



GEELONG CROSS COUNTRY CLUB

HAZARDOUS CONDITIONS PROCEDURES

Season 2025

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1. Introduction

The Geelong Cross Country Club (GCCC) operates their calendar season between the Geelong Half Marathon which is usually the Sunday after Easter Sunday and the Dawnbuster on New Year's Eve. There are normally around twenty four (24) races on the season calendar ranging in distance from 2km (The Eliminator) to 21.1km, and involving handicap events, sealed handicap (scratch) events as well as team events.

The events are conducted in various locations around the Geelong area, and on various routes including public roads, trails, shared walk/cycle paths and genuine cross-country courses. Most surfaces are either bitumen or gravel though some courses involve running partly on grassed and/or earthen surfaces.

Runners are both male and female, there are various age categories that allow points to be gained for club championship purposes.

2. Scope

The GCCC calendar season involves the conduct of events over a wide range of courses and running conditions. Most events commence at 9:00am. As most of the courses are over walking/cycling trails and public roads, there is the inherent risk of sharing the trail/road with the public whether they be on foot, bicycle, and indeed vehicular traffic on the roadways.

There is also the hazard presented by the surface on which the events are conducted. The trails can have holes in the surface, wash-outs, crumbling surface, displacement of the surface etc where trips and falls are possible. Vegetation also presents a hazard with overhanging limbs, potential fall of limbs, debris on the course and impairment of vision.

The weather plays a less prominent role in that the events are conducted in all weather conditions unless they are such that it is considered by the course director(s) that it is not safe to do so. In this case, the actions detailed in this policy will be enforced so far as wet weather, cold weather and hot weather are concerned.

This policy serves to address the hazards that are most likely to be encountered during the conduct of the race calendar.

3. Amendments

Added Hazardous Condition 4.10.6 re inadequate supplies - general	29/01/2014
Added Hazardous Condition 4.10.7 re inadequate course description documentation	29/01/2014
Hazardous Condition 5.3.1 – Wind – include mitigation measures for impact of wind on tents and signage	10/12/2014
Hazardous Condition 5.6.1 – add word Vermin to heading, include comments on snakes	10/12/2014
Hazardous Conditions 5.10.8 added to cover drones	10/12/17
Hazardous Conditions 5.3 amended to reference vehicles with trailers & boats, and accredited Traffic Controllers	28/03/2019
Section 4, sub-section 1, add Air Quality	14/01/2020

New section 5.1.6 Air Quality	14/01/2020
Section 4 – new item 8 re petrol operated equipment	19/01/2020
New Section 5.1.11 – Use of Petrol Operated Equipment	19/01/2020
New item 9 “Pandemics” added to list of hazards identified in Section 4	15/02/2021
New section 5.12 added in Section 5 re Pandemics	15/02/2021
Add reference to new Extreme Heat Policy 2021 in Hazard 5.1.1 Hot Weather	23/01/22
Added more information on wind management of structures including finish arches in Hazard 5.1.3	09/02/2022
Amended wording for Hazard 5.8 to include Base Person	1/11/2025

4. Hazards Identified

The following hazardous conditions are possible on an event day and will require action by the organizers in order to mitigate the risk to competitors and organizers:

- 1 Weather – hot, cold, wind, rain, thunderstorms, air quality
- 2 Course surface – bitumen, gravel, grass, other
- 3 Poor Course identification – markers, marshals
- 4 Watercourses/Sea – bridges, crossings, flood, tides/waves
- 5 Public – pedestrians, vehicles
- 6 Animals
- 7 Course Set-Up/Administration
- 8 Use of Petrol Operated Equipment
- 9 Pandemics

The hazardous conditions listed as follows are those that scored a risk rating of “Moderate”, “Significant” or “High” in the Risk Register that is included in the Risk Management Manual document.

5. Hazards Description

5.1 Weather

5.1.1 Hot Weather

Likelihood

Unlikely given the time of the year and race time, though the start of the season could be quite hot

Possible Consequences

Heat exhaustion and more serious heat stroke.

Impact

Significant

Mitigation Actions

Refer to the Australian Sports Medicine Australia's Extreme Heat Policy 2021 <https://sma.org.au/sma-site-content/uploads/2021/02/SMA-Extreme-Heat-Policy-2021-Final.pdf> . Warn competitors and marshals to hydrate sufficiently, wear hat where practical, dress appropriately, implement Hot Weather Procedure (Appendix 1), ensure adequate drink stations, medical support and emergency response contacts to be readily accessible.

5.1.2 Cold Weather

Likelihood

Most likely given the time of year and day

Possible Consequences

Hypothermia

Impact

Significant

Mitigation Actions

Warn competitors and marshals to wear protective clothing, medical support and emergency response contacts to be readily accessible.

5.1.3 Wind

Likelihood

Likely given the time of the year

Possible Consequences

Competitors can be blown off course, falling tree limbs and other wind-blown debris, chill factor. Potential for injury caused by wind-blown tents, signage and other structures such as finish arches.

Impact

Moderate

Mitigation Actions

Warn competitors to be aware of wind-blown debris, wear suitable clothing to protect against wind chill, be aware of potential for wind to blow competitor off course, medical support and emergency response contacts to be readily accessible.

Ensure that structures such as tents, finish arches etc. are properly fixed in accordance with manufacturer's recommendations and any structural compliance certificate requirements.

