



OUR MISSION

To connect people with dragon boating across Australia.

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ISSUE	DESCRIPTION	DATE	REVIEWED	APPROVED
Previous	Extreme Weather and Conditions Policy	May 2021	DBWA	May 2021
Current	Formatted	Jul 2023	DBWA	Aug 2023
Review		2026		

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1. INTRODUCTION

Dragon Boating WA (DBWA) and Affiliated Clubs (Clubs) have a responsibility to ensure that all their dragon boat competitions and events are conducted in a safe environment. The welfare of all participants must be the foremost concern for Event Organisers and the way in which Event Organisers prepare for and respond to adverse weather and other conditions is a critical component of risk management.

Exercising in extreme weather or other conditions can cause extra demands on the body, while prolonged exposure to extreme conditions, even for those not actively paddling, can present similar risks. The dangers of high intensity exercise in such environments can be harmful.

This Policy has been developed to assist in the regulation of DBWA competitions and events, and to provide information and guidance to the whole dragon boat community, in particular in coming to an informed decision as to whether to modify, postpone or cancel dragon boat activities and associated events.

2. SCOPE

This Policy is applicable to all competitions and events administered by DBWA or conducted on its behalf. It may be adopted, with or without amendment, by any other Dragon Boat Organisation.

For the purposes of this Policy, the word Participant will encompass the following groups: athletes, members, spectators, volunteers, officials, coaches and any other persons participating in competitions or events.

3. INTENDED USE

There is a recognition that it is not possible to set down a black and white set of benchmarks at which point events must be modified. This is because of the diverse nature of dragon boat activities and the varied nature of the environments in which they take place. As an example, children or older participants may have different requirements to high performance athletes. Also, consideration must be given to the fact that while Participants maybe exposed to extreme weather conditions for a limited period, officials and/or volunteers may have a different period of exposure. Event Organisers have a duty of care to monitor environmental conditions and minimise risk for all Participants involved in a DBWA event.

While agencies such as the Bureau of Meteorology (BOM) can provide data and guidelines to assist in the decision-making process, these must be weighed against information specific to the location and nature of the activity. The BOM provides numerous local readings around Australia; however, there may be no reading available for the exact location of an event. Similarly, the information provided by such third parties may not be current. In assessing Air Quality, for example, there is typically a time lag of more than one hour to the availability of the recent readings. Accordingly, external data must be taken into consideration along with 'on the ground' observations of conditions and relevant factors.

This Policy lays out guidelines and factors to be considered by Event Organisers and, ultimately, all Participants involved in the event. While Event Organisers may choose to alter or cancel activities, even if the decision is made to continue Participants should never be forced to participate in dragon boat activities in any circumstances. DBWA respects the right of the individual not to participate in a DBWA sanctioned activity for whatever reason.



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4. EXTREME HEAT

For up-to-date temperature and humidity readings, Event Organisers may utilise weather monitoring equipment at the competition venue where possible. Alternatively, Participants are encouraged to refer to the Bureau of Meteorology's website - www.bom.gov.au. Then follow the link to *your state*, then to: *Observations*, then: *Thermal Comfort*. If readings are not available at the exact location of an activity, the BOM site will provide local temperature and humidity readings.

Event Organisers and Participants should understand that children are at greater risk of heat exposure than adults because their thermoregulation mechanisms are not fully developed (particularly high temperatures combined with high humidity levels). Similarly, older participants can also be at high risk because of reduced cardiac function. Highly trained athletes have improved thermoregulatory capacity, particularly if fully heat acclimatised. In addition, depending on the disability, some Para athletes are unable to thermoregulate.

4.1 Heat Index

As well as temperature, humidity is an important consideration in determining whether to amend or cancel a dragon boat activity. A Heat Index is used as a means of incorporating both temperature and humidity to give a single figure to be used in assessing conditions.

The Heat Index shall be determined from the Heat Index Table. In using the Heat Index Table provided below, Ambient Temperature and Relative Humidity should be measured directly at each competition venue, in the shade (out of direct sunlight). Relative Humidity can be determined by using a digital thermometer/ hygrometer that can be purchased at electronic stores at a reasonably low cost.

