

Policy Number: WBNSW-E-023

Version: 2

Approved by board:

Authority: Women's Bowls NSW

Applies to: All

Date Revised: 24 January 2020

## WBNSW Recommendations for Play in Extreme Weather

WBNSW recommends that each Club consider and adopt the Bowls Australia Weather Policy approved in November 2016, ([http://bowls.com.au/about/ba/key\\_documents/constitution\\_and\\_policies](http://bowls.com.au/about/ba/key_documents/constitution_and_policies)) together with the attached temperature/humidity index chart which shows when play must be suspended and/or cancelled. The **Yellow Zone** means play **must** be suspended for 5 minutes for every 20 minutes of play when the temperature/humidity **index** is in the yellow zone. The **Red Zone** means play **must** be abandoned temporarily when the index is in the red zone on the chart.

Once the index is in the red zone, play must be suspended and can only be resumed when the temperature and humidity index moves out of the red zone into the yellow zone **AND** the Controlling Body deems it safe to resume the event having regard to all factors. If this has not occurred within two hours of play being suspended, the Controlling Body should abandon play for the day and set a day to resume the event. **Neither the Controlling Body, officials nor players can agree to continue play once the index is in the red zone, nor can play continue without the 5 minute break every 20 minutes if the index remains in the yellow zone.** If you do so, your insurance cover, depending on its terms, may not provide cover so that the club and officials may leave themselves open to legal action, should players or officials suffer ill effects from heat. Sometimes these ill effects are not immediately obvious and may not manifest themselves until the evening or in the following days.

**The Controlling Body need not and should not wait for a player or official to complain about the conditions before they follow and invoke the BA policy and** should also take into consideration the following:

1. The predicted temperature for the locality;
2. The fact that synthetic greens sometimes conduct and reflect heat differently to grass greens;
3. The hydration of players (cold water must be provided by the Club throughout any match);
4. The level of player comfort and distress (some medications affect players in the heat);
5. The availability of shade for players and officials;
6. The time of day that play is occurring. (We recommend commencing play earlier or later in the day, if possible, to avoid playing in the hottest part of the day); and
7. The effects of a hot wind in increasing uncomfortable playing conditions.

## FAQS – Frequently Asked Questions

1. What if our Club does not yet own a calibrated portable weather station?  
It is strongly recommended that the club purchase one. Please note that temperature and humidity are most accurately measured by using a calibrated portable weather station, situated in the sun, on the surrounds of the green, where there is airflow. **Note: do not place the weather station in the shade, it must be in full sun.** Another option is to use a smart phone whereby a phone app such as *google weather* can be used and will indicate the temperature and relative humidity in any given location.
2. Can we use a thermometer instead of the weather station?  
No, because a thermometer does not measure humidity, only temperature. It is only by having both measurements that you can find out whether the weather on the day has reached the yellow or red zones.
3. How do I use the chart and what is the “index”?  
Firstly, print a colour copy of the chart. Then, using a calibrated weather station situated in the sun note the temperature and humidity. Then find the temperature on the chart using the numbers across the top. Then find the humidity by looking down the left-hand side of the chart. Then find the point where those two numbers intersect on the chart. The point where the two intersect is called the “index”.
4. What does it mean if the index is in the **yellow zone** on the chart?  
Play **must** be suspended immediately for 5 minutes, then resumed for 20 minutes, then play is suspended again for 5 minutes and so on, whilst the index remains in the yellow zone.
5. What does it mean if the index is in the **red zone** on the chart?  
Play **must** be suspended immediately until either:
  1. The index returns to the yellow zone;
  2. 2 hours passes, then play is abandoned for the day or green zones;
  3. Both players/teams AND the Controlling Body agrees to abandon play for the day earlier than 2 hours having regard to all the circumstances.
6. What are the consequences if I as Controlling Body, do not follow the chart regarding yellow and red zones?  
You are putting players and officials at risk of injury. Your insurance policy will probably be null and void, meaning, that if something weather related occurs (e.g. such as injury) both you and your club may be uninsured. So, even if the players/teams agree to play contrary to the restrictions in the policy and the chart, you as controlling body must not permit this to protect the players' welfare, your Club and yourself.
7. As the Controlling Body, do I need to wait for a complaint about the weather from a player or another official to suspend or cancel play?  
All Controlling Bodies need to be acutely aware of their responsibilities in relation to the BA Weather Policy and remember that they and the Club owe players and officials a duty of care. Safety of players and officials is paramount. If the index reaches the yellow or red zones you should suspend play immediately, even without complaint.

8. Our Club already has a weather policy, which policy should Women's Bowlers follow?

Many clubs already have their own weather policy which addresses local conditions. If the policy does so, then provided the Club policy caters for extreme weather and it is consistent with the attached chart by setting the same or lower yellow and red zones, then follow the Club policy. If the Club policy is more conservative: the yellow and red zones are activated at a lower index reading, then follow the Club Policy. The attached chart is a **maximum** threshold, that is, agreement to a lower yellow and/or red zone is permissible, particularly having regard to local factors and the local membership. See Q9 below. There can be no agreement to set a higher threshold for yellow or red zones as explained in Q6.

