

Weather Policy – POL-014

INTRODUCTION

The Saskatchewan Cycling Association (SCA) considers the health and safety of riders as an absolute priority. We must always be very mindful that we do not potentially cause harm to a venue site when cycling during bad weather conditions (e.g., Heavy rain on a BMX tracks, parks or trails, etc.).

PURPOSE

The purpose is to provide policies and guidelines that will assist Commissaires, event organizers, and race organizers in making informed decisions on taking the proper course of action in a timely manner so that participant risk is minimized. Decisions could range from modifications in the time schedule and the route, alteration of the start time, finish venue, or overall course, neutralization or cancellation of a stage or the race entirely depending on the severity of the risk and established policies.

SCOPE

This policy applies to all SCA cycling events and races as extreme weather conditions could occur at any time before or during the event or race that could potentially harm the health and / or safety of riders or cause harm to a venue site.

Extreme weather conditions can include, but are not limited to; lightning, thunder, strong winds, air pollution, extreme temperatures, poor visibility, freezing rain, snow, etc.

POLICY

SCA highly recommends that local weather forecasts be monitored closely by the event Commissaires and Race / Event Organizer as events will not be held during extreme weather conditions.

Commissaries, Race Organizers, and participants will be informed of this policy.

What are possible weather conditions?

1. Lightning / Thunder
2. Possible Tornado – funnel clouds
3. Air Pollution
4. Extreme Heat
5. High Heat and Humidity Combined
6. Extreme Cold
7. Strong Winds

8. Poor Visibility
9. Rain
10. Fog
11. Hail
12. Freezing Rain / Sleet
13. Snow / Snow accumulation on the course

What are the possible actions?

Depending on the severity of the weather conditions that may occur, the following actions may be taken:

1. No action
2. Modification of the schedule
3. Time delay in the schedule
4. Modification of the start venue
5. Modification of the start time
6. Modification of the finish venue
7. Modification of finish time
8. Use of an alternative course / route
9. Neutralization of a section of the stage / race
10. Cancellation of the stage / race

Decisions around cancelling / postponing events?

At any point where a decision is to be made regarding stopping, delaying, postponing, shortening or cancelling a race or cycling recreational event due to the severity of weather conditions, the decision will be made by the races' Chief Commissaire, in consultation with his / her partners, the Race Organizer, and the SCA Provincial Chief Commissaire and / or SCA VP Technical (if available). If this is a cycling recreational event, the decision would be made by the Event Organizer.

If the decision is to start an event, either on time or through postponement, the race may still be cancelled at any time if the conditions become dangerous.

Weather Policy Summary

Lightning / Thunder Policy

In the event of thunder or lightning, the course will be evacuated and shelter found. Thirty minutes must pass from the last clap of thunder or flash of lightning before riders may resume their competition. The next occurrence begins a new 30-minute cycle.

No outdoor activities will be initiated when thunder and / or lightning is present.

If thunder and lightning occur once activities have started, utilize the "*flash-to-bang*" method for determining the distance of lightning.

Air Quality Policy

Events will not be started, or may be immediately stopped, or cancelled if started, if the Air Quality Health Index (AQHI) reaches **8 or higher**.

Extreme Heat Policy

Once the temperature reaches **40° C**, all activities must be cancelled.

Once the temperature reaches between 35° - 39° C, the cancellation of races should be seriously considered.

Heat and Humidity Policy

Once the humidex range reaches **40**, all activities must be cancelled.

Once the range reaches between 30 - 39, the cancellation of races should be seriously considered.

Extreme Cold Policy

All cycling events and races must be cancelled when the temperature is **-20° C or below, including the wind chill factor**.

Wind Policy

All cycling events and races must be cancelled when the wind speed reaches **40 km/h**.

Once the wind speed reaches between 30 – 39 km/h, the cancellation of races should be seriously considered.

Visibility Policy

Visibility is defined as the state of being able to see or be seen. In cycling events, this is described as the distance one can see as determined by light and weather conditions.

Once visibility reaches **< 100 meters**, all activities must be cancelled.

Once visibility reaches **< 1 km**, the cancellation of races should be seriously considered.

Cyclists should not be riding after dark unless they have equipment to make themselves visible to others; such as reflective clothes, handlebar white light, and red tail light.

