

# Thunderstorms and Lightning



All thunderstorms are dangerous. The offspring of thunderstorms are strong winds, lightning, hail, heavy rain, flash floods, flooding, downbursts, and tornadoes.

Thunderstorms frequently occur in the late afternoon and at night in the Plains States. Although they are most likely to happen in the spring and summer months, they can occur year-round and at all hours.

## **Severe Thunderstorm (or Tornado) Watch**

Watches are issued by the Storm Prediction Center in Norman, OK when the threat appears. Watches are issued to heighten public awareness anywhere from two to six hours before severe weather may develop in a specific geographic area that may include 30,000 square miles.

## **Severe Thunderstorm (or Tornado) Warning**

Warnings are issued by the Weather Service Forecast Office (WSFO) in their area of responsibility when the threat poses an imminent danger to life and property to those in the path of the storm. A warning is issued based on information reported by spotters or indicated by radar. The WSFO serving our area is at Pleasant Hill, MO.

## **Lightning**

Lightning occurs with all thunderstorms; the result of a sudden discharge of the electrical potential between the positive and negative charges generated in a thunderstorm. Lightning produces an electric current that generates an enormous amount of heat, up to 50,000 degrees Fahrenheit. The rapid heating and cooling of the air near the lightning channel causes a shock wave that results in thunder. More deaths are attributed to lightning each year than tornadoes and hurricanes combined. Most lightning deaths and injuries occur when people are caught outdoors.

A cloud-to-ground lightning strike begins as an invisible channel of electrically charged air moving from the cloud toward the ground. When one channel nears an object on the ground, a powerful surge of electricity from the ground moves upward to the cloud and produces the visible lightning strike.

## **Lightning Myths**

- If it is not raining, there is no danger from lightning.
- The rubber soles of shoes and tires on a car will protect you from a lightning strike.
- People struck by lightning carry an electrical charge and should not be touched.
- "Heat lightning" occurs after very hot summer days and poses no threat.

## **Outdoors With No Shelter Nearby**

- Find a low spot away from trees, fences, and poles. Make sure the place you pick is not subject to flooding.
- If you feel your skin tingle or your hair stand on end, squat low to the ground on the balls of your feet. Place your hands on your knees with your head between them. Make yourself the smallest target possible, and minimize your contact with the ground.
- If you are boating or swimming, get to land and find shelter immediately!

## **The 30-30 Rule**

Use the 30-30 rule where visibility is good and there is nothing obstructing your view of the thunderstorm. When you see lightning, count the time until you hear thunder. If that time is 30 seconds or less, the thunderstorm is within six miles of you and it is dangerous. Seek shelter immediately. The threat of lightning continues for a much longer period than most people realize. Wait at least 30 minutes after the last clap of thunder before leaving shelter. Don't be fooled by sunshine or blue sky!