Outdoor Council of Australia
Representing the Outdoor Sector Nationally

Reviewed and updated by

Outdoors NSW & ACT

Guidance Note

For Outdoor Activities to prepare for

Bushfire and Severe Weather Conditions

These guidelines have been designed and updates for the use of dependent groups and should be used in conjunction with the Australian Activity Adventure Standards and Good Practice Guides.

(Version 2 • May 2021)

Originally published by the Outdoor Recreation Centre Inc in 2009, which was supported by the Victorian Outdoor Industry and the Victorian State Government. Version 2 compiled by the Incident Management and Risk Management Committee of Outdoors NSW & ACT for the benefit of the Outdoor Industry in Australia. It remains to be a document that should continually reviewed and improved over time. Comments and feedback should be directed to secretariat@outdoorcouncil.asn.au for consideration and possible inclusion.

This document is to be used by the industry in planning for severe weather and built into the activity's risk management plan. It is not intended as a resource for the industry to be used whilst facing severe weather issues during activity.

Guidelines for the Outdoor Industry in planning for Bushfire and Severe Weather

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1 Introduction

This document provides information and commonly agreed procedures for planning and responding to severe weather in the outdoors that involve led activities with dependent participants in Australia. The nature and intensity of severe weather can vary across Australia and local resources should be consulted in each case.

Severe weather conditions may result from various weather events and can be defined as any destructive weather phenomenon.

The best risk management plans and processes will avoid the conduct of outdoor activities in any location where a forecasted severe weather event is likely to occur. Operators should have a code of conduct to protect their participants and this is an important consideration of your organisation's processes.

This document will help you plan for any unforeseen events, variable conditions and mitigate against injury or death.

The document will also enhance the capacity of organisations and leaders to develop and implement consistent policies and support decision-making to continue, modify or postpone planned activities. It should be read in conjunction with the activity specific Australian Adventure Activity Standards (AAAS) and reviewed annually.

2 Document Review

This document was originally developed in response to increasing concern over severe weather events. The project was initiated by the outdoor industry and facilitated by the Outdoor Industry Bushfire Taskforce (OIT).

The OIT was established immediately following the Black Saturday bushfires of February 2009. This taskforce included senior representatives of the Outdoor Recreation Centre Victoria Inc. (ORC), Victorian Outdoor Education Association (VOEA), Australian Camps Association (ACA), Tourism Alliance Victoria (TAV) and is supported by the Department of Planning and Community Development (DPCD) represented by Sport & Recreation Victoria.

The decision to develop these guidelines was made after whole-of-industry discussion forum arranged by the OIT to;

- evaluate the impact of the fires and other severe weather events on the industry
- develop guidelines to better manage the risks associated with severe weather events.

The ORC, OIT and the many contributing organisations recognised that this document will undergo regular review.

Outdoors NSW & ACT are the first to review this document under the guidance of the Risk Management and Incident Response Sub-Committee in late 2020 with release set for early 2021.

Updates to this document will be made available on the Outdoor Council of Australia's website and will reflect the most current version.

3 Part One – Planning

The Australian Adventure Activity Standards (AAAS) recognise that there are many desired outcomes, participant types and organisational structures involved within the outdoor industry. This planning section is intended to provide consideration areas, accepted measures or guides to plan for foreseeable severe weather events prior to any activities being undertaken.

Each organisation will determine how they can best achieve the outcomes within the boundaries of these guidelines.

3.1 Activity Plans

3.1.1 General

In the development of an activity plan the following severe weather factors should be considered.

Ensure that relevant weather information has been collected and understood. This will include:

- weather forecasts, warnings and associated conditions (dry, snowmelt, heat) for the duration and location of the activity
- all weather warnings prior to, and where possible during the activity, should be monitored and, a system should be in place to inform the leaders in the field in a timely manner. If there is a chance that communicating weather warnings may be impossible then particular attention should be paid to the skill and experience of the leader selected for the activity.

See Appendix for resources.

If using information sources other than those listed be sure that the information provided is current and reliable.

Communication with parents, guardians, land managers, local police, and other activity providers will normally be part of the planning prior to the activity and should include any issues about severe weather-related events.

All leaders must:

- know and comply with the organisation's procedures for managing severe weather risks and be prepared to *suspend* or *cancel* an activity or *evacuate* a group
- know and always operate within the limit of their training and experience in managing groups in severe weather conditions.

