Thunderstorm & Lightning Information

Overview

Thunderstorms—A thunderstorm is a storm containing lightning caused by unstable atmospheric conditions. When cold upper air sinks and warm, moist air rises, storm clouds or "thunderheads" develop. Thunderstorms may occur singly, in clusters, or in lines. Thus, it is possible for several thunderstorms to affect one location in the course of a few hours. Some of the most severe weather occurs when a single thunderstorm affects one location for an extended period of time. Severe thunderstorms can bring heavy rains which can cause flash flooding, strong winds, lightning, and tornadoes. All thunderstorms produce lightning that can cause death or serious injury.

Lightning—Lightning is an electrical discharge that results from the buildup of static electricity within clouds or between clouds and the ground. It always accompanies thunderstorms. When the buildup is strong enough to overcome the insulating effect of the air, lightning appears as a bolt. This flash of light can remain within the cloud, can occur between the clouds or strike toward the ground several miles from the parent cloud. Lightning is a major threat during a thunderstorm. Lightning is an underrated hazard that occurs during thunderstorms, tornadoes and hurricanes. In the United States, between 75 and 100 Americans are hit and killed each year by lightning. Consider these facts: Most people struck by lightning are not in the rain; lightning can strike from up to 5 to 10 miles away, even if it is not raining or is sunny where you are. A bolt of lightning has a temperature of 50000° F. The super heating of the air as the charge passes through it, explodes the hydrogen atoms, and creates thunder. Lightning can and does strike the same place twice.

At any moment, there are 2,000 thunderstorms occurring around the world and as many as 100 bolts of lightning every second -- 8,640,000 per day and over 3 billion per year. Chances of being struck by lightning are over 2 million to one.

Florida ranks first in the nation for lightning, with an average of 100 thunderstorm days per year. The lightning capitol of the world is the West coast of Africa, with as many as 295 thunderstorm days per year.

Terminology:

Thunderstorm Watch—Thunderstorms are possible. Watch the sky and listen to the radio/TV for more information. Be prepared to take shelter.

Thunderstorm Warning—Thunderstorms are occurring. Take shelter, turn on the radio/TV and wait for directions.

Quick notes and reminders:

- If you hair stands on end this indicates that lightning is about to strike, take cover.
- Know the "Flash-to-Bang" method (when you see lightning, count how many seconds until you hear thunder. If the time is 5 seconds until you hear thunder, the lightning was one mile away. If it is 10 seconds, the lightning is two miles away. Seek shelter if the lightning moves to within four (4) miles of your location.

This information is published for general educational purposes by Adams County Office of Emergency Management. Should you have additional questions please contact us at (303) 289-5441.

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Preparedness (Before)

- Know the terms used to describe thunderstorms and/or severe thunderstorms.
- Know the counties in which you live and work in.
- Check your local forecast before leaving for extended periods outdoors and postpone plans if severe weather is imminent.
- Keep a list of emergency phones numbers available.
- Teach children how and when to call 911 for emergency assistance.
- Choose an out-of-area contact should your family be separated.
- Keep important documents and records in a safe deposit box or other secure location.
- Maintain your 72-hour Family Emergency Kit.

Response (During)

- Close all window and doors.
- Draw the shade or blinds on the windows. (If glass window/ doors break due to high winds, shades/blinds may reduce the risk of flying glass.)
- Monitor the radio/TV for the latest weather information and follow directions.
- Avoid using the telephone or other electrical appliances until the storm passes.
- Do not take baths/showers until after the storm.

If Outdoors

- Seek shelter immediately. (If you can hear thunder, you are probably close enough to the storm to be struck by lightning.)
- Avoid tall structures such as towers, tall trees, fences, telephone lines, or power lines.
- Stay away from natural lightning rods such as golf cart, golf clubs, tractors, fishing rods, bicycles or camping equipment.
- Stay away from water sources such as rivers, lakes or other bodies of water.
- If in a boat, get to shore as quickly as possible.
- If in a vehicle, pull safely to the shoulder of the road away from trees and power lines. (Lightning can bounce from trees or power poles into a vehicle through the radio antenna.)
- If no shelter is available, find a low spot away from trees and power poles where you can squat low to the ground with feet close together. DO NOT LIE FLAT on the ground.
- Make yourself the smallest target possible.

Recovery (After)

- Check for injuries. Do not attempt to move seriously injured persons unless they are in immediate danger of death or further injury. If you must move an unconscious person, first stabilize the neck and back, then call for help immediately.
- Monitor the radio/TV for emergency information and instructions.
- Take photos or videotape the damage to your home or property.
- Do not make unnecessary telephone calls.
- If driving, be alert for hazards in the roadway
- If a person has been hit by lighting
  - Call 911 immediately
  - If the victim is not breathing and/or has no pulse CPR should be administered by properly trained person.
- Medical attention should be given to victims who appear only temporarily stunned or otherwise unhurt, since there are many hidden effects of lightning.