BASEBALL ALBERTA
WEATHER POLICY

POLICY STATEMENT

The safety of players, coaches, umpires, volunteers, and spectators is the primary concern in any weather event that occurs during games sanctioned by Baseball Alberta.

By understanding and following the below information provided and endorsed by Environment Canada and/or Alberta Environment, the safety of everyone shall be greatly increased. During Baseball Alberta league play, the host / home team and the umpire in chief have specific responsibilities as outlined in the Official Rules of Baseball in deciding to delay or restart a game due to weather related factors. At Baseball Alberta Provincial Championship events, the umpire in chief and the Baseball Alberta Tournament Director, if applicable, have the final decision over delaying or restarting a game due to weather related factors. Umpires and Baseball Alberta Tournament Directors are expected to act responsibly when dealing with such events during games they are controlling.

APPLICATION

This policy applies to all games sanctioned by Baseball Alberta including, league games, exhibition games, and Provincial Championship games.

LIGHTNING AND SEVERE WEATHER

When thunder roars, go indoors.

You can determine the approximate distance of lightning from your area by counting the number of seconds between the flash and the first sound of the thunder and dividing by three (3). This will give you the distance in kilometers from your location.

The problem lies in that people need to be in a safe location (not a dugout!) before the count reaches 30. For instance if one counts 35 seconds, people should be finding a safe location to shelter in.

Additional Information

Please note the following recommendations from Environment Canada:

The existence of blue sky and absence of rain are not protection from lightning. Lightning can and does strike as far as fifteen (15) kilometers away from the rain shaft. It does not have to be raining for lightning to strike. Many lightning casualties occur in the beginning, as the storm approaches, because many people ignore initial precursors of high winds, some rainfall and cloud cover, or after the system moves past. The risk of being struck by lightning may persist for more than thirty (30) minutes so shelter in place until 30 minutes after the last rumble of thunder.

Lightning can strike ahead or behind the parent cloud – take action even if the thunderstorm is not overhead.

Be aware of how close lightning is occurring. The flash-to-bang method is the easiest and most convenient way to estimate how far away lightning is occurring. Thunder always accompanies lightning, even though its audible range can be diminished due to background noise in the immediate environment and its distance from the observer.

Lightning awareness should be increased with the first flash of lightning or the first clap of thunder, no matter how far away. This activity must be treated as a wake-up call to all. The most important aspect to monitor is how far away the lightning is occurring, and how fast the storm is approaching, relative to the distance of a safe shelter for everyone.

Recognize that personal observation of lightning may not be sufficient. Additional weather information may be required to ensure consistency, accuracy and adequate advance warning. There is a Canadian Lightning Danger Map available at http://weather.gc.ca/lightning/index_e.html that can help identify where recent lightning has struck.

When larger groups are involved, the time needed to properly evacuate an area increases. As time requirements change, the distance at which lightning is noted and considered a threat to move into the area must be increased. Extending the range used to determine threat potential also increases the chance that a localized cell or thunderstorm may not reach the area giving the impression of a “false alarm”.

Know where the closest “safe structure or location” is to the field or playing area and know how long it takes to get to that safe structure or location.

Safe structure or location is defined as:

Any building normally occupied or frequently used by people, i.e., a building with plumbing and / or electrical wiring that acts to electrically ground the structure. Avoid using the showers or plumbing facilities during a thunderstorm.

In the absence of a sturdy, frequently inhabited building, any vehicle with a hard metal roof (not a convertible or golf cart) and rolled-up windows can provide a measure of safety. A vehicle is certainly better than remaining outdoors. It is not the rubber tires that make a vehicle a safe shelter, but the hard metal roof which dissipates the lightning strike around the vehicle. Do not touch the sides of any vehicle!

Avoid using the telephone, except in emergency situations. People have been struck by lightning while using a land-line telephone. A cellular phone or a portable remote phone is a safe alternative to land-line phones, if the person and the antenna are located within a safe structure or location, and if all other precautions are followed.

When considering resumption of any athletics activity, it is recommended that everyone should ideally wait at least thirty (30) minutes after the last sound of thunder before returning to the field.

People who have been struck by lightning do not carry an electrical charge. Therefore, cardiopulmonary resuscitation (CPR) is safe for the responder. If possible, an injured person should be moved to a safer location before starting CPR. Lightning-strike victims who show signs of cardiac or respiratory arrest need emergency help quickly. Prompt, aggressive CPR has been highly effective for the survival of victims of lightning strikes.

