GUIDELINES FOR LIGHTNING SAFETY

Non-negotiable: The band director must move all students and adults to a safe shelter if the "flash to bang" ratio is 30 seconds or less. If lightening is within six miles, you must evacuate.
Use the schools lightning detector (obtain from athletic department at your school). You may also use cell phones for weather warnings.

- **Plan**: Plan outdoor activities to avoid thunderstorms. Know the latest weather forecast and the local weather patterns. **Be sure to have a plan in place to move quickly to cover. Students with large or cumbersome instruments (sousaphones) or equipment (flag poles) should be asked to move to cover prior to the on-set of a storm.**
- **30 – 30 Rule:**
  - If there are 30 seconds or less between lightning and its thunder, go inside.
  - Stay inside 30 minutes or more after the last thunder.
- **Safe Places**: Large fully enclosed buildings with electrical wiring, plumbing, and phone service provide good lightning protection, which aid in the grounding of the structure. A fully enclosed automobile with a hard metal roof and rolled up windows is also a reasonable choice, and school buses are an excellent lightning shelter that can be utilized for large groups of people. However, it is important to avoid contact with any metal while inside the vehicle.
- **Indoors**: Don't use corded telephones or headsets. Cellular and cordless telephones are considered reasonably safe and can be used to summon help during a thunderstorm. Keep away from electrical appliances and wiring. Stay away from plumbing. **Do not use** showers or plumbing facilities during a thunderstorm.
- **Outdoors**: Avoid elevated places and open areas (golf courses, sports fields, beaches), water (swimming, boating, fishing) and tall isolated objects. Do **NOT** go under trees. Allow time to get to safety. Don't use open structures (picnic pavilions, rain shelters).
- **First Aid**: Start CPR or rescue breathing immediately. Have someone call 911. Use an AED. If an AED is not available or won't work, continue CPR or rescue breathing until medical assistance arrives.

RECOGNITION OF LIGHTNING PROXIMITY:

- **Flash to Bang** – This method is used to assess how far away lightning is striking. It is determined by counting the number of seconds it takes to hear a clap of thunder after witnessing a flash of lightning. The number of seconds is then divided by five to get the distance, in miles, to the lightning flash. A 30-second or less flash-to bang count requires removal of the students from the field to a safe shelter. Nearly all lightning-related injuries occur between the months of May and September and the greatest number of lightning casualties occurs between the hours of 10:00 a.m. and 7:00 p.m., with the greatest risk concentrated between 2:00 p.m. and 6:00 p.m.

- **Evacuation Plan** – All personnel should be clearly informed of available safe structures or shelters in the event a thunderstorm approaches. The person in authority must be aware of

Guidelines taken from the document issued by the National Weather Service (NWS) entitled: "**LIGHTNING SAFETY - When Thunder Roars, Go Indoors**"; *Lightning: Florida's #1 Weather Killer; Severely Injures Many More Than It Kills*

the amount of time it takes to get to each structure and the number of people each structure can safely hold. When caught in a thunderstorm without availability or time to reach safe structures, you can minimize the risk of lightning-related injury by following a few basic guidelines:

1. Avoid being the highest object. Seek a thick grove of small trees or bushes surrounded by taller trees or a dry ditch.
2. Avoid contact with anything that would be attractive to lightning. Stay away from freestanding trees, poles, antennas, towers, bleachers, dugouts, metal fences, standing pools of water and golf carts.
3. Crouch down with legs together, the weight on the balls of the feet, arms wrapped around knees, and head down with ears covered.

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.

If no safe structure or location is within a reasonable distance, find a thick grove of small trees surrounded by taller trees or a dry ditch. Assume a crouched position on the ground with only the balls of the feet touching the ground, wrap your arms around your knees and lower your head. Minimize contact with the ground, because lightning current often enters the victim through the ground rather than by a direct overhead strike. Minimize your body's surface area, and minimize contact with the ground! Do not lie flat. If unable to reach safe shelter, stay away from the tallest trees or objects (such as light poles or flag poles), metal objects (such as fences or bleachers), individual trees, standing pools of water, and open fields. Avoid being the highest object in a field. Do not take shelter under a single, tall tree.

