June 25, 2004

Lightning Dangers

Play It Safe

The Morgantown U. S. Forest Service Office was disabled Friday, May 21, through Tuesday morning, May 25, due to two lightning strikes that occurred on consecutive days. The old adage of lightning never striking twice in the same location is obviously just that, an old adage that is no longer believed in that office! The damage and disruption potential that a lightning strike can cause has been experienced first hand, but they were fortunate that it was not accompanied by injury Each year about 400 people in the United States are struck by lightning, killing an average of 73 people. This exceeds the annual number of people killed by tornadoes and hurricanes. Several hundred each year are left to cope with permanent disabilities.

Gearing up for the summer season remember that it begins the peak season for this dangerous weather phenomena. Outdoors is the most dangerous place to be during a lightning storm. Here are some, Safety Tips:

What is a safe shelter?

A house or other substantial building offers the best protection from lightning. In assessing the safety provided by a structure, it is more important to consider what happens if the structure gets struck, rather than whether the structure will be hit. To be safe, a building must contain a mechanism for conducting electrical current from the point of lightning contact to the ground. It can be a device specifically designed to do this, a lightning arrestor. Lightning can also travel along the outer shell of a building, metal gutters and downspouts, electrical wiring, plumbing, and telephone lines to the ground. Structures without these electrical paths to follow provide little protection. Small open shelters on athletic fields, golf courses, parks, and picnic areas are designed to protect people from rain and sun, but not lightning.

So how does lightning enter a building?

There are three ways lightning enters homes and buildings: (1) a direct strike, (2) through wires or pipes that extend outside the structure, and (3) through the ground. Regardless of the method of entrance, once in a structure, lightning can travel the electric wiring, phone, plumbing, and radio/television reception systems. Lightning can also travel through any metal wires or bars in concrete walls or flooring.

So what can you do to be safe?

Phone use is the leading cause of indoor lightning injuries in the United States. Lightning can travel long distances in both phone and electrical wires. Do not use corded phones during lightning storms. Stay away from windows and doors as these can provide the path for a direct strike to enter a building. Do not lie on concrete floors that may contain wire mesh, typically garages. Generally basements are a safe place to go during thunderstorms. But avoid contact with concrete walls if you suspect they contain metal reinforcing bars. Avoid washers and dryers since they do not only have

contacts with the plumbing and electrical systems, they also contain an electrical path to the outside through the dryer vent.

What about the family pet?

You may want to consider the safety of your family pets during thunderstorms. Dog houses are not lightning safe. Dogs that are chained to trees or chained to wire runners can easily fall victim to a lightning strike.

And personal property?

Lightning also causes significant damage to personal property each year. In additional to direct strikes, lightning generates electrical surges that can damage electronic equipment some distance from the actual strike. Typical surge protectors will NOT protect equipment from a lightning strike. To the extent possible, unplug any appliances or electronic equipment from all conductors well before a thunderstorm threatens.

Let's recap

During a lightning storm:

1. Avoid contact with corded phones.
2. Avoid contact with electrical equipment or cords. If you plan to unplug electrical equipment, do so well before the storm arrives.
3. Avoid contact with plumbing. Do not wash your hands, take a shower, wash dishes, or do laundry.
4. Stay away from windows and doors, and stay off porches.
5. Do not lie on concrete floors, and do not lean against concrete walls.
6. Do not stand under trees for shelter.
7. Avoid being outdoors. No place is safe outdoors near a thunderstorm.
8. A house or other fully enclosed substantially constructed building, offers your best protection against lightning.
9. A car with a metal roof and sides is your second best protection against lightning. Just don't touch any conducting paths leading to the outside. It's the metal shell that protects you not the rubber tires.

Safety Tip: As dramatic and exciting as it is to see, remember that lightning has potential to cause serious injury or death even within the relative safety of indoors. The best thing you can do to avoid lightning danger is learn and practice good lightning safety.

SAFE & SECURE
Department of the Interior