SEVERE THUNDERSTORMS

While all thunderstorms are dangerous, the National Weather Service (NWS) defines a severe thunderstorm as one that:

- Produces hail at least three-quarters of an inch in diameter.
- Has winds of 58 miles per hour or greater.
- Produces a tornado.

Thunderstorms may occur singly, in clusters, or in lines. Some of the most severe weather occurs when a single thunderstorm affects one location for an extended time.

The risks associated with severe thunderstorms include:

- Lightning. Although most victims of lightning strikes do survive, 75 to 100 people in the United States are killed each year by lightning—more than are killed each year by tornadoes. Lightning also causes an estimated five billion dollars in economic losses each year in the United States.
- Hail. Hail can be smaller than a tear or as large as a softball, and can cause destruction to automobiles, glass surfaces, roofs, plants, and crops. Pets and livestock are particularly vulnerable to hail.
- Downbursts and straight-line winds. Thunderstorms can produce winds as high as 150 miles per hour, strong enough to flip cars, vans, and trucks.
- Flash floods. Heavy rain from thunderstorms can cause flash flooding.
- Tornadoes. Some thunderstorms may spawn tornadoes.

The National Weather Service (NWS) Storm Prediction Center issues watches and warnings of hazardous weather, including severe thunderstorms.

SEVERE THUNDERSTORMS (CONTINUED)

LIGHTNING

Lightning often strikes outside areas of heavy rain and can occur as far as 10 miles away from any rainfall.

You are in danger from lightning if you can hear thunder. In fact, more than 50 percent of lightning deaths occur after the thunderstorm has passed.

These are the key steps in thunderstorm preparedness:

- Understand the risk. Severe thunderstorms can occur year-round and at any hour. Take time to learn about the severe thunderstorm risk in your area—including whether and how often severe thunderstorms are accompanied by tornadoes.

- Learn to make a small target. Practice squatting low to the ground, making the smallest target possible while minimizing contact with the ground.

- Pay attention to warnings. Use a NOAA weather radio with a tone-alert feature or listen to local radio or television for EAS broadcasts. Learn the community's warning system and never ignore warnings.

You should avoid:

- Water sources. If boating or swimming, get to land immediately. Stay away from bodies of water and wet sand. If indoors, stay away from running water. Electricity from lightning can travel through plumbing.

- The telephone. Electricity from lightning can also travel through phone lines.

- The outdoors. A sturdy building is the safest place to be during a severe thunderstorm. Avoid unprotected areas and unprotected shelters in open areas.

Your should turn off air conditioning and appliances. Electricity from lightning can enter a room through appliances. Also, turning off and unplugging appliances can eliminate the risk of damage from surges that accompany lightning strikes in close proximity to the home.

SEVERE THUNDERSTORMS (CONTINUED)

You should also take measures to protect your property, including those measures that are required for high wind:

- Bring outdoor furniture inside or otherwise secure it to keep it from blowing. Small objects can become deadly projectiles in a high wind.

- Remove dead or overhanging limbs from trees and shrubbery. Strategically remove branches to allow the wind to pass through. Strong winds can break weak limbs and carry them at high speed, causing damage to property or injury to humans and animals.

If your community is at high risk for severe thunderstorms or if sections of the community are particularly vulnerable, and you live in those areas, it is suggested that you purchase and install lightning rods.

If caught outdoors in a severe thunderstorm, you should:

- Avoid water sources. Get out of pools or lakes. Get off the beach.

- Seek shelter in a substantial, permanent, enclosed structure. Avoid unprotected shelters, such as golf carts and baseball dugouts. Remember that isolated shelters in otherwise open areas are a target for lightning. Temporary shelters, such as gazebos, are subject to being blown in a strong wind and offer little protection from hail.

- If there are no permanent shelters within reach, take shelter in a car. Keep all windows closed and do not touch anything that is metal. If in the woods, find an area that is protected by low trees (not a single tall tree in the open). As a last resort, go to a low-lying area, away from trees, poles, and metal objects. (Avoid areas that are subject to flooding.) Squat low to the ground, and place your hands on your knees with your head between them. Make as small a target as possible. Do not lie flat on the ground.

- Avoid natural lightning rods, such as golf clubs, tractors, fishing rods, and camping equipment. Lightning is attracted to all of these items.

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