For example, if the Temperature is 35°C and the Relative Humidity is 40%, the Heat Index is a value of 39. If the Temperature is 35°C and the Relative Humidity is 60%, the Heat Index is a value of 42.

		Ambient Temperature (°C)																
		27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
Humidity (%)	25	25	26	28	29	30	31	32	33	35	36	37	38	40	41	42	43	
	30	26	28	29	30	31	33	34	35	37	38	39	41	42	43	45	46	
	35	27	28	30	31	32	34	35	36	38	39	40	42	43	45	46	48	
	40	28	29	30	32	33	34	36	37	39	40	41	43	44	46	48	49	
	45	28	30	31	32	34	35	37	38	40	41	43	44	46	47	49		
	50	29	30	32	33	35	36	38	39	41	42	44	45	47	49	50		
	55	30	31	32	34	35	37	38	40	42	43	45	46	48	50			
	60	30	32	33	35	36	38	39	41	42	44	46	48	49				
	65	31	32	34	35	37	39	40	42	43	45	47	49					
	70	31	33	35	36	38	39	41	43	44	46	48	50					
	75	32	34	35	37	38	40	42	44	45	47	49						
	80	33	34	36	38	39	41	43	45	46	48	50						
	85	33	35	37	38	40	42	44	45	47	49							
	90	34	36	37	39	41	43	45	46	48	50							
	95	35	36	38	40	42	43	45	47	49								
	100	35	37	39	41	42	44	46	48	50								

4.2 Activation Recommendations

The Event Organisers have the responsibility to modify, postpone or cancel any race on account of the weather conditions if they believe there is a real danger to the Participants' health based



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on the heat index.

The following guidelines will determine activation of the recommendations.

- **For Participants over 16 years of age:**

Where the heat index is 42 and above (Red Zone), competition should be postponed, cancelled or participants in this age category not to compete at the event. At heat index between 38 and 41, inclusive (Orange Zone), Event Organisers need to assess the suitability of participation based on the following:

- Nature of Activity (e.g. duration/intensity of exposure, activity is in water, etc.)
- Fitness level of competitors
- Athletic ability
- Age of competitors
- Level of acclimatization.

- **For Participants 16 years and younger:**

Ideally, U16 events should be scheduled for the cooler parts of the day.

Where the ambient temperature is 34 degrees and above and the heat index is 40 and above (Patterned Red Zone), competition for U16 athletes should be postponed or cancelled. As soon as the ambient temperature is 34 degrees or above, Event Organisers need to assess the suitability of U16 athletes participating in events based on the following:

- Nature of Activity (e.g. duration/intensity of exposure, activity is in water, etc.)
- Fitness level of competitors
- Athletic ability
- Age of competitors
- Level of acclimatization.

- **For Officials and Volunteers:**

In addition to the guidelines for competitors, consideration must be given to officials and volunteers involved in the delivery of the dragon boat activity. A heat index between 38 and 41, inclusive (Orange Zone), Event Organisers need to assess the suitability of officials and volunteers participating in events based on the following:

- Nature of Activity (e.g. duration/intensity of exposure, access to periods of rest, exposure to the elements, access to seating, water and sustenance, etc.)
- Fitness level of participants
- Age of participants
- Level of acclimatization.

Event Organisers should consider strategies to minimise risk to officials and volunteers, including rotation of roles, provision of additional food/drink/shade, etc. In extreme conditions, Event Organisers should consider suspension of the paddling activity for 10 minutes every hour to allow officials and volunteers to take a break.



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5. AIR QUALITY

Poor air quality can pose a health risk to Participants. Elevated exposure to pollutants can result in inflammation of the respiratory tract, exacerbating conditions such as asthma. During exercise, the total amount of air passing through the airway can be increased, with a corresponding increase in pollutant exposure. The health impact of poor air quality can vary based on an individual's current health status and previous medical conditions.