3.1.2 Physical Environment

Know the landscape of your activity area and how it relates to weather events. For example, is it alpine, semi desert or coastal, sheltered or exposed, lightly treed or heavily timbered?

It is important to know the prevailing conditions of the area you are going into; this will have a large effect on the outcomes of any severe weather event. For example, if the region has been in drought for a long period this could affect the bushfire potential or the stability of trees during a strong wind event. If the area has had a wet period, this will affect the likelihood of the rivers rising quickly.

3.1.3 Severe Weather Safer Place

These are ***locations that the group can move to***, if practicable, where they would receive shelter from adverse weather conditions.

This may be as simple as a clearing to protect from tree fall and/or a rocky depression that can shield from the heat of a fire. These sites should be predetermined in the planning process with consideration given to how far the group will be from the sites at any given point and how safely you can move the group to the sites once you have discovered there is a severe weather event.

Know the potential access and egress routes for evacuation if this is required. Are there river crossings, potential road closures and/or alternative routes?

3.1.4 Trigger Points

Develop ***trigger points and responses***.

A 'trigger point' is a quantifiable measure of weather conditions such as a wind speed, temperature, etc. Authorities use trigger points to create community alerts such as a total fire ban or a severe wind warning.

Each organisation should also develop their own trigger points that take into consideration those of the authorities but that also consider the context of activity being undertaken. These should also be considered in the stages of your activity; prior to department and when the environment starts to change during activity.

For an outdoor activity, a trigger point will be a previously identified measure (e.g., level of fire danger, temperature, river level or wind speed) that when reached will cause the leader to consider whether the activity should continue, be modified (e.g. different route) or cease or even whether the group needs to be evacuated.

For example, when a Total Fire Ban is announced for your area, how will you alter your bushwalk? If winds of 50 knots are predicted for a coastal area, how will you change your canoeing activity? If a Fire Danger Rating reaches 'Severe' or 'Extreme' will you call off the canoe trip?

3.1.5 Communication

Where communication systems are available, they must ***ensure messages can be sent*** and ***be confirmed*** as having been received.

A procedure should be in place in the event that a message is not confirmed as received.

3.1.6 Local Authorities

Know the emergency management plan of the location in which the activities are being undertaken. Land managers and emergency management authority decisions override those of

any visiting group. If the emergency management authority or the land manager declares an evacuation, then the group must be ready to comply.

Leaders should realise that an emergency (such as a fire) may mean that emergency services do not have sufficient resources to respond and they should plan for such an eventuality (e.g. by selecting severe weather sites).

3.1.7 Training

All organisations should endeavour to maintain ***ongoing severe weather knowledge and training for their staff/contractors***.

This will vary according to the activities, environments and clients/participants but should generally include:

- venue and activity specific skills
- appropriate use of communications/technology and associated procedures
- understanding of terminology for weather warnings and fire danger ratings
- knowledge of activity sites/locations
- hazard identification (tree fall, river levels, debris)
- general risk management
- fire behaviour
- other training may involve driving, emergency management or other appropriate to the activities being undertaken.

3.1.8 Notication of Incident

Businesses and activity providers must notify their work health and safety regulator of certain 'notifiable incidents'. This is required under the WHS Act and a legal responsibility of businesses or leaders in the outdoors. Work health and safety regulators are committed to preventing work-related deaths and injuries. Notifying the regulator of 'notifiable incidents' can help identify causes of incidents and prevent similar incidents.

A Notifiable Incident is defined by the Work Health and Safety Act and means;

(a) the death of a person; or

(b) a serious injury or illness of a person; or

(c) A dangerous incident, that exposes a person to a serious risk, even if no one is injured;

arising out of the conduct of a business or undertaking at a workplace.

Notifiable Incidents may relate to any person—whether an employee, volunteer, contractor, visitor, guest or member of the public.

3.1.9 Duty of Care

Duty of care is your responsibility around your staff and clients. As a worker, volunteer or paid, you have a legal and moral responsibility to keep your clients and co-workers safe from harm whilst they are using a service or facility in which you are working. This responsibility is known as 'duty of care'.