9. Can play be suspended due to hot weather conditions at an index which is lower or less than the yellow or red point on the chart?

Yes. Indeed, a prudent club should consider the characteristics of its local area and its members in advance and it may decide (as many have) to set a lower threshold for the yellow and red zones.

10. What about cold weather?

Play may be suspended when the temperature drops to 8 degrees or below. Controlling Bodies will also take into consideration the following:

1. the condition of the green in relation to traction. If the green is slippery from frost, dew, rain, hail, sleet, ice, snow or mud;
2. wind chill factor;
3. availability of shelter or warmth;
4. lightening;
5. bad light; and
6. advice from the greenkeeper in relation to possible damage to the green.



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5	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50		
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100	24	25	27	29	30	32	33	35	37	39	41	42	44	46	48	50																					

**BOWLS AUSTRALIA HEAT POLICY WHEN THIS INDEX REACHES 36  
PLAY TO BE SUSPENDED FOR 5 MINUTES EVERY 20 MINUTES**

**WHEN THIS INDEX REACHES 40 PLAY MUST BE SUSPENDED.**

## Air Quality

WBNSW recommends that Air Quality is also considered when deciding to proceed with a competition or social bowls. NSW Planning, Industry & Environment update the Air Quality readings every hour. You can get the latest reading for your area at <https://www.dpie.nsw.gov.au/air-quality/current-air-quality>. Or you can subscribe to regular updates via SMS [here](#).

Only when the AQI is 'very good' or 'good', should outdoor events automatically proceed as scheduled.

When the AQI is 'fair' or 'poor', it is recommended that consideration be given to suspending or cancelling the event, or at a minimum, be postponed until the AQI improves.

If the event is to proceed, warnings should be issued to parents and athletes, that the conditions may pose a health hazard, particularly to those with respiratory or cardiovascular conditions.

When the AQI is 'very poor' or 'hazardous', all outdoor events be cancelled or suspended until the AQI improves.

### Further Information

The Australia Institute of Sport (AIS) recommend the AirRater app to keep up to date with current Air Quality which can be found [here](#)

Further information and numerous Air Quality Fact Sheets are available on the NSW Health website: <https://www.health.nsw.gov.au/environment/air/Pages/aqi.aspx>

Or AIS website: [https://ais.gov.au/position\\_statements#smoke\\_pollution\\_and\\_exercise](https://ais.gov.au/position_statements#smoke_pollution_and_exercise)

### Exercise-specific categories for smoke affected environments

Table 1 below has drawn on information from several of the Australian State and Territory websites and modified information specifically for application to decisions around physical exercise in smoke affected environments. There are many factors that contribute to readings found on State and Territory websites, air-quality apps and handheld devices. The numbers on the table below are a guide and should not be taken as absolutes. There is a need to use common sense in assessing the environment and utilising other factors such as visibility in making a decision about whether or not exercise is appropriate.

**Table 1. Guidelines for exercise in smoke affected environments**

Exercise Category	General Recommendations	Exercise-specific Recommendations	PM2.5 $\mu\text{g}/\text{m}^3$
Good to exercise	<ul style="list-style-type: none"> <li>It is a good day to be outside</li> </ul>	<ul style="list-style-type: none"> <li>All forms of exercise are encouraged.</li> </ul>	<25
Moderate Caution for those who are sensitive	<ul style="list-style-type: none"> <li>The air is probably smoky.</li> <li>Sensitive groups may experience symptoms like</li> </ul>	<ul style="list-style-type: none"> <li>If you are sensitive to air pollution, you may need to reduce prolonged high intensity endurance exercise</li> </ul>	25-50



Exercise Category	General Recommendations	Exercise-specific Recommendations	PM2.5 $\mu\text{g}/\text{m}^3$
to air pollution	<p>coughing or shortness of breath.</p> <ul style="list-style-type: none"> <li>If you are sensitive to air pollution, spend less time outside in the smoke or dust and follow your treatment plan.</li> <li>If you are worried about your symptoms, seek medical advice.</li> </ul>	<p>(e.g. rowing, cycling, long-distance running).</p> <ul style="list-style-type: none"> <li>Most individuals will tolerate exercise as normal, without symptoms.</li> </ul>	
Poor conditions for exercise	<ul style="list-style-type: none"> <li>The air is probably very smoky.</li> <li>Sensitive groups and/or others may experience symptoms like coughing or shortness of breath.</li> <li>If you are sensitive to air pollution, spend less time outside in the smoke or dust and follow your treatment plan.</li> <li>If you are worried about your symptoms, seek medical advice.</li> <li>Seek urgent medical help if anyone has trouble breathing or tightness in the chest. Call 000 for an ambulance.</li> </ul>	<ul style="list-style-type: none"> <li>Consider reducing prolonged high intensity endurance activities (e.g. rowing, cycling, long-distance running).</li> <li>If you are sensitive to air pollution, avoid prolonged high intensity endurance exercise (e.g. rowing, cycling, long-distance running) or move it indoors.</li> <li>Intermittent exercise (e.g. tennis, netball, beach volleyball, cricket) and power activities (e.g. sprint training, javelin training, jump training, rugby skills training) may still be well-tolerated but athletes should be alert to symptoms.</li> <li>Increase rest-to-activity ratio for intermittent exercise.</li> </ul>	<b>51-100</b>
Very poor conditions for exercise	<ul style="list-style-type: none"> <li>The air is probably very smoky.</li> <li>Sensitive groups and/or others may experience symptoms like coughing or shortness of breath.</li> </ul>	<ul style="list-style-type: none"> <li>High intensity endurance activities (e.g. rowing, cycling, long-distance running) should be avoided or moved indoors.</li> <li>Intermittent exercise (e.g. tennis, netball, beach</li> </ul>	<b>101-150</b>

