



# Spotter Quick Reference Guide

National Weather Service—Newport/Morehead City NC



**Shelf Cloud**—Leading edge of storm outflow. Gusty winds and rain behind. Storm is moving to the right.



**Low Hanging Scud**-May look like a funnel cloud, but no rotation, no funnel.



**Mammatus Clouds**-Represent extreme turbulence aloft, not tornadoes.



**Funnel Cloud**-No ground circulation.

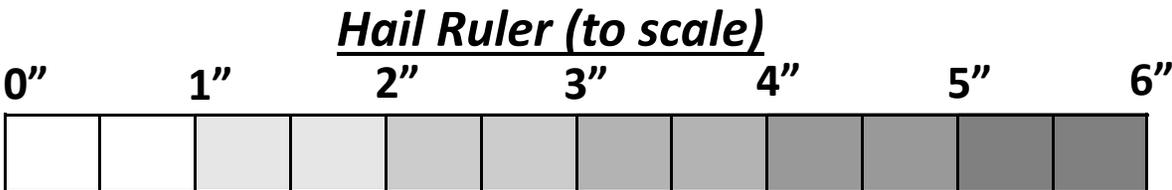


**Tornado**-Rotation, plus dirt and debris at the surface proves it is a tornado.

<b>Wind Speed Estimates</b>	
25-31 mph	Large branches in motion; whistling in overhead wires.
32-38 mph	Whole trees are in motion; walking into the wind becomes difficult.
39-54 mph	Twigs and small thin branches break off; a few larger dead or weak branches may break off.
55-73 mph	Large limbs break and shallow-rooted trees are pushed over; damage to antennas; a few shingles and may be blown off houses; mobile homes, billboards and carports may sustain some minor damage.
74-89 mph	Widespread tree damage either broken or uprooted; mobile homes and carports will sustain more significant damage-mobile homes may be overturned; some roof damage to buildings; weak structures (outbuildings) may be severely damaged.
> 90 mph	Groves of trees flattened; mobile homes severely damaged, pushed off their foundations or overturned; roof damage is more substantial, parts of the roof may be peeled off; barns and sheds severely damaged or destroyed.

### **Things to Remember**

- When estimating hail size, **NEVER** report “marble size”! Marbles come in many sizes. Use the estimate chart below.
- When looking for a tornado, be sure to look for evidence of rotation at the ground level, not just a funnel. Sometimes there may be no visible funnel, but a debris cloud will be visible on the ground.
- When observing a suspicious lowering, be sure to look for ***persistent*** and ***organized rotation*** when determining a tornado threat. Many thunderstorms often have lowerings that do not rotate called scud clouds, which are often mistaken for funnels.



<b>Hail Size Estimates</b>	
1" - Quarter	2.50" - Tennis Ball
1.25" - Half Dollar	2.75" - Baseball
1.50" - Ping Pong Ball	3.00" - Large Apple
1.75" - Golf Ball	4.00" - Grapefruit
2.00" - Hen's Egg/Lime	4.50" - Softball



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## What To Report:

- Tornadoes
- Rotating Wall Clouds
- Funnel Clouds
- Waterspouts
- Hail  $\geq 1''$
- Wind Gusts  $>58$  mph (estimated or measured)
- Any storm damage, trees, limbs, and/or power lines down, structural damage
- Flooding that impacts roads and/or property

## You Need To Include:

- WHO** you are, and any affiliations (Spotter, law enforcement, etc).
- WHAT** you observed. Give details and *be specific*.
- WHERE** the event occurred.
- WHEN** it happened. Try to be precise.

## Safety First!

Good spotters always practice safety first. If it becomes unsafe to observe from where you are, seek shelter at once. *NEVER* put yourself or others in harm's way!

## Watch/Warning Definitions

**Severe Thunderstorm WATCH**-Conditions are favorable for storms to produce hail  $\geq 1''$  and/or winds  $> 58$  mph. Watches are issued by the Storm Prediction Center for a region, generally for a 4-8 hour period.

**Severe Thunderstorm WARNING**-Radar has detected, or a report has indicated, a thunderstorm producing hail  $\geq 1''$  and/or winds greater than 58 mph. Issued by your local National Weather Service office, generally for 1 hour or less, for individual counties.

**Tornado Watch**-Conditions are favorable for tornadoes to develop. Watches are issued by the Storm Prediction Center for a region, generally for a 4-8 hour period.

**Tornado Warning**-Radar has detected, or a report has indicated, a thunderstorm producing a tornado. Issued by your local National Weather Service office, generally for 1 hour or less, for individual

## Submit Storm Reports...How?

- **Phone** — 1-800-889-6889
- **Twitter**— @NWSMoreheadCity
- **Facebook**— [www.facebook.com/NWSMoreheadCity](http://www.facebook.com/NWSMoreheadCity)
- **Our office form submission page** — [www.weather.gov/mhx/OnlineSpotterReport](http://www.weather.gov/mhx/OnlineSpotterReport)
- **E-Mail**— [wxobs.mhx@noaa.gov](mailto:wxobs.mhx@noaa.gov)

**We Want To Hear From You!**

## NOAA Weather Radio Transmitters

New Bern	162.400 MHz
Cape Hatteras	162.475 MHz
Mamie	162.425 MHz
Warsaw	162.425 MHz

## SKYWARN Amateur Radio Network Monitoring Frequencies

Grifton	146.685- (88.5 tone)
Newport	145.450- (100.0 tone)
Newport	444.825+ (88.5 tone)
Columbia	146.835- (131.8 tone)
Jacksonville	147.000- (88.5 tone)
Oriental	147.210+ (151.4 tone)
Swansboro	146.760- (88.5 tone)
Grantsboro	145.230- (85.4 tone)
K4GRW/IRLP 8561 to Columbia/Outer Banks	

