

Severe Weather Terms

It is very important to understand the difference between a severe weather WATCH and WARNING. WATCHES and WARNINGS are issued for Tornadoes, Severe Thunderstorms, and Flash Floods. The term WATCH implies that people should be alert for the *possibility* of severe weather or flash flooding, and have a plan of action in case a storm threatens. When a WARNING is issued by the National Weather Service, this means that a tornado, severe thunderstorm, or flash flood has been detected by radar or observed by trained storm spotters or public officials. These warnings are for short-fuse events that only last an hour or so. People in the path of the storm are expected to take action to protect life and property when the term WARNING is heard.

The following table is a list of watches/warnings/statements that the NWS issues and the criteria used for issuing them:

PRODUCT	Description
TORNADO WATCH	Conditions are favorable for the development of tornadoes in and close to the watch area. Watches are usually in effect for several hours, with 6 hours being the most common.
TORNADO WARNING	Tornado is indicated by radar or sighted by storm spotters. The warning will include <u>where</u> the tornado is and <u>what</u> towns will be in its path.
SEVERE THUNDERSTORM WATCH	Conditions are favorable for the development of severe thunderstorms in and close to the watch area. Watches are usually in effect for several hours, with 6 hours being the most common.
SEVERE THUNDERSTORM WARNING	Issued when a thunderstorm produces hail one inch or larger in diameter and/or winds which equal or exceed 58 mph. Severe thunderstorms can result in the loss of life and/or property. Information in this warning includes: <u>where</u> the storm is, <u>what</u> towns will be affected, and the <u>primary threat</u> associated with the storm.
SEVERE WEATHER STATEMENT	Issued when the forecaster wants to follow up a warning with important information on the progress of severe weather elements.
FLASH FLOOD WATCH	Indicates that flash flooding is possible in and close to the watch area. Those in the affected area are urged to be ready to take quick action if a flash flood warning is issued or flooding is observed.

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FLASH FLOOD WARNING	Signifies a dangerous situation where rapid flooding of small rivers, streams, creeks, or urban areas are imminent or already occurring. Very heavy rain that falls in a short time period can lead to flash flooding, depending on local terrain, ground cover, degree of urbanization, degree of man-made changes to river banks, and initial ground or river conditions.
URBAN AND SMALL STREAM FLOOD ADVISORY	Alerts the public to flooding which is generally only an inconvenience and does not pose a threat to life and/or property. Issued when heavy rain will cause flooding of streets and low-lying places in urban areas, or if small rural or urban streams are expected to reach or exceed bankfull.
FLASH FLOOD STATEMENT	Used as a follow-up to Flash Flood Warnings and Watches. The statement will contain the latest information on the event.
SPECIAL WEATHER STATEMENT	Issued to convey update information about severe weather watches.
SHORT TERM FORECAST (NOWCAST)	A short term forecast designed to give specific, detailed forecast information for the next 1 to 6 hours on a county-by-county basis. Both routine and near-severe information are contained in these forecasts which are routinely issued several times per day, and more often during busy weather periods.
LOCAL STORM REPORT	Used to distribute severe weather reports to the media, emergency managers, and other NWS offices. It is issued as reports are received, and may also be issued as a collection of all reports received after an event is over. Delayed reports are disseminated after an event is over as well.
WEATHER WATCH REDEFINING STATEMENT	Issued for every tornado and severe thunderstorm watch that affects a state. It lists the type of watch, its corresponding number, the ending time of the watch, all counties included in the watch, and large cities and towns in the watch area.

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HAIL DIAMETER SIZE

HAIL DIAMETER SIZE	DESCRIPTION
1/4"	Pea Size
1/2"	Small Marble Size
3/4" (Severe Criteria)	Dime/Penny/Large Marble Size
7/8"	Nickel Size
1"	Quarter Size
1 1/4"	Half Dollar Size
1 1/2"	Walnut or Ping Pong Ball Size
1 3/4"	Golf Ball Size
2"	Hen Egg Size
2 1/2"	Tennis Ball Size
2 3/4"	Baseball Size
3"	Teacup Size
4"	Grapefruit Size
4 1/2"	Softball Size

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BEAUFORT WIND SCALE

WIND SPEED ESTIMATE	DESCRIPTION
25-31 mph	Large branches in motion; whistling in telephone wires.
32-38 mph	Whole trees in motion; inconvenience felt walking against wind.
39-54 mph	Twigs break off trees; wind generally impedes progress.
55-72 mph	Damage to chimneys and TV antennas; pushes over shallow-rooted trees.
73-112 mph	Peels surfaces off roofs; windows broken; mobile homes overturned; moving cars pushed off road.
113-157 mph	Roofs torn off houses; cars lifted off ground.

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FUJITA TORNADO INTENSITY SCALE

The Fujita Scale, developed by Dr. Theodore Fujita, assigns a numerical rating from F0 to F5 to rate the intensity of tornadoes. F0 and F1 tornadoes are considered "weak" tornadoes, F2 and F3 are classified as "strong" tornadoes, where F4 and F5 are categorized as "violent" tornadoes. The F scale is based on tornado damage (primarily to buildings), so there is some ambiguity in the scale, but nonetheless, it provides a good baseline for classifying tornadoes according to their intensity.

SCALE	WIND SPEED (MPH)	DAMAGE
0	< 73	Light damage. Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.
1	73-112	Moderate damage. The lower limit is the beginning of hurricane-force wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off roads.
2	113-157	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated; Cars lifted off ground.
3	158-206	Severe damage. Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
4	207-260	Devastating damage. Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
5	261-318	Incredible damage. Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile-sized missiles fly through the air in excess of 100 meters (109 yds); trees debarked; incredible phenomena will occur.