Exercise Category	General Recommendations	Exercise-specific Recommendations	PM2.5 $\mu\text{g}/\text{m}^3$
	<ul style="list-style-type: none"> <li>If you are sensitive to air pollution, spend less time outside in the smoke or dust and follow your treatment plan.</li> <li>If you are worried about your symptoms, seek medical advice.</li> <li>Seek urgent medical help if anyone has trouble breathing or tightness in the chest. Call 000 for an ambulance.</li> </ul>	<p>volleyball, cricket) and power activities (e.g. sprint training, javelin training, jump training, rugby skills training) may still be well-tolerated but athletes should be alert to symptoms.</p> <ul style="list-style-type: none"> <li>Increase rest-to-activity ratio for intermittent exercise.</li> <li>Any individual may be affected by exercising in smoky air at these levels. If symptoms develop, cease exercise and move indoors.</li> </ul>	
Likely to be hazardous to exercise outdoors	<ul style="list-style-type: none"> <li>The air is probably extremely smoky. Everyone will be at risk of experiencing symptoms like coughing or shortness of breath.</li> <li>Listen to your local emergency radio station or visit your State Emergency Agency for advice.</li> <li>Stay indoors away from smoke and dust.</li> <li>If you are sensitive to air pollution, follow your treatment plan. Close your windows and doors to keep smoke and dust out of your home.</li> <li>If you think the air in your home is uncomfortable, consider going to an air-conditioned building like a library or shopping centre for a break if it's safe to do so.</li> </ul>	<ul style="list-style-type: none"> <li>Most individuals should avoid physical activity outdoors.</li> <li>Where there is an intention to play organised high level sport and there are medical staff on site to advise, these levels of pollution should trigger a discussion between medical staff and officials about the advisability or otherwise of proceeding with the event.</li> </ul>	<b>&gt;150</b>

Exercise Category	General Recommendations	Exercise-specific Recommendations	PM2.5 $\mu\text{g}/\text{m}^3$
	<ul style="list-style-type: none"> <li>If you are worried about your symptoms, seek medical advice.</li> <li>Seek urgent medical help if anyone has trouble breathing or tightness in the chest. Call 000 for an ambulance.</li> </ul>		

### Activity levels based on visibility, air health category and smoke sensitivity

The above table provides exercise guidelines, but individuals should also remember that there is high variability in PM2.5 across relatively short distances and quite rapid changes across time. Those wishing to exercise should also take note of the visibility and keep in mind their own individual experience of sensitivity to smoke pollution. The following visibility guidelines should be considered in conjunction with the information from the above table. These visibility guidelines are based on those of the [Victorian Environment Protection Authority](#)

**Table 2. Activity levels based on visibility**

Visible landmark	Air health category	Activity levels – people sensitive to smoke	Activity levels – everyone else
About 20 km	Good	It's a good day to be outside.	It's a good day to be outside.
About 10 km	Moderate	It's okay to be outside but watch for changes in air quality around you.	It's okay to be outside but watch for changes in air quality around you.
About 5 km	Poor	Reduce prolonged or heavy physical activity.	Normal activity, but be alert to changes in air quality
About 1.5 km	Very poor	Avoid physical activity outdoors.	Reduce prolonged or heavy physical activity.



Visible landmark	Air health category	Activity levels – people sensitive to smoke	Activity levels – everyone else
Less than 1.5 km	Hazardous	If you can, stay indoors and keep physical activity levels as low as possible.	Avoid all physical activity outdoors.

### Additional Information

- Air quality information on State and Territory government websites is generally updated hourly; therefore, there can be a lag between official measurements and what is occurring in real time. This can cause limitations when it comes to determining the air quality in your local environment. If smoke is affecting usual visibility within your area, it is likely that the air quality will fall into a higher risk category.
- Consecutive days of exposure to polluted air can have a cumulative effect, lowering an athlete's threshold for symptoms. This should be considered if your region has been exposed to increased smoke for several days in succession.
- Increases in exercise intensity and duration result in increased airway exposure to polluted air. AIS recommends modifying training, or training locations based on the table above.
- All athletes who suffer from asthma should have an updated asthma management plan and consult their doctor prior to exercising in smoke-affected environments.
- Recent respiratory infection increases the risk for development of smoke-related symptoms, even in non-asthmatics.