



Weather Spotter Quick Reference Guide

Your reports are critical to helping the NWS achieve its mission of saving lives and property through the issuance of timely warnings. The **NWS needs these reports**: tornadoes, funnel clouds, hail of any size, wind gusts (estimated or measured) of 50 mph or higher, flooding (water closing roads or entering buildings), and impact of damage (property, trees, power-lines, etc). Being an effective weather spotter may take years to master, and takes practice. **Remember, you are mobile! Report severe weather or damage wherever you are!**



NWS Columbia, SC Contact Information

Severe Weather Report Phone Voice Mailbox: 803-234-4115

E-mail: NWS.Columbia@noaa.gov

Website: <http://weather.gov/cae>

Facebook: [NWSColumbia](https://www.facebook.com/NWSColumbia)

X: [@NWSColumbia](https://twitter.com/NWSColumbia)



Tips for Providing Useful Reports

- Safety first (report is #2 priority). Never put yourself or others in harm's way.
- Know what you're reporting. False reports do more harm than no report at all. Not sure? – Don't report.
- Tools to help you provide accurate reports include:
 - NOAA Weather Radio
 - Accurate Clock
 - Map/GPS
 - Paper and Pencil
 - Ruler
 - This Guide Sheet
- **Report the Time, Event and Location (TEL) of event:**
 - Exact **Time** event *occurred* and time of call.
 - **Event** details, including any damage, injuries and fatalities.
 - **Location** of Event – Address, Lat/Lon, or distance and direction from a landmark (city, intersection, etc).
 - (Optional) Your name, e-mail , or phone number, so we can contact you if we have questions.
- **An example of an accurate report to the NWS:**
"My name is Joe Smith. At 558 pm, I observed straight-line wind gusts estimated at 65 mph about 1.2 miles south of Any Town, SC in Any County. A tree fell onto a house injuring 2 people near the intersection of A and B Streets."



What to Report

Severe Thunderstorm Winds (severe criteria: 58 mph winds or greater)

- 1) Estimated or measured winds of 58 mph or higher (can estimate using Straight-line Wind Gust Estimate Table on back page)
- 2) Downed power lines, trees or limbs (include diameter of tree limbs)
- 3) Any structural damage, including type of structure damaged

Tornadoes and Funnel Clouds

- 1) What is the exact location of the tornado or funnel cloud?
- 2) Is cloud rotation evident?
- 3) Is there damage on the ground?
- 4) What direction is the tornado or funnel cloud moving?
- 5) If known, how long has it been on the ground?

Hail (severe criteria: 1 inch diameter hail or larger)

- 1) Report hail of any size (use the largest hail stone) and any damage
- 2) To estimate size, compare hail to well known objects such as coins or balls, but not to marbles, or measure the hail with a ruler (see Hail Chart on back page)

Significant Flooding

- 1) Roads impassable or closed due to high water
- 2) Water entering homes or businesses



Watch/Warning Definitions

Severe Thunderstorm Watch - Conditions are favorable for thunderstorms to produce large hail in excess of 1 inch, and/or damaging winds 58+ mph; Isolated tornado possible.

Severe Thunderstorm Warning - Radar has detected, or a report has indicated, a severe thunderstorm producing large hail or damaging winds in progress or imminent.

Tornado Watch - Conditions are favorable for tornadoes.

Tornado Warning - Radar has indicated a possible tornado or a report has indicated a tornado in progress.



Weather Hazards and Safety



Severe Thunderstorm Wind Safety

- Keep a firm grip on vehicle's steering wheel for control.
- If you can, point your vehicle into the wind to minimize risk of vehicle overturning.
- Watch for sudden low visibility (heavy rain, dust, etc.)
- If inside, move away from windows
- Look up! Stay away from trees, power lines, etc. that can fall.



Tornado Safety

- Go to a basement or small interior room on the lowest floor.
- Get out of mobile homes and vehicles.
- NEVER try to outrun tornadoes in your car.
- Don't take shelter under bridges or overpasses



Hail Safety

- Sturdy structures & buildings offer the best protection
- If in a vehicle, avoid parts of storm where large hail is occurring.
- Hard-top vehicles offer the best protection from hail up to golf-ball size.
- Larger hail will damage or break out windshields.
- Remember large hail can break and bring down items from above such as signs, tree limbs, power lines, etc.