Other Weather Conditions to Monitor

There are several other weather conditions that could put participants' health and safety at risk and cause potential damage to a venue site (e.g., Fog, mist, haze, air pollution, rain, freezing rain, sleet, hail, snow).

Monitoring of the impact, visibility and course conditions are the responsibility of the races' Chief Commissaire, in consultation with his / her partners, the Race Organizer, and the SCA Provincial Chief Commissaire and / or SCA VP Technical (if available). If this is a cycling recreational event, the impact, visibility and course conditions monitoring are the responsibility of the Event Organizer.

Lightning / Thunder Policy

In the event of thunder or lightning, the course will be evacuated and shelter found. Thirty minutes must pass from the last clap of thunder or flash of lightning before riders may resume their competition. The next occurrence begins a new 30-minute cycle.

No outdoor activities will be initiated when thunder and / or lightning is present.

If thunder and lightning occur once activities have started, utilize the “*flash-to-bang*” method for determining the distance of lightning.

1. Count the number of seconds between seeing the lightning and hearing the clap of thunder
2. If the time between “*flash to bang*” is 30 seconds or less, stop the event and seek shelter
3. A rough rule of thumb, if lightning is that is closer than 10km poses a risk to participants
4. The formula is roughly the time between “*flash-to-bang*” divided by 3 equals the distance away in km

e.g., If the time from “*flash-to-bang*” is 30 seconds then the storm is 10 km away. E.g., 30 seconds / 3 = 10km

Lightning / Thunder Guidelines

The storm’s distance and your location will determine when there is a need for evacuation to a safe shelter. A safe shelter is defined as a sturdy building that has metal plumbing or wiring, or both, to electrically ground the structure. A shed or a shack is not a safe shelter.

Stay away from tall or individual trees, lone objects (flagpoles), metal objects, standing pools of water, and open fields.

Avoid close contact with others by maintaining a distance of 15-20 feet.

Allow 30 minutes to pass after the last sound of thunder or sight of lightning before resuming any outdoor activities, INCLUDING WALKING OUTSIDE OF YOUR SHELTER.

In the event that funnel clouds are spotted, the course will be evacuated and you must seek shelter until the threat of a tornado has passed.

Seek shelter in a sturdy building if possible. Go to the basement or take shelter in a small interior ground floor room such as a bathroom, closet or hallway. If you have no basement, protect yourself by taking shelter under a heavy table or desk. Protect your head with your hands, or with a blanket or jacket. In all cases, stay away from windows, outside walls and doors.

If it looks like a funnel cloud could hit your car and you don't have time to seek shelter, then carefully exit your car, move far away from your vehicle, and crouch or lie down in a low-lying area (such as a ditch). Protect your head with your hands, or with a blanket or jacket.

Air Quality Policy

Events will not be started, or may be immediately stopped, or cancelled if started, if the Air Quality Health Index (AQHI) reaches **8 or higher**.

Air Quality Guidelines

Local air quality should be monitored by the event organizer and SCA leading up to the event. For air quality monitoring the Saskatchewan Governments Air Quality Health Index will be used. <http://www.environment.gov.sk.ca/airqualityindex>

Air Quality Health Index

The Air Quality Health Index or "AQHI" is a scale designed to help you understand what the air quality around you means to your health.

AQHI is a health protection tool that is designed to help you make decisions to protect your health by limiting short term exposure to air pollution and adjusting your activity levels during increased levels of air pollution. It also provides advice on how you can improve the quality of the air you breathe.

This index pays particular attention to people who are sensitive to air pollution and provides them with advice on how to protect their health during air quality levels associated with low, moderate, high and very high health risks.

The AQHI communicates four primary things;

1. It measures the air quality in relation to your health on a scale from 1 to 10. The higher the number, the greater the health risk associated with the air quality. When the amount of air pollution is very high, the number will be reported as 10+.
2. A category that describes the level of health risk associated with the index reading (e.g., Low, Moderate, High, or Very High Health Risk).
3. Health messages customized to each category for both the general population and the 'at risk' population.
4. Current hourly AQHI readings and maximum forecast values for today, tonight and tomorrow.

The AQHI is designed to give you this information along with some suggestions on how you might adjust your activity levels depending on your individual health risk from air pollution. [Follow this guide on how to use the AQHI.](#)

How is the AQHI calculated?

