

Thunderstorms, Severe

Learn about your area's severe thunderstorm risk. Severe thunderstorms can occur year-round and at any hour. Contact your local emergency management office, National Weather Service office, or American Red Cross chapter for more information.

More information about lightning and lightning safety is available at www.lightningsafety.noaa.gov/.

AWARENESS MESSAGES

Why talk about thunderstorms?

Despite their small size, all thunderstorms are dangerous. Every thunderstorm produces lightning, which kills more people each year than tornadoes and hurricanes. Heavy rain from thunderstorms can lead to flash flooding. Strong winds, hail, and tornadoes are also dangers associated with some thunderstorms. High winds from thunderstorms can cause damage to homes, overturn vehicles, and blow down trees and utility poles, causing widespread power outages.

Many strong thunderstorms produce hail. Large hail, and the glass it may break, can injure people and animals. Hail can be smaller than a pea, or as large as a softball, and can be very destructive to automobiles, glass surfaces (skylights and windows), roofs, plants, and crops.

Downbursts and straight-line winds associated with thunderstorms can produce winds of 100 to 150 miles (161 to 241 kilometers) per hour—enough to flip cars, vans, and pickup trucks. The resulting damage can equal the damage of most tornadoes.

What are severe thunderstorms?

Thunderstorms affect relatively small areas when compared with hurricanes and winter storms. The typical thunderstorm is 15 miles (24 kilometers) in diameter and lasts an average of 20 to 30 minutes. Of the estimated 100,000 thunderstorms occurring each year in the United States, only about 10 percent are classified as severe.

The National Weather Service (NWS) considers a thunderstorm severe if it produces hail at least three-quarters of an inch (2 centimeters) in diameter, has wind gusts of 58 miles (93 kilometers) an hour or higher, or 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.

How can I protect myself in a severe thunderstorm?

Each year, many people are killed or seriously injured by severe thunderstorms despite advance warning. While some did not hear the warning, others heard the warning but did not heed it. The following preparedness information, combined with timely severe weather watches and warnings could save your life. Once you receive a warning or observe threatening skies, you yourself must make the decision to take shelter before the storm arrives. It could be the most important decision you will ever make.

Talking About Disaster: Guide for Standard Messages

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