

Cycling Australia

# Air Quality Policy

January 2020



## 1. Introduction

Cycling Australia (CA) takes rider safety and well-being seriously and has developed a policy for coaches, parents, riders and officials on training and racing based on different levels of air quality. This policy applies to all CA, State and Club related training and events. It does not apply to UCI Sanctioned event.

## 2. What is the Air Quality Index

The Air Quality Index (AQI) is an index for reporting daily and hourly air quality.

The AQI is a quick and easy tool to inform you about:

- Air pollution levels at your nearest monitoring site or region
- Specific information for people more at risk from exposure to short-term air pollution
- Simple steps to take to protect yourself

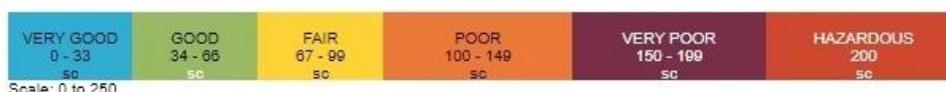
The AQI does not provide guidance on the effects of long-term exposure to air pollution.

The following links will be useful in helping you determine your region's air quality;

- Australian Capital Territory: <https://www.health.act.gov.au/about-our-health-system/population-health/environmental-monitoring/monitoring-and-regulating-air-0>
- Victoria: <https://www.epa.vic.gov.au/for-community/airwatch>
- New South Wales: <https://www.dpie.nsw.gov.au/air-quality/current-air-quality>
- Queensland: <https://apps.des.qld.gov.au/air-quality/>
- Western Australia: <https://www.der.wa.gov.au/your-environment/air/air-quality-index>
- South Australia: [https://www.epa.sa.gov.au/data\\_and\\_publications/air\\_quality\\_monitoring](https://www.epa.sa.gov.au/data_and_publications/air_quality_monitoring)
- Tasmania: <https://epa.tas.gov.au/epa/air/monitoring-air-pollution/real-time-air-quality-data-for-tasmania>

## 3. What the air quality index means

When reviewing the AQI at your nearest monitoring site or in you region, you will see the display of a colour depending on the air quality measured, as per the table below.



The AQI is based on the amount of fine particulate matter (PM 2.5) levels in the air. Tiny particles in the air reduce visibility and cause the air to appear hazy, but based on exposure to these particles, it can cause short-term health effects.

The AQI helps participants understand the current level of air quality and provide information on how to reduce your risk of exposure to air pollution if necessary.

## 4. Major Causes of Poor Air Quality

Bush fire smoke and dust storms are the two main environmental conditions for which you may need to consider the air quality to determine if a ride or race should be revised, postponed or cancelled.

### **a. Bushfire Smoke**

Smoke from bushfires is made up of small particles, gases and water vapour. The particles are very small - up to 1/30th the diameter of an average human hair - and are not visible to the human eye.

The gases in bushfire smoke include carbon monoxide, carbon dioxide, nitrogen oxides and volatile organic compounds.

### **a. Dust Storms**

Dust storms are natural events, and are common in parts of the world with dryland areas. Periods of severe and widespread drought can dramatically increase the likelihood of major dust storms, particularly during the summer months.

Dust storms reduce air quality and visibility, and may have adverse effects on health, particularly for people who already have breathing-related problems. Dust particles vary in size from coarse (non-inhalable), to fine (inhalable), to very fine (respirable). Obviously, these smaller particles have a greater potential to cause serious harm to your health.

## **5. Exposure and health effects**

Fine smoke particles are known to affect the human breathing system. The smaller or finer the particles, the deeper they go into the lungs.

These particles can cause a variety of health problems, such as itchy or burning eyes, throat irritation, runny nose and illnesses such as bronchitis. The smoke particles can also aggravate existing lung conditions, such as chronic bronchitis, emphysema and asthma.

The most common symptoms experienced during a dust storm are irritation to the eyes and upper airways. People who may be more vulnerable than others are:

- infants, children and adolescents
- the elderly
- people with respiratory conditions, such as asthma, bronchitis and emphysema
- people with heart disease
- people with diabetes

For these people, exposure to a dust storm may:

- trigger allergic reactions and asthma attacks
- cause serious breathing-related problems
- contribute to cardiovascular or heart disease
- contribute to reduced life span

Prolonged exposure to airborne dust can lead to chronic breathing and lung problems, and possibly heart disease.

## **6. Low Visibility**

Low visibility is generally caused by fog/mist or smoke. **No event can commence unless there is at least 100m visibility at all positions on the course.**

## **7. Determination of Competition**

To determine if a local competition should proceed, or if the events on offer should be amended, the Event Organiser, Chief Commissaire or Coach (in the case of training) must make the decision, based on information from the AQICN website and a local assessment of conditions.