The AQHI is calculated based on the relative risks of a combination of common air pollutants that is known to harm human health. These pollutants are:

- Ozone (O₃) at ground level,
- Particulate Matter (PM_{2.5}/PM₁₀) and
- Nitrogen Dioxide (NO₂).

What is the scale for the AQHI?

The AQHI is measured on a scale ranging from 1-10+. The AQHI index values are grouped into health risk categories as shown below. These categories help you to easily and quickly identify your level of risk.



- 1-3 Low health risk
- 4-6 Moderate health risk
- 7-10 High health risk
- 10 + Very high health risk

The following procedures are to be followed depending on the Air Quality Index:

Air Quality Category	Message	Action for Events
Good Visibility: 15 km and Up AQHI 1-3	Ideal air quality for outdoor activities	Ideal conditions for an event
Moderate/ Unhealthy for Sensitive Groups Visibility: 5-14 km AQHI 4-6	Be aware of health effects of smoke and related symptoms	Be aware of health effects of smoke and related symptoms
Unhealthy Visibility: 2.5-4 km AQHI 7	Reduce or re-schedule strenuous activities, especially if you experience symptoms	Consider reduction of length of events and/or cancellation junior and younger events Consider delaying the start of the event for up to 2 hours Cancel event based on the forecast Provide warning to competitors with respiratory issues
Unhealthy Visibility: 2.5-4 km AQHI 8	Re-schedule strenuous activities	Cancel event Cancel Junior Events
Very Unhealthy Visibility 1.5-2 km AQHI 9-10	Avoid prolonged strenuous activities and stay indoors if possible	Cancel all events and training

HAZARDOUS Visibility: < 1.0 km AQHI 10+	Avoid all strenuous activities and stay indoors	Cancel all events and training
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*Unfortunately, there are some areas in the province where there are no air quality monitoring stations. It will be up to the Chief Commissaire, Technical Delegate and Organizer to consider other factors. Factors to take into consideration are, presence of smoke, regional air quality conditions, forecasted air quality conditions and visibility.

Extreme Heat Policy

Once the temperature reaches **40° C**, all activities must be cancelled.

Once the temperature reaches between 35° - 39° C, the cancellation of races should be seriously considered.

Extreme Heat Guidelines

With high heat temperatures across Saskatchewan, all clubs must take precautions to ensure all members are safe. It is the responsibility of the club executive, coaches, and ride leaders to monitor local temperatures and decide exactly which precautions must be taken- including the cancelling of any race or ride.

Extreme Heat Activity Chart

HUMDEX VALUE	DISCOMFORT AT REST	RISK OF OVERHEATING DURING EXERCISE	ACTIVITY MODIFICATION
Below 24° C	None	Low	N/A
25° C - 29° C	None	Low to Moderate	Consider shorter rides, especially for young riders
30° C - 34° C	Some	Moderate - Athletes should be monitored	Shorter rides, longer breaks between motos, water breaks
35° C - 39° C	High	High - Athletes should be very monitored closely	Consider cancelling racing Practises, or easy rides only Make sure there are shaded areas for breaks Have plenty of water on hand
40+° C	EXTREME	EXTREME	Activity Cancelled

Preventative Measures

Where possible activities should be scheduled for cooler times of the day.

Ensure that everyone participating has enough water / hydration. Recognize that even well-hydrated athletes can be affected by heat illness.

Plan for plenty of breaks and keep riders shorter.

Other factors to consider in determining risk include, but are not limited to:

Not being acclimatized	Fitness Level
Hypo hydration	Hyper hydration
Use of medications or supplements	Certain medical conditions (cardiac, lung)

Early warning signs to consider include but are not limited to:

Flushed face	Hyperventilation or shortness of breath
Headache	Dizziness
Tingling arms	Goose Bumps
Chilliness	Poor coordination

Confusion, agitation, uncooperativeness

Potential Risks of Extreme Heat Exposure

Heat Cramps - these are the mildest form of heat trauma and are commonly related to low body sodium and chloride levels.

