of National Consequence
 - AUSBURN annex –national response arrangements for an incident resulting in mass casualties with severe burns



SA Health has never requested activation of national plans and arrangements, however during the Pinery Fire November 2015 the Health Gold Commander contacted and briefed the National Health Incident Room on the status of the fire and the five major burns cases, in case further cases occurred, stretching the capacity of the RAH burns unit.

SA Health Burns Capability and arrangements

The Royal Adelaide Hospital Burns Unit has fifteen beds and the Women's & Children's hospital has capacity for four major burns patients, but as indicated in the SA Health Multiple Burns Plan ([click here](#)) the limitation on the number of burns casualties that can be treated in one location is determined by the acuity of the casualties injuries which determine the ongoing treatment requirements, not the number of specialist burns beds available. The Primary Burns Surgeon at the RAH and the Burns Consultant at the WCH will determine the initial response strategies which will be coordinated through the CALHN/WCHN Silver Commanders in consultation with the Health and SAAS Commanders. The Royal Flying Doctor Service (RFDS) facility at Adelaide airport has a stabilisation bay which can hold up to 3 patients and this stabilisation facility is an option which can inform strategic decision making.

EXTREME HEAT PREPAREDNESS

SA HEALTH EXTREME HEAT STRATEGY

The purpose of the SA Health Extreme Heat Strategy ([click here](#)) is to reduce the risk of harmful effects of extreme heat on the health of the community by:

- Ensuring a planned, managed, and effective response to an extreme heat event
- Providing a coordinated SA Health communication plan; and
- Promoting community resilience and adaptation to extreme heat conditions.

As part of the Strategy, health actions have been developed for implementation at each stage of 'Extreme Heat' Alerts. These alerts are issued by the SA State Emergency Service (SASES [click here](#)) in conjunction with the Adelaide Bureau of Metrology (BOM). There are two alert levels for the Greater Adelaide area relative to Average Daily Temperature (ADT) which is an average of the minimum overnight and maximum daily temperature occurring that day:

Extreme Heat WATCH

Issued at ADTs $\geq 28\text{C}$ for three or more consecutive days

E.g. a maximum $\geq 36\text{C}$ for three or more consecutive days, and a minimum $\geq 22\text{C}$ for three or more consecutive nights.

Public Alerts WILL NOT be issued by the SES / BoM at this alert level and Heat related hospital presentations WILL NOT be collected and reported

Extreme Heat WARNING

Issued at ADTs $\geq 32\text{C}$ for three or more consecutive days

E.g. a maximum $\geq 40\text{C}$ for three or more consecutive days, and a minimum $\geq 24\text{C}$ for three or more consecutive nights.

Public Alerts WILL be issued by the SES / BoM at this alert level and Heat related hospital presentations WILL be collected and reported

The Department of Families and Social Inclusion (DCSI) reaches out to community services during Extreme Heat events and both before and during extreme heat events DCSI and SA Health also refer vulnerable clients to the Red Cross service Telecross REDI, which telephones at risk people to check on their welfare twice a day during heat waves [click here](#)

