

Air Quality Index

The air quality index (AQI) is an index for reporting daily and hourly air quality. It is an indication of how clean or polluted the air is in areas across NSW.

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 AQI in NSW is obtained from the Office of Environment and Heritage at www.environment.nsw.gov.au/AQMS/aqi.htm

Further to this, the AirRater App (developed by the CSIRO) provides location specific air quality data (<https://airrater.org/>)

What the Air Quality Index Means

When you look at the AQI at your nearest monitoring site or in your region, you will see the display of a colour depending on the air quality measured, as per the table below. The AQI will help you understand the current level of air quality and provide information on how to reduce your risk of exposure to air pollution if necessary.

AQI	What action should people take?
VERY GOOD 0-33	Enjoy activities
GOOD 34-66	Enjoy activities
FAIR 67-99	People unusually sensitive to air pollution: Plan strenuous outdoor activities when air quality is better
POOR 100-149	AIR POLLUTION HEALTH ALERT Sensitive Groups: Cut back or reschedule strenuous outdoor activities
VERY POOR 150-200	AIR POLLUTION HEALTH ALERT Sensitive groups: Avoid strenuous outdoor activities Everyone: Cut back or reschedule strenuous outdoor activities
HAZARDOUS 200+	AIR POLLUTION HEALTH ALERT Sensitive groups: Avoid all outdoor physical activities Everyone: Significantly cut back on outdoor physical activities

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 Little Athletics competition should be revised, postponed or cancelled.

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.

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 NSW Rural Fire Service website lists current fires and incidents - www.rfs.nsw.gov.au/fire-information/fires-near-me

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.

Exposure and health effects

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.

Little Athletics Competition

The NSW Office of Environment and Heritage (OEH) is responsible for air quality monitoring in NSW and issues the AQI. Their website lists the current AQI at in a defined region and is updated on an hourly basis.

www.environment.nsw.gov.au/AQMS/aqi.htm.

Alternatively, the AirRater App (<https://airrater.org/>) can be used to determine the Air Quality in a location where centre activities and/or competitions are being conducted.

To determine if a local Little Athletics centre competition should proceed, or if the events on offer should be amended, a minimum of two centre committee members is recommended to make the decision, based on information from the OEH website and a local assessment of conditions. In the case of Little Athletics NSW championships, the safety coordinator for the carnival will make the determination on whether specific events, and/or the entire carnival, is suspended or cancelled due to dangerous air quality.

Only when the AQI is 'very good' or 'good', can Little Athletics events *automatically* proceed as scheduled.

When the AQI is 'fair' or 'poor', it is recommended that consideration be given to suspending or cancelling the carnival, and at a minimum, those events more strenuous in nature, such as distance events, be postponed until the AQI improves. If the carnival 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', it is recommended that the carnival be cancelled or suspended until the AQI improves.

Further Information

Further information and a number of Air Quality Fact Sheets are available on the NSW Health website:

www.health.nsw.gov.au/environment/air/Pages/aqi.aspx