Symptoms include:

- Weakness
- Muscle cramps
- Collapse with low blood pressure

Treatment:

- Rest briefly and cool down
- Drink clear juice or an electrolyte-containing sports drink
- Practice gentle, range-of-motion stretching and gentle massage of the affected muscle group
- Don't resume strenuous activity for several hours or longer after heat cramps go away
- See a doctor if cramps don't go away within one hour or so

Heat Exhaustion - a more severe form of heat trauma.

Symptoms include:

- Cool, moist skin with goose bumps when in the heat
- Heavy sweating
- Faintness
- Dizziness

- Fatigue
- Weak, rapid pulse
- Low blood pressure upon standing
- Muscle cramps
- Nausea
- Headache

Treatment includes:

- Stop all activity and rest
- Move to a cooler place
- Drink cool water or sports drinks

Contact your doctor if your signs or symptoms worsen or if they don't improve within one hour. If you are with someone showing signs of heat exhaustion, seek immediate medical attention if he or she becomes confused or agitated, loses consciousness, or is unable to drink. You will need immediate cooling and urgent medical attention if your core body temperature (measured by a rectal thermometer) reaches 40° C or higher.

Heat Stroke - is a medical emergency! Call 911 or your local emergency number immediately if you are caring for someone, such as a running partner, who has a high body temperature and is either unconscious or confused.

While waiting for help - cool the person right away by:

- Moving them to a cool place, if you can;
- Applying cold water to large areas of the skin or clothing; and
- Fanning the person as much as possible

High Heat and Humidity Combined (Humidex)

Heat and Humidity Policy

Once the humidex range reaches **40**, all activities must be cancelled.

Once the range reaches between 30 - 39, the cancellation of races should be seriously considered.

What is Humidex?

Humidex is a term to measure how hot we feel; to describe when heat and humidity combine at uncomfortable or dangerous levels.

High heat and humidity lead to two problems in the exercising body:

- Increased core body temperature
- Dehydration

Increased body temperature (hyperthermia) leads to decreased muscle endurance, which means the muscle's ability to contract repeatedly or in a sustained manner over long periods of time. High core temperatures also cause a shift in energy production from aerobic to anaerobic mechanisms, which means the body has to use up its muscle energy stores more rapidly. Unfortunately, during a longer athletic

event, the rate of adding energy (sports drinks, energy bars, gels, etc.) can't keep up with the rate of losing energy when heat and humidity are high. Finally, high body temperature causes a decrease in blood flow to the heart as blood pools in the limbs. If the heart doesn't get as much blood, it can't pump as much oxygenated blood back to the muscles.

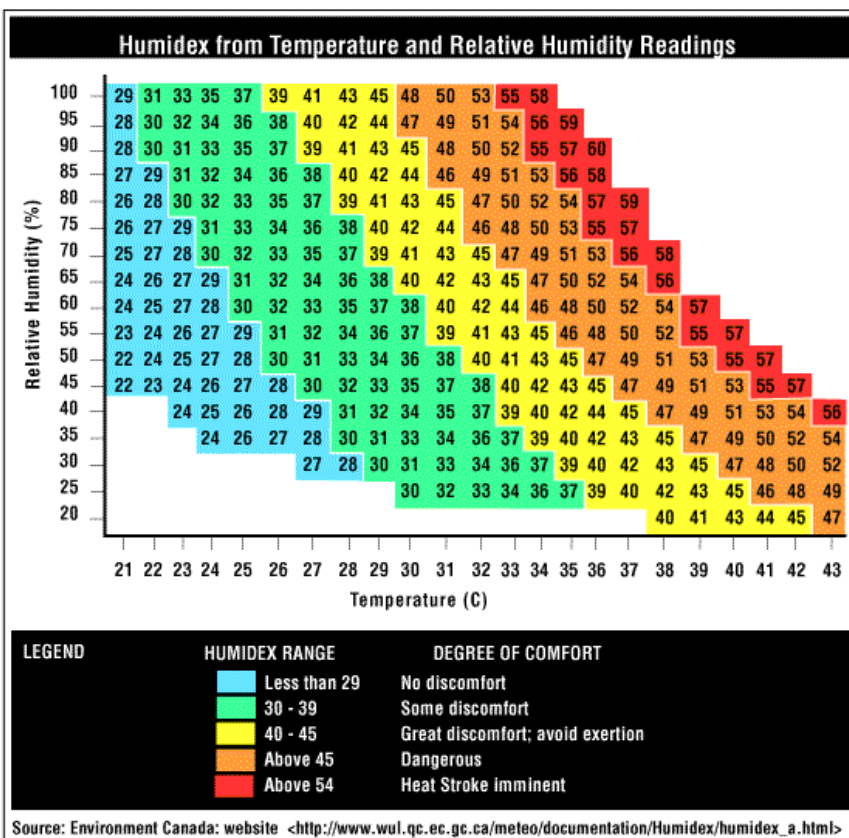
Dehydration often occurs long before some athletes realize it or before cramps set in. Athletes can lose as much as 2 to 8 % of their body weight during high intensity exercise, and the rate of fluid absorption from the gut just can't keep up with that rate of loss. Dehydration causes a decrease in VO₂max, which means the body can't utilize oxygen as efficiently to provide energy. Dehydration also contributes to the decrease of heart blood pumping mentioned above.