For additional information, the following websites are helpful:

Canadian Lightning Danger Map: https://weather.gc.ca/lightning/index_e.html
Lightning safety for soccer video: http://www.ec.gc.ca/foudre-lightning/default.asp?lang=En&n=54B219E5-1
Lightning safety for large outdoors venue: http://www.ec.gc.ca/foudre-lightning/default.asp?lang=En&n=90CC153A-1
Lightning in Canada: http://www.ec.gc.ca/foudre-lightning/default.asp?lang=En&n=BEC25F94-1

AIR QUALITY

AQHI of 7 or higher means that play will be suspended immediately. Host locations must monitor AQHI levels and notify umpires when levels are 7 or higher to suspend the game.

The Air Quality Health Index (AQHI) is a recognized risk management measurement which describes a local reading of air quality as it relates to human health. The AQHI is not real time reporting and can have a lag-time of over one hour. If air quality is changing during athletic activity, be aware of the common symptoms of irritated eyes, coughing, and difficulty breathing in addition to the reported AQHI index.

An AQHI index of over 7 indicates a “high risk” from air pollutants.

An AQHI index of between 4 and 6 indicates ongoing AQHI air monitoring should be initiated in order to identify to the umpire and Tournament Director if the index should reach 7 or higher. In practice situations, athletic activity should be adjusted through reduced intensity, educed duration, and providing rest periods.

Additional Information

In order to obtain the AQHI, go to http://environment.alberta.ca/apps/aqhi/aqhi.aspx or use the AQHI Canada app for more specific stations. Air quality can be variable within a localized region like the greater Edmonton area even though stations such as Edmonton and St. Albert are in proximity to each other. Use the index value that is within one hour of the scheduled start time for the game or activity.

In addition to the AQHI, be aware of weather and other conditions. Conditions such as forest fires located some distance away, local burning of agricultural stubble, and sudden changes in wind direction and strength can all affect local air quality.

The AQHI is calculated differently for Alberta in two significant ways. First, in the rest of Canada, the AQHI only measures ground-level ozone, fine particulate matter (PM2.5) and nitrogen dioxide. In addition to these three pollutants, Alberta is more comprehensive by also including sulphur dioxide, hydrogen sulphide, total reduced sulphur and carbon monoxide in its AQHI reporting. Second, for the rest of Canada the AQHI is calculated on a 3-hour rolling average and so is less responsive to dramatic changes in air quality. It is for these reasons that the Alberta AQHI website is the best source of AQHI index values.

Individuals tend to rely on sensory perception to evaluate air quality when, in fact, the pollutants that present the greatest harm to human health are difficult to see or smell such as ground level ozone.

The AQHI treats an index value above 10+ as "Very High" with health messages for the "general" and "at risk" populations to reschedule all outdoor activities – strenuous or not. Athletes are in the "at-risk" population because of the intensity and duration of exposure to outdoor air quality.

For additional information, the following websites are helpful:

Environment Canada Air Quality: https://weather.gc.ca/mainmenu/airquality_menu_e.html
Alberta Environment AQHI: http://environment.alberta.ca/apps/aqhi/aqhi.aspx
Air Health: https://www.canada.ca/en/environment-climate-change/services/air-quality-health-index.html
Alberta Air Quality Advisory Site: http://www.albertahealthservices.ca/news/air.aspx

Heat Guidelines

PURPOSE:

1. To clearly articulate the practical, and standardized, steps to create a safe and enjoyable participation in games of Baseball during days of elevated temperature.

DEFINITIONS:

1. **Elevated Temperature** Specifically relates to any practice or game that is played with a Humidex above **30**.

2. **Heat Exhaustion** Participants, who collapse ***after*** exercise, are likely suffering from a post-exercise drop in blood pressure (posturalhypotension) but, some may in fact have heat stroke.

3. **Heat Stroke** Those who show signs of altered mental function, lossof consciousness or collapse ***during*** exercise are likely suffering heatstroke. Sports participants showing signs of confusion, loss of skill, loss of coordination or irrational behaviour should be stopped and removed from the field immediately

4. **Heat Index** Is an index that takes account of both air temperatureand relative humidity (RH) to determine the 'human-perceived' equivalent temperature – e.g. '***how hot it feels***'.

BACKGROUND:

5. Heat illness can occur anytime a participant exercises vigorously in hot conditions. It may also occur with prolonged exposure to hot weather, even if the activity is low intensity.

6. Heat illness in sport usually presents as either '*Heat Exhaustion*' (sometimes referred to as heat stress) or, '*Heat Stroke*'. Heat exhaustion is the more common sports-related heat illness. Heatstroke is rare, but it is a life threatening condition.

