17. Extreme weather

17.1 AFL statement on extreme weather

Environmental factors may affect the playing of Australian Football. On some occasions, extreme weather conditions (for example, heat, humidity, lightning, poor air quality) may lead to postponement or cancellation of matches, or the implementation of other measures to ensure the safety of Players and Football Officials. This Section sets out the approach that each Controlling Body must adopt when assessing extreme weather conditions.

17.2 Extreme heat

(a) **Effects of extreme heat**

Heat stress can impair the wellbeing of Players and Football Officials (for example, dizziness, headaches and collapse). In extreme cases, heat stroke can develop, which may be life threatening. Preventing and managing heat stress and injury will ensure safe performance and may improve Player recovery. To prevent and manage heat stress, careful planning and preparation is required in accordance with this Section.

(b) **Controlling Body responsibility**

(i) A Controlling Body must:

(A) assess the heat stress risk by regularly reviewing weather information provided by the Bureau of Meteorology; and

(B) use reasonable endeavours to monitor the implementation of heat stress management strategies by Clubs and Players.

(ii) Where there is a risk of heat stress, a Controlling Body must use reasonable endeavours to schedule Matches:

(A) to avoid extremes of heat;

(B) allow for increased rest and recovery breaks; and

(C) at venues equipped with cooling facilities (for example, cool room (where possible), misting fans, shade and air conditioning).

(iii) In addition, a Controlling Body may undertake the following measures to mitigate heat stress:

(A) increase the number of water carriers to run drinks at Matches;

(B) increase the length of intervals to enable teams to leave the field for the shade of the rooms at each break;

(C) reduce length of quarters;

(D) postpone or reschedule Matches.

(c) **Club responsibility**

(i) A Club must monitor environmental factors such as extreme heat in respect of Matches and any training sessions administered by the Club. The Club should assess the heat stress risk by regularly reviewing information provided by the Bureau of Meteorology. Heat stress management strategies should also be implemented at all Matches and training sessions.

(ii) A Club must use reasonable endeavours to:

(A) coordinate training times to avoid extreme heat conditions;

(B) use cooling aids during Matches and training sessions such as ice vests, water spray bottles, cold or iced towels, misting fans (in change rooms and on interchange bench) and shade including portable shade structures;

(C) provide heat permeable apparel to Players;

(D) report incidents of heat stress illness to the relevant Controlling Body;

(E) ensure a Club Football Official is available to monitor and manage Players for heat stress issues as they arise during a Match;

(F) provide adequate fluids (water and/or sport drinks) in appropriate bottles; and

(G) ensure trainers are fit enough to access as many players as possible during the game.

(d) **Player responsibility**

A Player must ensure that the impact of environmental factors such as extreme heat is not exacerbated by their own conduct and take measures to:

(i) use cooling strategies before, during and after Matches (for example, cool shower, ice towels or vest on neck and torso)

(ii) ensure adequate fluid intake prior to and during Matches (500-700mls per quarter);

(iii) monitor hydration, if practical, by pre-and post weighing and replace lost fluids (weight)

(iv) notify Club Football Officials when affected by heat or when performance is noticeably affected;

(v) not play in the heat with an existing illness; and

(vi) apply sun protection sunscreen at least 30 minutes before exposure to the sun.

*[**Guidance Note:** Sunscreen with a UPF rating above 15 is suitable however the AFL recommends a 50+ UPF rating]*

17.3 Lightning

(a) **AS1768-2007**

(i) A Controlling Body must use best endeavours to comply with AS1768-2007, entitled The Lightning Protection Standard, published on 10 January 2007 (**Lightning Standard**).

(ii) While the Lightning Standard will not necessarily prevent damage or personal injury due to lightning, it will reduce the probability of such damage or injury occurring.

(b) 30/30 Safety Guideline

(i) In the absence of specific information from a weather radar, lightning location system or specialised warning device then the relevant Controlling Body and Club(s) must refer to the 30/30 Safety Guideline.

(ii) The 30/30 Safety Guideline specifies that where lightning is considered to be a possible or actual threat to a Match or training session the following procedures and considerations apply:

(A) The observation of approaching storm clouds, the first flash of lightning or clap of thunder, no matter how far away should heighten lightning awareness. The level of risk depends on one's location (direction and distance) relative to the storm cell and the direction in which the storm system is traveling.

(B) A simple method of determining the distance to the storm cell is to measure the time elapsed from when the lightning flash is observed and when the associated clap of thunder is heard.