Wind management

Definitions and background information:

- Wind speed refers to the average speed of the wind over a ten minute period.
- Gusts may be up to 40% stronger than average wind speed.
- A strong wind is one where the average speed is in the range 26 to 33 knots

Tents would not be erected in strong winds or in conditions that could gust up to strong wind speed. That means that no tents would be erected or be allowed to remain erected if the wind could reach a speed of 26 knots (48 km/h). This equates to an average speed of 18.6 knots (34.4 km/h).

Weather forecasts from the Bureau of Meteorology (BOM) are to be checked on the night before the given event and again on the morning of the race.

In the event of changing conditions BOM updates are to be checked and/or local conditions taken into account. Tents are to be secured using pegs of length 300mm minimum and/or adequate weights. If a period of increasing winds is predicted then an additional measure of weighting would be used. This would consist of two filled 20 litre water containers per 3X3 tent and four containers per 6X3 tent.

If the erected tents are suffering undue disturbance then the site supervisor will decide whether further securing is necessary or whether the tents need to be taken down.

Signage management

Definitions and background information:

- Signs to be used are approximately one metre by 800 mm. These are to be attached to barricades which are approximately 2.5 m by 1 m.
- Wind speed refers to the average speed of the wind over a ten minute period.
- Gusts may be up to 40% stronger than average wind speed.
- A strong wind is one where the average speed is in the range 26 to 33 knots

Signage would not be attached to barricades in strong winds or in conditions that could gust up to strong wind speed. That means that no signage would be erected or be allowed to remain erected if the wind could reach a speed of 26 knots (48 km/h). This equates to an average speed of 18.6 knots (34.4 km/h).

Weather forecasts from the Bureau of Meteorology (BOM) are to be checked on the night before the given event and again on the morning of the race.

In the event of changing conditions BOM updates are to be checked and/or local conditions taken into account.

If the erected signs are suffering undue disturbance then the site supervisor will decide whether further securing is necessary or whether the signs need to be taken down.

5.1.4 Rain

Likelihood

Possible given the time of the year

Possible Consequences

Slips or falls due to wet surface, cold, poor visibility, running water and wash-outs

Impact

Moderate

Mitigation ActionsHail

Track hailstorm activity via the BOM web site and determine likelihood of hailstorm duration. Postpone race start for up to one half hour if hailstorm activity deemed to be of limited duration. Postpone race if hailstorm duration or movement unclear.

Heavy Rain

Postpone race start for up to one half hour if rainstorm activity deemed to be of limited duration. Cancel the race if heavy rain persists such that it renders the course dangerous.

5.1.5 Thunderstorms**Likelihood**

Unlikely given time of year

Possible Consequences

Injury due to hail and lightning.

Impact

Significant

Mitigation Actions

Track storm activity via the BOM web site and determine likelihood of storm duration. Postpone race start for up to one half hour if storm activity deemed to be of limited duration. Postpone race if storm duration or movement unclear. Medical support and emergency response contacts to be readily accessible.

5.1.6 Air Quality**Likelihood**

Possible

Possible Consequences

Health risk to participants

Mitigation Actions

Refer to Australian Institute of Sport publication https://ais.gov.au/position_statements#smoke_pollution_and_exercise in Appendix 3, and the state guideline <https://www.epa.vic.gov.au/for-community/airwatch>.

5.2 Course Surface Imperfections**Likelihood**

Likely

Possible Consequences

Injury due to slips and falls.

Impact

Significant

Mitigation Actions

Inspect course prior to event. If hazard cannot be removed or modified during inspection, place marshal or sign/barrier at hazard. Modify course if hazard presents an unavoidable dangerous

situation. Brief competitors on the condition of the course, medical support and emergency response contacts to be readily accessible.

5.3 Poor Course Identification

Likelihood

Possible

Possible Consequences

Competitors getting lost, running wrong course, entering inaccessible and potentially dangerous locations

Impact

Minor

Mitigation Actions

Organize adequate markers and marshals. If inadequate markers and marshals are available, modify the course.

5.4 Watercourses/Sea

5.4.1 Proximity of Rivers and Creeks

Likelihood

Likely

Possible Consequences

Fall or slip into watercourse, flood waters threaten course

Impact

Significant

Mitigation Actions

Inspect course prior to event and place warning signs and/or marshals where hazard exists. Modify course or canceling event if flood waters threaten safety of event, medical support and emergency response contacts to be readily accessible.

5.4.2 Bridges and Other Watercourse Crossings

Likelihood

Likely

Possible Consequences

Falls or slips on bridges and watercourse crossings

Impact

Moderate

Mitigation Actions

Warn competitors to cross bridges carefully, place warning signs and/or marshals on particularly hazardous locations. Modify or canceling event if hazard presents an unacceptable risk to competitors, medical support and emergency response contacts to be readily accessible.

5.4.3 Sea (Tide/Waves)

Likelihood

Likely

Possible Consequences

Sea encroaching onto course, trips and falls on seaweed etc, large wave intrusion

Impact

Moderate

Mitigation Actions

Consult tide charts prior to event and ensure suitable tide conditions with timing of the event, warn competitors of inherent dangers.

5.5 Public**Likelihood**

Almost certain

Possible Consequences

Collision with cyclists and pedestrians

Impact

Moderate

Mitigation Actions

Brief competitors on likely presence of pedestrians and cyclists on the course and to exercise caution and provide clear passage for the public, medical support and emergency response contacts to be readily accessible.

5.6 Vehicles**Likelihood**

Almost certain on some courses. For example, movement of vehicles and vehicles with boats on trailers during the Geelong Half Marathon event and other calendar events that use the section of riverside roadway between Barrabool Road and the boat ramp car park east of Moorabool Street bridge and/or Belmont Common.

