

REPORTING PROCEDURES and Criteria Report Briefly

WHAT YOU HAVE SEEN:

- ACTUAL TORNADO SIGHTED
 - Definite wall cloud
 - Funnel cloud
 - Rapid rotation
 - Roar and debris
- HAIL ½ INCH or LARGER
- DAMAGING WINDS (*Usually 50 mph or greater*)
 - Damage to buildings
 - Damage to large (*healthy*) trees or utility poles
- FLOODING
 - Stream out of banks
 - Water covering a roadway
 - Water entering 1st floor of homes (*not basements*)
- HEAVY RAIN - An inch per hour or greater (*measured!*)

WHERE AND WHEN YOU SAW IT

WHAT IT WAS DOING:

- The Storm's direction and speed of travel
- Size and intensity of the storm
- Destructiveness



The National Weather Service needs accurate local weather reports from trained observers to identify and report hazardous weather conditions in their area. These reports must be forwarded through authorized communications channels.

Amateur radio is ideally suited to make these reports. Arrangements have been made between many National Weather Service offices and local amateur radio groups to have officially sanctioned communications networks operational during periods of severe weather. A net control station will activate the local severe weather reporting net on a designated frequency when alerted by the National Weather Service. After net activation, casual contacts should be shifted to other frequencies.

The most important requirements of weather reporting are accuracy and speed. Ground truth reports from trained spotters are needed to correlate with observations from scientific information gathering tools such as the WSR-88D Doppler radar. Accuracy helps guarantee warnings are issued for severe weather, while keeping false alarms to a minimum.

Speed is needed to give as much warning as possible to areas in the path of severe weather. Many lives can be saved by early warning.

Give your location and report as briefly as possible. Weather in specific areas will be requested by the meteorologists when conditions indicate.

Please confine your reports to the criteria list to the right unless otherwise requested by net control to avoid tying up radio frequencies with unnecessary traffic. All spotters should attend official spotter training sessions conducted by the National Weather Service.

W.A.R.N. Frequencies

Call-up and net repeater	146.88-
Stand-by repeaters	147.09+
	145.19-
W.A.R.N. UHF repeater	443.70+

DEFINITIONS

ANVIL

The spreading of the upper portion of a cumulonimbus cloud into an anvil-shaped plume usually of fibrous or smooth appearance. Strong or severe thunderstorms often have thicker anvils.

DOWNBURST

These potentially damaging events are also called microbursts or macrobursts, depending on the size. They are caused by a massive downdraft in a thunderstorm. When this downdraft hits the ground, it causes winds to curl outward in a straight line. These straight line winds can cause significant damage. They are often evidenced by a "rainfoot" or "dustfoot", which appears as a wave of precipitation or dust moving away from the downburst. The damage from downbursts is many times mistaken by untrained observers as tornado damage.

FLASH FLOODING

Flooding that develops very quickly on streams and river tributaries, usually as the result of thunderstorms. Sometimes the onset of flash flooding comes before the end of heavy rains. There is little time between detection of flood conditions and the arrival of the flood crest, usually less than six hours. Swift action is essential for the protection of life and property.

FUNNEL CLOUD

A funnel-shaped cloud extending down from the base of a parent thunderstorm. It is associated with a rotating column of air that is not in contact with the ground. If the cloud has a debris cloud or dust whirl below, at ground level, it is a tornado, not a funnel cloud.

GUST FRONT

The leading edge of the thunderstorm downdraft air. The gust front is most prominent beneath the rain-free base and on the

leading edge of an approaching thunderstorm. It is usually marked by gusty cool winds, and sometimes blowing dust, moving away from the storm. The gust front often precedes the storm precipitation by several minutes. The shelf or roll cloud sometimes accompanies the gust front.

HAIL

Precipitation in the form of balls or clumps of ice, produced by thunderstorms. Severe storms with intense updrafts are most likely large hail producers.

MAMMA CLOUDS

Also called mammatus, these clouds appear as hanging, rounded pouches on the underside of the anvil. These clouds do not produce tornadoes, funnels, hail or any other type of severe weather, although they do often accompany severe thunderstorms.

RAIN-FREE BASE

A horizontal dark base of a thunderstorm, with no precipitation visible beneath it. This is the base of the storm's updraft and is the area where air is flowing into the storm. Tornadoes most commonly develop from wall clouds attached to the rain free base. However, tornadoes can form from the rain free base itself.

DOPPLER RADAR SIGNATURES

Doppler radars will often display a "couplet", a multi-color indication of rotation. While these signatures do not show a tornado on the ground, they are ominous signs that a tornado may be present or forming. Spotter reports from these areas are crucial to determine if a tornado is present.

RIVER FLOOD

Flooding along rivers is a natural and inevitable part of life. Some floods occur seasonally when winter or spring rains, coupled with melting snow, fill river basins with too much water, too quickly. River floods develop and reach their peak more slowly than flash floods. In many cases, river floods reach their peak after the rain has ended.

