

MISD ATHLETIC DEPARTMENT LIGHTNING POLICY

Background:

Lightning is the most consistent and significant weather hazard that may affect interscholastic athletes. Within the United States, the National Severe Storms Laboratory (NSSL) estimates more than 100 fatalities and 400-500 injuries requiring medical treatment occur from lightning strikes every year. While the probability of being struck by lightning is extremely low, the odds are significantly greater when a storm is in the area and the proper safety precautions are not followed.

Prevention and education of our coaches are the keys to lightning safety. Education begins with information on lightning. The references associated with these guidelines are an appropriate resource. Prevention should begin long before any athletic event or practice is held. The following steps are recommended by the NCAA and NSSL to mitigate the lightning hazard.

Section I: Chain of Command

Game Administrator / Athletic Trainer

Game Official / Head Coach / Athletic Department Administrator

School Administrator

The Game Administrator and the Licensed Athletic Trainer will co-command the implementation of the lightning policy. Both the Game Administrator and the Licensed Athletic Trainer can activate the safety plan by suspending an event.

The Game Administrator assumes the responsibility as spokesperson to participating teams, school administrators, game officials, press box and news media.

Section II: Designate a Weather Watcher

The Athletic Training Staff will actively obtain weather reports the day of the game and during the event. This information will be shared within the department and the Licensed Athletic Trainer will disseminate the information within the chain of command.

Section III: Monitor Local Weather Forecasts

All representatives in the "Chain of Command" are required to monitor local weather forecasts. The Athletic Trainers offices of McKinney ISD are equipped with 24-hour passwords to allow the web access to DTN-WeatherSentry website. DTN updates every minute their website with any and all local warning and watches from the NWS. As well, they are equipped with the DTN Weather Alerts on their mobile phones.

Be aware of the National Weather Service issued (NWS) thunderstorm "watch" and "warning" as well as the signs of thunderstorms developing nearby.

- A "watch" means conditions are favorable for severe weather to develop in an area.
- A "warning" means that severe weather has been reported in an area and for everyone to take proper precautions.

McKinney ISD uses DTN-WeatherSentry Online to monitor weather conditions. www.dtn.com

DTN will be McKinney ISD's main lightning monitoring and warning tool.

Anytime MISD is hosting an outdoor activity or participating outside the district, the weather in the area is being monitored by DTN (a web-based weather program used by airports and many major athletic facilities around the country to monitor the weather).

How DTN works to protect the athletes, coaches and spectators from lightning:

- When there is a thunderstorm “warning” or “watch” posted by the NWS for the area, DTN will alert the athletic trainers and coaches via text.
- When lightning occurs within 30 miles of the event, DTN will notify via text that lightning has occurred in the “Advisory Area”.
- If the lightning is moving toward the event and lightning occurs within 15 miles of the event, DTN will notify via text that lightning has occurred in the “Caution Area”.
- If the storm is still progressing toward the event and lightning occurs within 10 miles of the event, DTN will notify via text that lightning has occurred in the “Warning Area”.
- At that point, all athletes and coaches are removed and sent to the safe shelter. The public address announcer will make the announcement to seek safe shelter.
- Then the “30-30” rule takes effect. When DTN does not detect a strike in the “Warning Area” for 25 minutes, a text is sent to notify the athletic trainers and other coaches. If in the 5 minutes remaining there are no more “Warning Area” (within 10 miles) strikes, the competition or practice is allowed to resume.

While in a lightning delay, DTN’s site can be accessed by MISD personnel to see real time radar and lightning data to help assess the situation and make the appropriate recommendations to spectators and officials.

Section IV: Define and List Safe Location

Define and List safe locations for participating athletic teams. (Table I)

Primary Location

Any building normally occupied or frequently used by people. (Example: building with plumbing and/or electrical wiring that acts to electrically ground the structure) Avoid using shower facilities for safe shelter and or do not use the showers plumbing facilities during thunderstorms.

Secondary Location

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 THE VEHICLE

Avoid being in or near:

High places and open fields, isolated trees, unprotected gazebos, rain or picnic shelters, baseball dugouts, communications towers, flagpoles, light poles, bleachers(metal or wood), metal fences, convertibles, golf carts, water (oceans, lakes, swimming pools, rivers, etc.)