(C) Light travels faster than sound. Assuming that the light from the flash reaches the observer instantaneously, and knowing that sound takes approximately three (3) seconds to travel one (1) kilometre, the distance can be determined by using the following rule:

distance (in km) = time from observing the flash to hearing thunder (in 3 seconds).

(D) It is important to remember that lightning may be obscured by clouds so it must be assumed that when thunder is heard, lightning is in the vicinity. In such cases, careful judgment must be used to determine whether a threat exists.

(E) The accepted "safe" distance from lightning is greater than 10km. This means that as the time interval between observing the flash and hearing the thunder approaches 30 seconds, all those in exposed areas should be seeking or already inside safe shelters. A storm cell with lightning activity within 10km constitutes a threat.

(F) It is recommended that people wait a minimum of 30 minutes after the last sighting of lightning or sound of thunder. This figure is based on the observation that the typical storm moves at about 40km/h. Thus, waiting 30 minutes allows the thunderstorm to be about 20km away, minimising the likelihood of a nearby lightning strike.

(G) It is important to emphasise that blue skies and lack of rainfall are not adequate reasons to breach the 30 minute minimum return-to-activity rule.

(c) **General lightning safety guideline**

(i) Prior to Match Day

A Controlling Body must assess the thunderstorm activity and lightning risk to Matches and training sessions by regularly reviewing weather information provided by the Bureau of Meteorology.

(ii) Match Day

(A) If lightning is predicted within 10km of a Match venue at the scheduled starting time, that Match may be delayed or suspended by the relevant Controlling Body or Umpire(s).

(B) A decision to resume play in respect of a Match which has been delayed or suspended due to lightning will be made by the Controlling Body or Umpire(s) based on information obtained from the Bureau of Meteorology and in consultation with the relevant Clubs. As per 17.3(b)(ii)(F), it is recommended that at least 30 minutes have elapsed since the last sighting of lightning or sound of thunder.

(d) **Club responsibility**

(i) A Club must monitor environmental factors such as lightning in respect of Matches and any training sessions administered by the Club. The Club should assess the lightning risk by reviewing information provided by the Bureau of Meteorology.

(ii) Where there is a risk of lightning, a Club must adhere to the following general guidelines:

(A) If a lightning threat emerges, a nominated Club Football Official must contact all relevant coaching, rehabilitation and training staff and provide updates on a regular basis.

(B) A decision to delay, suspend or resume training should be made in consultation with relevant coaching and administration staff.

(C) If Players are training when the lightning threat becomes real, then they should leave the training venue immediately and take shelter inside a building or car. They should not shelter under or near trees.

(D) Once the storm's path has been reassessed, there must be a minimum of 30 minutes elapsed before returning to training.

(E) Where there is no access to Bureau of Meteorology information, the 30/30 Safety Guideline serves as a guide for the suspension and subsequent resumption of activities.

17.4 Air Quality

(a) **Effects of poor air quality**

Exposure to poor air quality – such as bushfire smoke or pollution – affects individuals differently based on their overall health and pre-existing conditions (e.g. asthma or other respiratory illnesses). Physical activity during such conditions can significantly increase respiratory rate and volume, heightening the risk of breathing difficulties and respiratory complications.

(b) **General air quality guideline**

(i) PM2.5 refers to fine particulate matter with a diameter of less than 2.5 micrometres. These particles are a key indicator of air quality and are commonly elevated during bushfires and other pollution events. Elevated PM2.5 levels can pose risks to health, particularly for individuals with respiratory conditions.

(ii) When air quality is compromised or at risk, the following recommended actions should be considered:

PM2.5 Level (µg/m³)	Air Quality	Recommended action
PM2.5 less than 25	Good	Normal outdoor activity
PM2.5 between 25 – 30	Fair	Normal outdoor activity; players with existing respiratory conditions should take additional care
PM2.5 between 51 – 150	Poor	Where possible, limit duration of outdoor training or train indoors
PM2.5 greater than 150	Hazardous	Avoid outdoor training and consider postponing or suspending matches

(iii) The PM2.5 level can be monitored by reviewing information provided by the Bureau of Meteorology or apps including AirRater and AirMatters.

(c) **Controlling Body and Club responsibility**

(i) Where a Controlling Body or Club is notified or it is apparent, that air quality may be poor or hazardous:

(A) A Controlling Body and/or Club should monitor and assess air quality risk in respect of Matches

(B) A Club should monitor and assess air quality risk in respect of any training sessions administered by the Club

(ii) Where there is poor or hazardous air quality, a Controlling Body and/or Club should consider following the recommended actions outlined in Section 17.4(b).