The Air Quality Index (AQI) is an accepted means of quantifying air quality by public health authorities encompassing:

- Air pollution levels at your nearest monitoring site or region
- The common contributing pollutants
- The overall health risk associated with a given rating

The Air Quality Measuring website in Western Australia is found at <https://www.der.wa.gov.au/your-environment/air/air-quality-index>

For healthy individuals, the AIS guidelines recommend that training/competition should be modified or cancelled if the AQI levels are more than 100 for prolonged intense endurance activities (e.g. marathon or long distance events) or more than 150 for intermittent or short duration intense events. With that in mind, Event Organisers must meet to consider cancelling or modifying the dragon boat activity as soon as the AQI levels elevate beyond 100 for longer duration activities and 150 for shorter duration and intermittent activities. In deciding as to whether the program for an activity should be altered, consideration should also be given to factors including:

- Whether recent readings suggest the AQI is trending up or down (Note: it is a recommendation that events are modified/cancelled if the AQI is above the tolerance threshold and is trending upwards)
- Temperature
- Humidity
- Prevailing winds
- Local bushfire or atmospheric conditions
- The AQI forecast
- The nature of the activity, in terms of duration, intensity, etc

Participants who are more susceptible to poor air quality (eg asthmatics) should seek medical advice and make their own decision on whether they should participate in an activity once the AQI is over 100.

6. BUSHFIRES

Bushfires and grassfires are common throughout Australia. The nature of these fires can be unpredictable and fast moving. DBWA recommends activities should be cancelled or postponed if the advice in the area is "watch and act" or higher. Up to date information regarding the status of individual fires can be obtained through websites/apps of government fire services.

If the advice is increased to "Emergency" then all activities must stop immediately, and all



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7. LIGHTNING

participants must follow the instructions of emergency personnel in the area. Lightning poses a real risk of death or serious injury to individuals undertaking outdoor activities, and this risk is increased when participants are on the water.

A safe distance from lightning is advised to be at least 10 km. Therefore, if an activity is taking place within 10 km, the recommendation is to stop activities and seek shelter.

If you are unable to access information on the location of the lightning, the 30/30 lightning guideline is to be used. The 30/30 lightning guideline is in two stages:

1. Stop the activity:

If the time between seeing the lightning flash and hearing the thunder is less than 30 seconds, then all activities should stop, and you should seek shelter as the lightning is within 10 km of your location.

2. When it is safe to resume the activity:

A minimum 30-minute wait is recommended before activities resume.

8. RESPONSIBILITIES OF CHIEF OFFICIAL

- The Chief Official, or similar, is appointed by the Event Organisers.
- The Chief Official must have access to the appropriate weather monitoring equipment (where available) and/or internet sites to monitor weather conditions. For activities taking place in remote locations, this includes ensuring a steady internet signal is available.
- When conditions are forecast for extreme weather or weather begins to deteriorate conditions are to be monitored at least every hour.
- When extreme conditions are forecast, the Chief Official should ensure that all Participants are aware of the process for assessment of conditions and how any decisions will be communicated.
- If an activity is suspended, the Chief Official must ensure firstly that all Participants involved are promptly made aware of the decision and secondly, that they are made aware of the process in place to make subsequent decisions around resumption or cancellation. This will allow participants to make informed decisions around what they should be doing during any break in the activity.
- The Chief Official should keep timely records of the processes undertaken to reach decisions and the outcomes arrived at.
- The Chief Official is responsible for ensuring that the Risk Management Plan for the activity is up to date in advance of the holding of the activity.
- The Chief Official is responsible for ensuring that there are appropriate measures in place to mitigate the risks of extreme weather or conditions, such as the provision of shade or sunscreen, and access to water.



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9. ARRIVING AT A DECISION TO MODIFY/SUSPEND/CANCEL AN ACTIVITY

- The Chief Official has the power to cancel or postpone an activity on account of the weather conditions.
- Where possible, the Chief Official may seek advice from an authorised medical person at the activity. Ideally, this medical advisor should be someone who does not have any interest in the outcomes of the activity itself, to maximise the objectivity of the advice provided.
- In assessing conditions, the Chief Official should seek views from the stakeholder groups involved in the activity including but not limited to: Persons with experience of local conditions; Athletes; Officials; the relevant Dragon Boat Organisation(s).
- Notwithstanding the above, DBWA reserves the right to cancel any competition at its events if it is deemed that the environmental conditions present a serious health risk to Participants, even if conditions fall within the acceptable levels detailed within this Policy.

