

KNW-158
ICE STORMS

Adapted from a Mecklenburg County, North Carolina ARES training article.

Ice storms are a particular hazard when they occur in our area. They have the potential to cause considerable property damage and disrupt of our daily lives. Tree branches heavily laden with a thick coating of ice falling from 30, 40 or 50 foot or more destroy anything in its path.

Roads covered in a thick ice make for extremely dangerous driving conditions. Power outages caused by ice storms disable the heating, lighting, cooking and refrigeration systems in our homes.

An ice storm is a type of winter storm characterized by freezing rain. The U.S. National Weather Service defines an ice storm as a storm which results in the accumulation of at least 0.25-inch of ice on exposed surfaces.

Ice storms occur when a layer of warm air is between two layers of cold air. Frozen precipitation melts while falling into the warm air layer, and then proceeds to refreeze in the cold layer just above the ground. If the precipitation is partially melted, it will land on the ground as sleet.

However, when the warm layer completely melts the precipitation, it becomes rain, the droplets will continue to fall, and pass through a thin layer of cold air just above the surface. This thin layer of air then cools the rain to a temperature below freezing. However, the drops themselves do not freeze, it's a phenomenon called super cooling. When the super cooled rain strikes the ground or anything else which is below freezing, such as power lines, tree branches and vehicles, they instantly freeze, forming the thin film of ice called freezing rain.

The freezing rain from an ice storm covers everything with a heavy glaze of ice. The weight of the ice causes power lines and tree limbs to break and fall. Sometimes entire trees fall because they become top heavy. Power often fails leaving our homes without heat, light and other essential electrical appliances.

The chief hazards of an ice storm are directly related to the damage the storm causes. Lack of home heating can cause hypothermia or frostbite, downed electrical lines pose electrocution risks, ice on the roads make driving hazardous and falling trees or tree limbs can injure people and cause significant property damage.

The best place to shelter during an ice storm is in your own home. But if you lose power, or home heating due to power outage or your home is damaged by falling trees or limbs then consider evacuating.

When you use alternate heating sources during a power outage then be sure that the heater you use is safe to use indoors. Do not use gas or charcoal grills, outdoor propane heaters or camp stoves to heat you home. All of these can cause carbon monoxide to fill your house. Carbon monoxide is an odorless gas that can kill you.

Only use emergency heaters that are approved for indoor use and always have a carbon monoxide detector installed in your home. A carbon monoxide detector looks very similar to a smoke detector but it is installed close to the floor because carbon monoxide is heavier than air.

If the temperature in your home drops below 50 degrees then you should consider finding an alternate shelter. A night in a Red Cross Shelter, a motel or at a friend's home is much wiser than facing the hazards of hypothermia or frostbite in your unheated house. Red Cross shelters will be announced on TV, commercial radio and on the repeaters in our area.

Please be aware that downed power lines can cause electrical hazards. They can fall across roads, vehicles and other metallic items such as fences. Avoid touching any metallic object unless you can be certain that downed power lines are not touching it. A downed power line can energize a chain link fence hundreds of feet away from where you could be touching it. Do not drive over downed power lines, find an alternate route.

If you choose to evacuate your home then be very careful when driving. The best advice is to drive very slowly, accelerating and braking evenly and slowly to avoid skidding. Never slam on the brakes or accelerate quickly. You may encounter tree limbs or downed power lines in the road adjust your speed to allow time to avoid these hazards.

It is highly recommended that you keep a 72 hour Emergency Kit for use both in your home or when you evacuate. Because of the possibility of ice storms in our area, add items such as sleeping bags, rain gear, blankets and winter clothing to your emergency kit.

As always, all Amateurs should keep spare batteries for their radios, charged and ready to respond to emergency situations. I highly recommend that you take the time, this week, to check all your batteries, generators and emergency supplies, as you may need them this winter.