4 Part Two – Considerations for Specific Events

Know your Weather Warnings

Weather warnings are provided when weather is expected that is not necessarily directly related to severe thunderstorms, tropical cyclones or bushfires. Examples include land gales, squalls, flash flooding, dangerous surf or tides. The effects of these incidents can be broad but also include such things as asthma attacks. The document provides guidance considerations for each severe weather warning provided by the Bureau of Meteorology. (See http://www.bom.gov.au/weather-services/severe-weather-knowledge-centre/WarningsInformation_SW_SWW.shtml for more information).

4.1 Fire Weather Warning

When preparing an activity plan you should check your relevant state authorities as listed in Appendix.

4.1.1 Fire Danger Index

The Bureau of Meteorology (BOM) issues Fire Weather Warnings when the Fire Danger Index (FDI) is expected to reach or exceed a value of 50 where conditions are considered as severe. The FDI is used to establish a Fire Danger Rating (FDR). See appendix for state relevant links to fire danger index maps.

4.1.2 Total Fire Ban

The Bureau of Meteorology **doesn't** have the power to declare a Total Fire Ban. This responsibility resides with the relevant state fire authorities (see Appendix) however the BOM publicises the declaration. A Total Fire Ban is declared on days when the danger of fires occurring is high, when fire would spread rapidly and be difficult to control. It creates restrictions on the use of open, fires, machinery, etc. The areas covered by fire bans does not necessarily align with BOM forecast districts.

A Total Fire Ban is declared when the FDI is about 50 - many factors come into play and FDI is just part of it. A total fire ban is normally issued in the afternoon for the following day but may be issued later, if needed.

4.1.3 Fire Danger Rating (FDR)

A Fire Danger Rating is a prediction of fire behaviour, including how hard it would be to put out a fire once it starts. It provides information on:

- the sort of bushfire behaviour that could be experienced on that day
- the type of threat bushfires may pose to life and property on any day given the forecast weather conditions.

Fire Danger Ratings will be a feature of weather forecasts and alert people about the actions to be taken in preparation for and on the day. FDRs will be publicized on the relevant state fire authorities website and possibly local media.

A Fire Danger Rating may not be announced until 5pm in the afternoon for the following day and may be specific for certain regions.

Groups should have a fire plan, prepared prior to undertaking the activity, that will enable thoughtful, considered decisions about trigger points and actions.

The Fire Danger Rating should be the trigger point for action for your activity. The Recommended Actions for Households are provided for comparative purposes.

4.1.4 Trigger point actions

RATING	Recommended Action for Households	Recommended Action for Outdoor Activities
CODE RED (Catastrophic) (FDI 100+)	If you live in a bushfire prone area the safest option is to leave the night before, or early in the morning.	Leave the area the night before or early in the morning. If this is not practical, take immediate action to protect the group. Practise or remind the group about behaviour in the event of a threat from fire.
EXTREME (FDI 75-99)	The safest option is to leave early in the day if you live in a bushfire prone area and your Bushfire Survival Plan is to leave. Only stay if your home is well prepared, well-constructed and you can actively defend it.	Leave the area the night before or early in the morning. If this is not practical, take immediate action to protect the group. Practice or remind the group about behaviour in the event of a threat from fire.
SEVERE (FDI 50-74)	The safest option is to leave early in the day if you live in a bushfire prone area and your Bushfire Survival Plan is to leave. Only stay if your home is well prepared and you can actively defend it.	If your activity is in a bushfire prone area, consider leaving early in the day. • remind group of the location and route to your severe weather site. • practice or remind the group about behaviour in the event of a threat from fire. • reassess the likelihood of meeting the goals of the activity • re-evaluate route selection and evacuation options • re-evaluate campsite choices • ensure procedures are modified to account for the heightened fire risk

VERY HIGH (FDI 25-49)	If you live in a bushfire prone area and your Bushfire Survival Plan is to leave, the safest option is to leave at the beginning of a day.	If your activity is in a bushfire prone area • reassess the likelihood of meeting the goals of the activity • re-evaluate route selection and evacuation options • re-evaluate campsite choices • ensure procedures are modified to account for the heightened fire risk e.g., meals that do not require cooking, waste disposal, campsite procedures • practise or remind the group about behaviour in the event of a threat from fire.
HIGH (FDI 12-24)	Check your Bushfire Survival Plan	Review your activity plan including severe weather sites, particularly those for bushfires.
LOW–MODERATE (FDI 0-11)	Check your Bushfire Survival Plan	Review your activity plan including severe weather sites.