In the case of State or National events the Chief Commissaire and Race Director will make the determination on whether specific events, and/or the entire event, is suspended or cancelled due to

dangerous air quality.

Only when the AQI is 'very good' or 'good', all 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 training, and at a minimum, those events more strenuous in nature, such as distance events, be postponed until the AQI improves. If the event is to proceed, warnings should be issued via the PA system 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 racing and training should be cancelled or suspended until the AQI improves.

In the case of indoor venues, when the outdoor AQI is above 100, the indoor AQI should be tested using an electronic AQI testing device to determine the venue air quality. When the outdoor AQI is below this level no testing is required.

## **8. AIS Exercise Guidelines**

The Australian Institute of Sport has published the following guidelines taking into account the activity guidelines as they relate to the AQI.<sup>1</sup>

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<sup>1</sup> <https://ais.gov.au/position-statements#smoke-pollution-and-exercise>

**General population and low intensity exercise**

**Endurance based and high intensity exercise**

AQI	Action	AQI	Action
<b>VERY GOOD</b> (0-33)	Enjoy activities	<b>VERY GOOD</b> (0-33)	Enjoy activities
<b>GOOD</b> (34-66)	Enjoy activities	<b>GOOD</b> (34-66)	Enjoy activities
<b>FAIR</b> (67-99)	<b>People unusually sensitive to air pollution:</b> Plan strenuous outdoor activities when air quality is better	<b>FAIR</b> (67-99)	<b>Asthmatic athletes:</b> Should have medical review prior to performing high intensity extended training outdoors
<b>POOR</b> (100-149)	<b>AIR POLLUTION HEALTH ALERT</b> <b>Sensitive groups:</b> Avoid strenuous outdoor activities <b>Everyone:</b> Cut back or reschedule strenuous outdoor activities	<b>VERY POOR</b> (100-149)	<b>AIR POLLUTION HEALTH ALERT</b> Asthmatics or symptomatic non-asthmatics should not compete or train outdoors. Minimise asymptomatic athlete exposure
<b>VERY POOR</b> (150-200)	<b>AIR POLLUTION HEALTH ALERT</b> <b>Sensitive groups:</b> Avoid strenuous outdoor activities <b>Everyone:</b> Cut back or reschedule strenuous outdoor activities	<b>HAZARDOUS</b> (150-200)	<b>AIR POLLUTION HEALTH ALERT</b> Outdoor training should be rescheduled indoors, and exposure should be minimised for everyone
<b>HAZARDOUS</b> (>200)	<b>AIR POLLUTION HEALTH ALERT</b> <b>Sensitive groups:</b> Avoid strenuous outdoor activities <b>Everyone:</b> Significantly cut back on outdoor physical activities		

## 9. Actions based on the air quality category

The following table outlines the actions that should be taken for any event (ride or race) based on the air quality index.

AQI	Category	Action
0-66	Very Good/Good	<ul style="list-style-type: none"> <li>• Business as usual</li> </ul>
67-99	Fair	<ul style="list-style-type: none"> <li>• For most people there will be no noticeable symptoms of exposure</li> <li>• People who are sensitive to air pollution should take some precautions and/or consult their health practitioner before participating</li> <li>• Racing/Training to continue as planned</li> </ul>
100-149	Poor	<ul style="list-style-type: none"> <li>• Regular messaging to participants, staff, volunteers, officials and team staff regarding hydration, general health awareness and the potential risk to personal health</li> <li>• For sensitive groups (and symptomatic athletes) they should consider their participation</li> <li>• For asymptomatic athletes, they should reduce the amount they are training</li> <li>• Any club or junior event should be cancelled</li> <li>• Elite events/training may continue but options around start time and reducing race/training distances should be reviewed if there is the possibility to shift the event to better conditions</li> </ul>
150 – 200	Very Poor	<ul style="list-style-type: none"> <li>• Regular messaging to participants, coaches and officials regarding hydration, general health awareness and the potential risk to personal health</li> <li>• For sensitive groups (and symptomatic athletes) they should consider their participation in the event</li> <li>• For asymptomatic athletes, they should reduce the amount they are training</li> <li>• To consider modification of course/start time and communicate accordingly, in order to try and find a more suitable time and/or duration for the event</li> <li>• All non-elite training and competition should be cancelled</li> </ul>
200+	Hazardous	<ul style="list-style-type: none"> <li>• Cancellation of all events</li> </ul>