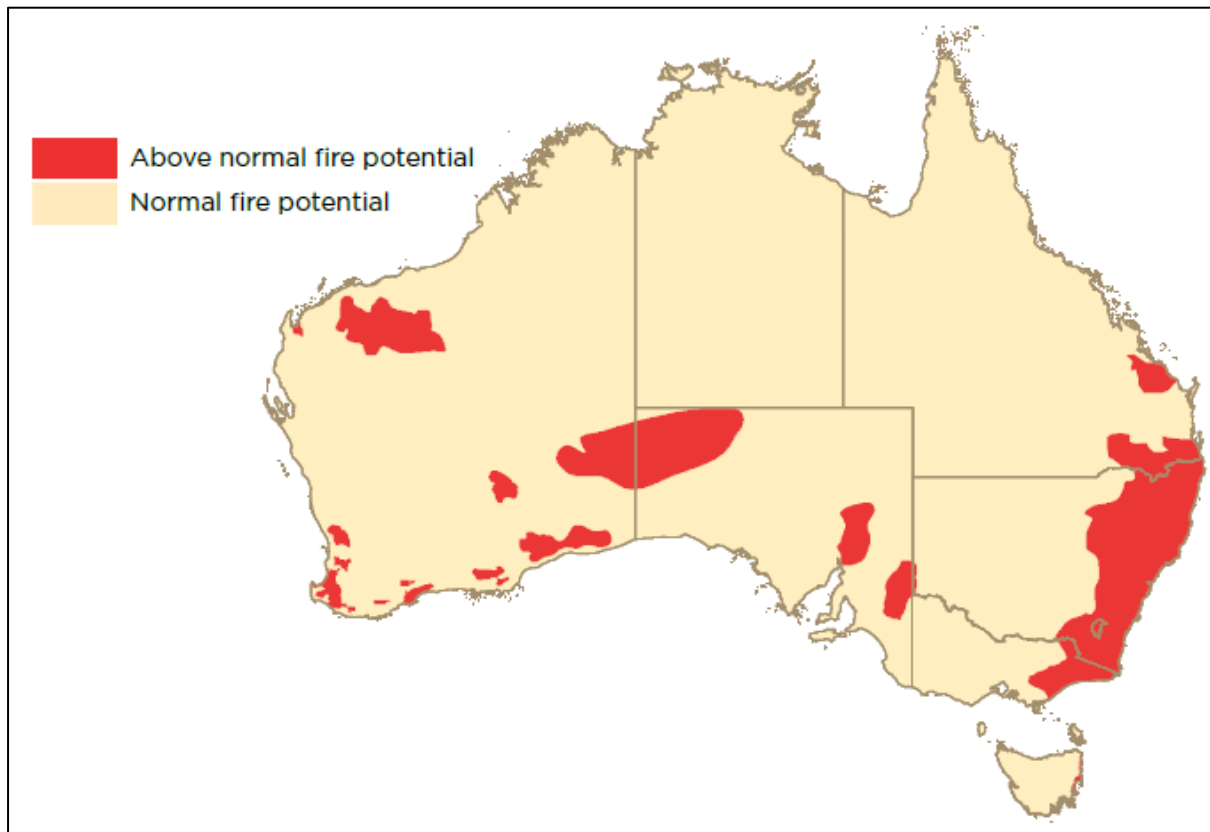
Extreme Heat Communications



A comprehensive extreme heat communications plan aims to outline messaging related to the health impacts of extreme heat and to support the broader whole of government plan developed by SES. The plan is reviewed every year and incorporates guidance issued by SES and the Bureau of Meteorology (BoM), allowing learnings from the previous season to be applied and includes provision of advice and information to SA Health staff, GPs and health professionals and the community, particularly those in at risk groups. The plan includes general heat related messaging throughout and in preparation for the summer season and communications for times an Extreme Heat Watch or Warning is issued and includes the following strategies:

- **Healthy in the Heat webpage** - a central repository of heat related information available on the Healthy in the Heat page on the SA Health website [click here](#)
 - **Short URL** - www.sahealth.sa.gov.au/healthyintheheat included on the websites of other relevant organisations, such as SES, Department for Communities and Social Inclusion (DCSI) and the www.sa.gov.au website.
 - **Internet site Carousel** - to ensure visitors to the SA Health website can find information easily a carousel linking to the Healthy in the Heat webpage will be featured on the website during summer months. During periods where an Extreme Heat Watch or Warning has been issued by SES the carousel will be replaced with an extreme heat specific carousel.
 - **Intranet Screensaver** - staff will be provided with information about coping with the heat and the dangers of heat related illness via a screensaver pushed out to all SA Health computers.
 - **Media** - DHA Media unit will develop a media strategy including proactive and reactive media strategies in liaison with other relevant agencies, including SES, SAAS, Department for Communities and Social Inclusion (DCSI), to ensure consistent messages and information across government
 - **Social media** - SA Health will use its owned social media channels, Facebook and Twitter, to appropriately and actively disseminate key messages about staying healthy in the heat.
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SOUTH AUSTRALIA BUSHFIRE AND SEASONAL OUTLOOK 2018/19



ANTECEDENT CONDITIONS - AUSTRALIA

The combination of dry weather and the background warming trend has resulted in much warmer than average temperatures. Dry and warm weather has seen poor vegetation growth for most of southern Australia. The general landscape dryness means that warm, windy conditions are likely to see elevated fire risk, and make an early start to the fire weather season likely. Countering this risk, the poor growth of grass and annual plants means that vegetation loads are reduced in drought affected areas. The combination of short and long-term rainfall deficits serves to increase the fire risk in the coming spring and summer.

SOUTH AUSTRALIA

Large parts of South Australia have experienced drier than average conditions since the start of 2018. Late winter rains have helped reduce the soil dryness indices in some parts of the state, however, the rainfall has not been enough to overcome the total moisture deficits in these areas. Rainfall from now will also promote vegetation growth before summer, which will increase the available fire fuels during the fire season. The current Bureau of Meteorology forecast is for dry conditions to persist through spring which may also erode any benefits from recent rainfall. The recent El Niño watch also suggests that the dry spring conditions are likely to continue throughout summer. On the basis of the forecast dry

conditions, and the cumulative effects of the long term moisture deficit, several areas have been identified as having above normal fire potential. Parts of the Riverlands, Murraylands, and the Flinders Ranges are particularly dry, which means that areas of scrub and woodland have increased fire potential. Populated areas of the APY Lands, particularly those parts infested with buffel grass, also have above normal fire potential. Without effective control mechanisms to limit the spread of buffel grass, the abundance of fuel it creates could create an increased and ongoing risk. Despite average winter rainfall, the fuel growth and forecast dry conditions indicate that the potential for bushfire across the populated areas of the Mount Lofty Ranges remains. The dry conditions in agricultural areas have resulted in less cropping activity, with South Australia forecast to record a decrease in areas planted and in yields from sown crops. This may reduce the risk of fires from agricultural activity in some areas. It is important to note that no forecast models are indicating any likelihood of increased rainfall across South Australia, which means the fire danger season has the potential to commence early and finish late in parts of the state. Significant bushfires have occurred in similar conditions, and areas of normal fire potential can expect to experience dangerous bushfires as per a normal South Australian fire season.

CLIMATE OUTLOOK SEPTEMBER TO DECEMBER

- The October to December climate outlook, issued 13 September 2018, indicates large parts of Australia are likely to be drier than average.
- October shows a strong likelihood of drier conditions across most of the country. However, the outlook for the eastern seaboard is different, with no strong indication of either a wetter or drier month.
- October to December days and nights are likely to be warmer than average for all of Australia.
- A drier and warmer-than-average end to the year would mean a low chance of recovery for drought-affected areas of eastern Australia.
- Dust: increased chance of dust storms
 - Very dry soils combined with high winds raise dust
 - Dry soils likely to persist given current outlooks





For further information visit

- Seasonal outlook - <https://www.bnhcrc.com.au/hazardnotes/38>
- Bushfire information - <https://www.cfs.sa.gov.au/site/home.jsp>
- Heatwave information - <http://www.bom.gov.au/australia/heatwave/>