Symptoms of high Heat and Humidity

- Heat rash, or prickly heat
- Heat craps
- Heat exhaustion
- Heat stroke

Why is humidex important?

When it is hot and humid, it is more difficult for you to cool down by sweating. When the relative humidity reaches around 90%, your sweat does not evaporate. In these situations, your body temperature may rise and lead to heat rash, cramps, heat exhaustion and heat stroke.



Humidex Calculator

http://www.ohcow.on.ca/edit/files/general_handouts/heat-stress-calculator.html

What can you do to combat or prevent the effects of high heat and humidity?

Exercise in the heat is usually associated with reduced performance; both dehydration and hyperthermia adversely affect mental and physical performance. To combat or prevent the effects of high heat and humidity:

- Where possible activities should be scheduled for cooler times of the day
- Ensure that everyone participating has enough water / hydration. Recognize that even well-hydrated athletes can be affected by heat illness
- Plan for plenty of breaks and keep riders shorter
- Fluid replacement is critical for events in high heat and humidity. Fluid replacement starts before an event, continues during it, and doesn't stop until long afterwards
- Wearing light-weight, light-colored clothes of open-weave natural fibers (cotton, wool) or fluid-wicking fibers help increase evaporation and cool the body
- Acclimatization to higher temps and humidity during training

Extreme Cold Policy

All cycling events and races must be cancelled when the temperature is **-20° C or below, including the wind chill factor.**

Common Cold-weather conditions:

- Numbness
- Frostbite
- Frostnip
- Hypothermia

How can I reduce cold-induced issues?

1. Pay attention to the weather forecast – temperature, weather conditions and wind chill
2. Get the right gear and coverage – coverage and layers
3. Cover your head, hands, feet and ears – more susceptible to cold
4. Warm up first
5. Don't get too sweaty
6. Hydrate well
7. Do not ride alone

What are the warning signs of health issues related to cold exposure?

- Tightness in the lungs
- Coughing
- Loss of breath
- Wheezing

What are the signs of frostbite and hypothermia?

Frostbite is an injury to the body that is caused by freezing. Frostbite is most common on exposed skin, such as your cheeks, nose and ears. It can also occur on hands and feet. Early warning signs include numbness, loss of feeling or a stinging sensation.

Immediately get out of the cold if you suspect frostbite. Slowly warm the affected area — but don't rub it because that can damage your skin. Seek emergency care if numbness doesn't go away.

Hypothermia is abnormally low body temperature. When exposed to cold temperatures, your body begins to lose heat faster than it can be produced. Exercising in cold, rainy weather increases the risk of hypothermia. Older adults and young children are at greater risk.

Hypothermia signs and symptoms include:

- Intense shivering
- Slurred speech
- Loss of coordination
- Fatigue

*Seek emergency help right away for possible hypothermia.

Wind Policy

All cycling events and races must be cancelled when the wind speed reaches **40 km/h**.

Once the wind speed reaches between 30 – 39 km/h, the cancellation of races should be seriously considered.