4.1.5 Radiant heat

Understanding radiant heat – it is a major cause of death in bushfires

- bushfires produce enormous amounts of radiant heat that travels in straight lines, radiating out from a bushfire ahead of the flames
- radiant heat is the warmth you feel from a campfire, a radiator heater, or the flame from a gas stovetop but could be up to 50,000 times more intense in a major bushfire
- without protection, intense radiant heat will kill you
- radiant heat can be blocked by a solid object, such as a concrete wall, building, rock or log that creates a barrier between you and the bushfire
- the best protection from radiant heat is distance.

The radiant heat from a bushfire can kill a human without flames ever touching them. Radiant heat kills very quickly. The human body cannot absorb large amounts of radiant heat or withstand extremely high temperatures.

Protection from radiant heat

- wear protective clothing to safeguard yourself from radiant heat - long-sleeved shirt, pants made from cotton or some other natural fibre, sturdy boots and woollen socks
- make sure all skin is covered
- don't wear shorts, t-shirts and thongs during a bushfire as they do not give your body any protection from radiant heat
- cover up as soon as you are alerted to a fire in your area

- wear a wide-brimmed hat to protect your head and a face mask or towel to cover your mouth and nose
- solid objects provide a barrier against radiant heat.

Distance is the best protection

- the only sure way to survive bushfire and avoid radiant heat is to be out of the area
- the best protection from radiant heat is distance.

4.1.6 Heat-related illness

- heat stress occurs when the body is exposed to too much heat
- symptoms of heat stress include cramps, fatigue and dizziness
- managing heat stress is important as it can lead to heat exhaustion and heat stroke
- heat stroke can be fatal
- you can become dehydrated or heat-stressed during bushfires and not be aware of it
- to prevent heat stress, drink plenty of water as well as electrolyte drinks such as sports drinks to keep hydrated
- cool yourself by placing wet towels over your lower arms
- loosen clothing to circulate air flow, remove head protection and get some rest when safe to do so
- if someone is affected by heat stroke, move them to a shaded area if safe to do so and cool them by removing excess clothing, dampen them and fan air over them give small sips of fluids and place wet towels to the back of their head and armpits
- seek assistance immediately.

4.1.7 Signs of fire are observed

If a group spots smoke in the field:

- if it is safe, stop, observe the smoke and assess the following:
    - where is the fire?
    - how big is the fire?
    - in what direction is the fire moving? (what direction is the smoke blowing?)
    - can you tell how fast the fire is moving?
- contact an appropriate local authority such as the fire authority or land manager (and/or your base camp if you have one) and report any smoke or fire you can see from your position. Seek further information and advice from that authority to help inform your actions
- agree on a regular time to communicate with an external contact for up-to-date information.
- if necessary, evacuate, move to a safer location or move towards the pre-determined severe weather site
- once at the safer location, inform the external contact of your new position and what assistance, if any, you require.

4.1.8 Imminent threat

If the threat is imminent the following additional steps may be required:

- remain calm

- beware of radiant heat and smoke (rock is a good protector from radiant heat)
- do not wear any synthetic material and cover all exposed skin
- make and communicate a clear plan that everyone understands and stick to it
- avoid wandering or driving around
- find an open area or an area with low fuel, e.g. already burnt ground.

On foot

When moving on foot:

- move *out of the path* of the front of the bushfire, the safest location may be towards the rear of the fire
- move *across* any slopes
- move *downhill,* as fire and smoke move very fast uphill
- if you need to move faster, consider leaving backpacks and other loads, and carry only life essentials including communications, first aid kit and water.

Avoid:

- trying to out-run the fire
- travelling uphill
- going through flames, even low flames
- taking refuge in above ground water tanks (they boil).

If you cannot avoid the fire, protect yourself from radiant heat by

- getting behind a barrier such as a rocky outcrop, large log, wall or cave
- lying face down under an embankment or rock
- burrowing into loose earth
- get into a pond, dam or stream.

4.2 Severe Weather

The Bureau of Meteorology issues wind warnings via their website at www.bom.gov.au. Severe wind can be part of several different warnings.

4.2.1 Severe Thunderstorm Warning

These warnings are provided when thunderstorms are expected to produce dangerous or damaging conditions.

Literally hundreds of thunderstorms occur each year in Australia. Although all thunderstorms produce lightning, that is a danger itself, not all of them are "severe" or likely to produce damage. The Bureau of Meteorology defines a severe thunderstorm as one that produces:

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

Most thunderstorms do not reach the level of intensity needed to produce these dangerous phenomena, but they all produce lightning which can cause death, injury and damage. They are localised events and are more common than any other natural hazard.