Possible Consequences

Competitors colliding with vehicle, vehicle forcing competitor off road causing slip/fall.

Impact

Significant/catastrophic.

Mitigation Actions

Ensure competitors are briefed on hazards of running on road, permits approved, road signs erected at regular intervals, marshals at key points including hazardous locations, medical support and emergency response contacts to be readily accessible. In the case of events that use the riverside road between Barrabool Road and the boat ramp car park east of Moorabool Street bridge and/or the Belmont Common, accredited Traffic Controllers are to be used at potential conflict points.

5.7 Animals/Vermin**Likelihood**

Possible.

Possible Consequences

Competitors colliding with animal on or without leash, attack by animal including snake.

Impact

Significant

Mitigation Action

Warn competitors to be careful when approaching animals, provide clear thoroughfare for public with animals. Warn competitors to be vigilant in the event of snakes being present. Tail-End-Charlie to carry first aid kit and communications.

5.8 Poor Communications**Likelihood**

Possible

Possible Consequences

Medical incident could be hampered, delayed emergency response

Impact

Major

Mitigation Action

Appoint a member at each race who has basic first aid training to be the nominated Base Person. The Base Person stays at the Start/Finish area (with the van) for the duration of the race.

Ensure that marshals (including drink stations) and "tail-end-Charlie" have mobile phones or two-way radio contact, ensure that mobile phone numbers are exchanged prior to each event commencement. Instruct all parties to obtain accurate and timely information for conveyance to the Base Person.

5.9 Lack of Adequate/Proper Medical Supplies**Likelihood**

Possible

Possible Consequences

Medical incident could be hampered, delayed emergency response, worsening of patient's condition, delayed recovery of patient, increased liability on club

Impact

Major

Mitigation Action

Ensure that first aid kits are properly stocked and available in the van and at other strategic locations such as drink stations

5.10 Lack of Skill/Fitness

NOTE: This procedure applies to the general fitness level and capability of the competitor.

Likelihood

Almost certain

Possible Consequences

General fatigue, minor injury

Impact

Minor

Mitigation Action

Provide advice in Members' Handbook and at pre-race briefing regarding proper race preparation. Ensure that adequate first aid is provided from the van at other strategic locations for longer distances (greater than 10km).

5.11 Course Set-Up/Administration/Incidents**5.11.1 Incorrect Transport of Club Van****Likelihood**

Possible

Possible Consequences

Moderate to severe injury in the event of an accident

Impact

Significant

Mitigation Action

Person driving Van to have current driver's license and be familiar with safe driving techniques in particular experience with driving with loads.

5.11.2 Incorrect Storage of Club Van**Likelihood**

Unlikely

Possible Consequences

Minor

Impact

Low

Mitigation Action

Van to be stored in secure location, away from flammable materials and locked.

5.11.3 Incorrect Set-Up of Van (incl. load and unload)**Likelihood**

Possible

Possible Consequences

Minor

Impact

Moderate

Mitigation Action

Person handling Van to be properly briefed and familiar with correct lifting techniques, to be familiar with safe set-up practices.

5.11.4 Incorrect Use of Van**Likelihood**

Possible

Possible Consequences

Minor

Impact

Moderate

Mitigation Action

Persons using Van to be properly briefed and familiar with correct manual handling techniques, to be mindful of safe storage and placement of equipment to prevent users from colliding/tripping/slipping in and around the Van.

5.11.5 Volunteering for Non-GCCC Events**Likelihood**

Likely

Possible Consequences

Moderate

Impact

Significant

Mitigation Action

President/Secretary to ensure that the organization to which GCCC members are to volunteer (or be hired), has the appropriate insurance to cover the GCCC member in the case of an incident involving the volunteer. It is preferable that the GCCC obtains formal sign-off with respect to such cover prior to volunteers commencing the activity.

5.11.6 Inadequate Supplies – General**Likelihood**

Possible

Possible Consequences

Minor

Impact

Low

Mitigation Action

Handicappers to check that all supplies are adequate for the next race day. Includes fuel for generator, paper & cartridges for the printer, print paper. Race committee to ensure that this is carried out each week.

5.11.7 Inadequate Course Description Documentation**Likelihood**

Possible

Possible Consequences

Minor

Impact

Low

Mitigation Action

Race committee to ensure that all courses are documented adequately for future course set-up, Info to be kept in file in van.

5.11.8 Drones**Likelihood**

Possible

Possible Consequences

Minor

Impact

Medium

Mitigation Action

Race Directors to ensure that any club use is in accordance with the Civil Aviation Regulations 1998.

For public drones, if they are deemed to present a hazard to both club members, volunteers and the public, the Race Directors shall identify the operator(s) and advise them of the relevant Civil Aviation Regulations 1998. The Race Directors will issue the appropriate warning to the club members, volunteer and public (as required), and implement any actions deemed necessary to maintain the safety of those in the vicinity.

Should public use that is deemed to be hazardous to club members, volunteers and members of the public continue despite warnings and intervention, the Race Directors will advise the President who will in turn report the incident with all available details to the Civil Aviation Authority. On this basis, the Race Directors shall endeavor to obtain name and contact details of the operator of the drone(s).

5.11.9 Use of Petrol Operated Equipment**Likelihood**

Possible

Possible Consequences

Moderate

Impact

Significant

Mitigation Action

Race Directors to ensure that any fuel-operated club equipment such as generators is used in accordance with the document titled "Use of petrol generators in open-air and other events", refer .Appendix 4 – Use of Petrol Operated Equipment.