7. The human body normally cools itself by perspiration. Heat is removed from the body by the evaporation of that perspiration. However, relative humidity reduces the evaporation rate because thehigher vapor content of the surrounding air does not allow the maximum amount of evaporation from the body to occur.

8. While all participants in a game of baseball can be subject to Heat Illness, umpires are generally at a greater risk due to the added protection that they wear and also that they generally have less respite from direct sunlight, given that they do not get to spend time'on the bench' while the other team is 'at bat'. Teams should provide consideration to allow the umpire some respite from the heat between innings.

9. With respect to all Baseball Alberta sanctioned games, an '*accredited*'umpire is the official representative of Baseball Alberta for all matters pertaining to the conduct of that game. This

responsibility extends to ensuring, in a reasonably practical manner, the safety of all participants in that game.

10. This Policy is a '***procedural guide***' for umpires to assist teams and associations in implementing appropriate (fair, reasonable and practical) riskmitigation strategies on days of elevated temperature.

POLICY:

When Competing In the Heat

With baseball being an outdoor sport there is no escaping the environmental conditions. If it is hot and/or humid a nutrition & hydration strategy and a plan to maintain body temperature should be part of your pregame preparation. If you do not have a plan in place you may suffer the associated side effects of heat illness. The information provided below offers valuable information on how to maintain performance while remaining healthy in hot & humid conditions.

COMMON SIGNS & SYMPTOMS OF HEAT ILLNESS

Tolerance to heat will differ from person to person. For this reason, each player must be aware of their reaction to these conditions. Some common signs and symptoms of heat illness include: Headache, weakness, dizziness, fatigue, muscle cramps, gastral intestinal distress, nausea, vomiting, excessive sweating, confusion, blurred vision, increased heart rate, low blood pressure, seizures, and unconsciousness.

STOP! PLAN YOUR NUTRITION & HYDATION STRATEGY

In hot & humid conditions fluid and electrolyte replacement is key in limiting dehydration and its side effects. To limit the effects of heat & humidity consider:

1. Planning your day to ensure you have optimal nutrition & hydration for the day.
2. Additional electrolytes and fluids with your pre-event meal.
3. Additional fuel to accommodate for added energy expenditure (~30-60 g carbs/hr). Having an effective hydration schedule during training or games (~6 ml/kg every 2-3 hours).

DECISION MAKING STEPS AT FIELD

STEP 1

Go to: https://weather.gc.ca/forecast/canada/index_e.html?id=AB
Specify your location or closest reporting station.

STEP 2

Check the current temperatures with specific focus on the "feels like" temperature which accounts for the humidity in measuring temperature.

STEP 3

Use the Temperature and Humidity readings to reference the chart below.

STEP 4

It is the responsibility of the respective associations and/or their coaches to monitor local temperatures and consult with the Umpire to determine the status of the game.

Heat Index Chart

Temperature (©)	Humidity (%)									
	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
45	42									
44	41									
43	40	44								
42	39	42								
41	37	41	45							
40	36	39	43							
39	35	38	42							
38	34	37	40	44						
37	33	35	38	41						
36	32	34	36	39	43					
35	31	33	35	37	41	45				
34	30	31	33	36	38	42				
33	29	30	32	34	36	39	42			
32	28	29	31	32	34	37	40	43		
31	27	28	30	31	33	35	37	40	43	
30	26	27	28	30	31	33	34	37	39	43
29	25	26	27	28	30	31	32	34	36	39
28	24	26	26	27	28	29	30	32	34	36
27	24	25	26	26	27	28	29	30	31	33

Adapted from : Vanderbilt University Medical Center

Prior to the start of the game, if the heat index calculates to a number in the Red Zone, the game will not start at the scheduled time. Teams will wait 30 minutes in order to see if the calculation drops below of the Red Zone. If the calculation remains in the Red Zone, the game will be canceled and rescheduled, if possible. During the game, if the calculation reches the Red Zone, the umpire will be notified. The game will continue for 15 minutesand conditions will be monitored. If after 15 minutes, conditions remain in the Red Zone, all activities will be stopped. All participatns will hydrate and find shade. If the conditions remain in the Red Zone, the game will be canceled and rescheduled, if possible.

If the heat index calculates to a number in the Yellow Zone, teams should take cautionary measures to decrease the liklihood of heat related incidents. Umpires will be provided the accommodations mentioned above. Coaches should consider changing catchers and pitchers more than they may normally do.
It is the responsibility of the respective associations and/or their coaches to monitor local conditions and consult with the Umpire to determine the status of the game.

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