See 4.3.1 for lightning strike considerations.

4.2.2 Severe Weather Warning

These warnings are provided when severe weather is expected that is not directly related to severe thunderstorms, tropical cyclones or bushfires. Examples include land gales, squalls, flash flooding, dangerous surf or tides. The effects of these incidents can be broad but also include such things as asthma attacks.

4.2.3 Gales / Cyclones

Winds greater than 63 km/h or 34 knots usually last longer and affect much larger areas than thunderstorms. Cyclones measure at 47 knots, while some Storms at 117km/hr or 64 knots.

At the lower speed, on land, twigs break off trees; progress is generally impeded.

At sea there would be moderately high waves of greater length; edges of crests begin to break into spindrift; foam is blown in well-marked streaks along the direction of the wind. (Part of the Beaufort Wind Scale, which relates visible phenomena to wind speed).
Blizzard conditions in snow terrain refers to strong winds and reduction of horizontal visibility of less than 200 metres.

4.2.4 Coastal Waters Wind Warning

Warnings for coastal waters are issued whenever strong winds, gale, storm force or hurricane force winds are expected (i.e. greater than 26 knots or 48 km/h).

See www.bom.gov.au/catalogue/warnings/WarningsInformation_Marine_CWWW.shtml

4.2.5 Action

In severe wind:

- consider forecast wind direction
- do not shelter or camp under or in the fall zone of trees
- ensure all loose objects are secured. (e.g. small or light items lying around a campsite or equipment/clothing stowed on a backpack or in a canoe/on a kayak deck)
- extinguish any campfires
- seek sheltered area
- consider moving away from high-risk areas, e.g. cliff faces/edges, on water
- consider ceasing or modifying your current activity
- limit driving only to that which is necessary for the activity to continue or for safety reasons
- move off the water.

4.3 Lightning Strike

The Bureau of Meteorology issues warnings via their website at www.bom.gov.au.

For the impact of thunderstorms, including lightning, see http://reg.bom.gov.au/info/thunder/

4.3.1 Severe Thunderstorm Warning

Also see 4.2.1

Generally accepted practices across outdoor sport and construction industries promotes the 30/30 rule for harm minimisation. See Australian Standard AS/NZS 1768:2007.

4.3.2 The 30/30 rule

This means if there is 30 seconds or less from the lightning flash to the thunder, you are in danger and should avoid high and exposed areas. Then wait at least 30 minutes after the last thunder before assuming that it is safe to continue the activity.

4.3.3 Lightning position

- take off any backpack or similar load
- remove, and stay away from, all metal objects
- spread the group out, approximately 15 metres apart if space allows, reducing risk of multiple injuries. Ensure you maintain communication within the group
- crouch down, feet and knees together, put your head down, cover ears with hands and try and make yourself the smallest target possible while minimising your contact with the ground.

If anyone is struggling to maintain this position, use a rolled-up mat, stuffed sleeping bag or bag of clothes to sit on. If you are in possible danger, then:

Do

- suspend all outdoor activities and seek safer (less exposed) ground
- try to get off peaks and ridges as soon as possible; descend to lower ground
- try to find an enclosed structure, e.g. a hut
- get inside your vehicle if possible, close the windows and avoid touching metal
- find an area of forest/bush that is protected by a wide area of uniform trees, the smaller the better
- get off water.

Don't

Do not move towards or seek shelter from:

- shallow caves, overhangs, rocky outcrops, towers, tall trees, fences, telephone lines, power lines and metal objects
- single large trees in the open
- rivers, lakes, and other bodies of water. If on the water, get off and seek appropriate cover. Avoid using communication devices.

4.3.4 Thunderstorm Asthma

Thunderstorms can be very serious for people with asthma.

Thunderstorm asthma events are believed to be triggered by an uncommon combination of high grass

pollen levels and a certain type of thunderstorm, causing pollen grains from grasses to be swept up in the wind and carried long distances. The BOM issue warnings when such events are likely to occur

(Ref https://asthma.org.au/about-asthma/triggers/thunderstorm-asthma/)

4.4 Flood Warnings

4.4.1 Flash flooding

Flash flooding usually results from relatively short, intense bursts of rainfall, commonly from thunderstorms. Flash floods tend to be quite local and it is difficult to provide effective warning because of their rapid onset. Torrents of water can wash people, cars and even buildings away at short notice. It effects activities or operators that use water or rivers for their crossing or activity.

