SEVERE WEATHER AWARENESS

As the cold air from winter continues to move across the Great Plains into the Southeast during the spring season, warm moist air begins to crawl northward from the tropical environment over the Gulf of Mexico. When the collision of the two different air masses occurs, the potential for severe weather becomes increasingly likely across the southern portions of the United States. Severe thunderstorms are characterized by wind speeds in excess of 58 mph, hail of at least ¾-inch in diameter, torrential rainfall, flooding, and at times, tornadoes. When the conditions are favorable for the development of severe weather the National Weather Service will issue watches and/or warnings according to these criteria:

A SEVERE THUNDERSTORM WATCH means conditions are favorable for thunderstorms to become severe, or severe thunderstorms to move into the watch area. Watches are intended to heighten public awareness of the possible severe weather threat. Keep an eye on the sky and stay tuned to NOAA Weather Radio or local radio, television, or cable to know when severe weather warnings are issued for your area.

A SEVERE THUNDERSTORM WARNING means a severe thunderstorm poses an imminent danger to life and property to those in the path of the storm. When severe weather is indicated by weather radar, or is reported by trained SKYWARN Severe Weather Spotters or law enforcement officials, a warning is issued immediately.

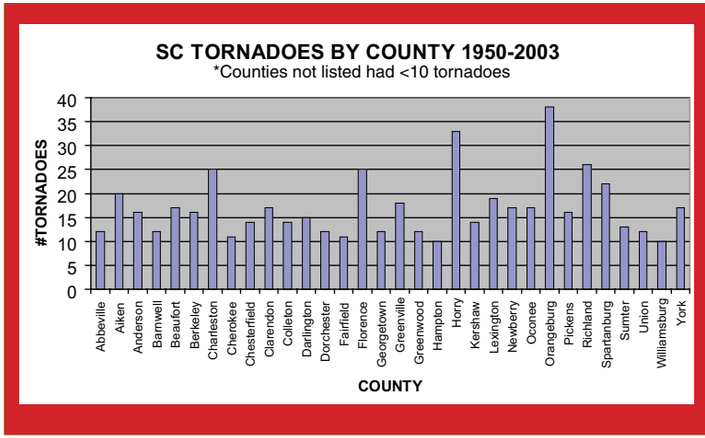
One of the most under-rated weather hazards associated with severe thunderstorms is the electrical phenomenon of lightning. According to the National Weather Association, lightning is the second leading cause of storm-related deaths in the US, exceeded only by floods. In an average year, lightning kills more people in the United States than tornadoes or hurricanes. Of the estimated 1,000 people who are struck by lightning each year in the US, only 10 percent are killed, but survivors may suffer life-long disabilities. In the period 1993-2004, the National Climatic Data Center reports that South Carolina had 67 injuries and 16 deaths attributed to the dangerous energy associated with lightning strikes. A wealth of safety information is posted on the National Weather Association Web site at *www.nwas.org/links/lightning.html* to assist in the preparation for lightning-related emergencies.

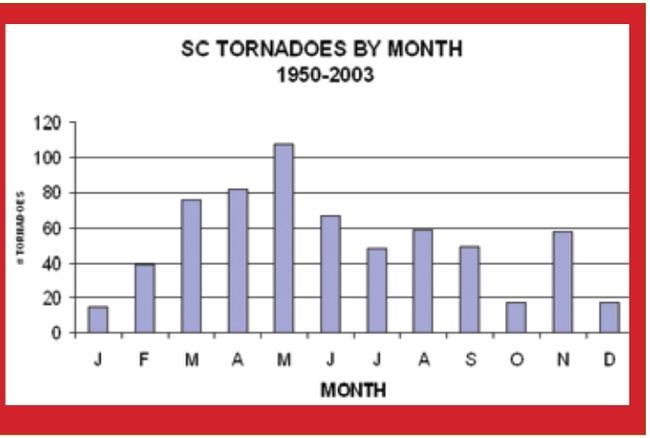
Some other less-known weather phenomena that can accompany severe thunderstorms include downbursts and hail. Downburst winds, or microbursts, occur when the atmospheric conditions produce a sudden downdraft from the upper region of a thunderstorm cloud. The winds in a downburst may reach speeds of near 150 mph by the time the air reaches the surface. Nearly 10 times more downbursts occur in a given year than tornadoes. Therefore, it is important to adhere to safety rules until the threat of severe weather has completely ended.

In thunderstorms, the updrafts and downdrafts are essential to the generation of another hazardous weather type, hailstones. As a drop of water is lifted rapidly inside a thunderstorm, the water freezes and begins to fall back to earth as a piece of ice. Instead of continuing on a path to the surface, strong updraft winds lift the ice pellet back above the freezing level again and again to create a hailstone. Eventually, the hail gets too heavy for the upward motion to suspend in the atmosphere and falls to the ground as a layered chunk of ice. In South Carolina, the largest hailstone recorded in modern history was 3.75 inches in diameter. However, the National Weather Service in Columbia provided the following excerpt from the *South Carolina Gazette* on July 1, 1784:

> *On the eighth of May last, a most extraordinary shower of hail, attended with thunder and lightning, fell in this district, and along the banks of the Wateree; the hail stones or rather pieces of ice, measured about 9 inches in circumference; it killed several people, a great number of sheep, lambs, geese, and the feathered inhabitants of the woods without numbers; its greatest violence did not extend more than two miles in breadth, but where it began or ended is not known; within that space it stript trees of their leaves and even their bark, and every blade of grass was beat to the ground. But what is even more astonishing is there are at this time [46 days later] many wagon loads of hailstones unmelted, lying in the hollows and gullies on the Wateree.*

David M. Ludlum, *The American Weather Book*, Houghton Mifflin Co., 1982, page 150





Myrtle Beach Herald

SEVERE WEATHER AWARENESS WEEK is a valuable time to practice the preparation and response to severe weather that promises to affect South Carolina throughout the year. PLEASE take the time to meet with your family members and discuss a plan of action during weather emergencies. It will save lives!

Additional information may be obtained on weather and climate from the State Climate Office at their Web site (*www.dnr.state.sc.us/climate/sco*).

KNOW TORNADO SAFETY

- ➤ Stay or move indoors to a sheltered area (basement, small interior room/hallway) on the lowest floor away from windows.
- ➤ DO NOT stay in an automobile. Lie flat in a nearby ditch and cover your head.
- ➤ A bridge or overpass is not a safe place.
- ➤ DO NOT open windows in your home. The myth that your home will explode is not true and may cost valuable time in finding shelter.

KNOW LIGHTNING SAFETY

- ϟ Stay or move indoors.
- ϟ DO NOT take shelter under trees or near tall objects. If outside, find a low spot and squat on the balls of your feet with your hands over your ears and your head between your knees. DO NOT LIE DOWN!
- ϟ Unplug appliances and DO NOT use the phone or take a bath.
- ϟ Lightning causes 80 deaths and 300 injuries yearly in the nation.