When inside a building, avoid:

Use of the telephone, taking a shower, washing your hands, doing dishes, or any contact with conductive surfaces with exposure to the outside, such as metal doors or window frames, electrical wiring, telephone wiring, cable TV wiring, plumbing, etc.

Section V: “30-30” Lightning Safety Rules:

Suspension and Resumption of Athletic Activities

The key to a **lightning safety plan of action** is knowing the answer to the following two questions:

1. How far away am I (or the group for whom I am responsible) from a safe location?
2. How long will it take me (and/or my group) to get to the safe location?

These questions need to be answered before lightning storms threaten. By knowing the answer to the above questions, you will greatly increase your chances of not becoming a lightning strike victim.

The “30-30” Lightning Safety Rules: Suspension of Play (Table 3)

To estimate the distance between you and a lightning flash, use the “**Flash to Bang**” method. The Flash to Bang method is the most reliable, 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 it’s distance from the observer. The audible range of thunder is about 810 miles. The premise upon which the Flash to Bang method is based is the fact that light travels faster than sound, which travels at a speed of approximately one mile every 5 seconds.

How to use Flash to Bang

Once lightning is sighted, count the number of seconds until the thunder (bang) is heard; divide by 5 to obtain how far away (in miles) the lightning is occurring. Example: If an individual counts 15 seconds between seeing the flash and hearing the bang, 15 divided by five equals three, therefore, the lightning flash is approximately three miles away. Play is suspended as Flash to Bang method reaches 30 seconds. This indicates the lightning is at the 6-mile range. 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 wakeup call to those monitoring inclement weather. The important aspect to monitor is how far away the lightning is occurring, and how fast the storm is approaching, relative to the distance of to safer shelter.

At a minimum, the National Severe Storm Laboratory (NLSS) and NCAA Committee on Competitive Safeguards and Medical Aspects of Sports strongly recommend that by the time the observer obtains a FLASH TO BANG count of 30 seconds, all individuals should have left the athletics site and reached a safe structure or location. Athletic events may need to be terminated.

The existence of blue sky and the absence of rain are not protection from lightning. Lightning can and does, strike as far as 10 miles away from the rain shaft. It does not have to be raining for lightning to strike. During large storms, the distance between successive lightning flashes was once thought to be 6 miles. Experts have revised that distance to 23 miles. That is just 10-15 seconds in the Flash to Bang count. While seeking shelter when the Flash to Bang count is under 30 seconds may put you at risk, as the next successive lightning strike may be on you.

“30-30” Safety Rule: Resumption of Play

Resumption of play can continue only when lightning or thunder **has not** been detected for 30 minutes. Every time lightning or thunder is detected within the 30 minutes, **the clock restarts**.

Speed of Texas Storms a typical thunderstorm can travel up to 30 miles per hour. Experts believe 30 minutes allows for thunderstorms to be about ten to twelve miles from the area. This minimizes the probability of a nearby, and dangerous, lightning strike.

Bolt out of the Blue

Evidence of blue sky in the local area, or lack of rainfall, are not adequate reasons to breach the 30-minute return to play rule. Lightning can strike far from where it is raining, even when the clouds begin to clear and show evidence of blue sky.

(Table 3) The “30-30” Rule

Criteria for suspension of activities by the time Flash to Bang count approaches 30 seconds: All individuals should already be inside a safe shelter. Criteria for resumption of activities: Wait at least 30 minutes after the last sound (thunder) or observation of lightning before leaving the safe shelter to resume activities.

Section VI: Obligation to Warn

Stadium announcements should be repeated over the public address system (Table 4).

Colorful notices and safety instructions will be posted in visible, high traffic areas (Table 5).

Safety instructions for each McKinney athletic venue will be posted to give the nearest location of the safe shelter.

Section VII: First Aid

People who have been struck by lightning do not carry an electrical charge. Therefore, the first responder is safe to begin first aid procedures. When possible, move the victim to a safe area.

Activate EMS as soon as possible, and remember that lightning strike victims who show signs of cardiac or respiratory arrest need emergency help quickly. Prompt first aid and CPR have been highly effective for the survival of lightning strikes.