5.12 Pandemics**Likelihood**

Possible

Possible Consequences

Major

Impact

High

Mitigation Action

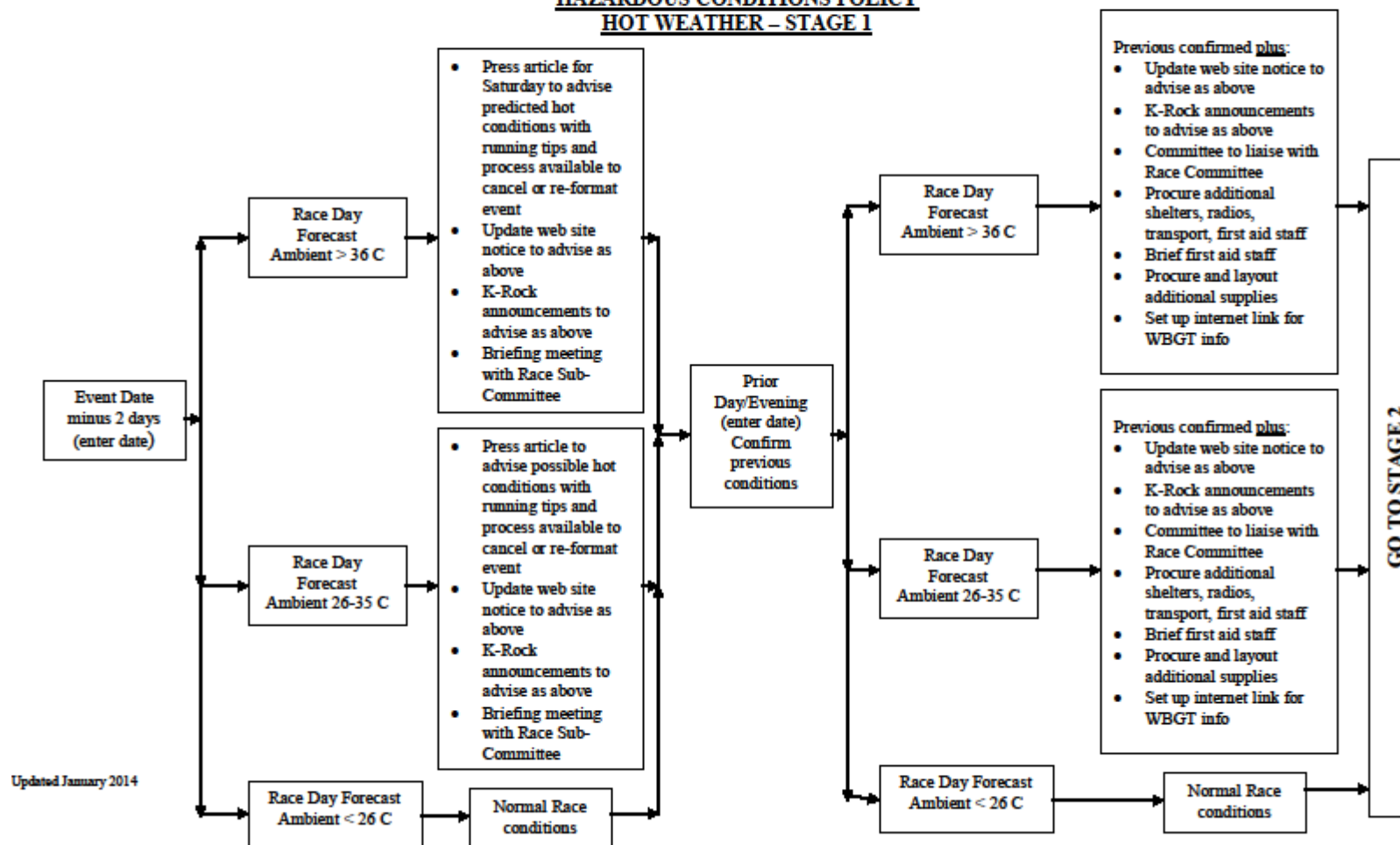
Depending on the individual pandemic type and nature, consult the appropriate Government authority to determine the current protection/restriction requirements. If necessary, prepare a Safe Event Plan to manage the risks. GCCC most likely to appoint a Pandemic Sub-Committee to manage specific events that are conducted during the pandemic.