APPENDIX 1 - Further information about heat related risks

Fluids

Exposure to high temperatures is an issue to be aware of with respect to all paddling activities. High intensity exercise in a hot environment, with the associated fluid loss and elevation of body temperature, can lead to dehydration, heat exhaustion and heat stroke. It should be noted that children are generally more susceptible to heat related risks, given that they have greater difficulty in getting rid of heat. Accordingly, close attention should be paid to children to ensure that they are exercising at their preferred intensity.

Precautions for minimising the risks of heat injuries include:

- **Do not wait to feel thirsty before you drink!** Thirst is a poor indicator – it is a late signal of severe fluid loss.
- Drink cool water as it is absorbed more rapidly than warm water.
- If competing for more than one hour, use a sports drink - a carbohydrate drink of 5-10% concentration with a small amount of sodium chloride (salt tablets should be avoided because of their extremely high sodium chloride content, which can make dehydration worse). Diluted sports drinks, cordial and fruit juices should also be made available or recommended. Not only will this make the fluids more palatable, but it will be beneficial for replacing fluids, energy and electrolytes lost during exercise. It will delay the onset of exercise-induced exhaustion and hence aid in the prevention of heat stroke.
- It is recommended that officials and participants drink at least 7-8ml of fluid per kg of body mass, per hour, to diminish the risk of heat illness.
- Fluid should begin to be consumed at least two hours before exercising to promote adequate hydration.
- Drink at least 500 ml (2-3 glasses) ½ to 1 hr before a race. Drink at least 500 ml to 1 litre (5-6 glasses) after a race and continue to drink until fluid losses are replaced.

What to wear

- Race shirt, long sleeve shirt or singlet top.
- Shorts, leggings or paddling shorts.
- Boat shoes or the like
- Hat, sunglasses and sunscreen

Public announcements

Recommended that public announcements be regularly made during events reminding everyone to keep drinking water, apply sunscreen and remain in the shade whenever possible.

Symptoms of heat exhaustion

Dehydration can lead to heat exhaustion. Symptoms of heat exhaustion may include:

- High heart rate
- Dizziness
- Headache
- Loss of endurance / skill
- Confusion
- Nausea
- Cramps
- The skin may still be cool/sweating, but there will be signs of developing vasoconstriction, e.g. pale colour.
- They will pass little urine, which will be highly concentrated.
- They may collapse on cessation of activity.

If you have any of these symptoms, you should stop competing, drink more fluids, cool down and seek medical treatment / First Aid.

Emergency plan for heat exhaustion

If a person is showing any symptoms of heat exhaustion take the following action:

- Stop the person
- Lie the person down, preferably in a shaded area out of direct sunlight
- Loosen and remove excessive clothing
- Cool by wetting skin liberally and vigorous fanning
- Give cool water to drink if conscious
- If the person is confused or unable to drink water seek medical help immediately.

Symptoms of heat stroke

Severe dehydration may lead to heat stroke, which is potentially fatal and must be treated immediately by a medical practitioner. Participants who keep participating when suffering from heat exhaustion may experience heat stroke. Heat stroke can occur even when drinking plenty of fluids. It is important to cool the person down as quickly as possible. Heat stroke symptoms include:

- Dry skin
- Confusion
- Collapsing

Emergency Plan for heat stroke

If a person is showing any symptoms of heat stroke take the following action:

- **Call a Doctor or Ambulance immediately**
- Stop the person
- Lie the person down
- Loosen and remove excessive clothing
- Cool by wetting skin liberally and vigorous fanning. If access to a shallow bath of water/iced water is available this should be used
- Give cool water to drink if conscious
- Apply wrapped ice packs to groin and armpits
- **SEEK MEDICAL ASSISTANCE IMMEDIATELY**

For more information on heat related injuries refer Sports Medicine Australia website <https://sma.org.au/sma-site-content/uploads/2017/08/beat-the-heat-2011.pdf>.