

Winter Storms

AWARENESS MESSAGES

Why talk about winter storms?

Each year, exposure to cold, vehicle accidents caused by wintry roads, and fires caused by the improper use of heaters injure and kill hundreds of people in the United States. Add these to other winter weather hazards and you have a significant threat to human health and safety.

A major winter storm can last for several days and can include high winds, freezing rain or sleet, heavy snowfall, and cold temperatures. People can become marooned at home without utilities or other services. Heavy snowfall and blizzards can trap motorists in their vehicles and make walking to find help a deadly effort. Storm effects, such as severely cold temperatures, heavy snow, and coastal flooding, can cause hazardous conditions and hidden problems. The aftermath of a winter storm can impact a community or region for days, weeks, or even months.

What are winter storms?

Winter storms can range from a moderate snow over a few hours to a blizzard with blinding, wind-driven snow that lasts for several days. Some winter storms are large enough to affect several states, while others affect only a single community. Many winter storms are accompanied by dangerously low temperatures and sometimes by strong winds, icing, sleet, and freezing rain.

Winter storms are defined differently in various areas of the country, and each area is equipped differently to deal with the challenges and hazards of severe winter weather. A snowstorm that would be unremarkable in Buffalo, N.Y., could bring a city in the southern states to a standstill. Local emergency management offices, National Weather Service (NWS) offices, and American Red Cross chapters can provide definitions specific to each area.

What damages can snow cause, and what are the different kinds of snow?

Heavy snow can immobilize a region and paralyze a city, stranding commuters, closing airports, stopping the flow of supplies, and disrupting emergency and medical services. Accumulations of snow can cause roofs to collapse and knock down trees and power lines. Homes and farms may be isolated for days. In rural areas, unprotected livestock can be lost. In urban areas, the cost of snow removal, damage repair, and lost business can have severe economic impacts. In the mountains, heavy snow can lead to an **avalanche**—a mass of tumbling snow. More than 80 percent of midwinter avalanches are triggered by a rapid accumulation of snow, and 90 percent of those occur within 24 hours of snowfall. An avalanche can reach a mass of a million tons and travel at speeds up to 200 miles (322 kilometers) per hour.

Various intensities of snow are defined differently:

- **Blizzard** describes winds of 35 miles (56 kilometers) per hour or more with snow and blowing snow that reduce visibility to less than one-quarter mile (0.4 kilometer) for at least three hours.
- **Blowing snow** describes wind-driven snow that reduces visibility. Blowing snow may be falling snow and/or snow on the ground that is picked up by the wind.
- **Snow squall** describes a brief, intense snow shower accompanied by strong, gusty winds. Accumulation from snow squalls can be significant.
- **Snow shower** describes snow that falls at varying intensities for short durations with little or no accumulation.