Appendix 1 Hot Weather Procedure



GEELONG CROSS COUNTRY CLUB

HAZARDOUS CONDITIONS POLICY HOT WEATHER – STAGE 1

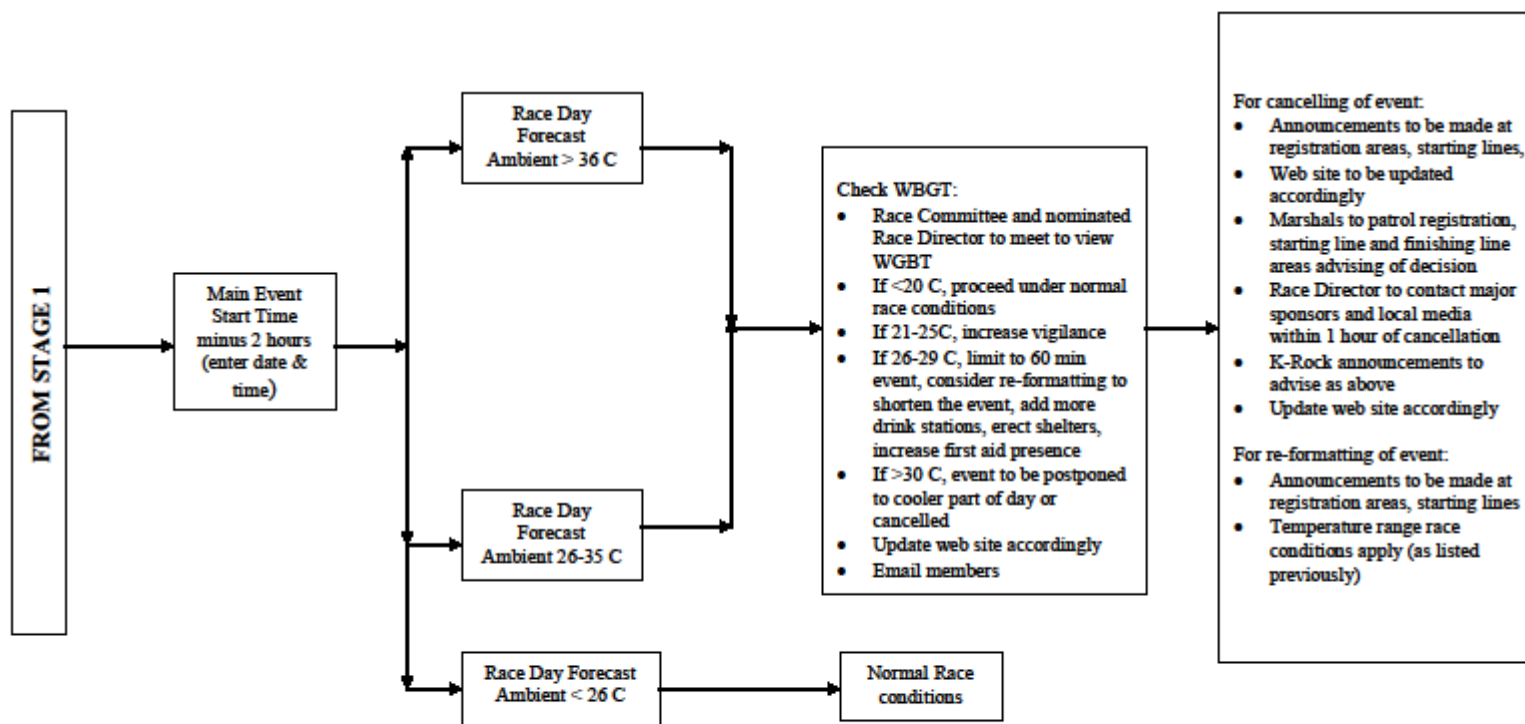




GEELONG CROSS COUNTRY CLUB

HAZARDOUS CONDITIONS POLICY

HOT WEATHER – STAGE 2



Appendix 2 Sports Medicine Australia Heat Guidelines

(printed from website <https://sma.org.au/sma-site-content/uploads/2009/05/hot-weather-guidelines-web-download-doc-2007.pdf> on 14/01/2020)



(Web download document)

HOT WEATHER GUIDELINES

For sporting clubs and associations and the physically active

Why use guidelines?

Every year in hot weather **Sports Medicine Australia (SMA)** receives requests from sporting clubs and associations, individuals and members of the media asking:

- Should our sporting event be modified or cancelled?
- Should our training be modified or cancelled?
- When is it safe to play sport or be physically active in the heat?

To help organisations, coaches, teachers and other individuals when conducting sport in hot weather, SMA has produced this revised set of guidelines. These new guidelines are based on the latest research as well as the expertise of SMA's medical and scientific members.

Most people understand the importance of physical activity for good health but it is just as important that, when levels of activity rise, the risk of harm is minimised. And it is even more important for those who have not recently or regularly taken part in sport or physical activity.

These guidelines are not binding, but SMA reminds all parties that they must act responsibly. We encourage a common sense approach and consideration of the comfort and well-being of all individuals including participants and officials.

Modification or cancellation of events, training or withdrawal from participation may be appropriate even in circumstances falling outside these recommendations.

There are many factors to be considered when clubs and associations are contemplating modifying, postponing or canceling sporting events or training.

Sporting organisations need to be aware of the difficulty of settling "one size fits all" guidelines in this area. For normally healthy active people, the only dangers from heat illness are likely to arise from high intensity exercise such as endurance running. Most community sport does not reach this level for periods long enough to cause serious harm. Many types of sport, such as cricket and tennis, are usually safe at higher temperatures because of the lower intensity of the play.

One area of higher risk for organisers of community-level sport is in the conduct of marathons and fun runs and bike rides. These events are more likely to see participants push themselves beyond their normal boundaries of activity, and organisers need to take extra precautions.

•PO Box 78, Mitchell ACT 2911•
•Telephone (02) 6241 9344•Facsimile (02) 6241 1611•
•E-mail smanet@smsa.org.au •Web www.smsa.org.au •

1



However, at any time, high intensity exercise in a hot environment, with the associated elevation of body temperature, can lead to heat illness. Heat illness in sport presents as **heat exhaustion** or the more severe **heat stroke**.

Heat exhaustion

- Characterised by a high heart rate, dizziness, headache, loss of endurance/skill/confusion and nausea.
- The skin may still be cool/sweating, but there will be signs of developing vasoconstriction (eg, pale colour).
- The rectal temperature may be up to 40°C and the athlete may collapse on stopping activity. Rectal temperature should only be measured by a doctor or nurse.

To avoid heat exhaustion, if people feel unwell during exercise they should immediately cease activity and rest. Further benefit comes if the rest is in a shaded area with some passing breeze (from a fan if necessary) and the person takes extra hydration. Misting or spraying with water can also help.