4.4.2 Riverine flooding

Riverine flooding is generally the result of widespread rain, causing water over large areas to collect in streams and rivers, which overflow. These floods generally rise at a slower rate and although quite devastating, do rise at a rate that usually allows for managed escape. Riverine floods are still dangerous as flowing water can still wash people, cars, etc away.

The Bureau of Meteorology issues flood warnings via their website www.bom.gov.au

on a as needs basis.

4.4.3 Action

Groups/leaders should monitor river levels in the field when flood is a foreseeable hazard,

- there must be a policy about the continuation of activities in flood-affected rivers/areas if recommended flood cut- offs are exceeded (as issued by the Bureau of Meteorology or the organisation / group policy)
- on a river, do not continue water activities if the river is rising rapidly and likely to exceed the competency of the leader and the ability of the group
- reassess the crossing of swollen creeks and rivers and flooded bridges/fords, including by vehicle. Check for:
    - Debris
    - Turbidity of water
    - Depth
    - Speed & current
    - Base of creek/river
- have knowledge of safe crossing techniques
- consider consequences (for evacuations or other support to group/s) of reduced vehicle access due to flooding where access involves river / creek crossings
- avoid camping in locations likely to experience flash flooding, e.g. creek beds
- reassess the suitability of water for drinking, during and after a flood.

4.5 Extreme Temperature – hot and cold

Note that no authority or agency advises what conditions are considered 'too hot' or

'too cold'. Consider stopping the activity if:

- the environmental conditions exceed the ability of the leader and group
- anyone is showing signs or symptoms of a temperature-related illness. In conducting activities in extreme temperatures
- take into account the group's skill level, experience, equipment and goals
- be aware of pre-existing medical conditions of participants and leaders which may be exacerbated by extreme temperatures
- the group/s should have appropriate individual and group equipment
- consider moisture (humidity) for hot conditions, and wind chill for cold conditions
- in white-out conditions, the leader should always take over navigation and implement white-out procedures
- have frequent rest breaks to prevent fatigue and associated injury and medical conditions
- facilitate frequent food and water intake by participants
- group members should be aware of and alert to the signs and symptoms of heat and cold related illnesses and conditions for themselves and each other.

4.6 Blizzard Warning

The Bureau of Meteorology defines a blizzard as a violent and very cold wind that is laden with snow, some part, at least, of which has been raised from snow covered ground.

If blizzard conditions are forecast for the expected trip

- consider taking specialist equipment (snowshoes as well as skis)
- ensure tents are rated for expedition conditions if camping
- consider smaller group size and/or higher leader ratios. In such conditions
    - do not travel through exposed areas unless group has sufficient experience and equipment to manage the conditions seek sheltered locations or postponement of the activity
    - move away from high-risk areas such as steep slopes, treed areas (limb fall), peaks, exposed open areas, etc.

Blizzard and high snowfall days also include poor visibility, extreme cold, very high winds and deep snow with reduced mobility.

4.7 Bushfire Smoke & Fuel Reduction Health Hazards

Exposure to smoke from fires can worsen asthma and other respiratory conditions, cause coughing and shortness of breath and irritate the eyes, nose and throat.

Large particles in bushfire smoke irritate the eyes, nose, throat and lungs. The finer particles can penetrate deep into the lungs and are more harmful. Smoke also contains toxic gases, such as carbon monoxide, carbon dioxide, and nitrogen oxides.

If you suffer from asthma, heart or lung problems, make sure you always have at least 5 day's worth of medication with you if there is a bushfire nearby.

Health alerts will be normally be promulgated by state authorities when smoke concentrations are a health risk. They will include information on who is likely to be affected and advice on what to do.

Consideration to adapting or even cancelling programs should be made when smoke levels are high, in particular when some or all participants have respiratory health issues such as severe asthma

The national link is https://www.health.gov.au/news/health-alert-bushfires-and-smoke

5 Definition of terms

Severe weather event

Severe weather is defined as any potentially destructive weather phenomenon.

Trigger point

A 'trigger point' is a quantifiable measure of weather condition(s), e.g., wind strength, total fire ban, fire danger rating, rainfall in millimetres or river level.

