



With student safety and well-being the highest priority, High School District 211 and the Illinois High School Association (IHSA) have developed guidelines for hazardous weather conditions. The IHSA adopted new [Play It Safe in the Heat](#) guidelines for determining if conditions are safe for student-athletes to compete and outlined what modifications should be made during athletic activities.

In response the [Play It Safe in the Heat](#) guidelines, the Mid-Suburban League (MSL) and District 211 have changed weather guidelines to mirror those of the IHSA. The MSL will use a WetBulb Globe Temperature (WBGT) at the actual playing surface to obtain the most accurate data to determine if it is safe for student-athletes to compete. The WBGT is different from a “heat index” or a “feels like temperature.” Some common questions regarding WBGT are answered below.

What is Wet Bulb Globe Temperature?

The WetBulb Globe Temperature (WBGT) is a measure of the heat stress in direct sunlight, which takes into account temperature, humidity, wind speed, sun angle, and cloud cover (solar radiation). This differs from a heat index, which accounts for only temperature and humidity and is calculated for shady areas. The United States military and the Occupational Safety and Health Administration (OSHA), in addition to many other countries, use the WBGT as a guide to managing workload in direct sunlight (National Weather Service website).

	WBGT	Heat Index
Measured in the sun	X	
Measured in the shade		X
Uses temperature	X	X
Used relative humidity	X	X
Uses wind	X	
Uses cloud cover	X	
Uses sun angle	X	

Why did the MSL change from the heat index to the WBGT?

The IHSA, the governing body of high school athletics in Illinois, enacted new heat guidelines that use the WBGT. In an effort to more closely align with the IHSA, the Mid-Suburban League adopted new heat guidelines. There are several advantages to using the WBGT. First, the WBGT can be taken at a specific location. Using heat index temperatures calculated from positions close to the school, but not at the school or on actual playing surfaces, does not give as accurate a reading as a WBGT reading. Playing conditions can vary significantly depending upon the playing surface and its location. Second, the WBGT can be taken inside a venue to gather a heat action temperature reading. Currently, there is no way to gather heat index data for an indoor location. Additionally, the WBGT uses other weather factors, such as wind and cloud cover, to calculate a more accurate “feels like” temperature. The WBGT is used by OSHA and the United States military when determining temperature and if it is a safe work environment.

Why are WBGT action temperatures lower than the heat index numbers?

Because WBGT accounts for factors such as wind and cloud cover, the calculated action temperatures are actually lower than the previous heat index temperatures. Therefore, the corresponding action levels have been lowered to account for the change.

Why would practice or a contest be allowed to continue when the heat index indicates a potential danger?

Because the WBGT uses additional factors such as cloud cover, wind, and sun angle to calculate a reading, OSHA has determined the WBGT is a more accurate representation of actual temperature and the effects on an individual. When using the WBGT, it is possible to continue an outdoor activity even when the heat index reading is elevated because wind speed and cloud cover will affect the WBGT reading, but will have no effect on the heat index.



What if there is a conflict between WBGT and heat index readings? For example, the heat index indicates it is safe to play, but the WBGT indicates practice should be canceled.

When a WBGT temperature is available, the decision to restrict or cancel practices and games will be based upon the WBGT readings and the restrictions table.

Protocol for Determining the WBGT Temperature

For the purposes of establishing temperature activity restrictions, WBGT readings will be taken on three different surfaces at the school site — grass, turf, and tennis courts. Decisions about play will be made separately for each surface based on that surface's WBGT reading. If a team is practicing or competing at the school's off-site facility (such as golf or cross-country), the WBGT temperature taken on the grass surface at the school will be used to determine temperature activity restrictions at the off-site location.

The athletic trainer will take WBGT readings 30 minutes prior to the start of a game or 30 minutes prior to the start of the day's activities. Once the initial reading is taken, WBGT readings will be taken at time intervals designated by the plan until it has been determined the WBGT readings are below the yellow zone.