Heat stroke

- Characteristics are similar to heat exhaustion but with a dry skin, confusion and collapse.
- Heat stroke may arise in an athlete who has not been identified as suffering from heat exhaustion and has persisted in further activity.
- Core temperature measured in the rectum is the only reliable diagnosis of a collapsed athlete to determine heat stroke.

This is a potentially fatal condition and must be treated immediately. It should be assumed that any collapsed athlete is at danger of heat stroke. The best first aid measures are "Strip/Soak/Fan":

- strip off any excess clothing;
- soak with water;
- fan;
- ice placed in groin and armpits is also helpful.

The aim is to reduce body temperature as quickly as possible. The athlete should immediately be referred for treatment by a medical professional.

Important: heat exhaustion/stroke can still occur even in the presence of good hydration.

Dehydration

Dehydration is fluid loss which occurs during exercise, mainly due to perspiration and respiration. It makes an athlete more susceptible to fatigue and muscle cramps. Inadequate fluid replacement before, during and after exercise will lead to excessive dehydration and may lead to heat exhaustion and heat stroke.

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To avoid dehydration, SMA recommends that:

- athletes drink approximately 500 mls (2 glasses) in the 2 hours prior to exercise;
- during exercise longer than 60 minutes, 2-3 cups (500-700ml) of cool water or sports drink are sufficient for most sports.
- after exercise replenish your fluid deficit to ensure that you are fully re-hydrated, but not over-hydrated.
- refer to SMA's free [DRINK UP](http://www.smartplay.com.au) brochure available as a web download at <http://www.smartplay.com.au> or from your local National Pharmacies store.

Points to consider:

- Will your players and officials be able to consume enough water during the event?
- Even a small degree of dehydration will cause a decrease in performance.
- Take care not to over-hydrate. Drinking too much fluid can lead to a dangerous condition known as hyponatraemia (low blood sodium). Aim to drink enough to replace lost fluids, but not more than that.

Factors to consider before cancelling or modifying a sporting event or training

(Remember not only to take players into account but also umpires, officials and volunteers.)

The following tables provide estimates of risk related to the weather and also guidelines to managing activity in order to minimise heat stress.

Environmental Factors

1. Temperature

Ambient temperature is the most easily understood guide available, and is most useful on hot, dry days

Ambient temperature	Relative humidity	Risk of Heat Illness	Possible management for sustained physical activity
15 - 20		Low	Heat illness can occur in distance running. Caution over-motivation.
21 - 25	Exceeds 70%	Low - moderate	Increase vigilance. Caution over-motivation.
26 - 30	Exceeds 60%	Moderate	Moderate early pre-season training. Reduce intensity and duration of play/training. Take more breaks.
31 - 35	Exceeds 50%	High - very high	Uncomfortable for most people. Limit intensity, take more breaks. Limit duration to less than 60 minutes per session.
36 and above	Exceeds 30%	Extreme	Very stressful for most people. Postpone to a cooler conditions (or cooler part of the day) or cancellation.

**OR****WBGT**

Further guidance might be gained from what is known as the Wet Bulb Globe Temperature (WBGT) index. The WBGT is useful when humidity is high.

WBGT	Risk of thermal injury	Possible modifying action for vigorous sustained activity
< 20	Low	Heat illness can occur in distance running. Caution over-motivation.
21 - 25	Moderate to high	Increase vigilance. Caution over-motivation. Moderate early pre-season training intensity and duration. Take more breaks.
26 - 29	High - Very high	Limit intensity. Limit duration to less than 60 minutes per session.
30 and above	Extreme	Consider postponement to a cooler part of the day or cancellation (allow swimming).

The Bureau of Meteorology (BOM) produces ambient and WBGT readings for many locations in Australia. You can check these readings and a guide for the relative risk for your location at www.bom.gov.au/info/thermal_stress/index.shtml

N.B. It is important to watch for unusual "heatwave" conditions or variations from the average temperature for the time of year. This is one situation where there may be a greater danger of heat illness.

Heat stress increases with increases in air temperature but be aware that there are not clear demarcations in risk between temperature ranges. At relative humidity levels above those indicated in the tables, stress increases markedly.

2. Duration and intensity of an event

- The combination of extreme environmental conditions and sustained vigorous exercise is particularly hazardous for the athlete. The greater the intensity of the exercise, the greater the risk of heat related symptoms; eg, distance running is more of a problem than stop-start team events.
- Player and official rotation may also be considered
- Reducing playing time and extending rest periods with opportunities to rehydrate during the event would help safeguard the health of participants.
- Provision of extra water for wetting face, clothes and hair is also important.
- A fan to enhance air movement would be beneficial



3. Conduct of competition and training (hydration and interchange opportunities)

- Associations may consider dividing games into shorter playing periods rather than halves to allow for extra breaks.
- Coaches may consider alternative training times and venues during hot weather.
- Remember, even five minutes rest can cause a significant reduction in core temperatures.
- It is important to consider the welfare of officials, as well as players.

4. Time of Day

- Avoid the hottest part of the day (usually 11 am-3 pm). Scheduling events outside this time should be a consideration throughout any summer competition, training or event, regardless of the temperature.

5. Local Environment

- Radiant heat from surfaces such as black asphalt or concrete can exacerbate hot conditions.
- The type of exercise surface and the amount of sunlight vary significantly with different sporting activities and therefore must be analysed for each individual sport.
- An air-conditioned indoor venue will provide less of a problem. A hot indoor venue or an outside venue without shade cannot be considered an acceptable environment.
- Airflow should be considered, including fans in change rooms or appropriately placed.