Wind Speed Guidelines

< 1 km/h	Still, calm air, smoke will rise vertically.	Calm
1 – 5 km/h	Rising smoke drifts, wind vane is inactive.	Light Air
6 – 11 km/h	Leaves rustle, can feel wind on your face, wind vanes begin to move.	Light Breeze
12 - 19 km/h	Weather vanes will move, leaves and small twigs will rustle and move, and you'll feel a breeze on your face. Light weight flags extend.	Gentle Breeze
20 - 29 km/h	Strong enough to straighten flying flags and shake small tree branches. Expect dust and loose paper garbage to fly around in the air.	Moderate Breeze

30 - 39 km/h	Small trees start to sway.	Fresh Breeze Consider canceling activity
40 - 50 km/h	Strong enough to break umbrellas and move large tree branches.	Strong Breeze Cancellation of activities
51 - 62 km/h	Walking will be tough. Or incredibly easy, if you're going in the same direction as the wind. Large trees sway.	Gale Force Cancellation of event
63 - 74 km/h	Strong enough to send large, loose objects (garbage cans, patio furniture) flying. Tree limbs can break and driving gets white-knuckle—cars can veer off the road.	Gale Force Cancellation of activities
75 – 89 km/h	Wind is strong enough to damage structures. Shingles are blown off roofs.	Strong Gale Cancellation of activities
90 – 117 km/h	Wind can uproot entire trees.	Storm / Violent Storm Cancellation of activities
118 km/h	Wind is considered hurricane force...but happily it doesn't get that windy every day.	Hurricane Cancellation of activities

Visibility Policy

Visibility is defined as the state of being able to see or be seen. In cycling events, this is described as the distance one can see as determined by light and weather conditions.

Once visibility reaches < **100 meters**, all activities must be cancelled.

Once visibility reaches < 1 km, the cancellation of races should be seriously considered.

Cyclists should not be riding after dark unless they have equipment to make themselves visible to others; such as reflective clothes, handlebar white light, and red tail light.

Visibility Guidelines

Clear visibility	Visibility of 30 km	
Good Visibility	Visibility of 5 – 29 km	
Moderate Visibility	Visibility of 1 – 4 km	
Poor Visibility	Visibility of < 1 km	Monitor very closely.
Zero or Very Low Visibility	<p>Visibility of less than 100 meters (330 ft.)</p> <p>Roads may be closed or automatic warning lights activated.</p>	<p>Dense fog or smoke, blowing sand, dust, and debris in high winds, heavy rain, snow storm, heavy sleet, heavy hail, darkness.</p> <p>Cancellation of activities</p>

OTHER WEATHER CONTIONS TO MONITOR

There are several other weather conditions that could put participants' health and safety at risk and cause potential damage to a venue site (e.g., Fog, mist, haze, air pollution, rain, freezing rain, sleet, hail, snow).

Monitoring of the impact, visibility and course conditions are the responsibility of the races' Chief Commissaire, in consultation with his / her partners, the Race Organizer, and the SCA Provincial Chief Commissaire and / or SCA VP Technical (if available). If this is a cycling recreational event, the impact, visibility and course conditions monitoring are the responsibility of the Event Organizer.

Fog	<p>Monitor impact, visibility and course conditions.</p> <p>Visibility of < 1 km</p>	Hazardous due to ice formation as occasional freezing drizzle and snow can occur.
Mist	<p>Monitor impact, visibility and course conditions.</p> <p>Visibility from 1 – 2 km</p>	
Haze	<p>Monitor impact, visibility and course conditions.</p> <p>Visibility from 2 – 5 km</p>	
Air Pollution	<p>Monitor impact, visibility and course conditions.</p>	Smog, smoke, etc. See AQHI < 8

	Visibility from 2.5 – 4 km	
Rain	Monitor impact, visibility and course conditions.	Hazardous due to slippery surfaces.
Freezing Rain / Sleet	Monitor impact, visibility and course conditions.	Hazardous due to ice formation.
Hail	Monitor impact, visibility and course conditions.	Hazardous due to body impact and ice formation.
Snow / Snow accumulation on the course	Monitor impact, visibility and course conditions.	Hazardous due to slippery surfaces and cooling temperatures.

COMPLIANCE

Failure to follow the ‘Weather Policy’ could affect the health and safety of riders which may lead to disciplinary action being taken.

DEFINITIONS

Term	Definition
SCA	Saskatchewan Cycling Association.
Extreme Weather	Any weather condition that puts participants at a health and / or safety risk or could potentially cause harm to a venue site.

Approved By:	<i>SCA Board of Directors</i>
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