Minimum restrictions for athletic activity will be established 30 minutes prior to the start of activity. Readings will be recorded in writing and records will be maintained by the athletic department. Use Table 1 (see below) with an on-site WBGT reading for appropriate exercise modifications during all indoor and outdoor athletic activities.

Table 1

≤79.9 degrees F (GREEN ZONE)

1. All sports
 - a. Water should always be available and student-athletes should be able to take in as much water as they desire.
 - b. Optional water breaks every 30 minutes for 10 minutes in duration. Coordinate breaks with assigned contest officials.
 - c. Watch/monitor student-athletes carefully for necessary action.

80.0-84.5 degrees F (YELLOW ZONE)

1. All sports
 - a. Water should always be available and student-athletes should be able to take in as much water as they desire.
 - b. Optional water breaks every 30 minutes for 10 minutes in duration. Coordinate breaks with assigned contest officials.
 - c. A cooling station (ice, towels, shaded areas, etc.) will be made available.
 - d. Watch/monitor student-athletes carefully for necessary action.
2. Contact sports and activities with additional protective equipment (in addition to the above measures)
 - a. Protective equipment is removed when not necessary for safety (helmets, shoulder pads, or catching gear).
 - b. Reduce time of inside and outside activity. Consider postponing activity to later in the day.
 - c. Thirty minutes prior to the start of an activity, and again 60 minutes after the start of the activity, temperature and humidity readings will be taken at the site of the activity.



84.6-87.5 degrees F (ORANGE ZONE)

1. All sports
 - a. Water should always be available and student-athletes should be able to take in as much water as they desire.
 - b. Coaches and officials are encouraged to take a 10-minute break every 30 minutes of training or competition.
 - c. A cooling station (ice, towels, shaded areas, etc.) will be made available for before, during, and after exercise/training/competition.
 - d. Watch/monitor athletes carefully for necessary action.
 - e. If practicing, a maximum of 2 hours of training/practice, including all breaks, from original start time, even if WBGT drops below 84.6.
 2. Contact sports and activities with additional protective equipment (in addition to the above measures)
 - a. For Practices: protective equipment is removed when not necessary for safety (helmets, shoulder pads, or catching gear). Football and lacrosse are permitted a maximum of helmet, shoulder pads, and protective gloves. If additional equipment is necessary for safety, suspend activity.
 - b. For Contests: helmets and other protective equipment is removed if not involved in activity or necessary for safety. If necessary for safety, suspend activity.
 - c. Thirty minutes prior to the start of an activity, and again 60 minutes after the start of the activity, temperature and humidity readings will be taken at the site of the activity.
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87.6-89.9 degrees F (RED ZONE)

1. All sports
 - a. Water should always be available and student-athletes should be able to take in as much water as they desire.
 - b. Coaches and officials are encouraged to take a 10-minute break every 30 minutes of training or competition.
 - c. A cooling station (ice, towels, shaded areas, etc.) will be made available for before, during, and after exercise/training/competition.
 - d. Watch/monitor student-athletes carefully for necessary action.
 - e. If practicing, a maximum of 1 hour of training/practice while temperature is in this range from the original start time, even if the WBGT drops below 87.6.
 2. Contact sports and activities with additional protective equipment (in addition to the above measures)
 - a. For Practices: protective equipment is removed when not necessary for safety (helmets, shoulder pads, or catching gear). Football and lacrosse are permitted a maximum of helmet, shoulder pads, and protective gloves. If additional equipment is necessary for safety, suspend activity.
 - b. For Contests: helmets and other protective equipment removed if not involved in activity or necessary for safety. If necessary for safety, suspend activity.
 - c. Re-check air temperature and humidity every 30 minutes to monitor for increased heat conditions.
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≥90 degrees F (BLACK ZONE)

1. All sports
 - a. No training/competition.
 - b. Cancel and/or postpone activity to a cooler time of the day.