Remember, air movement decreases heat stress. However, a following wind can increase problems for runners or cyclists by actually reducing air movement.

Host (personal) factors

1. Clothing

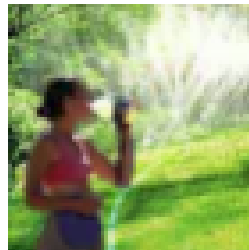
- Type of clothing is vital in minimising health risks associated with exercise in heat.
- Fabrics that minimise heat storage and enhance sweat evaporation should be selected.



- Light weight, light coloured, loose fitting clothes, made of natural fibres or composite fabrics with high wicking (absorption) properties, that provide for adequate ventilation are recommended as the most appropriate clothing in the heat. This clothing should complement the existing practices in Australia that protect the skin against permanent damage from the sun.
- This should apply to the clothing worn by players, umpires, other officials and volunteers.

Protective clothing

If clothing is worn for protective reasons, ensure that it is worn only while training and competing in hot weather. Some examples include leathers in motorcycling and mountain biking, protective equipment for hockey goalkeepers and softball and baseball umpires. Remove non-breathable clothing as soon as possible if the participants or officials are feeling unwell in hot conditions. Start cooling the body immediately via ventilation and/or a cool spray such as a soaker hose or a hand-held spray and a fan.



2. Acclimatisation of the participant

- Acclimatisation of the participant includes umpires, other officials and volunteers as well as players.
- Preparation for exercise under hot conditions should include a period of acclimatisation to those conditions, especially if the athlete is travelling from a cool/temperate climate to compete in hot/humid conditions.
- It has been reported that children will acclimatise slower than adults.
- Regular exercise in hot conditions will facilitate adaptation to help prevent performance deteriorating, or the athlete suffering from heat illness, during later competitions. Sixty minutes acclimatisation activity each day for 7-10 days provides substantial preparation for safe exercise in the heat.

3. Fitness levels/athletic ability of participant

- A number of physical/physiological characteristics of the athlete will influence the capacity to tolerate exercise in the heat, including body size and endurance fitness.
- In endurance events, accomplished but non-elite runners, striving to exceed their performance, may suffer from heat stress. The potential for heat-related



illnesses would be exacerbated if they have not acclimatised to the conditions and have failed to hydrate correctly.

- Overweight and unconditioned athletes, umpires, officials and volunteers will generally also be susceptible to heat stress.
- Refer to SMA's free [DRINK UP](#) brochure available from www.sma.org.au/information or your local National Pharmacies store.

4. Age and gender of participant

- **Female participants** may suffer more during exercise in the heat because of their greater percentage of body fat.
- **Young children** are especially at risk in the heat. Prior to puberty, the sweating mechanism, essential for effective cooling, is poorly developed. The ratio between weight and surface area in the child is also such that the body absorbs heat rapidly in hot conditions.
- In practical terms, child athletes must be protected from over-exertion in hot climates, especially with intense or endurance exercise.
- Although children can acclimatise to exercise in the heat, they take longer to do so than adults.
- Coaches should be aware of this and limit training for non-acclimatised children during exposure to hot environments.

NB: Children tend to have a more "common sense" approach to heat illness than adults. They "listen to their bodies" more and will usually slow down or stop playing if they feel distressed in the heat. ***On no account should children be forced to continue sport or exercise if they appear distressed or complain about feeling unwell.***

- Veteran participants may also cope less well with exercise in the heat. Reduced cardiac function is thought to be responsible for this effect.

5. Predisposed medical conditions

- It is important to know if athletes, umpires, officials or volunteers have a medical condition or are taking medication that may predispose them to heat illness.
- Examples of illnesses that will put the participant or official at a high risk of heat illness include asthma, diabetes, pregnancy, heart conditions and epilepsy. Some medications and conditions may need special allowances.
- Participants and officials who present with an illness such as a virus, flu or gastro or who are feeling unwell are at an extreme risk of heat illness if exercising in moderate to hot weather.
- Participants or officials who may be affected by drugs or alcohol may be at an extreme risk of heat illness if exercising in moderate to hot weather.
- SMA has produced Pre-exercise Health Check Guidelines. These should be used if pre-existing medical conditions are suspected or if the participant has



no recent record of activity. The Guidelines can be downloaded from www.sma.org.au

6. Other factors to consider

- Preventative measures can be undertaken to minimise heat injuries. Examples include the provision of shade, hats, appropriate sunscreen, spray bottles and drinking water.
- It is important to have trained personnel available to manage heat injuries and designated recovery areas for patients.
- In situations where heat problems may be expected, an experienced medical practitioner should be present.

Heat stroke is potentially life threatening. Any indication of this condition should be immediately referred for medical assessment.

Appendix 3 Australian Institute of Sport - Smoke Pollution & Exercise

Printed from https://ais.gov.au/position_statements#smoke_pollution_and_exercise

Smoke Pollution and Exercise

Bushfire smoke can pose a health risk to athletes. The health impact of bushfire smoke can vary based on an individual's current health status and previous medical conditions. Current public health advice is aimed at high-risk groups, including people over 65, children 14 years and younger, pregnant women and those with existing heart or lung conditions. However, athletes involved in high performance sport can also be at higher risk while performing high intensity prolonged exercise outdoors and additional caution should be taken.

When pollution exposure is at low levels, the respiratory tract usual defence mechanisms trap, transport and clear pollutants effectively. With elevated exposure, short-term accumulation can occur resulting in inflammation and this can exacerbate a number of health conditions with asthma being the most common in athletes.