SCUD

Scud clouds are small, ragged, low cloud fragments that are not attached to a larger cloud base. These clouds are often seen behind thunderstorm gust fronts. Generally associated with cool moist air, like thunderstorm outflow. Scud may be mistaken for a funnel cloud. One way to determine the difference is to watch for a time. Funnels are persistent, while scud usually dissipates or changes rapidly.

VIRGA

Virga is streaks or wisps of precipitation falling from a cloud but evaporating before reaching the ground. In certain cases, shafts of virga may precede a downburst.

WARNING

A NWS product indicating that a particular weather hazard is either imminent or has been reported. A warning indicates the need to take action to protect life and property. The type of hazard may be a tornado, severe thunderstorm, flood, or flash flood. Warnings typically cover periods of an hour or less for only one county.

WATCH

A NWS product which specifies locations in which conditions are favorable for severe weather to develop. A watch is a recommendation for planning preparation, and increased awareness. Watches typically cover periods of 6 to 12 hours for many counties. Watches are issued for tornadoes, severe thunderstorms, floods, or flash floods.

**NOTE:* Whenever a watch or warning is issued, the information will be toned and broadcasted over the NOAA Weather Radio.

W.A.R.N. MISSION

The mission of the Weather Amateur Radio Network is to provide information to the National Weather Service during periods of severe weather. In order for us to best provide data which the NWS requests, we ask that stations only report severe weather conditions which are stated in each net preamble or any specific information requested by the net control station. Reporting criteria are also listed in this pamphlet.

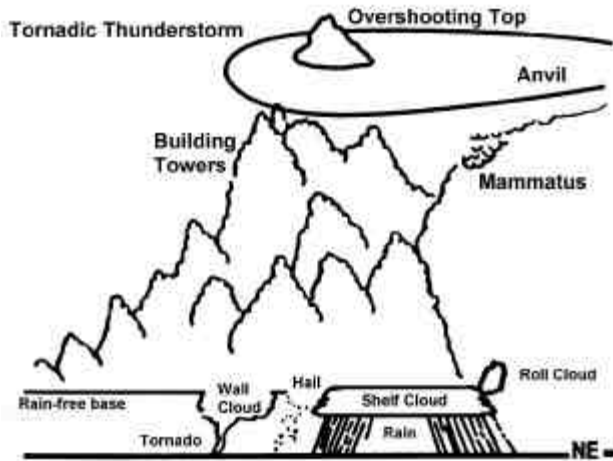


Reports not conforming to proper criteria consume valuable resources of airtime and do not benefit our mission. Therefore any reports such as "It's beginning to rain" or, "The clouds are very dark here", or "It's really windy" are strongly discouraged. One of the most memorable violations of this policy was an actual report called in by a spotter stating their plastic pink lawn flamingo had blown away. Subsequent non-severe reports have since been dubbed "Pink Flamingo Reports" and are NOT welcome.

We are striving to maintain net discipline and request everyone's cooperation so we may provide the best possible service to the National Weather Service.

W.A.R.N.
Needs Your Support

Dues are only \$5.00. We need your help to maintain and purchase equipment for our net control point. Send your \$5.00 check to W.A.R.N., 2915 Spruceway Drive, Cinti., OH 45251-4242. For more information call Dick Leffler - WB8MCX at (513) 825-7227



Tornadoes usually move from south...southwest...or west and rotate counterclockwise. They form on the back, or trailing edge of the parent thunderstorm. Radar cannot "see" a tornado. Only the human eye can do that.

Estimating Hail Size		Estimating Rainfall Intensity	
Pea Size	1/4"	Intensity	Rates - Inches
Dime Size	3/4"	Light	less than 0.2/hour
Quarter Size	1"	Moderate	0.2 to 1.1 per hour
Half Dollar	1-1/4"	Heavy	1.1 to 2.2 per hour
Golf Ball	1-3/4"	Very Heavy	2.2 to 4.5 per hour
Baseball	2-3/4"	Intense	4.5 to 7.1 per hour
Grapefruit	"Help!"	Extreme	more than 7.1/hour

Estimating Wind Speeds (miles per hour)	
0	Smoke rises vertically
1-3	Direction of wind shown by smoke drift but not wind vanes
4-7	Wind felt on face, leaves rustle, ordinary wind vane moved by wind
8-12	Leaves and small twigs in motion, light flags extended
13-18	Dust raised, loose paper raised, small branches move
19-24	Small leafy trees sway, crested wavelets form on lakes and ponds
25-31	Large branches in motion, whistling in telephone wires and chain link fences
32-38	Whole trees in motion, inconvenience felt walking against wind
39-54	Twigs break off trees; wind generally impedes progress
55-72	Damage to chimneys and TV antenna; pushes over shallow rooted trees
73-112	Peels surface off roofs; windows broken; light trailer houses pushed or overturned; moving automobiles pushed off roads
113-157	Roofs torn off houses; weak buildings and trailer houses destroyed; large trees snapped and uprooted
158&up	Severe damage; cars lifted off ground

W.A.R.N.



**WEATHER AMATEUR
RADIO NETWORK**

In
**Cooperation With
National Weather Service
(Wilmington, OH Office)**



See us on the web at
<http://www.warn.org>