For an activity, this will be a previously identified measure (e.g., level of fire danger, temperature, wind speed) that will 'trigger' a review of the conduct of the activity by the leader.

Severe weather site

A site or sites selected by the leader or organisation, prior to commencement of the activity, which the group may move to if threatened by a severe weather event.

Fire Plan

A well thought out plan about how you will prepare and respond to a fire in your area. A plan should include a set of actions to address the risk and will require you to make a series of decisions about what you will do on a high fire risk day, or should a fire threaten your activity.

Organisation or activity provider

This is a commercial body (for profit) or non-commercial body (not-for-profit / community group) which undertakes to provide an activity.

Leader

This is the person who has the responsibility for the conduct of the actual activity. The leader should have a level of skill appropriate to the conduct of the activity and may be supported by one or more assistant leaders.

Assistant leader

This person will be delegated tasks by the leader and will have a level of skill appropriate to those tasks.

Participants

A person whose welfare is the responsibility of leader or assistant leader and/or who participates in an activity for recreational or educational purposes.

6 Further Information

All weather information and warnings may be found at the Australian Government Bureau of Meteorology www.bom.gov.au

Outdoors NSW & ACT would like to extend its thanks to the volunteer committee who reviewed and updated this document for industry use.

Appendix of Resources

1) Weather information www.bom.gov.au

   Relevant information can be referred to in several sections of this website including;

   http://media.bom.gov.au/social/blog/2050/know-your-weather-bushwalking-and-camping/

   http://media.bom.gov.au/social/blog/2203/know-your-weather-kayaking-canoeing-and-rafting/

2) Severe Weather Knowledge Centre http://www.bom.gov.au/weather-services/severe-weather-knowledge-centre/safety.shtml

3) Fire information

   a) NSW https://www.rfs.nsw.gov.au

      i) NSW Fire Danger Index Maps http://www.bom.gov.au/nsw/forecasts/fire-map.shtml

   b) ACT https://esa.act.gov.au/

      i) ACT Fire Danger Index Maps http://www.bom.gov.au/nsw/forecasts/fire-map.shtml

   c) VIC https://www.cfa.vic.gov.au/home

      i) VIC Fire Danger Index Maps http://www.bom.gov.au/vic/forecasts/fire-map.shtml

   d) SA https://www.cfs.sa.gov.au/home/

      i) SA Fire Danger Index Maps http://www.bom.gov.au/sa/forecasts/fire-map.shtml

   e) WA https://www.emergency.wa.gov.au/

      i) WA Fire Danger Index Maps http://www.bom.gov.au/wa/forecasts/fire-map.shtml

   f) TAS https://www.fire.tas.gov.au/

      i) TAS Fire Danger Index Maps http://www.bom.gov.au/tas/forecasts/fire-map.shtml

   g) NT https://pfes.nt.gov.au/fire-and-rescue-service

      i) NT Fire Danger Index Maps http://www.bom.gov.au/nt/forecasts/fire-map.shtml

   h) QLD https://www.ruralfire.qld.gov.au/map/Pages/default.aspx

      i) QLD Fire Danger Index Maps http://www.bom.gov.au/qld/forecasts/fire-map.shtml

   i) Norfolk Island http://www.norfolkisland.gov.nf/services/fire-service

4) Bureau of Meteorology pre-recorded telephone messages;

   a) ACT/New South Wales Coastal, Land Weather and Flood Warnings: 1300 659 218
   b) Victoria Coastal, Land Weather and Flood Warnings: 1300 659 217
   c) Queensland Land Weather and Flood Warnings: 1300 659 219
   d) Western Australia Land Weather and Flood Warnings: 1300 659 213
   e) South Australia Coastal, Land Weather and Flood Warnings: 1300 659 215
   f) Tasmania Coastal, Land Weather and Flood Warnings: 1300 659 216
   g) Northern Territory Coastal and Land Weather Warnings: 1300 659 214

5) State and territory emergency services

   a) New South Wales NSW SES 132 500
   b) Victoria VIC SES 132 500
   c) Queensland SES 132 500
   d) Western Australia DFES 13 3337
   e) South Australia SA SES 132 500
   f) Tasmania Tas SES 132 500
   g) ACT ESA 13 22 81
   h) Northern Territory Secure NT 132 500

6) SafeWork Australia – Notifications and Working Outside
https://www.safeworkaustralia.gov.au/topic/working-outside