A person who feels his or her hair stand on end, or skin tingle, should immediately crouch as described above.

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 phone is a safe alternative to land-line phones, if the person and antenna are located within a safe structure or location and if all other precautions are followed.

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 effective for the survival of victims of lightning strikes.

Resources: www.lightningsafety.noaa.gov • NCAA – National Collegiate Athletic Association • www.nfhs.org

PREVENTING HEAT ILLNESSES

It is an expectation that the health and safety of the students will be the #1 priority of band teachers in all situations.

During outdoor marching rehearsals and performances, the body has to work extra hard to maintain a normal temperature. Excessive heat can cause serious health threats by pushing the human body beyond its limits. Young children, elderly people, and those who are sick or overweight are most at risk. Even though healthy high school students do not fall in the "high risk" category, it is important that the band director and chaperones are aware of the potential for problems.

The prevention of heat illness as a result of practice & performance by marching bands must be integral to the planning and design of each marching band event. Although policies and recommendations will be presented in this section, common sense must be used in all decisions.

MEASURES FOR PREVENTING HEAT RELATED ILLNESSES

- Eat properly—explain to your students the importance of healthy eating
    - Don't skip meals
    - Eat fruits, vegetables, and carbohydrates (for energy)
    - Avoid heavy, greasy foods (potato chips, candy, etc.)
- HYDRATE—drink water before you get thirsty. Thirst indicates dehydration.
- Slow down—be aware of the level of strenuous activity.
- Provide frequent water breaks.
- Avoid too much extended time in the sun.
- Plan rehearsals for early morning or evening if possible.
- Avoid extreme abrupt temperature changes.
- Rehearse music indoors some of time; use fans or air conditioners to cool the air. You can still work on drill concepts and footwork by having the students stand for inside rehearsal and practice their drill sequences in place.
- Wear loose-fitting, lightweight, light-colored clothing that will cover as much skin as possible.
- Protect face and head by wearing a wide brimmed hat.
- Drink plenty of water even if you do not feel thirsty (avoid carbonated beverages). **Require** that each student have a 2-quart, flip spout cooler filled with ice water at all rehearsals and marching performances. This saves time on water breaks and allows them to stay hydrated and healthy.
- Sports drinks can be used as a supplement, but water should be the primary source for hydration. The high sugar content of sports drinks can produce negative effects if not balanced with water.

The health of your students must be of primary concern. With proper education and prevention, the occurrence of the emergency situations described on the following page will be minimized. Take the time to read and be prepared—just in case.

HOT WEATHER HEALTH EMERGENCIES

Heat cramps: Painful spasms, mostly in legs and abdomen, usually the result of heavy exertion and heavy sweating

Recognizing Heat Cramps
Painful spasms, usually in the legs and abdominal muscles, that may occur in association with strenuous activity

What to do
Apply firm pressure to cramping muscles or gently massage to relieve spasms. Replace fluids. Consult health care provider.

Heat exhaustion: Typically occurs when people exercise heavily or work in a hot, humid place where body fluids are lost through heavy sweating

Recognizing Heat Exhaustion
Heavy sweating, weakness, cold, pale and clammy skin; weak pulse; fainting and vomiting possible

What to do
Lie down in a cool place. Loosen clothing. Apply cool wet cloths. Move to air-conditioned space if possible. Take sips of water. Consult health care provider.

Heat stroke: A medical emergency during which the body's temperature control system, which produces sweating to cool the body, stops working. **Sunstroke** is another term for heat stroke.

Recognizing Heat Stroke
High body temperature (104+); Hot, dry skin; Rapid, strong pulse; Possible unconsciousness; Individual will likely not sweat.

What to do
Heat stroke is a **life-threatening** medical emergency. Call 911 or emergency medical services or get the person to a hospital immediately. Move to a cooler environment. Try a cool bath or sponging to reduce body temperature. Use fans and/or air conditioners, to cool the body. **DO NOT GIVE FLUIDS.**