During exercise, respiratory rate and volume increases, this in turn increases the total airway exposure to pollutants. In high performance athletes, moderate exercise can increase the total amount of air passing through the airway by more than 10 times and vigorous exercise by more the 20 times, compared to resting values. Even at moderately reduced air quality, this can represent a significant increase in pollutant exposure during a one-hour, high intensity training session.

Air Quality Index (AQI)

The 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

Each state and territory has live online updates on current, local AQI levels. The AQI evaluates the current level of air quality with general advice on implications for individuals. In athletes performing extended higher intensity exercise the risk of airway irritation is higher at lower levels of pollution. Table 1 (below) is a suggested modification of the current NSW public health guidelines for those athletes who train outdoors at higher exercise intensities and longer durations such as cycling, rowing and running.

Table 1. AQI and suggested risk stratification, adapted from NSW Public Health Unit.

General population and low intensity exercise		Endurance based and high intensity exercise	
AQI	Action	AQI	Action
VERY GOOD (0-33)	Enjoy activities	VERY GOOD (0-33)	Enjoy activities
GOOD (34-66)	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	FAIR (67-99)	Asthmatic athletes: Should have medical review prior to performing high intensity extended training outdoors
POOR (100-149)	AIR POLLUTION HEALTH ALERT Sensitive groups: Avoid strenuous outdoor activities Everyone: Cut back or reschedule strenuous outdoor activities	VERY POOR (100-149)	AIR POLLUTION HEALTH ALERT Asthmatics or symptomatic non-asthmatics should not compete or train outdoors. Minimise asymptomatic athlete exposure
VERY POOR (150-200)	AIR POLLUTION HEALTH ALERT Sensitive groups: Avoid strenuous outdoor activities Everyone: Cut back or reschedule strenuous outdoor activities	HAZARDOUS (150-200)	AIR POLLUTION HEALTH ALERT Outdoor training should be rescheduled indoors, and exposure should be minimised for everyone
HAZARDOUS (>200)	AIR POLLUTION HEALTH ALERT Sensitive groups: Avoid strenuous outdoor activities		

General population and low intensity exercise	Endurance based and high intensity exercise
	<p>Everyone: Significantly cut back on outdoor physical activities</p>

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

- Australian Capital Territory
- **Victoria** (go to <https://www.epa.vic.gov.au/for-community/airwatch.>)
- New South Wales
- Queensland
- Western Australia
- South Australia
- Tasmania

Additional Information

- Air quality information 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 table 1.
- 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.

Appendix 4 Use of Petrol -Operated Equipment

Use of petrol generators at open-air and other events

Stalls, concessions and tents/marquees, to which the public have access at an event.

Guidance

This fire safety guidance note assumes the generator will be a modern domestic or small worksite petrol generator with an integrated starting mechanism and an integral petrol tank of less than 10 litres capacity petrol (see examples below). Other types of larger petrol generator or those with non-integral fuel tanks must be considered separately.



Domestic 'suitcase' generator



Small worksite 'frame' generator

The Events Risk Assessment should identify fire as the principal hazard. It must also identify issues such as unauthorised access to the generator, storage of spare fuel and the refuelling operation as hazards. The relevant event manager must be satisfied that the person in charge of the generator is competent. If this is not the case, then permission to use the generator should be refused and appropriate action taken to ensure compliance. Petrol generators may be acceptable provided there is a safe system of work in place (as detailed below), however, some event managers may only consider diesel generators for use at their sites.

The generator

The generator must be positioned in an appropriate place:

- in a well ventilated, outdoor location
- out of public areas and traffic routes
- not adjacent to tents, marquees etc.
- with the exhaust discharging in a safe direction

It must be cordoned off from unauthorised access including:

- the public (especially children)
- event personnel who have no reason to approach generator

There must be suitable signage such as:

- keep out
- no smoking or naked flame
- electrical hazards
- fire hazards

A fire extinguisher of the correct type (Powder or CO2) must be provided

- Spare fuel must be:
- the minimum amount required for the day
- stored in an appropriate petrol storage container with secure closure
- stored in a secure place
- stored out of direct sunlight and ignition sources

Who will enact controls?

- the person in charge of the generator

Who will monitor controls?

- the event safety officer / production manager / stalls or trader manager

How will they monitor controls?

- confirm operator's method (either written or verbally to satisfy themselves that the operator is competent)
- inspect installation of the generator (site electrician should sign-off electrical connections)
- confirm maintenance record of the generator
- check the refuelling operation (either by arrangement with the operator or on the spot-check basis)

Refuelling

- Must be carried out by a trained and competent person
- Must follow the manufacturer's or hirer's instructions
- The generator must be allowed to cool down before refuelling

Hot generators should not be refuelled as this is a major cause of fires. A petrol spillage is not necessary for a fire to start, heat from the engine or exhaust can ignite the invisible vapours causing severe burns. Make arrangements so that there is time for it to cool down, i.e. when the need for power is reduced during a rest break, and before it gets dark if being used for lighting. If continuous power is required a secondary source should be provided to allow for a cooling off period.

- Have a funnel or spout available to avoid spillages
- Provide absorbent cloth to mop up spills
- Wear gloves (also mask and goggles if identified by risk assessment)

Personal protective equipment should always be used by the person doing the refuelling as it is cheap, easy and effective.

- Take care not to overfill the tank and replace the filler cap
- Confirm barrier is secure
- Return the petrol container to secure storage

If all these measures are detailed on the Hazard Risk Assessment and put in place, then this would be considered as evidence of a suitable and sufficient risk assessment.