# SKYWARN SEVERE WEATHER SPOTTING

(From http://www.crh.noaa.gov/sgf/?n=spotter_reporting)

## Effective Spotter Reporting

Remember, being at the right spot at the right time isn't enough! Effective communications are even more important than spotting a tornado!

### Reporting Severe Weather

Call your NWS office via phone or via amateur radio and follow the format below when relaying a report.

- Who is reporting/is it a relayed report? ( name, spotter network, trained spotter?)
- What type of event occurred? Give an event description (be as specific and detailed as possible)
- When did the event happen? ( observed time or old report ) State the start & end time of the event (be sure to differentiate between event time & report time)
- Where are you located or where did it occur? Give your exact location and location relative to the event. ( direction/distance from a city, road intersection, etc. )
- If event is still occurring, provide frequent updates (continuous for tornado)

Do not assume that if a warning is issued, the NWS knows for certain that severe weather has occurred. (we want to hear from you!).

Never assume your report is not important.

Do not exaggerate your report! If you are uncertain, let us know why.

### When to Report

Make you report as soon as it is possible after the weather event occurred.

Reports do us the most good when they are received as the event is occurring or shortly after the event occurred.

Even reports received the next day though help verify warnings and evaluate radar signatures.

### What to Report

The following elements should be reported and are most critical to warning operations.

- Tornado, funnel cloud, or rotating wall cloud
- Hail **1 inch (quarter size) or larger**
- Flooding of roads or low water crossings
- Trees or power lines down; Wind gusts 58 mph or greater

## Severe Weather Reporting

### Tornado Reports

Tornado Warnings are issued when a tornado is sited or indicated by NWS doppler radar.

Tornado

- Were buildings damaged?
- If no damage is visible, relay
  - Storm structure clues
  - Trees and/or Power lines down
  - Dust or debris swirling

Funnel and Wall Clouds with Rotation, Upward motion

Suspicious Clouds – Indicate uncertainty!

### Wind Reports

Severe Thunderstorm Warnings are issued for wind gusts of 50 knots (58 mph) or actual wind damage.

Wind speed is very difficult to estimate without damage and extra care should be taken in relaying a wind report. Report specific impacts or damage caused by the wind (large branches broken, shingles blown off roof, several trees down, etc.)

Wind Reports Include:

- Estimated Straight-line wind speeds
- Damage Reports (Structures, signs, etc.)
- Size and number of trees down. Downed power lines

| Wind Speed | Wind estimate method |
|---|---|
| **25-31 mph** | large branches in motion |
| **32-38 mph** | whole trees in motion |
| **39-54 mph** | twigs break off, wind impedes walking |
| **55-72 mph** | damage to chimneys and TV antennas, large branches broken and some trees uprooted |
| **73-112 mph** | removes shingles, windows broken, trailer houses overturned, trees uprooted |
| **113+ mph** | roofs torn off, weak buildings and trailer houses destroyed, large trees uprooted |

## Flood Reports

Flash Flood Warnings are issued when flash flooding is sited or indicated by NWS Doppler radar.

Flood reports include the flooding of :

- Roads
- Low water crossings
- Low lying or poor drainage areas
- Urban Flooding
- Rivers and Streams out of their banks
- Dam Breaks

When reporting flooded roads, specify whether the water is ponding or flowing over the road, and whether or not the road is impassable.

Also report heavy rainfall amounts: wet soil – 1 inch, dry soil – 2 inch.

## Hail Reports

Severe Thunderstorms Warnings are issued for hail **one inch in diameter or larger**.

Avoid reporting "marble size hail." As can be seen, marble sizes differ. Some marbles are big enough to be considered severe hail while others would not.

Instead, reference hail size to that of a coin (i.e. penny, quarter, etc.), sports ball, (i.e. golf ball, tennis ball, baseball), or specifically state ½ inch, 1½ inch, etc.

If different size hail stones are falling, report the size of the largest stones. The best way to get an accurate hail size is, of course, to measure it with a ruler.

| Hail Diameter Size | Description |
|---|---|
| ¼” | Pea size |
| ½" | Mothball size |
| ¾” | Penny size |
| 7/8" | Nickel size |
| 1" | Quarter size |
| 1 ¼” | Half-dollar size |
| 1 ½” | Walnut or Ping -Pong ball size |
| 1 ¾” | Golf-ball size |
| 2" | Hen-egg size |
| 2 ½" | Tennis-ball size |
| 2 ¾” | Baseball Size |
| 4" | Grapefruit size |
| 4 ½" | Softball size |

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## How to Report

Organized spotter groups use your normal communications methods.

Non Affiliated Spotters & General Public:

- Call NWS Springfield (Storm Reports Only!)
- Call local law enforcement or county dispatch center
- Internet: http://www.crh.noaa.gov/sgf
- ESPOTTER: http://espotter.crh.noaa.gov/ (Be sure to apply for an account in advance)

**Amateur Radio**

SKYWARN Amateur Radio (HAM) Operators play a vital role in collecting and disseminating critical weather information during a severe weather event.

A HAM radio net control center is set up at the NWS by volunteer HAMs during severe weather. This allows for effective and timely communication between mobile spotters and the NWS.

Regional Net: Initiated for widespread severe weather
- 145.490 MHz Primary
- 146.910 MHz Backup

Radar Summaries, warnings, and warning updates are broadcast every 10 – 15 mins

***ROLLA & PHELPS COUNTY***
Severe weather frequencies: 146.790 MHz (PL 88.5 Hz) – Primary, sometimes linked to Regional Net
147.210 MHz (PL 88.5 Hz) – Usually linked to 146.790 MHz
145.450 MHz (PL 110.9 Hz) – Local backup