Flash Flood Safety

- **TURN AROUND...DON'T DROWN!**
- Never try to cross a flooded road or low water crossing as you can't be sure of the water's depth and the road may be washed out!
- 2 feet of moving water will carry away most vehicles.
- 6 inches of moving water can knock you off your feet.
- If your vehicle is suddenly caught in rising water, leave it immediately if you can, get to higher ground.
- Be especially vigilant at night when flash floods are harder to see and recognize.



Lightning Safety

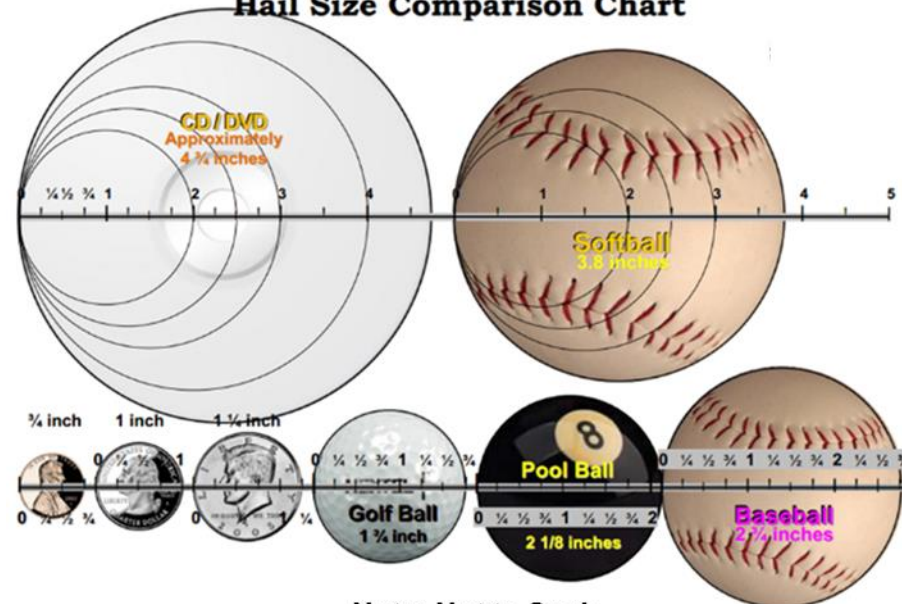
- Avoid being the tallest object!
- Stay away from water and metal.
- Best protection is in sturdy buildings.
- Stay off radios, corded phones, stay away from windows & appliances
- If inside a hard-tipped vehicle, avoid contact with metal frame
- Stay under cover until 30 minutes after last clap of thunder.



Reference Tables and Charts

Straight-line Wind Gust Estimates	
45-57 mph (39-49 kts)	Non Severe - Large trees bend; twigs, small limbs break, and a few larger dead or weak branches may break. Old/weak structures (e.g., sheds, barns) may sustain minor damage (roof, doors). Some loose shingles may be removed from houses.
58-74 mph (50-64 kts)	Severe - Large limbs break; shallow rooted trees pushed over. Semi-trucks overturned. More significant damage to old / weak structures. Shingles, awnings removed from houses; damage to chimneys and antennas; mobile homes, carports incur minor structural damage; large billboard signs may be toppled.
75-89 mph (65-77 kts)	Hurricane Force - Widespread tree damage (trees either broken or uprooted). Mobile homes may incur more significant structural damage; be pushed off foundations or overturned. Roofs may be partially peeled off industrial/commercial/warehouse buildings. Some minor roof damage to homes. Weak or open structures (e.g. farm buildings, airplane hangars) may be severely damaged.
90+ mph (78+ kts)	Significant Severe - Groves of trees flattened. Mobile homes severely damaged; moderate roof damage to homes. Roofs partially peeled off homes and buildings. Barns and sheds completely demolished.

Hail Size Comparison Chart



Note: Not to Scale