Section VIII: Safety Position without shelter

- Kneeling fetal position with hands covering ears
- Feet must be together
- Make yourself as close to the ground as possible

Table I: Safe Shelter for Participating Teams: High Schools

McKinney High School

Football, Soccer, Track, Softball, Tennis

Home Team – Locker Room

Visiting Team – Swim Locker Room C

Spectators – Multi-Purpose Facility

Baseball

Home Team – Locker Room

Visiting Team – Home Locker Room

Spectators – Restrooms, Concessions or Storage Rooms,

Faubion Weight Room

McKinney North High School

Football, Soccer, Track, Baseball, Softball, Tennis

Home Team – Locker rooms

Visiting Team – Freshman/JV Locker Room

Spectators – Multi-Purpose Facility

McKinney Boyd High School

Football, Soccer, Track

Home Team – Home Locker Room

Visiting Team – Multi-Purpose Facility
Spectators – Multi-Purpose Facility

Tennis

Home Team – Home Locker Room
Visiting Team – Visiting Locker Room
Spectators – Concession Stand

Baseball, Softball

Home Team – Concession Storage or Multi-Purpose Facility
Visiting Team – Multi-Purpose Facility
Spectators – Concessions, Vehicles, Multi-Purpose Facility

Dowell Middle School—all events

Home Team—Locker room
Visiting Team— Middle School Gym
Event Spectators—Middle School Gym

Faubion Middle School—all events

Home Team – Locker Rooms
Visiting Teams – Middle School Gym
Event Spectators – Middle School Gym

Cockrill Middle School—all events

Home Team – Locker Room
Visiting Team – Middle School Gym
Event Spectators – Middle School Gym

Evans Middle School

Tennis, Cross Country – Gym

Johnson Middle School – all events

Tennis, Cross Country – Gym

*****Baseball, softball dugouts, and soccer benches are unsafe during lightning storms.**

All players, student trainers, managers, and coaching staff should leave the field and proceed to the designated safe area.

Table III: Public Address Announcement

Hazardous lightning has been monitored in the immediate area and this sporting event has been temporarily suspended. All team members have been advised to seek shelter in the designated safe location. This suspension will last a minimum of 30 minutes.

All spectators are advised to leave the stadium bleachers at this time. Stadium seating is an unsafe location for you to remain during the lightning storm. Event Spectator location here at (Name of School) is (location of safe place.)

*******The safe place will be posted in each press box so that the announcer will have the information of the safe location.

“Please seek safe shelter at this time. Avoid high places and open fields. Do not seek shelter under trees, picnic shelters, baseball or softball dugouts. or not stand near a flagpole, light poles or metal fences.

The (Name of safe place) is a safe location, you may seek shelter inside the facility now. Do not remain outdoors. If you choose not to go to the designated safe area, please return to a fully enclosed vehicle with a metal roof, with the windows rolled up. Do not touch the metal of your car during the lightning storm. This delay will be at least 30 minutes. Thank You.”

Table IV: Posted Awareness Instructions

Personal Lightning Safety Tips

Practice and training increase athletic performance. Similarly, preparedness can reduce the risk of the lightning hazards. Lightning is the most frequent weather hazard impacting athletic events. Baseball, softball, football, golf, swimming, soccer, tennis, track and field events... all these and other outdoor sports have been impacted by lightning. Advance planning is the single most important means to achieve lightning safety.

Spectator Safety:

- If you hear it (thunder), clear it!!!
- If you see it (lightning), flee it!!!

At the first sign of lightning or thunder, leave the event. Go to the designated safe place or your vehicle and take shelter there with your windows rolled up.

Avoid:

- Metal or wooden bleachers
- High places and open fields
- Going under trees
- Baseball or softball dugouts, picnic shelters, flagpoles, metal fences

Seek:

- Any building normally occupied or frequently used by people.
- Any vehicle with a hard metal roof (not a convertible) and rolled up windows

Do not touch the metal of the vehicle during the lightning storms.

Wait 30 minutes after the last observed lightning or thunder before you leave shelter. Event administrators will signal a resumption of activities.

If lightning strikes nearby, you should:

- Crouch down with feet together
- Place hands on ears to minimize hearing damage

Injured persons

- Apply First Aid procedures to a lightning victim only if you are qualified to do so.

Call 911 or send for help immediately!!!